ABBYY®

ABBYY Mobile Capture SDK

Developer's Guide

Table of Contents

Introduction **9**

Guided Tour **10**

How to Add the Library to Your Android Studio Project 10
How to Implement Capture Scenario With User Interface 11
How to Capture Text from Camera 12
How to Recognize Text on Photos 13
How to Capture Data from Documents 15
How to Capture a Custom Data Field 20
How to Capture Image from Camera 22
Code Samples 24

API Reference **26**

Engine class 27
load method 28
createDataCaptureService method 29
createRecognitionCoreAPI method 29
createImageCaptureService method 30
createImagingCoreAPI method 30
createTextCaptureService method 30
getExtendedSettings method 31
unload method 31
LicenseException class 31
EngineSettings interface 31
getExternalAssetsPath method 32
setExternalAssetsPath method 32
IDataCaptureProfileBuilder interface 33
IFieldBuilder interface 34
setName method 34
setOnValidate method 35
setRegEx method 35
ISchemeBuilder interface 36
addField method 36
setName method 36
Predicate<T> interface 37
test method 37
addScheme method 37
checkAndApply method 38
setRecognitionLanguage method 38
ProfileCheckException class 39

IDataCaptureService interface ... 39
Callback interface ... 41
onRequestLatestFrame method ... 41
onFrameProcessed method ... 42
onError method ... 42
DebugLog interface ... 43
onBeginSeries method ... 43
onEndSeries method ... 43
onSaveImageBufferNV21 method ... 44
onAttachDebugInfo method ... 44
ExtendedSettings interface ... 45
getProcessingThreadsCount method ... 45
setProcessingThreadsCount method ... 46
DataScheme class ... 46
DataField class ... 46
TextLine class ... 48
CharInfo class ... 48
configureDataCaptureProfile method ... 49
getExtendedSettings method ... 49
setAreaOfInterest method ... 49
setDebugLog method ... 50
start method ... 50
stop method ... 51
submitRequestedFrame method ... 51
ResultStabilityStatus enum ... 51
Warning enum ... 52
IImageCaptureService interface ... 53
Callback interface ... 54
onFrameProcessed method ... 55
onRequestLatestFrame method ... 55
onError method ... 55
DebugLog interface ... 56
onBeginSeries method ... 56
onEndSeries method ... 56
onSaveImageBufferNV21 method ... 57
onAttachDebugInfo method ... 57
ExtendedSettings interface ... 58
getProcessingThreadsCount method ... 58
setProcessingThreadsCount method ... 59
QualityAssessmentForOcrBlock class ... 59
Result class ... 60
Status class ... 61
getExtendedSettings method ... 61
setDocumentSize method ... 62

setAreaOfInterest method ... 62
setDebugLog method ... 63
start method ... 63
stop method ... 64
submitRequestedFrame method ... 64
QualityAssessmentForOcrBlockType enum ... 64
ITextCaptureService interface ... 64
Callback interface ... 66
onRequestLatestFrame method ... 67
onFrameProcessed method ... 67
onError method ... 68
DebugLog interface ... 68
onBeginSeries method ... 69
onEndSeries method ... 69
onSaveImageBufferNV21 method ... 69
onAttachDebugInfo method ... 70
ExtendedSettings interface ... 70
isCJKVerticalTextEnabled method ... 71
setCJKVerticalTextEnabled method ... 72
isFrameMergingEnabled method ... 72
setFrameMergingEnabled method ... 72
getProcessingThreadsCount method ... 73
setProcessingThreadsCount method ... 73
isRecognitionEnabled method ... 73
setRecognitionEnabled method ... 73
TextLine class ... 74
CharInfo class ... 74
getExtendedSettings method ... 75
setAreaOfInterest method ... 75
setDebugLog method ... 76
setRecognitionLanguage method ... 76
setTranslationDictionary method ... 77
start method ... 77
stop method ... 78
submitRequestedFrame method ... 78
ResultStabilityStatus enum ... 78
Warning enum ... 79
IRecognitionService interface ... 80
Callback interface ... 81
onRequestLatestFrame method ... 81
onError method ... 82
DebugLog interface ... 82
onBeginSeries method ... 82
onEndSeries method ... 83

onSaveImageBufferNV21 method ... 83
onAttachDebugInfo method ... 84
ExtendedSettings interface ... 84
getProcessingThreadsCount method ... 84
setProcessingThreadsCount method ... 85
getExtendedSettings method ... 85
setAreaOfInterest method ... 85
setDebugLog method ... 86
start method ... 86
stop method ... 87
submitRequestedFrame method ... 87
ResultStabilityStatus enum ... 87
Warning enum ... 88
IRecognitionCoreAPI interface ... 88
ProcessingSettings interface ... 90
getProcessingThreadsCount method ... 90
setProcessingThreadsCount method ... 91
TextRecognitionCallback interface ... 91
onError method ... 91
onProgress method ... 92
onTextOrientationDetected method ... 92
TextRecognitionSettings interface ... 93
setRecognitionLanguage method ... 93
setAreaOfInterest method ... 93
CharInfo class ... 94
TextBlock class ... 95
TextLine class ... 95
close method ... 96
getTextRecognitionSettings method ... 96
getProcessingSettings method ... 97
recognizeText method ... 97
Warning enum ... 97
IDataCaptureCoreAPI interface ... 98
Callback interface ... 99
onError method ... 100
onProgress method ... 100
onTextOrientationDetected method ... 101
DataCaptureSettings interface ... 101
setRecognitionLanguage method ... 101
setProfile method ... 102
ExtendedSettings interface ... 102
ProcessingSettings interface ... 102
getProcessingThreadsCount method ... 103
setProcessingThreadsCount method ... 103

DataField class ... 103
close method ... 104
extractDataFromImage method ... 105
getDataCaptureSettings method ... 105
getExtendedSettings method ... 105
Warning enum ... 106
IImagingCoreAPI interface ... 106
ExportOperation interface ... 108
addPage method ... 109
Compression enum ... 109
ExtendedSettings interface ... 110
Image interface ... 110
close method ... 110
toBitmap method ... 110
ImageOperation interface ... 111
apply method ... 111
CropOperation class ... 111
DetectDocumentBoundaryOperation class ... 112
ExportToJpgOperation class ... 113
ExportToPdfOperation class ... 113
ExportToPngOperation class ... 114
ExportToWebPOperation class ... 114
QualityAssessmentForOcrOperation class ... 115
RotateOperation class ... 115
close method ... 116
createCropOperation method ... 116
createDetectDocumentBoundaryOperation method ... 116
createExportToJpgOperation method ... 117
createExportToPngOperation method ... 117
createExportToWebPOperation method ... 117
createExportToPdfOperation method ... 118
createQualityAssessmentForOcrOperation method ... 118
createRotateOperation method ... 119
getExtendedSettings method ... 119
loadImage from bitmap method ... 119
loadImage from byte buffer method ... 119
Language enum ... 120

User Interface API Reference ... 122

CaptureView class ... 122
CameraSettings interface ... 123
Resolution enum class ... 124
hasFlashlight method ... 124
isFlashlightEnabled method ... 124

setFlashlightEnabled method ... 125
setResolution method ... 125
getResolution method ... 125
ExtendedSettings interface ... 126
setAdditionalPermissions method ... 126
setRequestPermissionsResultCallback method ... 126
UISettings interface ... 127
Theme enum class ... 128
setCustomColor method ... 130
getCustomColor method ... 131
setCaptureButtonVisible method ... 131
isCaptureButtonVisible method ... 131
setFlashlightButtonVisible method ... 131
isFlashlightButtonVisible method ... 132
setTheme method ... 132
getTheme method ... 132
getCameraSettings method ... 133
getUISettings method ... 133
setCaptureScenario method ... 133
startCamera method ... 134
stopCamera method ... 134
CaptureScenario ... 134
ImageCaptureScenario class ... 134
Callback interface ... 136
onError method ... 136
onImageCaptured method ... 137
DocumentSize data class ... 137
Result class ... 138
captureImageManually method ... 138
setCallback method ... 138
setCropEnabled method ... 139
isCropEnabled method ... 139
setDocumentSize method ... 139
getDocumentSize method ... 140
setMinimumDocumentToViewRatio method ... 140
getMinimumDocumentToViewRatio method ... 140
start method ... 141
stop method ... 141

Specifications ... 142

Device Requirements ... 142
Distribution Kit ... 142
Available Recognition Languages ... 158
Translation Dictionaries ... 162

Supported ID Documents 163
Data Capture Profiles 165
Regular Expressions 441
Copyright and Trademark Notices 444

Contact ABBYY 447

How to Buy 447
Technical Support 447

Introducing ABBYY Mobile Capture

Welcome to ABBYY Mobile Capture.

ABBYY Mobile Capture is a software development kit that provides flexible methods of mobile data capture. The Mobile Capture SDK will automatically capture the image for further back-end processing or recognize the data from the document in real-time on the mobile device, requiring minimal interaction from the user.

Key features:

The ABBYY Mobile Capture SDK can power your applications with:

Out-of-the-box image capture: Easily add image capture with UI components by utilizing our API, to automatically capture the best quality image suitable for OCR for further back-end processing.

Automatic document detection: Detects document boundaries, crops and corrects perspective.

On device OCR: Automatically recognizes text from a static image or on the smartphones' camera preview screen from video stream by simply pointing the camera on the document or object.

Customizable data capture: Extract any specific data from a document by setting a regular expression describing the required content. Capture machine-readable zones (MRZ) or international bank account numbers (IBAN) by simply applying predefined profiles.

Out-of-the-box document capture: Easily add ready-made functionality to extract important fields from specific documents: passports, IDs, driver licenses, bank cards and others.

Ready-to-use business card reading: Allows automatic and convenient extraction of contact data from business cards by simply pointing the camera at the card to use within your mobile CRM or lead management app or for customer onboarding.

Out-of-the-box image capture scenario: Implement image capture by adding just a few lines of code to your app, using API that can draw UI, handle phone camera and perform image capture.

Translation: Provides built-in translation dictionaries; word-by-word and phrase-by-phrase.

Benefits:

- *Increase your customer retention rates:* Provide your customers with a seamless customer experience with a friendly mobile onboarding solution, meeting customers in their preferred channel with accurate results and minimal steps for the end user.
- *Get ahead of the competition:* Provide a better customer experience by minimizing the efforts by the end user to capture and deliver data within the onboarding experience with seamless accurate back-end integration to process the required information.
- *Optimize your development resources:* Easily integrate a pre-built comprehensive mobile capture solution into your mobile application.

Guided Tour

This section will help you to get started using ABBYY Mobile Capture.

- How to Add the Library to Your Android Studio Project
- Implementation of any capture scenario, using the User Interface API
- Step-by-step guides to the simple scenarios:
  - How to Capture Text from Camera
  - How to Recognize Text on Photos
  - How to Capture Data from Documents
  - How to Capture a Custom Data Field
  - How to Capture Image from Camera
- Code Samples

How to Add the Library to Your Android Studio Project

To create an application which uses ABBYY Mobile Capture SDK, you will need to add the library and its assets to your project. This is required for new projects only — packaged code samples work out of the box.

1. If you are using a Maven or Ivy repository, add the ABBYY Mobile Capture SDK package there. If not, you can copy the library ***.aar** files to your project or another folder and add this location as a flat repository. For example, add the following to the top-level **build.gradle** file in your project:

```
repositories {
    flatDir {
        dirs '<path to folder with the .AAR files>'
    }
}
```

2. Add the libraries dependency to the module-level **build.gradle** file for each required ***.aar** file. For example:

```
dependencies {
    implementation(name:'abbyy-rtr-sdk-1.0', ext:'aar')
    implementation(name:'abbyy-ui-1.0', ext:'aar')
}
```

3. In order to use UI components in your project add Kotlin std-lib dependency to the **build.gradle** file:

```
dependencies {
    implementation 'org.jetbrains.kotlin:kotlin-stdlib:1.3.31'
}
```

Note: *Adding Kotlin std-lib to 'dependencies' does not add Kotlin support to your project, nor does it pose any restrictions to the language you are using. This is just a regular library dependency.*

4. Copy the assets you need from the distribution to your project's assets (by default, **app/src/main/assets**). There are three types of resources used by the library: dictionaries, patterns, and translation dictionaries. See Distribution Kit for a detailed description of the necessary resources.

Important! *Your application needs Internet connection to gather the information about the current state of the library. Include the following line into your* ***AndroidManifest.xml****:*

```
<uses-permission android:name="android.permission.INTERNET" />
```

Note: *Please ensure that file compression is disabled in your IDE, because it may influence correct image processing. For example, detailed analysis may not work properly.*

How to Implement Capture Scenario With User Interface

This guide helps you to implement the whole capture scenario including the user interface part with just a little effort.

How it works

Mobile Capture technologies can be easily integrated to your application with the User Interface API. To implement any type of capture scenario you should just set preferable one during the User Interface implementation. Inner UI functionality extends the standard camera mode with features required for capturing elements. Specify the events, on which the capture scenario will start, and receive the results.

Note: *Currently UI components support only Mobile Imaging scenario integration. Other scenarios will be integrated in future versions.*

Implementation

Below you can find description of a basic image capture scenario with UI components.

1. Before you start, add the **CaptureView** class to the XML layout of your Activity or Fragment with default parameters. If you are implementing a non-English app, you can override the string resources of the user interface, using the attributes' IDs (see CaptureView attributes for details).

2. Receive the **CaptureView** class object from your layout inside the **onCreate** Activity or **onViewCreated** Fragment.

3. Redefine the **onResume** and **onPause** methods, embedding the UI components methods:

   - add **startCamera** method to the **onResume** method;
   - add **stopCamera** method to the **onPause** method.

4. Call the **Engine.load** method on the UI thread to create an engine object, required for all recognition mechanisms to work. This object should be reused for every new operation and should not be created again in the same activity.

5. Create the **ImageCaptureScenario** object, passing the created **Engine** object to its constructor, to connect the user interface and recognition parts.

6. Implement the **Callback** interface. Create the **Callback** object with the **ImageCaptureScenario.setCallback** method. The methods of the callback will be used to get the result and monitor errors. Here are brief recommendations on what the methods should do:
   - the **onImageCaptured** method returns the image as a **Result** object;
   - the **onError** method is for handling processing errors.
7. Use the **CaptureView.setCaptureScenario** method to set the capture scenario.

Note: *Currently only Mobile Imaging scenario is supported.*

8. Start performing the scenario with the **start** method of the **ImageCaptureScenario** object.
9. Wait for the response or an error in the callback.

See the description of classes and methods in the User Interface API Reference section.

How to Capture Text from Camera with Android

This guide walks you through a simple real-time text capture scenario, in which the user points the device's camera at the text to be recognized.

How it Works

The purpose of Mobile Capture SDK for OCR development is to enable your application to capture information directly from the smartphone camera preview frames, without actually snapping a picture. Once you start capturing, the Mobile Capture SDK engine will automatically receive new camera frames and process them, using each new frame to verify and improve the recognition result from the previous frame. This process is continued until the result reaches the required stability level. Combining several images enables Mobile Capture SDK to recognize text even in situation when it is hard to obtain a still photo of suitable quality for recognition.

Note that Mobile Capture SDK also supports recognizing text on an image that was already saved to a file, which allows it to process existing photos, scanned texts, and so on. See How to Recognize Text on Photos for the description of this scenario.

Implementation

Note: *Before you begin, see How to Add the Library to Your Android Studio Project.*

To implement the real-time text capture scenario, follow these steps:

1. Begin with the **Callback** interface implementation. Its methods will be used to pass the data to and from the recognition service. Here are the brief recommendations on what the methods should do:
   - The **onRequestLatestFrame** method should retrieve the image from the camera and pass it on to the **ITextCaptureService.submitRequestedFrame** method.
   - The **onFrameProcessed** method is where you work with the results, display them to the user, etc.
   - The **onError** method is for handling processing errors.
2. Call the **Engine.load** method on the UI thread to create an engine object via which all other objects may be created. This object should be reused for every new operation and should not be created again in the same activity.

3. Use the **createTextCaptureService** method of the **Engine** object to create a background recognition service (implementing the **ITextCaptureService** interface) on the UI thread. Only one instance of the service per application is necessary: multiple threads will be started internally.

4. Set up the processing parameters, according to the kind of text you expect to capture.
   The default text language is English; if you need other languages, specify them using the **setRecognitionLanguage** method.

5. When the camera is ready, call the **start** method of the **ITextCaptureService** interface. Required input parameters are the size and orientation of the video frame and the rectangular area of interest (e.g. if your application displays a highlighted rectangle in the center of the image, this rectangle should be specified as the "area of interest").
   The service will then start up several working threads and continue interacting with your application via the **Callback** interface.

6. Whenever the **Callback.onRequestLatestFrame** method is called, request for the current video frame from the camera and provide it to the service by callling **ITextCaptureService.submitRequestedFrame**.

7. The **Callback.onFrameProcessed** method is called on the UI thread to return the result when a frame is recognized.
   It also reports the result stability status, which indicates if the result is available and if it is likely to be improved by adding further frames (see the *resultStatus* parameter). Use it to determine whether the application should stop processing and display the result to the user. We do not recommend using the result until the stability level has reached at least Available.
   The result consists of one or more text lines represented by objects of the **TextLine** class. Each **TextLine** contains information about the bounding quadrangle for a single line of text and the recognized text as a string.
   Work with the results on your side.

8. When the appropriate result was get, as well as on pausing or quitting the application, call the **ITextCaptureService.stop** method to terminate the processing threads.

See the description of classes and methods in the API Reference section.

How to Recognize Text on Photos

This guide explains how Mobile Capture SDK can be used as a common OCR solution, recognizing text on existing images.

How it Works

Mobile Capture SDK provides access to single image processing functions, enabling the generic OCR functionality. This scenario works with any image file you can load to memory. It does not require access to the camera on the device.

Implementation

Note: *Before you begin, see How to Add the Library to Your Android Studio Project.*

To implement the image recognition scenario, follow these steps:

1. Begin with the **TextRecognitionCallback** interface implementation. Its methods will be used to get status information and control the recognition process. Here are the brief recommendations on what the methods should do:
   - The **onProgress** method is used to report recognition status. It also allows you to interrupt the recognition process.
   - The **onTextOrientationDetected** provides information about the image normal orientation, which may be used for the image rotation.
   - The **onError** method is for handling processing errors.
2. Call the **Engine.load** method to create an engine object via which all other objects may be created. This object should be reused for every new operation and should not be created again in the same activity.
3. Use the **createRecognitionCoreAPI** method of the **Engine** object to create a recognizer object (implementing the **IRecognitionCoreAPI** interface). Use this object on the thread on which it was created; you may also create several objects on different threads and use them concurrently. All **IRecognitionCoreAPI** interface method calls are synchronous (will not return until the operation is completed), so the recognizer should not be used on the UI thread.
4. If you want to change recognition settings, use **IRecognitionCoreAPI.getTextRecognitionSettings** to get a **TextRecognitionSettings** object, then use its methods to set the recognition area and text language.
   - If you are using a recognition language different from English, specify it using the **TextRecognitionSettings.setRecognitionLanguage** method. Multiple languages are also supported, although setting too many languages may decrease recognition performance.
   - It is also recommended to call the **TextRecognitionSettings.setAreaOfInterest** method to specify the rectangular area of the image where to search for text. For example, your application may provide controls that allow user to select a smaller part of image for recognition if needed. Also, best results are achieved when between the area of interest and the text there is at least half the size of a typical printed character.
5. You can also set the number of processing threads using the object returned by **IRecognitionCoreAPI.getProcessingSettings** (**ProcessingSettings** interface).
6. To start recognition, call the **recognizeText** method of the **IRecognitionCoreAPI** interface. Its required input parameters are the bitmap to process and your instance **TextRecognitionCallback** object. The recognizer will start up several working threads and continue interacting with your application via the **TextRecognitionCallback** interface.
7. When finished, the **recognizeText** method will return an array of **TextBlock** objects which contain the results of recognition for the text areas found on the image. Each **TextBlock** contains one or more text lines represented by **TextLine** objects. Each **TextLine** contains information about the bounding quadrangle for a single line of text and the recognized text as a string.
   Work with the results on your side.
8. When the appropriate result was get, as well as on pausing or quitting the application, call the **IRecognitionCoreAPI.close** method to release resources.

See the description of classes and methods in the API Reference section.

How to Capture Data from Documents

This guide describes the procedure you need to follow to create an application which captures data from a specified type of document, without snapping a photo.

How it Works

In data capture scenarios, the processing quality is improved by the fact that we know which kind of data fields may be expected on the document. When you start capturing, you specify the type of document you are going to recognize (a data capture profile). The Mobile Capture SDK engine will automatically receive new camera frames and process them, trying to apply corresponding result schemes. The engine uses each new frame to verify and improve the recognition result from the previous frame. This process is continued until a specific result scheme is matched and the result reaches the required stability level.

For some data capture profiles, there are two or more corresponding result schemes. The difference between a data capture profile and a result scheme is the following:

- A data capture profile is the general type of document you specify to the engine — for example, a bank card or some document with a machine-readable zone (MRZ).
- A result scheme is a more specific identifier of the recognized document, returned by the engine — for example, an embossed or unembossed bank card, or a specific MRZ (from a passport, visa, travel document, and so on).

The profile you specify determines which result schemes may be applied during recognition, and the result scheme determines which document fields will be recognized and returned as the result. Data capture profiles and corresponding result schemes supported in Mobile Capture library are detailed in Data Capture Profiles; see also the summary below in Supported ID Documents.

Note that Mobile Capture SDK also allows you to create custom data capture profiles for documents that are not supported out-of-the-box. See How to Capture a Custom Data Field for the description of this scenario.

Supported Documents

Mobile Capture SDK provides predefined data capture profiles for many types of data, including:

- machine-readable zone (MRZ) in various documents,
- international bank account numbers (IBAN),
- bank card details,
- data from ID documents:
  - ID cards,
  - passports,
  - driver's licenses, and other.

Recognizing with predefined profiles does not require you to set specific rules or specify regular expressions that should match document fields. You simply specify a data capture profile (the general type of a document) and get recognized data with a more specific result scheme identifying the recognized document.

MRZ

Mobile Capture SDK can automatically detect and recognize the machine-readable zone (MRZ) on various ID documents: passports, ID cards, travel documents, and other. For details on supported MRZ types and recognized data, see MRZ profiles.



For example, when recognizing a 2-line or 3-line MRZ of a passport or an ID document, Mobile Capture SDK will recognize and extract the following data:

- Document type and subtype
- Document number
- The country where the document was issued
- Document holder's first and last name, date of birth, sex and nationality
- Document holder's personal number
- Document expiry date

IBAN

Mobile Capture SDK allows to automatically detect and extract international bank account numbers for Germany, France, Spain, and the United Kingdom. IBAN can be extracted from any document.



Bank card

Mobile Capture SDK can capture data from debit and credit cards, embossed and unembossed.

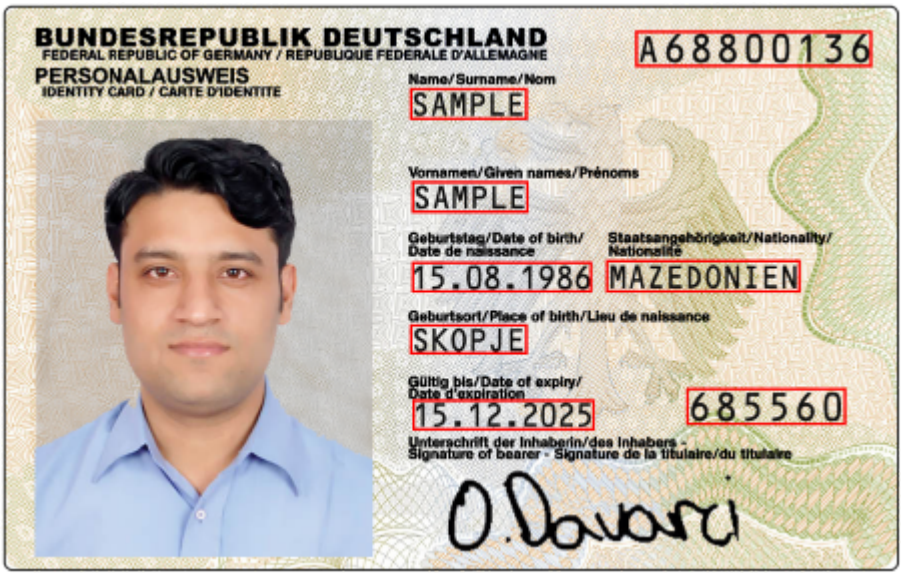




When recognizing a bank card, Mobile Capture SDK will detect and extract the card number, cardholder's full name, and date of expiry.

ID documents

Mobile Capture SDK can automatically extract data from various ID documents such as ID cards, driver's licenses, passports, and other documents from different countries (see Data Capture Profiles for detailed information).



For example, when recognizing the front side of a German ID card, Mobile Capture SDK will detect and extract the following data:

- Document number
- Document holder's first and last name, nationality, date and place of birth
- RFID number
- Document expiry date

The rest of the data in the German ID card scheme is recognized from the back side of the card; note that the data capture profile you specify and the result data scheme are the same for both card sides.

Business card

Mobile Capture SDK can automatically extract data from various business cards (see Business cards schema description for detailed information).



On the business card, recognized by Mobile Capture SDK, the following data will be detected and extracted:

- First Name/Last Name
- Phone and/or mobile phone number
- Fax number
- Web address
- Mailing and E-mail address
- Company name
- Job title

The recognition languages of the business card can be specified via data capture profile settings. Please note, that capturing business cards with non-Latin scripts requires English language for E-mail and Web address recognition.

Important! *For best business cards recognition accuracy Full High Definition (Full HD) camera stream is required.*

Implementation

Note: *Before you begin, see How to Add the Library to Your Android Studio Project.*

To implement the document data capture scenario, follow these steps:

1. Begin with the **Callback** interface implementation. Its methods will be used to pass the data to and from the recognition service. Here are the brief recommendations on what the methods should do:
   - The **onRequestLatestFrame** method should retrieve the image from the camera and pass it on to the **IDataCaptureService.submitRequestedFrame** method.
   - The **onFrameProcessed** method is where you work with the results, display them to the user, etc.
   - The **onError** method is for handling processing errors.
2. Call the **Engine.load** method on the UI thread to create an engine object via which all other objects may be created. This object should be reused for every new operation and should not be created again in the same activity.

3. Use the **createDataCaptureService** method of the **Engine** object to create a background recognition service (implementing the **IDataCaptureService** interface). Set the type of document you are going to capture using the *profileName* parameter — for example, `"IBAN"` or `"MRZ"`. The service is created and will further work with this profile (for a full list of available profiles, see Data Capture Profiles). Only one instance of the service per application is necessary: multiple threads will be started internally.

4. When the camera is ready, call the **start** method of the **IDataCaptureService** interface. Its required input parameters are the size and orientation of the video frame and the rectangular area of interest (e.g. if your application displays a highlighted rectangle in the center of the image, this rectangle should be specified as the "area of interest").
   The service will then start up several working threads and continue interacting with your application via the **Callback** interface.

5. Whenever the **Callback.onRequestLatestFrame** method is called, provide the current video frame from the camera by calling **IDataCaptureService.submitRequestedFrame**.

6. The **Callback.onFrameProcessed** method will be called on the UI thread to return the result. Its parameters are:
   - a **DataScheme** object; use its **Id** property to determine what recognition scheme has been applied to the document (some profiles provide two or more recognition result schemes), and its **Name** property to display a human-readable description to the user, if needed. For details on recognition schemes corresponding to the profile you selected, see Data Capture Profiles.
   - an array of **DataField** objects, each representing one of the fields found and recognized. A **DataField** object provides the identifier and the human-readable name for the field, the field text, and its location.
   - the result stability status, which indicates if the result is available and if it is likely to be improved by adding further frames. Use it to determine whether the application should stop processing and display the result to the user. We do not recommend using the result until the stability level has reached at least Available and the data scheme has been matched.

7. Save the results for the recognized page. Call the **IDataCaptureService.stop** method to terminate the processing threads and clean up image buffers.

See the description of classes and methods in the API Reference section.

How to Capture a Custom Data Field with Android

This section contains a step-by-step guide to creating an application that captures a single custom data field.

How it Works

With Mobile Capture SDK you can create custom data capture profiles for documents that are not supported out-of-the-box. In the corresponding result schemes you define custom data fields. (Currently, only one scheme per profile is supported, and only one field may be defined in the scheme). To tell the recognition engine that some text string is a data value (a field value), you will have to specify a regular expression that should match the strings you are looking for. The value may be a date, some code with a known format, and so on: the more specific the data is, the easier it would be to capture it.

This guide uses an alphanumeric code as an example of data that can be captured. Code format is the following: it contains 15 characters that are either digits or capital letters, and the first two characters are always digits. Example: 69KL46D7WF2AR5U.

Implementation

Note: *Before you begin, see How to Add the Library to Your Android Studio Project.*

To implement the custom data field capture scenario, follow these steps:

1. Begin with the **Callback** interface implementation. Its methods will be used to pass the data to and from the recognition service. Here are the brief recommendations on what the methods should do:
   - The **onRequestLatestFrame** method should retrieve the image from the camera and pass it on to the **IDataCaptureService.submitRequestedFrame** method.
   - The **onFrameProcessed** method is where you work with the results, display them to the user, etc.
   - The **onError** method is for handling processing errors.
2. Call the **Engine.load** method on the UI thread to create an engine object via which all other objects may be created. This object should be reused for every new operation and should not be created again in the same activity.
3. Use the **createDataCaptureService** method of the **Engine** object to create a background recognition service (implementing the **IDataCaptureService** interface). The *profileName* should be an empty string (or **null**): you are going to add your custom profile and then apply it to the service.
   Only one instance of the service per application is necessary: multiple threads will be started internally.
4. Call the **configureDataCaptureProfile** method of the **IDataCaptureService** object to create an **IDataCaptureProfileBuilder** object. Then use its **addScheme** method to create an **ISchemeBuilder** object. The scheme builder allows you to set a human-readable name to the scheme (for example, it can be used for UI labels) and to add field definitions.
5. Call **ISchemeBuilder.addField** to create an **IFieldBuilder** object. The field builder is used to configure field's properties — its human-readable name and recognition rules.
6. Call **IFieldBuilder.setRegEx** to set the regular expression that should match the field text. The *regEx* parameter is `"[0-9]{2}[0-9A-Z]{13}"` — match 2 digits followed by 13 characters which are digits or capital letters.

Note: *For details on regular expression syntax supported in ABBYY Mobile Capture SDK, see the Regular Expressions section.*
Also you can implement any string predicate and use it for additional validation after the data has passed the regular expression check — for example, calculate the field's checksum. To do so, implement **Predicate<T>** for the String type and set it as the additional validation callback using **setOnValidate**. An alphanumeric code needs no additional checks, so this step is skipped here.

7. After you have configured the field and scheme builders, call **IDataCaptureProfileBuilder.checkAndApply** to submit the profile for use in the data capture service. If an error is returned at this stage, it is probable the regular expression has mistakes in the syntax, please check it again.

Note: *The methods of builder objects return these objects, so in your code the steps above can be shortened as follows:*

```
IDataCaptureService dataCaptureService =
engine.createDataCaptureService( "", callback );
IDataCaptureProfileBuilder profileBuilder =
dataCaptureService.configureDataCaptureProfile()
    .setRecognitionLanguage( "English" );
```

```
profileBuilder.addScheme( "sampleScheme" )
    .setName( "Sample Profile" )
    .addField( "sampleField" )
        .setName( "Some Alphanumeric Code" )
        .setRegEx( "[0-9]{2}[0-9A-Z]{13}" );

profileBuilder.checkAndApply();
```

8. When the camera is ready, call the **start** method of the **IDataCaptureService** interface. Its required input parameters are the size and orientation of the video frame and the rectangular area of interest (e.g. if your application displays a highlighted rectangle in the center of the image, this rectangle should be specified as the "area of interest").
   The service will then start up several working threads and continue interacting with your application via the **Callback** interface.

9. Whenever the **Callback.onRequestLatestFrame** method is called, provide the current video frame from the camera by calling **IDataCaptureService.submitRequestedFrame**.

10. The **Callback.onFrameProcessed** method will be called on the UI thread to return the result. Its parameters are:
    - A **DataScheme** object; its **Id** property should return the same identifier that you have specified when adding the scheme (the *id* argument to **addScheme**).
    - An array of **DataField** objects, each representing one of the fields found and recognized. A **DataField** object provides the identifier and the human-readable name for the field, the field text, and its location.
    - The result stability status, which indicates if the result is available and if it is likely to be improved by adding further frames. Use it to determine whether the application should stop processing and display the result to the user. We do not recommend using the result until the stability level has reached at least Available and the data scheme has been matched.

11. Save the results. Call the **IDataCaptureService.stop** method to terminate the processing threads and clean up image buffers.

See the description of classes and methods in the API Reference section.

How to Capture Image from Camera

This guide walks you through a simple image capture scenario, in which the user points the device's camera at the document for capturing the image before sending to the server.

How it Works

The purpose of image capture scenario is to enable your application to capture the image from the smartphone camera preview frames. Once you begin capturing, the Mobile Capture engine will automatically receive new camera frames, detecting the quality assessment of the captured image to OCR and filtering out low quality photos. This process is continued until the result reaches the required stability level. Accessible image is cropped and justified. Then it can be compressed and exported to the processing server.

Implementation

Note: *Before you begin, see Build your application with the library for Android.*

To implement the image capture scenario, follow these steps:

1. Begin with the **Callback** interface implementation. Its methods will be used to pass the data to and from the recognition service. Here are the brief recommendations on what the methods should do:
   - The **onRequestLatestFrame** method should retrieve the image from the camera and pass it on to the **IImageCaptureService.submitRequestedFrame** method.
   - The **onFrameProcessed** method is where you work with the results, display them to the user, etc.
   - The **onError** method is for handling processing errors.
2. Call the **Engine.load** method on the UI thread to create an engine object via which all other objects may be created. This object should be reused for every new operation and should not be created again in the same activity.
3. Use the **createImageCaptureService** method of the **Engine** object to create a background recognition service (implementing the **IImageCaptureService** interface) on the UI thread. Only one instance of the service per application is necessary: multiple threads will be started internally.
4. When the camera is ready, call the **start** method of the **IImageCaptureService** interface. Its required input parameters are the size and orientation of the video frame. You can also specify the rectangular area where the document is supposed to be (e.g. if your application displays a highlighted rectangle in the center of the image, this rectangle should be specified as the "area of interest").
   The service will then start up several working threads and continue interacting with your application via the **Callback** interface.
5. Whenever the **Callback.onRequestLatestFrame** method is called, provide the current video frame from the camera by calling **IImageCaptureService.submitRequestedFrame**.
6. The **Callback.onFrameProcessed** method will be called on the UI thread to return the result as an instance of the **IImageCaptureService.Result** class when the frame is processed.
7. Process the applicable result using the **IImagingCoreAPI** functionality:
   - load the captured image to an **IImagingCoreAPI.Image** interface instance;
   - crop it with the **IImagingCoreAPI.CropOperation** in case perspective distortion should be corrected.
8. Export the processed result to the server in one of available formats: JPG, PNG, PDF or WebP. It is recommended to use the *Normal* compression mode to keep high quality while minimizing the image size.
9. When the appropriate result was get, as well as on pausing or quitting the application, call the **IImageCaptureService.stop** method to terminate the processing threads.

See the description of classes and methods in the API Reference section.

Code Samples

The ABBYY Mobile Capture SDK distribution package includes several code samples that show API usage and provide examples of typical scenarios.

The code samples are found in the root folder of the distribution package. All samples are provided in Java.

Sample scenario	Folder name	Description
Text Capture	**sample-textcapture**	A simple text capture scenario. The only setting available to the user is the text language.
Data Capture	**sample-datacapture**	The general data capture scenario showing how to capture a predefined document and a custom data field.
Image Capture	**sample-imagecapture**	This simple image capture scenario demonstrates how to automatically capture an image from the smartphone video preview frames.
	sample-ui-imagecapture	The image capture scenario and corresponding user interface implementation with the special API for UI.
	sample-imagecapture-camera2	The image capture scenario demonstrating how to automatically capture an image using android.hardware.camera2 special package for Android.
Core API	**sample-coreapi**	The sample demonstrates a simple scenario of a single image processing with the core API.

Configuring the code samples

The samples can be opened and built right from where they are in the downloaded distribution package. To work with any of the code samples you need to do only a little configuring first.

1. Please change the application ID before building, modifying or otherwise using any of the samples.

2. All samples expect that the license file (named **license**) is found into the **assets** folder located in the distribution package root. Copy your license to this folder and rename the file if necessary (a license obtained from your supplier may have a different name).
   You can also change the license file name in the sample code as below:

```
public class MainActivity extends Activity {

    // Licensing
    private static final String licenseFileName = "license";
```

API Reference

This section describes the Java API of ABBYY Mobile Capture SDK.

Classes

- Engine
- IDataCaptureService.CharInfo
- IDataCaptureService.DataField
- IDataCaptureService.DataScheme
- IDataCaptureService.TextLine
- IImageCaptureService.QualityAssessmentForOcrBlock
- IImageCaptureService.Result
- IImageCaptureService.Status
- IImagingCoreAPI.CropOperation
- IImagingCoreAPI.DetectDocumentBoundaryOperation
- IImagingCoreAPI.ExportToJpgOperation
- IImagingCoreAPI.ExportToPdfOperation
- IImagingCoreAPI.ExportToPngOperation
- IImagingCoreAPI.ExportToWebPOperation
- IImagingCoreAPI.QualityAssessmentForOcrOperation
- IImagingCoreAPI.RotateOperation
- ITextCaptureService.CharInfo
- ITextCaptureService.TextLine
- IRecognitionCoreAPI.CharInfo
- IRecognitionCoreAPI.TextBlock
- IRecognitionCoreAPI.TextLine

Interfaces

- Engine.EngineSettings
- IDataCaptureProfileBuilder
- IDataCaptureProfileBuilder.IFieldBuilder
- IDataCaptureProfileBuilder.ISchemeBuilder
- IDataCaptureProfileBuilder.Predicate<T>
- IDataCaptureCoreAPI
- IDataCaptureCoreAPI.DataCaptureSettings
- IImagingCoreAPI
- IImagingCoreAPI.ExportOperation
- IImagingCoreAPI.Image
- IImagingCoreAPI.ImageOperation
- IRecognitionService
  - IDataCaptureService
  - IImageCaptureService
  - ITextCaptureService
- IRecognitionService.Callback
  - IDataCaptureService.Callback
  - IImageCaptureService.Callback
  - ITextCaptureService.Callback
- IRecognitionService.DebugLog
  - IDataCaptureService.DebugLog
  - IImageCaptureService.DebugLog
  - ITextCaptureService.DebugLog

- IRecognitionService.ExtendedSettings
  - IDataCaptureService.ExtendedSettings
  - ITextCaptureService.ExtendedSettings
  - IImageCaptureService.ExtendedSettings
- IRecognitionCoreAPI
  - IRecognitionCoreAPI.ProcessingSettings
  - IRecognitionCoreAPI.TextRecognitionCallback
  - IRecognitionCoreAPI.TextRecognitionSettings

Enumerations

- IRecognitionService.ResultStabilityStatus
  - IDataCaptureService.ResultStabilityStatus
  - ITextCaptureService.ResultStabilityStatus
- IRecognitionService.Warning
  - IDataCaptureService.Warning
  - ITextCaptureService.Warning
- IRecognitionCoreAPI.Warning
- Language

Exceptions

- Engine.LicenseException
- IDataCaptureProfileBuilder.ProfileCheckException

Engine class

ABBYY Mobile Capture SDK engine via which all other objects may be created.

Creating the **Engine** and initializing the library may take up a lot of time, since all the resources have to be loaded. Therefore this object should only be created once (using the load method), when initializing the main activity of your application, and you should reuse it every time you need to start a new recognition operation.

```
public abstract class Engine
```

Methods

Name	Description
createDataCaptureService	Creates a background recognition service to run in data capture mode.
createRecognitionCoreAPI	Creates a core API object which provides access to low-level single image recognition functions.
createTextCaptureService	Creates a background recognition service to run in text capture mode.

Name	Description
createImageCaptureService	Creates a background recognition service to run in image capture mode.
createImagingCoreAPI	Creates a core API object which provides access to low-level single image recognition functions.
getExtendedSettings	Provides access to the EngineSettings object via which you may specify additional settings for all scenarios.
load	Loads the ABBYY Mobile Capture SDK engine.
unload	***Important!*** *Using this method is not recommended.* Unloads the ABBYY Mobile Capture SDK engine.

Nested classes

Name	Description
LicenseException	The exception thrown when an invalid license is loaded.
EngineSettings	Additional settings for ABBYY Mobile Capture SDK engine which apply to all processing scenarios.

load method of the Engine class

Loads the ABBYY Mobile Capture SDK engine.

Creating the Engine and initializing the library may take up a lot of time, because all the resources need to be loaded. Therefore you should call this method only once, when initializing the main activity of your application, and reuse the Engine object every time you need to start a new recognition operation.

```
public static Engine load( Context context, String licenseFilePath ) throws
IOException, LicenseException
```

Parameters

context

The application context.

licenseFilePath

The path to the license file relative to the **assets** directory.

Return values

The method returns an instance of the **Engine** object.

Exceptions

Throws **java.io.IOException** if a required library or resource is not found or could not be loaded.

Throws **Engine.LicenseException** if the specified license is invalid.

createDataCaptureService method of the Engine class

Creates a background recognition service to run in data capture mode. Only one instance of the service per application is necessary: multiple threads for processing will be started internally.

```
public abstract IDataCaptureService createDataCaptureService( String
profileName, IDataCaptureService.Callback callback );
```

Parameters

profileName

The name of a data capture profile (data scheme) to use. For the available predefined profiles see Data Capture Profiles.
Use an empty string or **null** to configure your own profile for custom data field capture with the help of the **IDataCaptureService.configureDataCaptureProfile** method.

callback

An object implementing the **IDataCaptureService.Callback** interface, which will handle requests from the service.

Return values

The method returns a data capture service object implementing the **IDataCaptureService** interface.

createRecognitionCoreAPI method of the Engine class

Creates a core API object which provides access to low-level single image processing functions.

```
public abstract IRecognitionCoreAPI createRecognitionCoreAPI();
```

Return values

The method returns an object implementing the **IRecognitionCoreAPI** interface.

createImageCaptureService method of the Engine class

Creates a background recognition service to run in image capture mode. Only one instance of the service per application is necessary: multiple threads for processing will be started internally.

```
public abstract IImageCaptureService
createImageCaptureService( IImageCaptureService.Callback callback );
```

Parameters

callback

An object implementing the **IImageCaptureService.Callback** interface, which will handle requests from the service.

Return values

The method returns a data capture service object implementing the **IImageCaptureService** interface.

createImagingCoreAPI method of the Engine class

Creates a core API object which provides access to low-level single image processing functions.

```
public abstract IImagingCoreAPI createImagingCoreAPI();
```

Return values

The method returns an object implementing the **IImagingCoreAPI** interface.

createTextCaptureService method of the Engine class

Creates a background recognition service to run in text capture mode. Only one instance of the service per application is necessary: multiple threads for processing will be started internally.

```
public abstract ITextCaptureService
createTextCaptureService( ITextCaptureService.Callback callback );
```

Parameters

callback

An object implementing the **ITextCaptureService.Callback** interface, which will handle requests from the service.

Return values

The method returns a text capture service object implementing the **ITextCaptureService** interface.

getEngineSettings method of the Engine class

Provides access to the **EngineSettings** object via which you may specify additional settings for all scenarios.

```
EngineSettings getExtendedSettings();
```

Return values

This method returns an object implementing the **EngineSettings** interface, which allows you to change the additional engine settings.

unload method of the Engine class

Important! *Using this method is not recommended.*

Unloads the ABBYY Mobile Capture SDK engine.

Explicitly unloading the engine is not required and **not recommended** for most applications. Use this method only if in your application the engine is used in a separate activity, which is not likely to be used repeatedly, and you absolutely must reclaim the memory. If this is the case, the most appropriate place to unload the engine is the **onDestroy** method of the activity.

```
public abstract void unload();
```

LicenseException class

The exception thrown when an invalid license is loaded.

```
public static final class LicenseException extends Exception
```

EngineSettings interface

Additional settings for ABBYY Mobile Capture SDK engine. They apply to all processing scenarios.

```
public interface EngineSettings
```

Methods

Name	Description
getExternalAssetsPath	Returns the path to the custom directory with the necessary resources.
setExternalAssetsPath	Sets the path to the custom directory with the necessary resources. By default, patterns and dictionaries which ABBYY Mobile Capture SDK needs are located in the **assets** folder. This setting allows you to store the resource files in another location, so that your application folder takes up less memory. The subfolder structure should be maintained. ***Important!*** *The license file should still be placed in* ***assets****.*

getExternalAssetsPath method of the EngineSettings interface

Returns the path to the custom directory with the necessary resources.

The program will search for any resource file it needs first in **assets**, then in the specified custom folder, each time looking in the corresponding subfolder. For example, it will try to locate a pattern file (*.rom) like this:

1) in **assets/patterns**
2) in **<custom search path>/patterns**
3) if the file is not found, an error will be returned

```
String getExternalAssetsPath();
```

Return values

The method returns the full path to the custom resource files folder.

setExternalAssetsPath method of the EngineSettings interface

Sets the path to the custom directory with the necessary resources.

The program will search for any resource file it needs first in **assets**, then in the specified custom folder, each time looking in the corresponding subfolder. For example, it will try to locate a pattern file (*.rom) like this:

1) in **assets/patterns**
2) in **<custom search path>/patterns**

3) if the file is not found, an error will be returned

```
void getExternalAssetsPath( String path );
```

Parameters

path

The path to the custom resources folder. Pass **null** for this parameter to search only in **assets**.

IDataCaptureProfileBuilder interface

The data capture profile builder interface. The profile builder allows you to configure the data capture service to recognize custom documents.

To define the custom document scheme, use **addScheme** and configure the builder with the **ISchemeBuilder** and **IFieldBuilder** interface methods. Then call **checkAndApply** to create the data capture profile with this scheme and apply it to the existing data capture service. Note that the service must not be running at the time of the **checkAndApply** call (use **IDataCaptureService.stop** if necessary).

```
public interface IDataCaptureProfileBuilder
```

Methods

Name	Description
addScheme	Adds a new empty scheme configuration to the builder.
checkAndApply	Checks builder settings, creates the profile and applies it to the data capture service.
setRecognitionLanguage	Sets the languages to use for recognition.

Nested classes

Name	Description
IFieldBuilder	The interface for a field builder used to define custom field properties.

Name	Description
ISchemeBuilder	The interface for a custom document scheme builder used to add fields to the scheme.
Predicate<T>	Represents a predicate (boolean-valued function) of one argument. Used in IFieldBuilder.setOnValidate.
ProfileCheckException	The exception thrown when invalid settings are found by the checkAndApply method.

IFieldBuilder interface

The interface for a field builder used to define the name and recognition rules for a custom field. The rules include regular expression matching and optional custom validation.

```
public static interface IDataCaptureProfileBuilder.IFieldBuilder
```

Methods

Name	Description
setName	Sets the human-readable name for the field.
setOnValidate	Sets the validation callback for additional checks not covered by regular expression matching.
setRegEx	Sets the regular expression that should match the field's text.

setName method of the IFieldBuilder interface

Sets the human-readable name for the field. This name corresponds to the **Name** property of the DataField class.

```
IFieldBuilder setName( String name );
```

Parameters

name

The field name.

Return values

The method returns the **IFieldBuilder** instance to which it belongs.

setOnValidate method of the IFieldBuilder interface

Sets the callback for additional validation performed after regular expression matching. This callback can be used for custom checks or tests that are not covered by regular expressions, for example, to calculate the field's checksum. If you do not perform such tests, there is no need to call this method.

```
IFieldBuilder setOnValidate( Predicate<String> onValidate );
```

Parameters

`onValidate`

An object implementing the **Predicate<T>** interface for the String type. Implemented by user.

Return values

The method returns the **IFieldBuilder** instance to which it belongs.

setRegEx method of the IFieldBuilder interface

Sets the regular expression that should match the field's text.

Note: *For details on regular expression syntax supported in ABBYY Mobile Capture SDK, see the Regular Expressions section.*

Important! *If the field contains two or more matches for the specified regular expression, the engine will extract and return only the first one.*

```
IFieldBuilder setRegEx( String regEx );
```

Parameters

regEx

A string describing the regular expression.

Return values

The method returns the **IFieldBuilder** instance to which it belongs.

ISchemeBuilder interface

The interface for a custom document scheme builder. Used to add fields to the scheme and set the name of the custom data capture profile.

Note: *Currently, only one scheme may exist in the profile, and only one field may be defined in the scheme.*

```
public static interface IDataCaptureProfileBuilder.ISchemeBuilder
```

Methods

Name	Description
addField	Adds a new field to the scheme.
setName	Sets the human-readable name for the scheme.

addField method of the ISchemeBuilder interface

Adds a new field to the scheme. Field properties are configured using the field builder returned by this method.

```
IFieldBuilder addField( String id );
```

Parameters

id

Internal field identifier, corresponds to the **Id** property of the DataField class. For a human-readable field name which you can display to the user, see IFieldBuilder.setName.

Return values

The method returns an IFieldBuilder instance.

setName method of the ISchemeBuilder interface

Sets the human-readable name for the scheme. This name corresponds to the **Name** property of the DataScheme class.

```
ISchemeBuilder setName( String name );
```

Parameters

name

The scheme name.

Return values

The method returns the **ISchemeBuilder** instance to which it belongs.

Predicate<T> interface

Represents a predicate (boolean-valued function) of one argument. Mimics the standard **java.util.function.Predicate<T>** interface defined in the Java API as of Java 8.

This interface and its **test** method are to be implemented on the client side.

```
public static interface IDataCaptureProfileBuilder.Predicate<T>
```

Methods

Name	Description
test	Evaluates this predicate on the given argument.

test method of the Predicate<T> interface

Evaluates the predicate on the given argument.

This method is to be implemented on the client side.

```
boolean test( T value );
```

Parameters

`value`

The input argument.

Return values

The method returns **true** if the input argument passes validation and **false** otherwise.

addScheme method of the IDataCaptureProfileBuilder interface

Adds a new empty scheme configuration to the profile builder. The scheme is then configured using the **ISchemeBuilder** interface methods.

```
ISchemeBuilder addScheme( String id );
```

Parameters

id

Internal scheme identifier, corresponds to the **Id** property of the **DataScheme** class. For a human-readable scheme name which you can display to the user, see **ISchemeBuilder.setName**.

Return values

The method returns an **ISchemeBuilder** instance.

checkAndApply method of the IDataCaptureProfileBuilder interface

Checks the profile builder's settings, creates the profile and applies it to the data capture service. This new profile replaces any previous profile, including a predefined profile if the latter was specified in the **createDataCaptureService** call.

Note that the data capture service must not be running when calling this method (use **IDataCaptureService.stop** if necessary).

```
void checkAndApply() throws ProfileCheckException;
```

Exceptions

Throws **IDataCaptureProfileBuilder.ProfileCheckException** if any of the profile settings are invalid.

setRecognitionLanguage method of the IDataCaptureProfileBuilder interface

Sets the languages to be used for field recognition.

By default, no language is set. Setting the correct languages for your document will improve recognition accuracy. However, setting too many languages may decrease performance.

```
IDataCaptureProfileBuilder setRecognitionLanguage( Language... languages );
```

Parameters

languages

One or more languages to be used for recognition, each represented by a constant of the **Language** enumeration.

Return values

The method returns the **IDataCaptureProfileBuilder** instance to which it belongs.

ProfileCheckException class

The exception thrown when a custom data capture profile cannot be applied due to invalid settings.

```
final class ProfileCheckException extends RuntimeException
```

IDataCaptureService interface

A background data capture service interface.

This interface provides methods to tune the processing settings, start and stop the work, and pass the video frames from the camera to the background processing engine.

Extends the **IRecognitionService** interface.

```
public interface IDataCaptureService extends IRecognitionService
```

Methods

Name	Description
configureDataCaptureProfile	Creates a profile builder object, which allows you to configure the data capture service to recognize custom documents.
getExtendedSettings	Provides access to extended service configuration settings. Inherited from **IRecognitionService**.
setAreaOfInterest	Sets the area on the frame where the text is to be found. Inherited from **IRecognitionService**.
setDebugLog	Attaches a callback for collecting debug data. Inherited from **IRecognitionService**.
start	Starts processing. Inherited from **IRecognitionService**.
stop	Stops processing and releases the resources used by the recognition service. Inherited from **IRecognitionService**.
submitRequestedFrame	Submits the video frame requested through the **Callback.onRequestLatestFrame** method. Inherited from **IRecognitionService**.

Nested classes

Name	Description
Callback	A callback interface to interact with the recognition service: input the data and obtain the results. Extends **IRecognitionService.Callback**.
CharInfo	Extended information about character formatting. ***Important!*** *This class is reserved for future use.*
DataField	A recognized data field. Provides field contents, location and included data fields, if applicable.
DataScheme	Information on the data scheme applied to the recognized frame.
DebugLog	A callback interface for collecting debug data. Inherited from the **IRecognitionService.DebugLog** interface without any modification.
ExtendedSettings	Extended service configuration settings. Inherited without any modification from **IRecognitionService.ExtendedSettings**.
TextLine	A line of recognized text; the location and additional information are also available.

Enumerations

The enumerations are inherited from **IRecognitionService** without any modifications.

Name	Description
ResultStabilityStatus	Result stability status: the estimate of how stable the result is, and whether it is likely to be improved by adding new frames.
Warning	A warning that occurred during processing.

Callback interface

A callback interface to interact with the recognition service: input the data and obtain the results. This interface and its methods are to be implemented on the client side.

Extends the **IRecognitionService.Callback** interface.

```
interface Callback extends IRecognitionService.Callback
```

Note: *While the service is being stopped, frames continue to be requested and calls to this callback continue to be queued, so this callback can be called after the service has been stopped.*

Methods

Name	Description
onError	Called to report an error. Inherited from **IRecognitionService.Callback**.
onFrameProcessed	Called to deliver the result after recognizing the frames that were provided.
onRequestLatestFrame	Called to request the latest video frame. Inherited from **IRecognitionService.Callback**.

onRequestLatestFrame method of the Callback interface

Called by the service when it needs the latest video frame. The frame should be provided through a call to the **IDataCaptureService.submitRequestedFrame** method.

This method is to be implemented on the client side.

```
void onRequestLatestFrame( byte[] buffer )
```

Parameters

buffer

The buffer to be filled with image data for latest frame. Only NV21 format is currently supported.

Can be passed directly to **Camera.addCallbackBuffer**. When the buffer is filled with data, it should be passed back to the service by calling **submitRequestedFrame**.

onFrameProcessed method of the Callback interface

Called by the service to deliver the result after recognizing the frames that were supplied.

The result stability status is also provided and should be used to determine if the accuracy is high enough for the result to be used for any practical purposes. We recommend not to use the data in any way until stability level has reached Available and the data scheme has been matched. When stability of the result has reached the desired level, the service may be stopped by calling the **IDataCaptureService.stop** method.

This method is to be implemented on the client side. The implementation of this method will probably contain assessing the result plausibility, displaying the results to the user or using them in any way you need.

```
void onFrameProcessed( DataScheme scheme, DataField[] fields,
ResultStabilityStatus resultStatus, Warning warning )
```

Parameters

scheme

A **DataScheme** object with information on the data scheme which was applied to the recognized frame.

Important! *If* ***null*** *is passed instead of a valid* ***DataScheme*** *object, the data scheme has not yet been matched, which may mean that the document the user is trying to recognize does not fit the data capture profile with which the data service was created. In this case, the results are not usable.*

fields

The result as an array of data fields, represented by **DataField** objects.

resultStatus

The estimate of how stable the result is, represented by a **ResultStabilityStatus** enumeration constant. It is not guaranteed that it ever reaches desired levels for a particular scene.

warning

The warning which occurred, if any; represented by a **Warning** enumeration constant.

onError method of the Callback interface

Called when an error occurs.

This method is to be implemented on the client side, which may include displaying the error description to the user or handling it otherwise.

```
void onError( Exception error );
```

Parameters

error

The **Exception** object for the error that has occurred.

DebugLog interface

A callback interface for collecting debug data. This interface and its methods are to be implemented on the client side.

Inherited from the **IRecognitionService.DebugLog** interface without any modification.

```
interface IDataCaptureService.DebugLog
```

Methods

Name	Description
onBeginSeries	Called when a series of video frames begins.
onEndSeries	Called when a series of video frames ends.
onSaveImageBufferNV21	Called to log an image in the NV21 format.
onAttachDebugInfo	Called to deliver debug information associated with a logged image.

onBeginSeries method of the DebugLog interface

Called by the service when a series of video frames begins. This method is to be implemented on the client side.

```
void onBeginSeries();
```

onEndSeries method of the DebugLog interface

Called by the service when a series of video frames ends. This method is to be implemented on the client side.

```
void onEndSeries();
```

onSaveImageBufferNV21 method of the DebugLog interface

Called by the service to log an image in the NV21 format. This method is to be implemented on the client side.

```
String onSaveImageBufferNV21( int width, int height, int orientation,
                              Rect areaOfInterest, byte[] buffer,
                              int dataSize );
```

Parameters

width

The image width.

height

The image height.

orientation

The image orientation in degrees, a multiple of 90.

areaOfInterest

The rectangular area of interest on the image.

buffer

The buffer with image data in NV21 format. Only *dataSize* bytes in the buffer contain valid image data.

dataSize

The number of bytes in the *buffer* containing valid image data.

Return values

A string identifier of the image to which detailed debug information may be attached. If **null** is returned, the **onAttachDebugInfo** method will not be called and no detailed information will be reported.

onAttachDebugInfo method of the DebugLog interface

Called by the service to deliver detailed debug information associated with a logged image. This method is only called if the **onSaveImageBufferNV21** method returned a non-null identifier.

This method is to be implemented on the client side.

```
void onAttachDebugInfo( String imageId, String debugInfo );
```

Parameters

imageId

The identifier of the image to which the debug information corresponds.

debugInfo

A string containing the detailed debug information.

ExtendedSettings interface

Extended service configuration settings. Intended for advanced users: most common scenarios will work with the default settings.

Inherited from the **IRecognitionService.ExtendedSettings** interface without any modification.

Important! *Any modifications of these settings should be made before the call to the **start** method.*

```
interface ExtendedSettings extends IRecognitionService.ExtendedSettings
```

Methods

Name	Description
getProcessingThreadsCount	Gets the number of processing threads to be used by the service.
setProcessingThreadsCount	Sets the number of processing threads to be used by the service.

getProcessingThreadsCount method of the ExtendedSettings interface

Gets the number of processing threads to be used by the service.

```
int getProcessingThreadsCount();
```

Return values

The method returns the number of threads. Returns 0 if the number of threads is to be determined automatically, which is the default setting.

setProcessingThreadsCount method of the ExtendedSettings interface

Sets the number of processing threads to be used by the service.

```
void setProcessingThreadsCount( int ThreadsCount );
```

Parameters

ThreadsCount

The new number of threads. Up to 16 threads are allowed. Set to 0 to determine the number of threads automatically.

DataScheme class

Information on the data scheme applied to the recognized frame.

```
final class DataScheme {
    public final String Id;
    public final String Name;
}
```

Properties

Name	Type	Description
Id	**String**	The internal scheme identifier. Can be one of the predefined data schemes listed in Data Capture Profiles or the custom scheme identifier that you specified in the **IDataCaptureProfileBuilder.addScheme** call.
Name	**String**	The human-readable name of the data scheme. If you are using a custom scheme, this is the name you set with the **ISchemeBuilder.setName** method.

DataField class

A recognized data field. Provides field contents, location and included data fields, if applicable.

Note that a field may have several components — for example, it can contain two or more words. Component details are available from the **Components** array. Each element of this array is a **DataField** object with its own **Text** property (for example, a word) and **Quadrangle** property (the bounding quadrangle of this component). The field's **Text** property contains its entire text, and the field's

Quadrangle property represents the whole area of a field: this quadrangle encloses the quadrangles of all components.

The **Components** array always contains at least one element. When a field contains only one component, the **Text** and **Quadrangle** properties of the field and this component are identical.

```
final class DataField {
    public final String Id;
    public final String Name;
    public final String Text;
    public final Point[] Quadrangle;
    public final DataField[] Components;
}
```

Properties

Name	Type	Description
Components	**DataField**[]	An array of data fields, representing one complex field found in the image, with all additional information.
Id	**String**	The internal field identifier. Can be one of the predefined fields listed in Data Capture Profiles or the custom field identifier that you specified in the **ISchemeBuilder.addField** call. May be **null**.
Name	**String**	The human-readable name of the field. If you are using a custom data capture profile, this is the name you set with the **IFieldBuilder.setName** method.
Quadrangle	**Point**[]	The four vertex points of the bounding quadrangle. The vertices are indexed clockwise starting from the bottom left. ***Note:*** *Before recognition, the service rotates the image obtained from camera in order to bring text orientation to normal (horizontal). The vertex coordinates are specified for this rotated image and may require coordinate conversion if you display the quadrangle on the video frame.*
Text	**String**	The text of the field.

TextLine class

A fragment of recognized text, with additional information about characters.

```
final class TextLine {
    public final String Text;
    public final Point[] Quadrangle;
    public final CharInfo[] CharInfo;
}
```

Properties

Name	Type	Description
CharInfo	CharInfo[]	Additional information about the characters. ***Important!*** *This property is reserved for future use.*
Quadrangle	**Point**[]	The four vertex points of the bounding quadrangle. The vertices are indexed clockwise starting from the bottom left. ***Note:*** *Before recognition, the service rotates the image obtained from camera in order to bring text orientation to normal (horizontal). The vertex coordinates are specified for this rotated image and may require coordinate conversion if you display the quadrangle on the video frame.*
Text	**String**	The recognized text.

CharInfo class

Extended information about character formatting.

Important! *This class is reserved for future use.*

```
final class CharInfo {
    public final Point[] Quadrangle;
}
```

Properties

Name	Type	Description
Quadrangle	**Point**[]	The four vertex points of the bounding quadrangle. The vertices are indexed clockwise starting from the bottom left.

configureDataCaptureProfile method of the IDataCaptureService interface

Creates a profile builder object, which allows you to configure the data capture service to recognize custom documents. The service should be created without a profile. If a predefined profile is specified when creating the service, later it will be completely replaced by the new custom profile when you call **IDataCaptureProfileBuilder.checkAndApply**.

```
IDataCaptureProfileBuilder configureDataCaptureProfile();
```

Return values

The method returns an object implementing the **IDataCaptureProfileBuilder** interface.

getExtendedSettings method of the IDataCaptureService interface

Provides access to extended service configuration settings. Intended for advanced users: most common scenarios will work with the default settings.

```
ExtendedSettings getExtendedSettings();
```

Return values

This method returns an object implementing the **ExtendedSettings** interface, which allows you to change the advanced configuration settings.

setAreaOfInterest method of the IDataCaptureService interface

Sets the area on the frame where the text is to be found.

The size of the area of interest affects performance and the speed of convergence of the result. The best result is achieved when the area of interest does not touch the boundaries of the frame but has a margin of at least half the size of a typical printed character.

```
void setAreaOfInterest( Rect areaOfInterest );
```

Parameters

areaOfInterest

The rectangle specifying the area of interest in the image coordinates.

setDebugLog method of the IDataCaptureService interface

Attaches a callback which collects image data for debugging and tuning the ABBYY Mobile Capture SDK library. The callback and its methods should be implemented on the client side.

```
void setDebugLog( DebugLog debugLog );
```

Parameters

debugLog

An object implementing the **DebugLog** interface, which will be used to process the debug data.

start method of the IDataCaptureService interface

Starts processing. The service will automatically create several processing threads, request video frames and return the results via the **Callback** interface.

```
void start( int width, int height, int orientation,
            Rect areaOfInterest );
```

Parameters

width

The width of the video frame.

height

The height of the video frame.

orientation

The orientation of the video frame in degrees. Should be a multiple of 90.

areaOfInterest

The rectangular area of the frame where the text is expected to be. For example, it may be selected by the user or highlighted in your application interface.

Note: *You can also change the area of interest while the service is running by calling the* ***setAreaOfInterest*** *method.*

Note: *Before recognition, the service rotates the image obtained from camera in order to bring text orientation to normal (horizontal). The area of interest is specified in the coordinates on this rotated image, which are different from the coordinates on the video frame except the case when the frame orientation is 0.*

stop method of the IDataCaptureService interface

Stops processing and releases the resources used by the service.

```
void stop();
```

submitRequestedFrame method of the IDataCaptureService interface

Submits the video frame obtained from the camera after it is requested through the **Callback.onRequestLatestFrame** method.

```
void submitRequestedFrame( byte[] buffer );
```

Parameters

buffer

The buffer filled with image data for the latest frame. Only NV21 format is currently supported. This should be the same buffer which has been passed via the call to the **Callback.onRequestLatestFrame** method.

ResultStabilityStatus enum

Result stability status: an estimate of how stable the result is, and whether it is likely to be improved by adding new frames. We do not recommend using the results in any way while stability is below Available.

```
enum ResultStabilityStatus {
    NotReady,
    Tentative,
    Verified,
    Available,
    TentativelyStable,
    Stable
};
```

Constants

Name	Description
NotReady	No content available.
Tentative	Content detected on a single frame.
Verified	Content verified: matching content found in at least two frames.
Available	Matching content found in three or more frames. The content is recognized and the result is available, though the result can still vary with the addition of new frames.
TentativelyStable	The result has been stable in the last two frames.
Stable	The result has been stable in the last three or more frames.

Warning enum

A warning that occurred during processing.

```
enum Warning {
    TextTooSmall
}
```

Constants

Name	Description
TextTooSmall	The text is too small. Advise the end user to move the camera closer or zoom in.

IImageCaptureService interface

An image capture service interface.

This interface provides methods to tune the processing settings, start and stop the work, and pass the video frames from the camera to the background processing engine.

Extends the **IRecognitionService** interface.

```
public interface IImageCaptureService extends IRecognitionService
```

Methods

Name	Description
getExtendedSettings	Provides access to extended service configuration settings. Inherited from **IRecognitionService**.
setAreaOfInterest	Sets the area on the frame where the text is to be found. Inherited from **IRecognitionService**.
setDebugLog	Attaches a callback for collecting debug data. Inherited from **IRecognitionService**.
setDocumentSize	Sets the physical size of the document to be captured.
start	Starts processing. Inherited from **IRecognitionService**.
stop	Stops processing and releases the resources used by the recognition service. Inherited from **IRecognitionService**.
submitRequestedFrame	Submits the video frame requested through the **Callback.onRequestLatestFrame** method. Inherited from **IRecognitionService**.

Nested classes

Name	Description
Callback	A callback interface to interact with the recognition service: input

Name	Description
	the data and obtain the results. Extends **IRecognitionService.Callback**.
ExtendedSettings	Extended service configuration settings. Extends **IRecognitionService.ExtendedSettings**.
QualityAssessmentForOcrBlock	Quality assessment block
QualityAssessmentForOcrBlockType	Type of quality assessment block
Result	Capture result.
Status	Capture status.

Callback interface

A callback interface to interact with the recognition service: input the data and obtain the results. This interface and its methods are to be implemented on the client side.

Extends the **IRecognitionService.Callback** interface.

```
interface Callback extends IRecognitionService.Callback
```

Note: *While the service is being stopped, frames continue to be requested and calls to this callback continue to be queued, so this callback can be called after the service has been stopped.*

Methods

Name	Description
onError	Called to report an error. Inherited from **IRecognitionService.Callback**.
onFrameProcessed	Called to deliver the result after recognizing the frames that were provided.

Name	Description
onRequestLatestFrame	Called to request the latest video frame. Inherited from IRecognitionService.Callback.

onFrameProcessed method

Called by the service to deliver the feedback and result of image capture.

When the confidence returned by this method has reached the desired level, the service may be stopped by calling the **stop** method.

```
void onFrameProcessed( IImageCaptureService.Status status,
                       IImageCaptureService.Result result )
```

Parameters

status

The current status of capture (for UI feedback).

result

The result of the capture.

onRequestLatestFrame method of the Callback interface

Called by the service when it needs the latest video frame. The frame should be provided through a call to the **IImageCaptureService.submitRequestedFrame** method.

This method is to be implemented on the client side.

```
void onRequestLatestFrame( byte[] buffer )
```

Parameters

buffer

The buffer to be filled with image data for latest frame. Only NV21 format is currently supported.

Can be passed directly to **Camera.addCallbackBuffer**. When the buffer is filled with data, it should be passed back to the service by calling **submitRequestedFrame**.

onError method of the Callback interface

Called when an error occurs.

This method is to be implemented on the client side, which may include displaying the error description to the user or handling it otherwise.

```
void onError( Exception error );
```

Parameters

error

The **Exception** object for the error that has occurred.

DebugLog interface

A callback interface for collecting debug data. This interface and its methods are to be implemented on the client side.

Inherited from the **IRecognitionService.DebugLog** interface without any modification.

```
interface IImageCaptureService.DebugLog
```

Methods

Name	Description
onBeginSeries	Begins a series of video frames.
onEndSeries	Ends the series of video frames.
onSaveImageBufferNV21	Logs the image in NV21 format.
onAttachDebugInfo	Attaches debug info associated with the image.

onBeginSeries method of the DebugLog interface

Called by the service when a series of video frames begins. This method is to be implemented on the client side.

```
void onBeginSeries();
```

onEndSeries method of the DebugLog interface

Called by the service when a series of video frames ends. This method is to be implemented on the client side.

```
void onEndSeries();
```

onSaveImageBufferNV21 method of the DebugLog interface

Called by the service to log an image in the NV21 format. This method is to be implemented on the client side.

```
String onSaveImageBufferNV21( int width, int height, int orientation,
                              Rect areaOfInterest, byte[] buffer,
                              int dataSize );
```

Parameters

width

The image width.

height

The image height.

orientation

The image orientation in degrees, a multiple of 90.

areaOfInterest

The rectangular area of interest on the image.

buffer

The buffer with image data in NV21 format. Only *dataSize* bytes in the buffer contain valid image data.

dataSize

The number of bytes in the *buffer* containing valid image data.

Return values

A string identifier of the image to which detailed debug information may be attached. If **null** is returned, the **onAttachDebugInfo** method will not be called and no detailed information will be reported.

onAttachDebugInfo method of the DebugLog interface

Reports the detailed debug information associated with the image. This method is only called if the **onSaveImageBufferNV21** method returned a non-null identifier.

This method is to be implemented on the client side.

```
void onAttachDebugInfo( String imageId, String debugInfo );
```

Parameters

imageId

The identifier of the image to which the debug information corresponds.

debugInfo

A string containing the detailed debug information.

ExtendedSettings interface

Extended service configuration settings. Intended for advanced users: most common scenarios will work with the default settings.

Important! *Any modifications of these settings should be made before the call to the* ***start*** *method.*

```
interface ExtendedSettings
```

Methods

Name	Description
getProcessingThreadsCount	Gets the number of processing threads to be used by the service.
setProcessingThreadsCount	Sets the number of processing threads to be used by the service.

getProcessingThreadsCount method of the ExtendedSettings interface

Gets the number of processing threads to be used by the service.

```
int getProcessingThreadsCount();
```

Return values

The method returns the number of threads. Returns 0 if the number of threads is to be determined automatically, which is the default setting.

setProcessingThreadsCount method of the ExtendedSettings interface

Sets the number of processing threads to be used by the service.

```
void setProcessingThreadsCount( int ThreadsCount );
```

Parameters

ThreadsCount

The new number of threads. Up to 16 threads are allowed. Set to 0 to determine the number of threads automatically.

QualityAssessmentForOcrBlock class

Note: *This is a technology preview feature. The functionality will be improved and completed in future versions.*

The block for the quality assessment for OCR.

```
final class IImageCaptureServcice.QualityAssessmentForOcrBlock {
    public final QualityAssessmentForOcrBlockType Type;
    public final int Quality;
    public final Rect Rect;
}
```

Properties

Name	Type	Description
Quality	**int**	Value from 0 to 100 that indicates suitability of the text for OCR.
Rect	**Rect**	Block rectangle.
Type	**QualityAssessmentForOcrBlockType**	Type of the quality assessment block.

Result class

Capture result.

```
final class IImageCaptureService.Result {
    public final Point[] DocumentBoundary;
    public final int DocumentHeight;
    public final int DocumentWidth;
    public final ByteBuffer ImageBuffer;
    public final int ImageHeight;
    public final int ImageWidth;
    public final qualityAssessmentForOcrBlocks[]
QualityAssessmentForOcrBlock;
}
```

Properties

Name	Type	Description
DocumentBoundary	**Point[]**	The document boundary for the captured image. Currently the result is always returned as the four vertex points of the bounding quadrangle. The vertices are indexed clockwise starting from the bottom left.
DocumentHeight	**int**	The physical document height in millimeters. (as specified in **setDocumentSize**). This property may be 0 if not specified.
DocumentWidth	**int**	The physical document width in millimeters (as specified in **setDocumentSize**). This property may be 0 if not specified.
ImageBuffer	**ByteBuffer**	The captured image buffer.
ImageHeight	**int**	The captured image height.
ImageWidth	**int**	The captured image width.
qualityAssessmentForOcrBlocks	**QualityAssessmentForOcrBlock[]**	The quality assessment blocks.

Status class

The capture status.

```
final class IImageCaptureService.Status {
    public final Point[] DocumentBoundary;
    public final int FrameRelativeQuality;
    public final Point MotionVector;
    public final QualityAssessmentForOcrBlock[]
qualityAssessmentForOcrBlocks;
}
```

Properties

Name	Type	Description
DocumentBoundary	**Point[]**	The document boundary defined by the four vertex points of the bounding quadrangle. The vertices are indexed clockwise starting from the bottom left.
FrameRelativeQuality	**int**	The value from internal image quality scale. Larger value means better image quality. The minimum value is 0. ***Note:*** *This API is available only in the extended version of the library. For correct quality comparison the image should represent the document at the same scene. If the background changes at some images, parameter values will not represent appropriate for comparison data.*
MotionVector	**Point**	The vector that indicates the image position shifting in comparison to the previous state.
qualityAssessmentForOcrBlocks	**QualityAssessmentForOcrBlock[]**	The quality assessment blocks.

getExtendedSettings method of the IImageCaptureService interface

Provides access to extended service configuration settings. Intended for advanced users: most common scenarios will work with the default settings.

```
ExtendedSettings getExtendedSettings();
```

Return values

This method returns an object implementing the **ExtendedSettings** interface, which allows you to change the advanced configuration settings.

setDocumentSize method of the IImageCaptureService interface

Sets the physical size of the document to be captured.

The values set by this method are used in various purposes. Setting this parameter will help to improve document boundary detection accuracy and preserve aspect ratio after crop. Known physical size of the document is used for document orientation detection during capture. The image resolution is automatically calculated to the physical size before export.

```
void setDocumentSize( int width,
                      int height )
```

Parameters

width

The width of the document in millimeters.

height

The height of the document in millimeters.

setAreaOfInterest method of the IImageCaptureService interface

Sets the area on the frame where the text is to be found.

The size of the area of interest affects performance and the speed of convergence of the result. The best result is achieved when the area of interest does not touch the boundaries of the frame but has a margin of at least half the size of a typical printed character.

```
void setAreaOfInterest( Rect areaOfInterest );
```

Parameters

areaOfInterest

The rectangle specifying the area of interest in the image coordinates.

setDebugLog method of the IImageCaptureService interface

Attaches a callback which collects image data for debugging and tuning the ABBYY Mobile Capture SDK library. The callback and its methods should be implemented on the client side.

```
void setDebugLog( DebugLog debugLog );
```

Parameters

debugLog

An object implementing the **DebugLog** interface, which will be used to process the debug data.

start method of the IImageCaptureService interface

Starts processing. The service will automatically create several processing threads, request video frames and return the results via the **Callback** interface.

```
void start( int width, int height, int orientation,
            Rect areaOfInterest );
```

Parameters

width

The width of the video frame.

height

The height of the video frame.

orientation

The orientation of the video frame in degrees. Should be a multiple of 90.

areaOfInterest

The rectangular area of the frame where the text is expected to be. For example, it may be selected by the user or highlighted in your application interface.

Note: *You can also change the area of interest while the service is running by calling the* ***setAreaOfInterest*** *method.*

Note: *Before recognition, the service rotates the image obtained from camera in order to bring text orientation to normal (horizontal). The area of interest is specified in the coordinates on this rotated image, which are different from the coordinates on the video frame except the case when the frame orientation is 0.*

stop method of the IImageCaptureService interface

Stops processing and releases the resources used by the service.

```
void stop();
```

submitRequestedFrame method of the IImageCaptureService interface

Submits the video frame obtained from the camera after it is requested through the **Callback.onRequestLatestFrame** method.

```
void submitRequestedFrame( byte[] buffer );
```

Parameters

buffer

The buffer filled with image data for the latest frame. Only NV21 format is currently supported. This should be the same buffer which has been passed via the call to the **Callback.onRequestLatestFrame** method.

QualityAssessmentForOcrBlockType enum

Note: *This is a technology preview feature. The functionality will be improved and completed in future versions.*

Type of the block for quality assessment for OCR.

```
enum QualityAssessmentForOcrBlockType { Text }
```

Constants

Name	Description
Text	The text detected.

ITextCaptureService interface

A background text capture service interface.

This interface provides methods to tune the processing settings, start and stop the work, and pass the video frames from the camera to the background processing engine.

Extends the **IRecognitionService** interface.

```
public interface ITextCaptureService extends IRecognitionService
```

Methods

Name	Description
getExtendedSettings	Provides access to extended service configuration settings. Inherited from **IRecognitionService**.
setAreaOfInterest	Sets the area on the frame where the text is to be found. Inherited from **IRecognitionService**.
setDebugLog	Attaches a callback for collecting debug data. Inherited from **IRecognitionService**.
setRecognitionLanguage	Sets the languages to be used for recognition.
setTranslationDictionary	Sets the name of the translation dictionary.
start	Starts processing. Inherited from **IRecognitionService**.
stop	Stops processing and releases the resources used by the recognition service. Inherited from **IRecognitionService**.
submitRequestedFrame	Submits the video frame requested through the **Callback.onRequestLatestFrame** method. Inherited from **IRecognitionService**.

Nested classes

Name	Description
Callback	A callback interface to interact with the recognition service: input the data and obtain the results. Extends **IRecognitionService.Callback**.
CharInfo	Extended information about the characters' formatting.

Name	Description
	Important! *This class is reserved for future use.*
DebugLog	A callback interface for collecting debug data. Inherited from the IRecognitionService.DebugLog interface without any modification.
ExtendedSettings	Extended service configuration settings. Extends IRecognitionService.ExtendedSettings.
TextLine	A line of recognized text; the location and additional information are also available.

Enumerations

The enumerations are inherited from IRecognitionService without any modifications.

Name	Description
ResultStabilityStatus	Result stability status: the estimate of how stable the result is, and whether it is likely to be improved by adding new frames.
Warning	A warning that occurred during processing.

Callback interface

A callback interface to interact with the recognition service: input the data and obtain the results. This interface and its methods are to be implemented on the client side.

Extends the IRecognitionService.Callback interface.

```
interface Callback extends IRecognitionService.Callback
```

Note: *While the service is being stopped, frames continue to be requested and calls to this callback continue to be queued, so this callback can be called after the service has been stopped.*

Methods

Name	Description
onError	Called to report an error. Inherited from **IRecognitionService.Callback**.
onFrameProcessed	Called to deliver the result after recognizing the frames that were provided.
onRequestLatestFrame	Called to request the latest video frame. Inherited from **IRecognitionService.Callback**.

onRequestLatestFrame method of the Callback interface

Called by the service when it needs the latest video frame. The frame should be provided through a call to the **ITextCaptureService.submitRequestedFrame** method.

This method is to be implemented on the client side.

```
void onRequestLatestFrame( byte[] buffer )
```

Parameters

buffer

The buffer to be filled with image data for latest frame. Only NV21 format is currently supported.

Can be passed directly to **Camera.addCallbackBuffer**. When the buffer is filled with data, it should be passed back to the service by calling **submitRequestedFrame**.

onFrameProcessed method of the Callback interface

Called by the service to deliver the result after recognizing the frames that were supplied.

The result stability status is also provided and should be used to determine if the accuracy is high enough for the result to be used for any practical purposes. We recommend not to use the data in any way until stability level has reached Available. When stability of the result has reached the desired level, the service may be stopped by calling the **ITextCaptureService.stop** method.

This method is to be implemented on the client side. The implementation of this method will probably contain assessing the result plausibility, displaying the results to the user or using them in any way you need.

```
void onFrameProcessed( TextLine[] lines, ResultStabilityStatus
resultStatus, Warning warning )
```

Parameters

lines

The result as an array of text lines, represented by **TextLine** objects.

resultStatus

The estimate of how stable the result is, represented by a **ResultStabilityStatus** enumeration constant. It is not guaranteed that it ever reaches desired levels for a particular scene.

warning

The warning which occurred, if any; represented by a **Warning** enumeration constant.

onError method of the Callback interface

Called when an error occurs.

This method is to be implemented on the client side, which may include displaying the error description to the user or handling it otherwise.

```
void onError( Exception error );
```

Parameters

error

The **Exception** object for the error that has occurred.

DebugLog interface

A callback interface for collecting debug data. This interface and its methods are to be implemented on the client side.

Inherited from the **IRecognitionService.DebugLog** interface without any modification.

```
interface ITextCaptureService.DebugLog
```

Methods

Name	Description
onBeginSeries	Called when a series of video frames begins.
onEndSeries	Called when a series of video frames ends.

Name	Description
onSaveImageBufferNV21	Called to log an image in the NV21 format.
onAttachDebugInfo	Called to deliver debug information associated with a logged image.

onBeginSeries method of the DebugLog interface

Called by the service when a series of video frames begins. This method is to be implemented on the client side.

```
void onBeginSeries();
```

onEndSeries method of the DebugLog interface

Called by the service when a series of video frames ends. This method is to be implemented on the client side.

```
void onEndSeries();
```

onSaveImageBufferNV21 method of the DebugLog interface

Called by the service to log an image in the NV21 format. This method is to be implemented on the client side.

```
String onSaveImageBufferNV21( int width, int height, int orientation,
                              Rect areaOfInterest, byte[] buffer,
                              int dataSize );
```

Parameters

width

The image width.

height

The image height.

orientation

The image orientation in degrees, a multiple of 90.

areaOfInterest

The rectangular area of interest on the image.

buffer

The buffer with image data in NV21 format. Only *dataSize* bytes in the buffer contain valid image data.

dataSize

The number of bytes in the *buffer* containing valid image data.

Return values

A string identifier of the image to which detailed debug information may be attached. If **null** is returned, the **onAttachDebugInfo** method will not be called and no detailed information will be reported.

onAttachDebugInfo method of the DebugLog interface

Called by the service to deliver detailed debug information associated with a logged image. This method is only called if the **onSaveImageBufferNV21** method returned a non-null identifier.

This method is to be implemented on the client side.

```
void onAttachDebugInfo( String imageId, String debugInfo );
```

Parameters

imageId

The identifier of the image to which the debug information corresponds.

debugInfo

A string containing the detailed debug information.

ExtendedSettings interface

Extended service configuration settings. Intended for advanced users: most common scenarios will work with the default settings.

Extends the **IRecognitionService.ExtendedSettings** interface.

Important! *Any modifications of these settings should be made before the call to the* ***start*** *method.*

```
interface ExtendedSettings extends IRecognitionService.ExtendedSettings
```

Methods

Name	Description
getProcessingThreadsCount	Gets the number of processing threads to be used by the service. Inherited from IRecognitionService.ExtendedSettings.
isCJKVerticalTextEnabled	**Deprecated**. Checks if vertical writing direction is enabled for Chinese, Japanese, and Korean languages.
isFrameMergingEnabled	Checks if frame merging is enabled.
isRecognitionEnabled	Checks if recognition is enabled.
setCJKVerticalTextEnabled	**Deprecated**. Enables or disables vertical writing direction for Chinese, Japanese, and Korean languages.
setFrameMergingEnabled	Enables or disables frame merging.
setProcessingThreadsCount	Sets the number of processing threads to be used by the service. Inherited from IRecognitionService.ExtendedSettings.
setRecognitionEnabled	Enables or disables recognition.

isCJKVerticalTextEnabled method of the ExtendedSettings interface

Checks if vertical writing direction for Chinese, Japanese, and Korean languages is enabled.

Important! *This method is deprecated and will be revised in future releases.*

```
boolean isCJKVerticalTextEnabled();
```

Return values

Returns **true** if vertical writing direction is enabled, **false** otherwise.

setCJKVerticalTextEnabled method of the ExtendedSettings interface

Enables or disables vertical writing direction for Chinese, Japanese, and Korean languages.

Important! *This method is deprecated and will be revised in future releases.*

```
void setCJKVerticalTextEnabled( boolean enable );
```

Parameters

enable

Set this parameter to **true** to enable vertical writing direction for Chinese, Japanese, and Korean languages, or to **false** to disable it.

isFrameMergingEnabled method of the ExtendedSettings interface

Checks if frame merging is enabled.

```
boolean isFrameMergingEnabled();
```

Return values

The method returns **true** if frame merging is enabled (the default setting), **false** if disabled.

setFrameMergingEnabled method of the ExtendedSettings interface

Enables or disables frame merging.

```
void setFrameMergingEnabled( boolean enable );
```

Parameters

enable

Set this parameter to **true** to enable frame merging, to **false** to disable it. By default frame merging is enabled.

getProcessingThreadsCount method of the ExtendedSettings interface

Gets the number of processing threads to be used by the service.

```
int getProcessingThreadsCount();
```

Return values

The method returns the number of threads. Returns 0 if the number of threads is to be determined automatically, which is the default setting.

setProcessingThreadsCount method of the ExtendedSettings interface

Sets the number of processing threads to be used by the service.

```
void setProcessingThreadsCount( int ThreadsCount );
```

Parameters

ThreadsCount

The new number of threads. Up to 16 threads are allowed. Set to 0 to determine the number of threads automatically.

isRecognitionEnabled method of the ExtendedSettings interface

Checks if recognition is enabled.

```
boolean isRecognitionEnabled();
```

Return values

The method returns **true** if recognition is enabled (the default setting).

setRecognitionEnabled method of the ExtendedSettings interface

Enables or disables recognition.

```
void setRecognitionEnabled( boolean enable );
```

Parameters

enable

Set this parameter to **true** to enable recognition, to **false** to disable it. By default recognition is enabled.

TextLine class

A line of recognized text; the location and additional information are also available.

```
final class TextLine {
    public final String Text;
    public final Point[] Quadrangle;
    public final CharInfo[] CharInfo;
}
```

Properties

Name	Type	Description
CharInfo	CharInfo[]	Additional information about the characters. ***Important!*** *This property is reserved for future use.*
Quadrangle	**Point**[]	The four vertex points of the bounding quadrangle. The vertices are indexed clockwise starting from the bottom left. ***Note:*** *Before recognition, the service rotates the image obtained from camera in order to bring text orientation to normal (horizontal). The vertex coordinates are specified for this rotated image and may require coordinate conversion if you display the quadrangle on the video frame.*
Text	**String**	The recognized text.

CharInfo class

Extended information about the character formatting.

Important! *This class is reserved for future use.*

```
final class CharInfo {
    public final int ForegroundColor;
    public final int BackgroundColor;
    public final Point[] Quadrangle;
}
```

Properties

Name	Type	Description
BackgroundColor	**int**	The color of the background. ***Note:*** *The **int** value is calculated from the RGB triplet using the formula: (**red value**) + (256 x **green value**) + (65536 x **blue value**), where **red value** is the first triplet component, **green value** is the second triplet component, **blue value** is the third triplet component. For example, the **int** value of the color white equals 16777215.*
ForegroundColor	**int**	The color of the symbol.
Quadrangle	**Point[]**	The four vertex points of the bounding quadrangle. The vertices are indexed clockwise starting from the bottom left.

getExtendedSettings method of the ITextCaptureService interface

Provides access to extended service configuration settings. Intended for advanced users: most common scenarios will work with the default settings.

```
ExtendedSettings getExtendedSettings();
```

Return values

This method returns an object implementing the **ExtendedSettings** interface, which allows you to change the advanced configuration settings.

setAreaOfInterest method of the ITextCaptureService interface

Sets the area on the frame where the text is to be found.

The size of the area of interest affects performance and the speed of convergence of the result. The best result is achieved when the area of interest does not touch the boundaries of the frame but has a margin

of at least half the size of a typical printed character.

```
void setAreaOfInterest( Rect areaOfInterest );
```

Parameters

areaOfInterest

The rectangle specifying the area of interest in the image coordinates.

setDebugLog method of the ITextCaptureService interface

Attaches a callback which collects image data for debugging and tuning the ABBYY Mobile Capture SDK library. The callback and its methods should be implemented on the client side.

```
void setDebugLog( DebugLog debugLog );
```

Parameters

debugLog

An object implementing the **DebugLog** interface, which will be used to process the debug data.

setRecognitionLanguage method of the ITextCaptureService interface

Sets the languages to be used for recognition.

By default, only the English language is set. Setting the correct languages for your text will improve recognition accuracy. However, setting too many languages may decrease performance.

```
void setRecognitionLanguage( Language... languages );
```

Parameters

languages

One or more languages to be used for recognition, each represented by a constant of the **Language** enumeration.

setTranslationDictionary method of the ITextCaptureService interface

Sets current translation dictionary, attaches or detaches a dictionary to enable or disable translation. By default, translation is disabled and no translation dictionary is used.

Translation dictionaries should be put in the **assets/translation** folder. Some dictionaries are supplied with the distribution. See Available Translation Dictionaries for a full list.

Important! *Calling this method with a dictionary name attaches this translation dictionary (or changes the one currently attached). With a dictionary attached, the recognized text will be translated automatically, and the* ***onFrameProcessed*** *method will return the result in the target language. The result of recognition in the source language will be unavailable. To detach a dictionary, pass a* ***null*** *argument.*

```
void setTranslationDictionary( String dictionaryName );
```

Parameters

dictionaryName

The name of the translation dictionary file, without extension. Can also be **null** to detach the current dictionary.

start method of the ITextCaptureService interface

Starts processing. The service will automatically create several processing threads, request video frames and return the results via the **Callback** interface.

```
void start( int width, int height, int orientation,
            Rect areaOfInterest );
```

Parameters

width

The width of the video frame.

height

The height of the video frame.

orientation

The orientation of the video frame in degrees. Should be a multiple of 90.

areaOfInterest

The rectangular area of the frame where the text is expected to be. For example, it may be selected by the user or highlighted in your application interface.

Note: *You can also change the area of interest while the service is running by calling the*

setAreaOfInterest *method.*

Note: *Before recognition, the service rotates the image obtained from camera in order to bring text orientation to normal (horizontal). The area of interest is specified in the coordinates on this rotated image, which are different from the coordinates on the video frame except the case when the frame orientation is 0.*

stop method of the ITextCaptureService interface

Stops processing and releases the resources used by the service.

```
void stop();
```

submitRequestedFrame method of the ITextCaptureService interface

Submits the video frame obtained from the camera after it is requested through the **Callback.onRequestLatestFrame** method.

```
void submitRequestedFrame( byte[] buffer );
```

Parameters

buffer

The buffer filled with image data for the latest frame. Only NV21 format is currently supported. This should be the same buffer which has been passed via the call to the **Callback.onRequestLatestFrame** method.

ResultStabilityStatus enum

Result stability status: an estimate of how stable the result is, and whether it is likely to be improved by adding new frames. We do not recommend using the results in any way while stability is below Available.

```
enum ResultStabilityStatus {
    NotReady,
    Tentative,
    Verified,
    Available,
    TentativelyStable,
    Stable
};
```

Constants

Name	Description
NotReady	No content available.
Tentative	Content detected on a single frame.
Verified	Content verified: matching content found in at least two frames.
Available	Matching content found in three or more frames. The content is recognized and the result is available, though the result can still vary with the addition of new frames.
TentativelyStable	The result has been stable in the last two frames.
Stable	The result has been stable in the last three or more frames.

Warning enum

A warning that occurred during processing.

```
enum Warning {
    TextTooSmall
}
```

Constants

Name	Description
TextTooSmall	The text is too small. Advise the end user to move the camera closer or zoom in.

IRecognitionService interface

The base background recognition service interface, extended by the **IDataCaptureService**, **ITextCaptureService** and **IImageCaptureService** scenario-specific interfaces.

```
public interface IRecognitionService
```

Methods

Name	Description
getExtendedSettings	Provides access to extended service configuration settings.
setAreaOfInterest	Sets the area on the frame where the text is to be found.
setDebugLog	Attaches a callback to collect debug data.
start	Starts processing.
stop	Stops processing and releases the resources used by the recognition service.
submitRequestedFrame	Submits the video frame requested through the **Callback.onRequestLatestFrame** method.

Nested classes

Name	Description
Callback	A callback interface to interact with the recognition service: input the data and obtain the results.
DebugLog	A callback interface for collecting debug data.
ExtendedSettings	Extended service configuration settings.

Enumerations

Name	Description
ResultStabilityStatus	Result stability status: the estimate of how stable the result is, and whether it is likely to be improved by adding new frames.
Warning	A warning that occurred during processing.

Callback interface

The base callback interface for interacting with the recognition service, extended by the IDataCaptureService.Callback and ITextCaptureService.Callback interfaces.

```
public static interface IRecognitionService.Callback
```

Note: *While the service is being stopped, frames continue to be requested and calls to this callback continue to be queued, so this callback can be called after the service has been stopped.*

Methods

Name	Description
onError	Called to report an error.
onRequestLatestFrame	Called to request the latest video frame.

onRequestLatestFrame method of the Callback interface

Called by the service when it needs the latest video frame. The frame should be provided through a call to the IRecognitionService.submitRequestedFrame method.

This method is to be implemented on the client side.

```
void onRequestLatestFrame( byte[] buffer )
```

Parameters

buffer

The buffer to be filled with image data for latest frame. Only NV21 format is currently supported.

Can be passed directly to **Camera.addCallbackBuffer**. When the buffer is filled with data, it should be passed back to the service by calling **submitRequestedFrame**.

onError method of the Callback interface

Called when an error occurs.

This method is to be implemented on the client side, which may include displaying the error description to the user or handling it otherwise.

```
void onError( Exception error );
```

Parameters

error

The **Exception** object for the error that has occurred.

DebugLog interface

A callback interface for collecting debug data. This interface and its methods are to be implemented on the client side.

```
interface IRecognitionService.DebugLog
```

Methods

Name	Description
onBeginSeries	Begins a series of video frames.
onEndSeries	Ends the series of video frames.
onSaveImageBufferNV21	Logs the image in NV21 format.
onAttachDebugInfo	Attaches debug info associated with the image.

onBeginSeries method of the DebugLog interface

Called by the service when a series of video frames begins. This method is to be implemented on the client side.

```
void onBeginSeries();
```

onEndSeries method of the DebugLog interface

Called by the service when a series of video frames ends. This method is to be implemented on the client side.

```
void onEndSeries();
```

onSaveImageBufferNV21 method of the DebugLog interface

Called by the service to log an image in the NV21 format. This method is to be implemented on the client side.

```
String onSaveImageBufferNV21( int width, int height, int orientation,
                              Rect areaOfInterest, byte[] buffer,
                              int dataSize );
```

Parameters

width

The image width.

height

The image height.

orientation

The image orientation in degrees, a multiple of 90.

areaOfInterest

The rectangular area of interest on the image.

buffer

The buffer with image data in NV21 format. Only *dataSize* bytes in the buffer contain valid image data.

dataSize

The number of bytes in the *buffer* containing valid image data.

Return values

A string identifier of the image to which detailed debug information may be attached. If **null** is returned, the **onAttachDebugInfo** method will not be called and no detailed information will be reported.

onAttachDebugInfo method of the DebugLog interface

Reports the detailed debug information associated with the image. This method is only called if the **onSaveImageBufferNV21** method returned a non-null identifier.

This method is to be implemented on the client side.

```
void onAttachDebugInfo( String imageId, String debugInfo );
```

Parameters

imageId

The identifier of the image to which the debug information corresponds.

debugInfo

A string containing the detailed debug information.

ExtendedSettings interface

Extended service configuration settings. Intended for advanced users: most common scenarios will work with the default settings.

Important! *Any modifications of these settings should be made before the call to the* ***start*** *method.*

```
interface ExtendedSettings
```

Methods

Name	Description
getProcessingThreadsCount	Gets the number of processing threads to be used by the service.
setProcessingThreadsCount	Sets the number of processing threads to be used by the service.

getProcessingThreadsCount method of the ExtendedSettings interface

Gets the number of processing threads to be used by the service.

```
int getProcessingThreadsCount();
```

Return values

The method returns the number of threads. Returns 0 if the number of threads is to be determined automatically, which is the default setting.

setProcessingThreadsCount method of the ExtendedSettings interface

Sets the number of processing threads to be used by the service.

```
void setProcessingThreadsCount( int ThreadsCount );
```

Parameters

ThreadsCount

The new number of threads. Up to 16 threads are allowed. Set to 0 to determine the number of threads automatically.

getExtendedSettings method of the IRecognitionService interface

Provides access to extended service configuration settings. Intended for advanced users: most common scenarios will work with the default settings.

```
ExtendedSettings getExtendedSettings();
```

Return values

This method returns an object implementing the **ExtendedSettings** interface, which allows you to change the advanced configuration settings.

setAreaOfInterest method of the IRecognitionService interface

Sets the area on the frame where the text is to be found.

The size of the area of interest affects performance and the speed of convergence of the result. The best result is achieved when the area of interest does not touch the boundaries of the frame but has a margin of at least half the size of a typical printed character.

```
void setAreaOfInterest( Rect areaOfInterest );
```

Parameters

areaOfInterest

The rectangle specifying the area of interest in the image coordinates.

setDebugLog method of the IRecognitionService interface

Attaches a callback which collects image data for debugging and tuning the ABBYY Mobile Capture SDK library. The callback and its methods should be implemented on the client side.

```
void setDebugLog( DebugLog debugLog );
```

Parameters

debugLog

An object implementing the **DebugLog** interface, which will be used to process the debug data.

start method of the IRecognitionService interface

Starts processing. The service will automatically create several processing threads, request video frames and return the results via the **Callback** interface.

```
void start( int width, int height, int orientation,
            Rect areaOfInterest );
```

Parameters

width

The width of the video frame.

height

The height of the video frame.

orientation

The orientation of the video frame in degrees. Should be a multiple of 90.

areaOfInterest

The rectangular area of the frame where the text is expected to be. For example, it may be selected by the user or highlighted in your application interface.

Note: *You can also change the area of interest while the service is running by calling the* ***setAreaOfInterest*** *method.*

Note: *Before recognition, the service rotates the image obtained from camera in order to bring text orientation to normal (horizontal). The area of interest is specified in the coordinates on this rotated image, which are different from the coordinates on the video frame except the case when the frame orientation is 0.*

stop method of the IRecognitionService interface

Stops processing and releases the resources used by the service.

```
void stop();
```

submitRequestedFrame method of the IRecognitionService interface

Submits the video frame obtained from the camera after it is requested through the **Callback.onRequestLatestFrame** method.

```
void submitRequestedFrame( byte[] buffer );
```

Parameters

buffer

The buffer filled with image data for the latest frame. Only NV21 format is currently supported. This should be the same buffer which has been passed via the call to the **Callback.onRequestLatestFrame** method.

ResultStabilityStatus enum

Result stability status: an estimate of how stable the result is, and whether it is likely to be improved by adding new frames. We do not recommend using the results in any way while stability is below Available.

```
enum ResultStabilityStatus {
    NotReady,
    Tentative,
    Verified,
    Available,
    TentativelyStable,
    Stable
};
```

Constants

Name	Description
NotReady	No content available.
Tentative	Content detected on a single frame.
Verified	Content verified: matching content found in at least two frames.
Available	Matching content found in three or more frames. The content is recognized and the result is available, though the result can still vary with the addition of new frames.
TentativelyStable	The result has been stable in the last two frames.
Stable	The result has been stable in the last three or more frames.

Warning enum

A warning that occurred during processing.

```
enum Warning {
    TextTooSmall
}
```

Constants

Name	Description
TextTooSmall	The text is too small. Advise the end user to move the camera closer or zoom in.

IRecognitionCoreAPI interface

Provides access to low-level functions for single image processing. Useful when you need to recognize an image that was not taken by the camera of the device on which the application operates — for example, scans sent by email.

Use the object on the thread on which it was created; you may also create several objects on different threads and use them concurrently. All method calls are synchronous (will not return until the operation is completed), so should not be used on the UI thread.

```
public interface IRecognitionCoreAPI
```

Methods

Name	Description
close	Releases the resources.
getProcessingSettings	Provides access to the general processing settings.
getTextRecognitionSettings	Provides access to the settings of text recognition.
recognizeText	Performs recognition of an image.

Nested classes

Name	Description
CharInfo	Extended information about the character formatting. ***Important!*** *This class is reserved for future use.*
ProcessingSettings	The general settings which are the same for different processing scenarios.
TextBlock	A collection of recognized text lines found in a text area (block) on the image.
TextLine	A line of recognized text; the location and additional information are also available.
TextRecognitionCallback	A callback interface to manage the processing: obtain information about progress and errors, terminate the operation if necessary.

Name	Description
TextRecognitionSettings	The settings for text recognition.

Enumerations

Name	Description
Warning	A warning that occurred during processing.

ProcessingSettings interface

The general settings which are the same for different processing scenarios.

```
interface ProcessingSettings
```

Methods

Name	Description
getProcessingThreadsCount	Gets the number of processing threads to be used.
setProcessingThreadsCount	Sets the number of processing threads to be used.

getProcessingThreadsCount method of the ProcessingSettings interface

Gets the number of processing threads to be used by the service.

```
int getProcessingThreadsCount();
```

Return values

The method returns the number of threads. Returns 0 if the number of threads is to be determined automatically, which is the default setting.

setProcessingThreadsCount method of the ProcessingSettings interface

Sets the number of processing threads to be used by the service.

```
void setProcessingThreadsCount( int ThreadsCount );
```

Parameters

ThreadsCount

The new number of threads. Up to 16 threads are allowed. Set to 0 to determine the number of threads automatically.

TextRecognitionCallback interface

A callback interface to manage the processing: obtain information about progress and errors, terminate the operation if necessary. This interface and its methods are to be implemented on the client side.

```
interface TextRecognitionCallback
```

Methods

Name	Description
onError	Reports an error.
onProgress	Reports the approximate percentage of operation completed and delivers the warnings that occurred during processing. Allows you to cancel processing.
onTextOrientationDetected	Informs the client application about the orientation of the image.

onError method of the TextRecognitionCallback interface

Reports an error.

This method is to be implemented on the client side, which may include displaying the error description to the user or handling it otherwise.

```
void onError( Exception error );
```

Parameters

error

The **Exception** object for the error that has occurred.

onProgress method of the TextRecognitionCallback interface

Reports the approximate percentage of operation completed and delivers the warnings that occurred during processing. Allows you to cancel processing.

This method is to be implemented on the client side, which may include a progress indicator and/or a message to the user about the warnings.

```
boolean onProgress( int percentage, Warning warning )
```

Parameters

percentage

The approximate percentage of the work currently done. This parameter is in the range from 0 to 100.

warning

The warning which occurred, if any; represented by a constant of the **Warning** enumeration.

Return values

The method should return **true** if you wish to terminate the current operation, **false** otherwise.

onTextOrientationDetected method of the TextRecognitionCallback interface

Informs the client application about the orientation of the image. This may be useful if you wish to rotate the view for the user.

Note that the coordinates of the text, after the **recognizeText** method call, will be returned on the image rotated to normal orientation, so you will need to take the rotation angle into account if you intend to use those coordinates.

This method is to be implemented on the client side, which may include displaying the error description to the user or handling it otherwise.

```
void onTextOrientationDetected( int angle )
```

Parameters

angle

The angle on which the image should be rotated to get normal orientation. Possible values are: 0, 90, 180, 270.

TextRecognitionSettings interface

The settings for text recognition scenario.

```
interface TextRecognitionSettings
```

Methods

Name	Description
setAreaOfInterest	Sets the area on the image where the text is to be found.
setRecognitionLanguage	Sets the languages to be used for recognition.

setRecognitionLanguage method of the TextRecognitionSettings interface

Sets the languages to be used for recognition.

By default, only the English language is set. Setting the correct languages for your text will improve recognition accuracy. However, setting too many languages may slow down performance.

```
void setRecognitionLanguage( Language... languages );
```

Parameters

languages

One or more languages to be used for recognition, represented each by a constant of the Language enumeration.

setAreaOfInterest method of the TextRecognitionSettings interface

Sets the area on the image where the text is to be found. By default, no area of interest is selected, and the whole image is considered to contain text blocks.

```
void setAreaOfInterest( Rect areaOfInterest );
```

Parameters

areaOfInterest

The rectangle specifying the area of interest in the image coordinates

CharInfo class

Extended information about the character formatting.

Important! *This class is reserved for future use.*

```
final class CharInfo {
    public final Rect Rect;
    public final Point[] Quadrangle;
    public final int ForegroundColor;
    public final int BackgroundColor;
    public final int Attributes;
}
```

Properties

Name	Type	Description

Attributes	**int**	Character attributes as the OR combination of the following flags:
		`int CHAR_ATTRIBUTE_ITALIC = 0x0;`
		`int CHAR_ATTRIBUTE_BOLD = 0x1;`
		`int CHAR_ATTRIBUTE_UNDERLINED = 0x2;`
		`int CHAR_ATTRIBUTE_STRIKETHROUGH = 0x4;`
		`int CHAR_ATTRIBUTE_SMALLCAPS = 0x8;`
		`int CHAR_ATTRIBUTE_SUPERSCRIPT = 0x10;`
		`int CHAR_ATTRIBUTE_UNCERTAIN = 0x10000;`

BackgroundColor	**int**	The color of the background.

Name	Type	Description
		Note: *The **int** value is calculated from the RGB triplet using the formula: (**red value**) + (256 x **green value**) + (65536 x **blue value**), where **red value** is the first triplet component, **green value** is the second triplet component, **blue value** is the third triplet component. For example, the **int** value of the color white equals 16777215.*
ForegroundColor	**int**	The color of the symbol.
Quadrangle	**Point[]**	The four vertex points of the bounding quadrangle. The vertices are indexed clockwise starting from the bottom left.
Rect	**Rect**	The bounding rectangle of the symbol.

TextBlock class

A collection of recognized text lines found in a text area (block) on the image.

```
final class TextBlock {
    public final TextLine[] TextLines;
}
```

Properties

Name	Type	Description
TextLines	TextLine[]	The lines of recognized text.

TextLine class

A line of recognized text; the location and additional information are also available.

```
final class TextLine {
    public final String Text;
    public final Rect Rect;
    public final Point[] Quadrangle;
```

```
    public final CharInfo[] CharInfo;
}
```

Properties

Name	Type	Description
CharInfo	CharInfo[]	Additional information about the characters. ***Important!*** *This property is reserved for future use.*
Quadrangle	**Point**[]	The four vertex points of the bounding quadrangle. The vertices are indexed clockwise starting from the bottom left. ***Note:*** *Before recognition, the service rotates the image obtained from camera in order to bring text orientation to normal (horizontal). The vertex coordinates are specified for this rotated image and may require coordinate conversion if you display the quadrangle on the video frame.*
Rect	**Rect**	The bounding rectangle of the text line.
Text	**String**	The recognized text.

close method of the IRecognitionCoreAPI interface

Releases the resources used by the object.

```
void close();
```

getTextRecognitionSettings method of the IRecognitionCoreAPI interface

Provides access to the settings for text recognition.

```
TextRecognitionSettings getTextRecognitionSettings();
```

Return values

This method returns an object implementing the **TextRecognitionSettings** interface, which allows you to change the settings for text recognition scenario.

getProcessingSettings method of the IRecognitionCoreAPI interface

Provides access to general processing settings common to all scenarios.

```
ProcessingSettings getProcessingSettings();
```

Return values

This method returns an object implementing the **ProcessingSettings** interface, which allows you to change the general processing settings.

recognizeText method of the IRecognitionCoreAPI interface

Performs recognition of a single image.

```
TextBlock[] recognizeText( Bitmap image, TextRecognitionCallback callback )
```

Parameters

image

The image to be recognized.

callback

An object implementing the **TextRecognitionCallback** interface which will be used to report progress and terminate the processing if required.

Return values

The method returns an array of **TextBlock** objects which contain the results of recognition for the text areas found on the image.

Warning enum

A warning that occurred during processing.

```
enum Warning {
    RecognitionIsSlow,
    ProbablyLowQualityImage,
    ProbablyWrongLanguage,
    WrongLanguage,
    TextTooSmall
}
```

Constants

Name	Description
ProbablyLowQualityImage	The image quality (contrast, resolution) may not be good enough for accurate results.
ProbablyWrongLanguage	The recognition language may be specified incorrectly.
RecognitionIsSlow	Recognition takes too much time. Check if there is some problem.
TextTooSmall	The text is too small. Advise the end user to move the camera closer or zoom in.
WrongLanguage	The recognition language is specified incorrectly.

IDataCaptureCoreAPI interface

Provides access to low-level single image core API functions for current thread, that are intended for capturing data from business cards.

Use the object on the thread on which it was created; you may also create several objects on different threads and use them concurrently. All method calls are synchronous (will not return until the operation is completed), so should not be used on the UI thread.

Note: *The functionality is currently supported for BusinessCards profile only.*

```
public interface IDataCaptureCoreAPI
```

Methods

Name	Description
close	Releases the resources.
extractDataFromImage	Extracts data from a still image.
getDataCaptureSettings	Provides access to data capture settings.

Name	Description
getExtendedSettings	Provides access to extended service configuration settings.

Nested classes

Name	Description
Callback	A callback interface to manage the processing: obtain information about progress and errors, terminate the operation if necessary.
DataField	Extended information about the character formatting.
ExtendedSettings	Extended configuration settings used for tuning the parameters of the data capture scenario.
ProcessingSettings	The general settings which are the same for different processing scenarios.

Enumerations

Name	Description
Warning	A warning that occurred during processing.

Callback interface

A callback interface to manage the processing: obtain information about progress and errors, terminate the operation if necessary. This interface and its methods are to be implemented on the client side.

```
interface Callback
```

Methods

Name	Description
onError	Reports an error.

Name	Description
onProgress	Reports the approximate percentage of operation completed and delivers the warnings that occurred during processing. Allows you to cancel processing.
onTextOrientationDetected	Informs the client application about the orientation of the image.

onError method of the Callback interface

Reports an error.

This method is to be implemented on the client side, which may include displaying the error description to the user or handling it otherwise.

```
void onError( Exception error );
```

Parameters

error

The **Exception** object for the error that has occurred.

onProgress method of the Callback interface

Reports the approximate percentage of operation completed and delivers the warnings that occurred during processing. Allows you to cancel processing.

This method is to be implemented on the client side, which may include a progress indicator and/or a message to the user about the warnings.

```
boolean onProgress( int percentage, Warning warning )
```

Parameters

percentage

The approximate percentage of the work currently done. This parameter is in the range from 0 to 100.

warning

The warning which occurred, if any; represented by a constant of the **Warning** enumeration.

Return values

The method should return **true** if you wish to terminate the current operation, **false** otherwise.

onTextOrientationDetected method of the Callback interface

Informs the client application about the orientation of the image. This may be useful if you wish to rotate the view for the user.

Note that the coordinates of the text, after the **recognizeText** method call, will be returned on the image rotated to normal orientation, so you will need to take the rotation angle into account if you intend to use those coordinates.

This method is to be implemented on the client side, which may include displaying the error description to the user or handling it otherwise.

```
void onTextOrientationDetected( int angle )
```

Parameters

angle

The angle on which the image should be rotated to get normal orientation. Possible values are: 0, 90, 180, 270.

DataCaptureSettings interface

The settings for basic data capture scenario.

Note: *The functionality is currently supported for BusinessCards profile only.*

```
interface DataCaptureSettings
```

Methods

Name	Description
setProfile	Sets the predefined profile name. See all available profiles in the Data Capture Profiles section.
setRecognitionLanguage	Sets the languages to be used for recognition.

setRecognitionLanguage method of the DataCaptureSettings interface

Sets the languages to be used for recognition.

By default, only the English language is set. Setting the correct languages for your text will improve recognition accuracy. However, setting too many languages may slow down performance.

```
void setRecognitionLanguage( Language... languages );
```

Parameters

languages

One or more languages to be used for recognition, represented each by a constant of the **Language** enumeration.

setProfile method of the DataCaptureSettings interface

Sets the name of the predefined profile for matching the corresponding data schemes to the image from which the data should be captured.

```
void setProfile( String profile );
```

Parameters

profile

The profile name. The functionality is currently supported for BusinessCards profile only.

ExtendedSettings interface

The interface is reserved for future use.

ProcessingSettings interface

The general settings which are the same for different processing scenarios.

```
interface ProcessingSettings
```

Methods

Name	Description
getProcessingThreadsCount	Gets the number of processing threads to be used.
setProcessingThreadsCount	Sets the number of processing threads to be used.

getProcessingThreadsCount method of the ProcessingSettings interface

Gets the number of processing threads to be used if applicable.

```
int getProcessingThreadsCount();
```

Return values

The method returns the number of threads. Returns 0 if the number of threads is to be determined automatically, which is the default setting.

setProcessingThreadsCount method of the ProcessingSettings interface

Sets the number of processing threads to be used if applicable.

```
void setProcessingThreadsCount( int ThreadsCount );
```

Parameters

ThreadsCount

The new number of threads. Up to 16 threads are allowed. Set to 0 to determine the number of threads automatically.

DataField class

A recognized data field. Provides field contents, location and included data fields, if applicable.

Note that a field may have several components — for example, it can contain two or more words. Component details are available from the **Components** array. Each element of this array is a **DataField** object with its own **Text** property (for example, a word) and **Quadrangle** property (the bounding quadrangle of this component). The field's **Text** property contains its entire text, and the field's **Quadrangle** property represents the whole area of a field: this quadrangle encloses the quadrangles of all components.

The **Components** array always contains at least one element. When a field contains only one component, the **Text** and **Quadrangle** properties of the field and this component are identical.

```
final class DataField {
    public final String Id;
    public final String Name;
    public final String Text;
    public final Point[] Quadrangle;
```

```
    public final DataField[] Components;
}
```

Properties

Name	Type	Description
Components	**DataField**[]	An array of data fields, representing one complex field found in the image, with all additional information.
Id	**String**	The internal field identifier. Can be one of the predefined fields listed in Data Capture Profiles or the custom field identifier that you specified in the **ISchemeBuilder.addField** call. May be **null**.
Name	**String**	The human-readable name of the field. If you are using a custom data capture profile, this is the name you set with the **IFieldBuilder.setName** method.
Quadrangle	**Point**[]	The four vertex points of the bounding quadrangle. The vertices are indexed clockwise starting from the bottom left. ***Note:*** *Before recognition, the service rotates the image obtained from camera in order to bring text orientation to normal (horizontal). The vertex coordinates are specified for this rotated image and may require coordinate conversion if you display the quadrangle on the video frame.*
Text	**String**	The text of the field.

close method of the IDataCaptureCoreAPI interface

Releases the resources used by the object.

```
void close();
```

extractDataFromImage method of the IDataCaptureCoreAPI interface

Extracts data from a still image.

```
DataField[] extractDataFromImage( Bitmap image, Callback callback );
```

Parameters

image

The image from which data should be extracted.

callback

An object implementing the **Callback** interface which will be used to report progress and terminate the processing if required.

Return values

The method returns an array of **DataField** objects which contain the results of capturing data from the image.

getDataCaptureSettings method of the IDataCaptureCoreAPI interface

Provides access to data capture settings.

```
DataCaptureSettings getDataCaptureSettings();
```

Return values

This method returns an object implementing the **ProcessingSettings** interface, which allows you to change the general processing settings.

getExtendedSettings method of the IDataCaptureCoreAPI interface

Provides access to extended service configuration settings. Intended for advanced users: most common scenarios will work with the default settings.

```
ExtendedSettings getExtendedSettings();
```

Return values

This method returns an object implementing the **ExtendedSettings** interface, which allows you to change the advanced configuration settings.

Warning enum

A warning that occurred during processing.

```
enum Warning {
    RecognitionIsSlow,
    ProbablyLowQualityImage,
    ProbablyWrongLanguage,
    WrongLanguage,
    TextTooSmall
}
```

Constants

Name	Description
ProbablyLowQualityImage	The image quality (contrast, resolution) may not be good enough for accurate results.
ProbablyWrongLanguage	The recognition language may be specified incorrectly.
RecognitionIsSlow	Recognition takes too much time. Check if there is some problem.
TextTooSmall	The text is too small. Advise the end user to move the camera closer or zoom in.
WrongLanguage	The recognition language is specified incorrectly.

IImagingCoreAPI interface

Provides access to low-level functions for single image processing. Use the object on the thread on which it was created; you may also create several objects on different threads and use them concurrently. All method calls are synchronous (will not return until the operation is completed), so should not be used on the UI thread. For advanced users.

Methods

Name	Description
close	Release all resources.

Name	Description
createCropOperation	Creates an operation for image crop.
createDetectDocumentBoundaryOperation	Creates an operation for document boundary detection.
createExportToJpgOperation	Creates an operation for exporting image to JPG.
createExportToPdfOperation	Creates an operation for exporting image to PDF.
createExportToPngOperation	Creates an operation for exporting image to PNG.
createExportToWebPOperation	Creates an operation for exporting image to WebP.
createQualityAssessmentForOcrOperation	Creates an operation for image quality assessment for OCR.
createRotateOperation	Creates an operation for rotating the image.
getExtendedSettings	Returns configuration settings for extended service.
loadImage from bitmap	Loads an image from a bitmap.
loadImage from a byte buffer	Loads an image from a byte buffer.

Nested classes

Name	Description
CropOperation	An operation for image crop.
DetectDocumentBoundaryOperation	An operation for image boundaries detection.

Name	Description
ExportOperation	Export operation interface.
ExportToJpgOperation	An operation for image export into JPG format.
ExportToPdfOperation	An operation for image export into PDF format.
ExportToPngOperation	An operation for image export into PNG format.
ExportToWebPOperation	An operation for image export into WebP format.
ExtendedSettings	Extended CoreAPI configuration settings.
Image	Loaded image.
ImageOperation	Image operation interface.
QualityAssessmentForOcrOperation	An operation for image quality assessment for OCR.
RotateOperation	An operation for rotating the image to a specified angle.

ExportOperation interface

Export operations operate on the provided output stream. Images are added as pages. Some export operations support adding multiple pages and some do not. Export operations are AutoClosable objects and should be properly closed to ensure that all required content has been written to the output stream.

Methods

Name	Description
addPage	Adds a page to the export target.

Enumerations

Name	Description
Compression	A uniform image compression scale for all lossy formats.

addPage method of the ExportOperation interface

Adds a bitmap image as a page to the export target.

```
void addPage( android.graphics.Bitmap bitmap ) throws IOException
```

Parameters

bitmap

The bitmap image to be added.

Exceptions

Throws **java.io.IOException** if a required library or resource is not found or could not be loaded.

Compression enum

A uniform image compression scale for all lossy formats.

```
enum Compression {
    ExtraHigh,
    High,
    Low,
    Normal
}
```

Constants

Name	Description
ExtraHigh	The maximum compression rate.
High	More compression, less safety margin.

Name	Description
Low	The lowest compression rate that still might have any noticeable effect on recognition of small text
Normal	[Default] Balanced trade-off between compression and quality.

ExtendedSettings interface

The interface is reserved for future use.

Image interface

The interface represents the captured image.

Methods

Name	Description
close	Releases the resources used by the object.
toBitmap	Converts the image to a bitmap. The bitmap is created with corrected orientation if applicable.

close method of the Image Interface

Releases the resources used by the object.

```
void close
```

toBitmap method of the Image Interface

Converts the image to a bitmap. The bitmap is created with corrected orientation if applicable.

```
android.graphics.Bitmap toBitmap()
```

Return values

The method returns the instance of the the **Bitmap** interface.

ImageOperation interface

Image operation interface.

After the image is captured a sequence of specified operations is applied to it. The operations can modify the image, then the returned result is the modified image, fill the [out] parameters of the operation or combine these two behavior types.

Methods

Name	Description
apply	Applies chosen operation to the image.

apply method of the ImageOperation interface

Applies chosen operation to the image.

```
void apply( IImagingCoreAPI.Image image )
```

Parameters

image

The image to which the operation is to by applied.

CropOperation class

An operation for image crop. The crop is performed on the image taking into account the orientation set up during image loading, if the image was loaded from byte buffer. In case the image was loaded from bitmap, orientation is not used.

This operation not only crops the image but also corrects perspective distortion if needed.

Use the **apply** method of the **ImageOperation** interface to apply the operation to the image.

```
abstract static class IImagingCoreAPI.CropOperation {
    public Point[] DocumentBoundary;
    public int DocumentHeight;
    public int DocumentWidth;
    public int Resolution;
}
```

Properties

Name	Type	Description
DocumentBoundary	**Point[]**	Document boundary defined by the four vertex points of the bounding quadrangle. The vertices are indexed clockwise starting from the bottom left.
DocumentHeight	**int**	[in, optional] The document height in millimeters.
DocumentWidth	**int**	[in, optional] The document width in millimeters.
Resolution	**int**	[out] The image resolution as calculated from image size and physical page size.

DetectDocumentBoundaryOperation class

An operation for image boundaries detection. Use the **apply** method of the **ImageOperation** interface to apply the operation to the image.

```
abstract static class IImagingCoreAPI.DetectDocumentBoundaryOperation {
    public Rect AreaOfInterest;
    public Point[] DocumentBoundary;
    public int DocumentHeight;
    public int DocumentWidth;
}
```

Properties

Name	Type	Description
AreaOfInterest	**Rect**	Area of interest for the operation.
DocumentBoundary	**Point[]**	[out] The detected document boundary defined by the four vertex points of the bounding quadrangle. The vertices are indexed clockwise starting from the bottom left.
DocumentHeight	**int**	[in, out] The document height in millimeters.

Name	Type	Description
DocumentWidth	**int**	[in, out] The document width in millimeters size.

ExportToJpgOperation class

An operation for image export into JPG format. Use the **addPage** method of the **ExportOperation** interface to export the image.

```
abstract static class IImagingCoreAPI.ExportToJpgOperation  {
    public Compression Compression ;
    public int Resolution;
}
```

Properties

Name	Type	Description
Compression	**Compression**	Image compression.
Resolution	**int**	Image resolution in EXIF. The default value of this property is 0.

ExportToPdfOperation class

An operation for image export into PDF format. Use the **addPage** method of the **ExportOperation** interface to export the image.

```
abstract static class IImagingCoreAPI.ExportToPdfOperation {
    public Compression Compression;
    public CompressionType  CompressionType;
    public int PageHeight;
    public int PageWidth ;
}
```

Properties

Name	Type	Description
CompressionType	**CompressionType**	Page compression. The default value of this property is Jpg.
Compression	**Compression**	Image compression.
PageHeight	**int**	Page heigth in points (1/72 per inch). If the value is 0, the page size is the same as the size of the image in pixels. The page size of A4 is 595x842. The default value of this property is 0.
PageWidth	**int**	Page width in points (1/72 of an inch). If the value is 0, the page size is the same as the size of the image in pixels. The default value of this property is 0. The page size of A4 is 595x842.

ExportToPngOperation class

An operation for image export into PNG format. Use the **addPage** method of the **ExportOperation** interface to export the image.

```
abstract static class IImagingCoreAPI.ExportToPngOperation;
```

ExportToWebPOperation class

An operation for image export into WebP format. WebP is an image format promoted by Google and natively present on Android devices. It is a modern format which gives a better quality compared to JPG at similar compression rates. It is faster than JPEG2000 and similar in both quality and speed to JPG XR promoted by Microsoft Codecs are available as source code or compiled tools with permissive license.

```
abstract static class IImagingCoreAPI.ExportToWebPOperation  {
    public Compression Compression ;
    public int Resolution;
}
```

Properties

Name	Type	Description
Compression	Compression	Image compression.
Resolution	**int**	Image resolution in EXIF. The default value of this property is 0.

QualityAssessmentForOcrOperation class

Note: *This is a technology preview feature. The functionality will be improved and completed in future versions.*

An operation for image quality assessment for OCR. Use the **apply** method of the **ImageOperation** interface to apply the operation to the image.

```
abstract static class IImagingCoreAPI.QualityAssessmentForOcrOperation {
    public Point[] DocumentBoundary;
    public QualityAssessmentForOcrBlock[] qualityAssessmentForOcrBlocks;
}
```

Properties

Name	Type	Description
DocumentBoundary	**Point[]**	[in, optional] Document boundary defined by the four vertex points of the bounding quadrangle. The vertices are indexed clockwise starting from the bottom left.
qualityAssessmentForOcrBlocks	QualityAssessmentForOcrBlock[]	[out] The quality assessment blocks.

RotateOperation class

An operation for rotating the image to a specified angle. Use the **apply** method of the **ImageOperation** interface to apply the operation to the image.

```
abstract static class IImagingCoreAPI.CropOperation { public int Angle; }
```

Properties

Name	Type	Description
Angle	**int**	The angle in degrees. Available values of the angle: 0, 90, 180, 270.

close method of the IImagingCoreAPI interface

Releases the resources used by the object.

```
void close();
```

createCropOperation method of the IImagingCoreAPI interface

Creates an operation for image crop.

```
IImagingCoreAPI.CropOperation createCropOperation();
```

Return values

The method returns an instance of the **CropOperation** class. Use the **apply** method of the **ImageOperation** interface to apply the operation to the image.

createDetectDocumentBoundaryOperation method of the IImagingCoreAPI interface

Creates an operation for document boundary detection.

```
IImagingCoreAPI.DetectDocumentBoundaryOperation
createDetectDocumentBoundaryOperation();
```

Return values

The method returns an instance of the **DetectDocumentBoundaryOperation** class. Use the **apply** method of the **ImageOperation** interface to apply the operation to the image.

createExportToJpgOperation method of the IImagingCoreAPI interface

Creates an operation for exporting image to JPG format.

```
IImagingCoreAPI.ExportToJpgOperation
createExportToJpgOperation( java.io.OutputStream outputStream );
```

Parameters

outputStream

The output stream for export.

Return values

The method returns an instance of the **ExportToJpgOperation** class. Use the **addPage** method of the **ExportOperation** interface to export the image.

createExportToPngOperation method of the IImagingCoreAPI interface

Creates an operation for exporting image to PNG format.

```
IImagingCoreAPI.ExportToPngOperation
createExportToPngOperation( java.io.OutputStream outputStream );
```

Parameters

outputStream

The output stream for export.

Return values

The method returns an instance of the **ExportToPngOperation** class. Use the **addPage** method of the **ExportOperation** interface to export the image.

createExportToWebPOperation method of the IImagingCoreAPI interface

Creates an operation for exporting image to WebP format.

```
IImagingCoreAPI.ExportToWebPOperation
createExportToWebPOperation( java.io.OutputStream outputStream );
```

Parameters

outputStream

The output stream for export.

Return values

The method returns an instance of the **ExportToWebPOperation** class. Use the **addPage** method of the **ExportOperation** interface to export the image.

createExportToPdfOperation method of the IImagingCoreAPI interface

Creates an operation for exporting image to PDF format.

```
IImagingCoreAPI.ExportToPdfOperation
createExportToPdfOperation( java.io.OutputStream outputStream );
```

Parameters

outputStream

The output stream for export.

Return values

The method returns an instance of the **ExportToPdfOperation** class. Use the **addPage** method of the **ExportOperation** interface to export the image.

createQualityAssessmentForOcrOperation method of the IImagingCoreAPI interface

Note: *This is a technology preview feature. The functionality will be improved and completed in future versions.*

Creates an operation for image quality assessment for OCR.

```
IImagingCoreAPI.QualityAssessmentForOcrOperation
createQualityAssessmentForOcrOperation();
```

Return values

The method returns an instance of the **QualityAssessmentForOcrOperation** class. Use the **apply** method of the **ImageOperation** interface to apply the operation to the image.

createRotateOperation method of the IImagingCoreAPI interface

Creates an operation for rotating the image.

```
IImagingCoreAPI.RotateOperation createRotateOperation();
```

Return values

The method returns an instance of the **RotateOperation** class. Use the **apply** method of the **ImageOperation** interface to apply the operation to the image.

getExtendedSettings method of the IImagingCoreAPI interface

Provides access to extended service configuration settings. Intended for advanced users: most common scenarios will work with the default settings.

```
ExtendedSettings getExtendedSettings();
```

Return values

This method returns an object implementing the **ExtendedSettings** interface, which allows you to change the advanced configuration settings.

loadImage method of the IImagingCoreAPI interface

Loads the specified bitmap image (HBITMAP) into the internal format.

```
IImagingCoreAPI.Image loadImage( Bitmap bitmap );
```

Parameters

bitmap

The bitmap image to be loaded.

Return values

The method returns the image object implementing the **Image** inteface.

loadImage method of the IImagingCoreAPI interface

Loads an image from a byte buffer.

```
IImagingCoreAPI.Image loadImage( ByteBuffer imageBuffer,
                                 int imageWidth,
```

```
                                    int imageHeight,
                                    int orientation );
```

Parameters

imageBuffer

The byte buffer to be filled with image data. This is the same buffer that is returned from camera or **IImageCaptureService** interface. Only NV21 format is currently supported.

imageWidth

The width of the image.

imageHeight

The height of the image.

orientation

The orientation of the image. The orientation is used to rotate the final image when getting the result.

Return values

The method returns the image object implementing the **Image** inteface.

Language enum

The language of the text. See Available Languages for a full list with information on features support for each language.

```
public enum Language {
    Afrikaans,
    Albanian,
    Basque,
    Belarusian,
    Breton,
    Bulgarian,
    Catalan,
    Chechen,
    ChineseSimplified,
    ChineseTraditional,
    CrimeanTatar,
    Croatian,
    Czech,
    Danish,
    Dutch,
    DutchBelgian,
    English,
    Estonian,
    Fijian,
    Finnish,
```

```
    French,
    German,
    GermanNewSpelling,
    Greek,
    Hawaiian,
    Hungarian,
    Icelandic,
    Indonesian,
    Irish,
    Italian,
    Japanese,
    Kabardian,
    Korean,
    Latin,
    Latvian,
    Lithuanian,
    NorwegianBokmal,
    NorwegianNynorsk,
    Macedonian,
    Malay,
    Maori,
    Moldavian,
    Mongol,
    Ossetic,
    Polish,
    Portuguese,
    PortugueseBrazilian,
    Provencal,
    RhaetoRomanic,
    Romanian,
    Russian,
    Samoan,
    Serbian,
    Slovak,
    Slovenian,
    Spanish,
    Swahili,
    Swedish,
    Tagalog,
    Tatar,
    Turkish,
    Ukrainian,
    Welsh
}
```

User Interface API Reference

This section describes provided Java API for user interface implementation.

CaptureView class

Provides methods for tuning the user interface appearance and the capturing process parameters.

Extends the **FrameLayout** class.

Note: *The settings will be discarded with the* ***CaptureView*** *object recreation.*

```
class CaptureView
```

Methods

Name	Description
startCamera	Starts working with the camera.
setCaptureScenario	Defines and automatically starts capture scenario, represented by a **CaptureScenario** object.
stopCamera	Stops working with the camera.
getCameraSettings	Returns the settings defined in the **CameraSettings** object to the camera.
getUISettings	Applies the settings defined in the **UISettings** object to the user interface.

Attributes

The user interface messages can be adjusted using the following attributes. Edit them in the **CaptureView** tag in the XML layout.

```
<com.abbyy.mobile.uicomponents.CaptureView
    android:id="@+id/captureView"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    app:dialog_permission_rationale_message="@string/custom_dialog_permissi
on_rationale_message"
    app:dialog_permission_rationale_negative_button="@string/custom_dialog_
permission_rationale_negative_button"
    app:dialog_permission_rationale_positive_button="@string/custom_dialog_
```

```
permission_rationale_positive_button"
    app:dialog_permission_rationale_title="@string/custom_dialog_permission
_rationale_title"
    app:dialog_permission_settings_message="@string/custom_dialog_permissio
n_settings_message"
    app:dialog_permission_settings_negative_button="@string/custom_dialog_p
ermission_settings_negative_button"
    app:dialog_permission_settings_positive_button="@string/custom_dialog_p
ermission_settings_positive_button"
    app:dialog_permission_settings_title="@string/custom_dialog_permission_
settings_title"
    app:image_capture_hint_acceptable_condition="@string/custom_image_captu
re_hint_acceptable_condition"
    app:image_capture_hint_not_acceptable_condition="@string/custom_image_c
apture_hint_not_acceptable_condition"
    app:image_capture_hint_started="@string/custom_image_capture_hint_start
ed"
    app:need_permission_hint_message="@string/custom_need_permission_hint_m
essage"
    app:need_permission_hint_title="@string/custom_need_permission_hint_tit
le" />
```

CameraSettings interface

Settings of the camera. The interface provides methods for tuning camera resolution. Also, if for some reason you have to hide embedded flashlight button and implement a custom one, you can use the methods of this interface to manage the flashlight.

```
interface CameraSettings
```

Methods

Name	Description
setResolution	Sets camera resolution.
getResolution	Provides access to the defined resolution.
hasFlashlight	Defines if the device has a flashlight.
isFlashlightEnabled	Defines if the flashlight is currently enabled in a torch mode.
setFlashlightEnabled	Enables or disables the device flashlight torch mode.

Nested classes

Name	Description
Resolution	The resolution of the images captured from the camera preview.

Resolution enum class

The resolution of the images captured from the camera preview.

```
enum Resolution {
   FULL_HD,
   HD;
}
```

Constants

Name	Description
FULL_HD	Captured image will have 1920x1080 px resolution
HD	Captured image will have 1280x720 px resolution

hasFlashlight method

Defines if the device has a flashlight.

Note: *All the methods in UI components implementation should currently be called from the Android Main Thread. The results should be also returned to the Main Thread.*

```
boolean hasFlashlight();
```

Return values

Returns **true** if the device has flashlight, **false** otherwise.

isFlashlightEnabled method

Defines if the flashlight in torch mode is currently enabled.

Note: *All the methods in UI components implementation should currently be called from the Android Main Thread. The results should be also returned to the Main Thread.*

```
boolean isFlashlightEnabled();
```

Return values

Returns **true** if the flashlight in torch mode is currently enabled, **false** otherwise.

setFlashlightEnabled method

Enables or disables the device flashlight torch mode.

Note: *All the methods in UI components implementation should currently be called from the Android Main Thread. The results should be also returned to the Main Thread.*

```
void setFlashlightEnabled( boolean isEnabled );
```

Parameters

isEnabled

This parameter defines if the flashlight in torch mode should be enabled. Set **true** to enable the flashlight and **false** otherwise.

setResolution method

Sets camera resolution.

Note: *All the methods in UI components implementation should currently be called from the Android Main Thread. The results should be also returned to the Main Thread.*

```
void setResolution( Resolution resolution );
```

Parameters

resolution

The value of camera resolution.

getResolution method

Returns the camera resolution.

Note: *All the methods in UI components implementation should currently be called from the Android Main Thread. The results should be also returned to the Main Thread.*

```
Resolution getResolution();
```

Return values

Returns a **Resolution** class object storing camera resolution.

ExtendedSettings interface

Extended user interface components settings. Intended for advanced users: most common scenarios will work with the default settings.

Methods

Name	Description
setAdditionalPermissions	Sets if any permissions to be granted for the scenario performance in addition to the camera usage permission.
setRequestPermissionsResultCallback	Sets the callback object for receiving the results for additional permission requests.

setAdditionalPermissions method

Sets if any permissions to be granted for the scenario performance in addition to the camera usage permission, i.e. remote storage, Bluetooth or geolocation permissions.

```
void setAdditionalPermissions(String[] permissions);
```

Parameters

permissions

This parameter defines the requested permissions.

setRequestPermissionsResultCallback method

Sets the callback object for receiving the results for additional permission requests.

```
void
setRequestPermissionsResultCallback(ActivityCompat.OnRequestPermissionsResu
ltCallback callback);
```

Parameters

callback

An **ActivityCompat.OnRequestPermissionsResultCallback** object which receives the results for additional permission requests.

UISettings interface

Settings for tuning the user interface appearance.

The elements of the user interface can be customized according to the implementation of your application needs and its design. The buttons for enabling flashlight or manual capturing can be hidden. A special color can be chosen for the main UI elements. Generally two color themes are provided, so you do not need to set the whole interface appearance manually.

```
interface UISettings
```

Methods

Name	Description
setFlashlightButtonVisible	Shows or hides the button for enabling flashlight in torch mode.
isFlashlightButtonVisible	Checks if the button of flashlight is in torch mode is shown.
setCaptureButtonVisible	Shows or hides the button for taking photo manually.
isCaptureButtonVisible	Checks if the button for manual capture is visible.
setTheme	Sets a color theme for the user interface.
getTheme	Returns current color theme of the user interface.
setCustomColor	Sets a custom color of the button for manual taking photo.
getCustomColor	Returns defined color of the button for manual taking photo.

Nested classes

Name	Description
Theme	The user interface theme.

Theme enum class

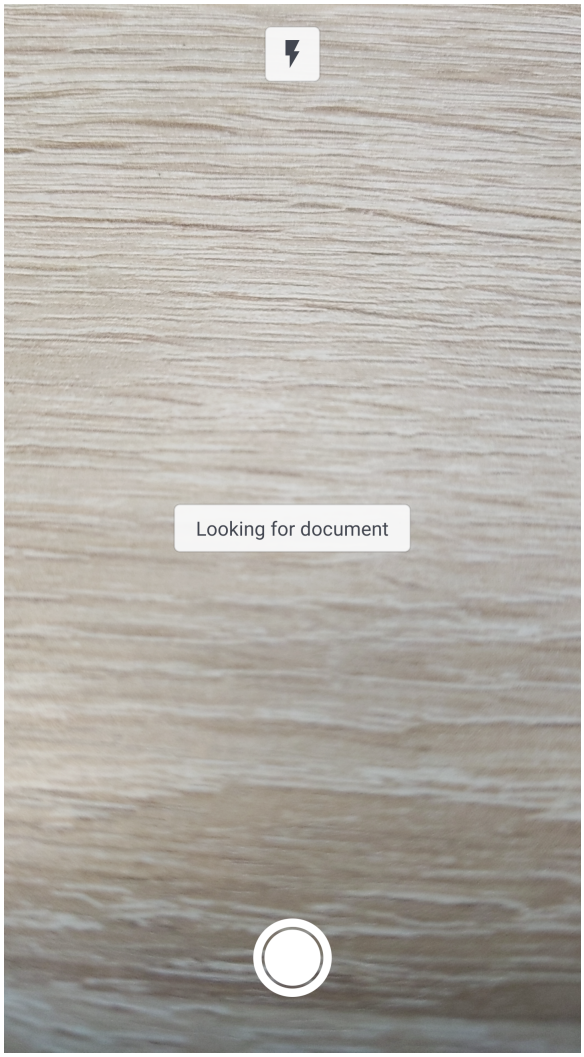
The user interface theme. Chosen theme defines the following:

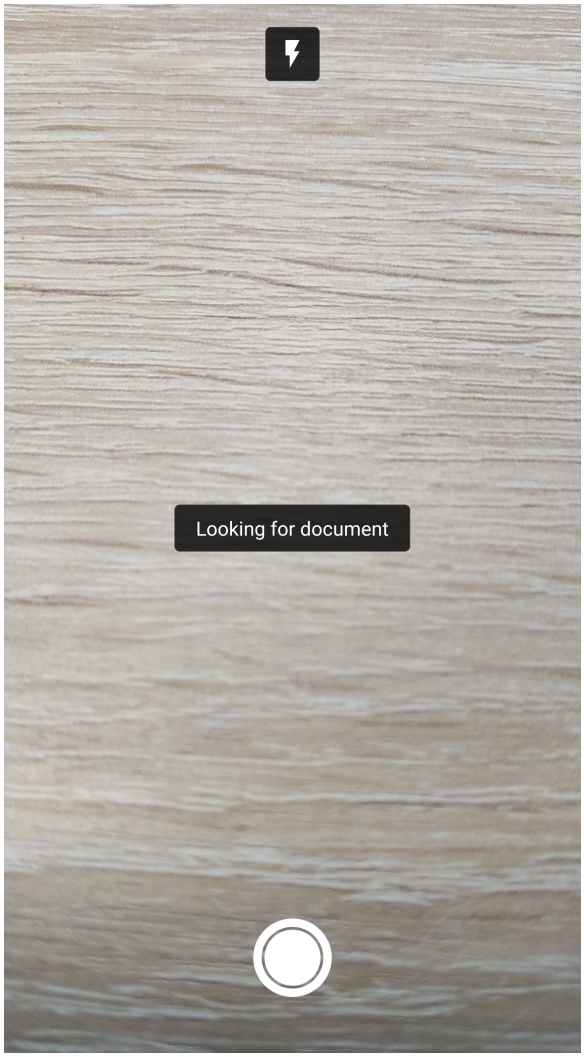
- background color
- color of the text
- buttons color
- document tracking frame color
- capture area corners color

You can customize the button color using the **setCustomColor** method of the **UISettings** interface

```
enum Theme{
    LIGHT,
    DARK;
}
```

Constants

Name	Description
LIGHT	

Name	Description
DARK	

setCustomColor method of the UISettings interface

Sets a custom color of the button for manual taking photo.

Note: *All the methods in UI components implementation should currently be called from the Android Main Thread. The results should be also returned to the Main Thread.*

```
void setCustomColor( @ColorRes int colorRes );
```

Parameters

colorRes

The custom color resource reference in the integer format.

getCustomColor method

Returns defined color of the button for manual taking photo.

Note: *All the methods in UI components implementation should currently be called from the Android Main Thread. The results should be also returned to the Main Thread.*

```
Integer getCustomColor();
```

Return values

Returns an **Int** value referring to the color resource. See **ColorRes** for details.

setCaptureButtonVisible method

Shows or hides the button for taking photo manually.

Note: *All the methods in UI components implementation should currently be called from the Android Main Thread. The results should be also returned to the Main Thread.*

```
void setCaptureButtonVisible( boolean isVisible );
```

Parameters

isVisible

This parameter defines if the button for taking photo manually should be visible. Set **true** to set the button visible and **false** otherwise.

isCaptureButtonVisible method

Checks if the button for taking photo manually is visible.

Note: *All the methods in UI components implementation should currently be called from the Android Main Thread. The results should be also returned to the Main Thread.*

```
boolean isCaptureButtonVisible();
```

Return values

Returns **true** if the button is visible and **false** otherwise.

setFlashlightButtonVisible method

Shows or hides the button for enabling flashlight in torch mode.

Note: *All the methods in UI components implementation should currently be called from the Android Main Thread. The results should be also returned to the Main Thread.*

```
void setFlashlightButtonVisible( boolean isVisible );
```

Parameters

isVisible

This parameter defines if the button for turning the flashlight on should be visible. Set **true** to set the button visible and **false** otherwise.

isFlashlightButtonVisible method

Checks if the button of flashlight in torch mode is shown.

Note: *All the methods in UI components implementation should currently be called from the Android Main Thread. The results should be also returned to the Main Thread.*

```
boolean isFlashlightButtonVisible();
```

Return values

Returns **true** if the button is visible and **false** otherwise.

setTheme method

Sets chosen theme for the user interface.

Note: *All the methods in UI components implementation should currently be called from the Android Main Thread. The results should be also returned to the Main Thread.*

```
void setTheme( Theme theme );
```

Parameters

theme

The chosen color theme of the user interface appearance, represented by a constant of the **Theme** enumeration.

getTheme method

Returns current color theme of the user interface.

Note: *All the methods in UI components implementation should currently be called from the Android Main Thread. The results should be also returned to the Main Thread.*

```
Theme getTheme();
```

Return values

Returns a **Theme** class object.

getCameraSettings method

Returns the object that defines the settings of the camera.

Note: *All the methods in UI components implementation should currently be called from the Android Main Thread. The results should be also returned to the Main Thread.*

```
CameraSettings getCameraSettings();
```

Return values

Returns the **CameraSettings** object.

getUISettings method

Returns the object that defines the settings of the user interface

Note: *All the methods in UI components implementation should currently be called from the Android Main Thread. The results should be also returned to the Main Thread.*

```
UISettings getUISettings();
```

Return values

Returns the **UISettings** object.

setCaptureScenario method

Sets the capture scenario.

Note: *All the methods in UI components implementation should currently be called from the Android Main Thread. The results should be also returned to the Main Thread.*

```
void setCaptureScenario( CaptureScenario scenario );
```

Parameters

scenario

Capture scenario, represented by an **CaptureScenario** object.

startCamera method

Starts the camera. It is recommended to call the method inside **onResume** or **onStart** methods of the Activity/Fragment lifecycle.

Permissions for the camera use by the app will be requested automatically when calling this method. If additional custom permissions are to be received, request for them before calling this method.

Only the first call of the method is taken into account. All the further repetitions will be ignored.

Note: *All the methods in UI components implementation should currently be called from the Android Main Thread. The results should be also returned to the Main Thread.*

Important! *Call the **stopCamera** method in pair to the **startCamera** to provide access to the camera for other applications.*

```
void startCamera();
```

stopCamera method

Stops the camera. It is recommended to call the method inside **onPause** or **onStop** methods of the Activity/Fragment lifecycle.

Only the first call of the method is taken into account. All the further repetitions will be ignored.

Note: *All the methods in UI components implementation should currently be called from the Android Main Thread. The results should be also returned to the Main Thread.*

Important! *Call the **stopCamera** method in pair to the **startCamera** to provide access to the camera for other applications.*

```
void stopCamera();
```

CaptureScenario

The interface is reserved for future use.

Extended by the **ImageCaptureScenario** interface.

ImageCaptureScenario class

Provides access to the capture scenario management. The **ImageCaptureScenario** object constructor receives an instance of the **Engine** object, required for connection of the User Interface API with the capturing and recognition mechanisms.

Scenario, represented by this class, is started on the call of the **setCaptureScenario** method of the **CaptureView** class.

Implements the **CaptureScenario** interface.

```
class ImageCaptureScenario implements CaptureScenario {
    public ImageCaptureScenario(Engine engine);
}
```

Methods

Name	Description
setCallback	Sets the callback object for current image capture scenario.
setCropEnabled	Indicates if the captured image should be cropped.
isCropEnabled	Checks if the crop function is enabled and the captured image will be cropped.
setDocumentSize	Sets the physical size of the captured document, if known.
getDocumentSize	Returns the defined physical size of the captured document.
setMinimumDocumentToViewRatio	Sets the minimum document area relative to the whole frame area, required for capturing. If the document area is less the image will not be captured.
getMinimumDocumentToViewRatio	Returns the value of defined minimum document area relative to the whole frame area.
start	Starts the image capture scenario.
captureImageManually	Captures image immediately.
stop	Stops the image capture scenario.

Nested classes

Name	Description
Result	Returned image in the Bitmap format and the coordinates of the result boundaries.
Callback	The callback interface to return the result of the capturing or error information.
DocumentSize	The physical size of the documents.

Callback interface

The callback interface of the image capture scenario. In case the image was captured successfully, the result image and document boundaries on it are returned. Otherwise the callback will return the occurred error information. This interface and its methods are to be implemented on the client side.

Methods

Name	Description
onImageCaptured	Called to deliver the result if the image was captured successfully.
onError	Called to report an error.

onError method

Called when an error occurs.

This method is to be implemented on the client side, which may include displaying the error description to the user or handling it otherwise.

```
void onError( Exception error );
```

Parameters

error

The **Exception** object for the error that has occurred.

onImageCaptured method

Sets chosen theme for the user interface.

Note: *All the methods in UI components implementation should currently be called from the Android Main Thread. The results should be also returned to the Main Thread.*

```
void onImageCaptured( Result result );
```

Parameters

result

The result of the capture scenario, represented by the **Result** class object.

DocumentSize data class

The physical size of the documents. Can be chosen from the preset values or defined manually.

```
class DocumentSize {
   public DocumentSize(float width, float height);
   public float getWidth();
   public float getHeight();

   public static final DocumentSize ANY;
   public static final DocumentSize A4;
   public static final DocumentSize LETTER;
   public static final DocumentSize BUSINESS_CARD;
}
```

Properties

Name	Type	Description
width	**Float**	Document width in millimeters.
height	**Float**	Document height in millimeters.

Constants

Name	Description
ANY	The captured document can have any size.

Name	Description
A4	Document size is 210x297 millimeters.
LETTER	Document size is 215.9x279.4 millimeters.
BUSINESS_CARD	Document size is 53.98x85.6 millimeters.

Result class

Captured bitmap image with detected document boundaries. This result can be received in both real-time capturing from camera preview and from an immediate manual capture scenario.

Properties

Name	Type	Description
bitmap	**Bitmap**	Captured image.
documentBoundary	**Point[]**	Coordinates of the boundaries detected on the image document.

captureImageManually method

Captures image immediately on button click.

Note: *All the methods in UI components implementation should currently be called from the Android Main Thread. The results should be also returned to the Main Thread.*

```
void captureImageManually();
```

setCallback method

Sets the callback object for current image capture scenario.

Note: *All the methods in UI components implementation should currently be called from the Android Main Thread. The results should be also returned to the Main Thread.*

```
void setCallback( Callback callback );
```

Parameters

callback

The **Callback** interface instance set for current scenario.

setCropEnabled method

Enables or disables the automatic crop option. In case this option is enabled, the fields around captured document will be cropped. Also perspective distortion will be corrected if needed.

Note: *All the methods in UI components implementation should currently be called from the Android Main Thread. The results should be also returned to the Main Thread.*

```
void setCropEnabled( boolean isCropEnabled );
```

Parameters

isCropEnabled

This parameter defines if the crop option should be enabled. Set **true** to enable image crop and **false** otherwise.

isCropEnabled method

Checks if the crop function is enabled and the captured image will be cropped.

Note: *All the methods in UI components implementation should currently be called from the Android Main Thread. The results should be also returned to the Main Thread.*

```
boolean isCropEnabled();
```

Return values

Returns **true** if the crop function is enabled, **false** otherwise.

setDocumentSize method

Sets the physical size of the captured document.

Note: *All the methods in UI components implementation should currently be called from the Android Main Thread. The results should be also returned to the Main Thread.*

```
void setDocumentSize( DocumentSize documentSize );
```

Parameters

documentSize

The size of the captured document, represented by a **DocumentSize** class object.

getDocumentSize method

Returns the defined physical size of the captured document.

Note: *All the methods in UI components implementation should currently be called from the Android Main Thread. The results should be also returned to the Main Thread.*

```
DocumentSize getDocumentSize();
```

Return values

Returns a **DocumentSize** class object.

setMinimumDocumentToViewRatio method

Sets the minimum document area relative to the whole frame area, required for capturing. If the document area is less the image will not be captured.

Note: *All the methods in UI components implementation should currently be called from the Android Main Thread. The results should be also returned to the Main Thread.*

```
void setMinimumDocumentToViewRatio(@FloatRange(from = 0.0,to = 1.0) float
ratio);
```

Parameters

ratio

The [0..1] ratio of the minimum document area relative to the whole frame area.

getMinimumDocumentToViewRatio method

Returns the value of defined minimum document area relative to the whole frame area.

Note: *All the methods in UI components implementation should currently be called from the Android Main Thread. The results should be also returned to the Main Thread.*

```
float getMinimumDocumentToViewRatio();
```

Return values

Returns the value that was set as a ratio of the minimum document area relative to the whole frame area.

start method

Starts the capture scenario execution.

This method can be called before the camera launch. In this case scenario will start simultaneously with the camera.

Note: *All the methods in UI components implementation should currently be called from the Android Main Thread. The results should be also returned to the Main Thread.*

```
void start();
```

stop method

Finalizes the capturing process and releases the resources.

Note: *All the methods in UI components implementation should currently be called from the Android Main Thread. The results should be also returned to the Main Thread.*

```
void stop();
```

Specifications

This section describes the technical requirements and capabilities of ABBYY Mobile Capture SDK.

Device Requirements

Android version: 5.0 or later for ARMv7 (armeabi-v7a) and ARMv8 (arm64-v8a) processors

Processor:

- Arm NEON or x86 SSE support
- multi-core

Camera:

- autofocus lens
- HD preview: generally recommended frame size is **1080×1920**, but it can vary depending on the scenario and processing speed

Memory requirements

Library operation takes up to:

- for texts in alphabetic languages — **40** MB RAM
- for texts in Chinese, Japanese, or Korean languages — **70** MB RAM

Library operation in the data capture scenario (for example, passport recognition) takes up to **170** MB RAM.

Please note, that your device may require more memory for certain processing scenario than specified in this section. For example, the next parameters may increase required RAM:

- recognition threads number
- device speed
- camera resolution
- recognition complexity

The higher are these indices, the more RAM is required.

Distribution Kit

ABBYY Mobile Capture SDK distribution pack includes the library, various resource files, samples and documentation. This section will help you determine which of the files to include when distributing your own application, and minimize the size of the final package.

The following folders contain files for development purposes only, not to be distributed:

Folder	File name	Description
	Readme.html	Readme file.

Folder	File name	Description
help	MobileCaptureDevelopersGuide.pdf	This Developer's Guide.
help/javadoc	All files in this folder.	The library API Reference in Javadoc-generated HTML format.
sample-ui-imagecapture	All files in this folder.	This sample illustrates the steps you need to perform to create a simple mobile application for image capture.
sample-datacapture	All files in this folder.	The sample code implementing a data capture scenario where the capture rule is specified by a regular expression.
sample-textcapture	All files in this folder.	The sample code implementing a simple text capture scenario.
sample-imagecapture	All files in this folder.	The sample code implementing an image capture scenario.
sample-imagecapture-camera2	All files in this folder.	The sample code implementing an image capture scenario using android.hardware.camera2 special package for Android.
sample-coreapi	All files in this folder.	The sample code demonstrating the core API usage in a simple scenario of capturing data from an image.

The files in the **libs**, **assets**, and **notice** folders are intended for the final distribution of your application. The table below shows what files you should distribute depending on your needs.

Folder	File name	Description	Distribution
libs	abbyy-rtr-sdk-1.0.aar or	The ABBYY Mobile Capture SDK library files.	Always required.

Folder	File name	Description	Distribution
	abbyy-mi-sdk-2.0.aar abbyy-ui-1.0.aar		
assets/dictionaries	Brazil.edc	Portuguese (Brazil) language recognition dictionary.	Only those dictionaries that correspond to the languages you will work with.
	Bulgar.edc	Bulgarian language recognition dictionary.	
	Czech.edc	Czech language recognition dictionary.	
	Danish.edc	Danish language recognition dictionary.	
	Dutch.edc	Dutch (Netherlands) language recognition dictionary.	
	English.edc	English language recognition dictionary.	
	Eston.edc	Estonian language recognition dictionary.	
	Finnish.edc	Finnish language recognition dictionary.	
	Flemmish.edc	Dutch (Belgium) language recognition dictionary.	
	French.edc	French language recognition dictionary.	
	German.edc	German (old spelling) language recognition	

Folder	File name	Description	Distribution
		dictionary.	
	GermanNS.edc	German (new spelling) language recognition dictionary.	
	Greek.edc	Greek language recognition dictionary.	
	Indones.edc	Indonesian language recognition dictionary.	
	Italian.edc	Italian language recognition dictionary.	
	NorwBok.edc	Norwegian (Bokmal) language recognition dictionary.	
	NorwNyn.edc	Norwegian (Nynorsk) language recognition dictionary.	
	Polish.edc	Polish language recognition dictionary.	
	Portug.edc	Portuguese (Portugal) language recognition dictionary.	
	Russian.edc	Russian language recognition dictionary.	
	Spanish.edc	Spanish language recognition dictionary.	
	Swedish.edc	Swedish language recognition dictionary.	

Folder	File name	Description	Distribution
	Turkish.edc	Turkish language recognition dictionary.	
	Ukrain.edc	Ukrainian language recognition dictionary.	
assets/patterns	DlQBlockClassifier.imodel DlQClassifier.imodel libMobileOcrEngine.dlp	The ABBYY Mobile Imaging SDK II resource files	Required for image capture scenario.
	ChineseJapanese.rom	Recognition database for Chinese, Japanese, and Korean languages.	Required for recognition of texts in Chinese, Japanese and Korean languages.
	European.rom	Recognition database for all supported recognition languages except Chinese, Japanese, and Korean.	Required for all recognition languages except Chinese, Japanese and Korean.
	FindText.rom	Recognition database for all languages.	Always required.
	KoreanSpecific.rom	Recognition database for Korean language.	Required for recognition of texts in Korean language.
assets/bcr	Brazil.akw	Source file for Brazilian business cards recognition.	Required for business cards recognition scenario.
	ChineseSimplified.akw	Source file for Chinese Simplified business cards recognition.	
	ChineseTraditional.akw	Source file for Chinese Traditional business cards recognition.	

Folder	File name	Description	Distribution
	Czech.akw	Source file for Czech business cards recognition.	
	Danish.akw	Source file for Danish business cards recognition.	
	Dutch.akw	Source file for Dutch business cards recognition.	
	English.akw	Source file for English business cards recognition.	
	Eston.akw	Source file for Estonian business cards recognition.	
	Finnish.akw	Source file for Finnish business cards recognition.	
	French.akw	Source file for French business cards recognition.	
	German.akw	Source file for German business cards recognition.	
	Greek.akw	Source file for Greek business cards recognition.	
	Indones.akw	Source file for Indonesian business cards recognition.	

Folder	File name	Description	Distribution
	Italian.akw	Source file for Italian business cards recognition.	
	Japanese.akw	Source file for Japanese business cards recognition.	
	Korean.akw	Source file for Korean business cards recognition.	
	NorwBok.akw	Source file for Norwegian (Bokmal) business cards recognition.	
	NorwNyn.akw	Source file for Norwegian (Nynorsk) business cards recognition.	
	Polish.akw	Source file for Polish business cards recognition.	
	Portug.akw	Source file for Portuguese business cards recognition.	
	Russian.akw	Source file for Russian business cards recognition.	
	Spanish.akw	Source file for Spanish business cards recognition.	
	Swedish.akw	Source file for Swedish business cards recognition.	

Folder	File name	Description	Distribution
	Turkish.akw	Source file for Turkish business cards recognition.	
	Ukrain.akw	Source file for Ukrainian business cards recognition.	
	WestEuropean.akw	Source file for recognition of English, French, German, Portuguese, Spanish and Italian business cards.	
scenarios-datacapture/assets/patterns	All_EDC.rom	All recognition databases from this directory.	Required if all *.rom files from this directory will be used.
	MRZ.rom	Recognition database for MRZ of the passport.	Required for MRZ data recognition.
	MRZ_EDC.rom	Extended MRZ recognition database for various document types.	Required for recognizing MRZ and MRZ-like zone data on supported documents (see Data Capture Profiles for details).
	BankCards_EDC.rom	Bank card recognition database.	Required for bank card recognition.
	ID_AE_EDC.rom	Recognition database for UAE documents.	Only the databases for the countries you are going to support are required.
	ID_AL_EDC.rom	Recognition database for Albanian	

Folder	File name	Description	Distribution
		documents.	
	ID_AM_EDC.rom	Recognition database for Armenian documents.	
	ID_AT_EDC.rom	Recognition database for Austrian documents.	
	ID_AZ_EDC.rom	Recognition database for Azerbaijani documents.	
	ID_BE_EDC.rom	Recognition database for Belgium documents.	
	ID_BG_EDC.rom	Recognition database for Bulgarian documents.	
	ID_BH_EDC.rom	Recognition database for Bahrain documents.	
	ID_BR_EDC.rom	Recognition database for Brazilian documents.	
	ID_BY_EDC.rom	Recognition database for Belarusian documents.	
	ID_CA_EDC.rom	Recognition database for Canadian documents.	
	ID_CH_EDC.rom	Recognition database for Swiss documents.	

Folder	File name	Description	Distribution
	ID_CL_EDC.rom	Recognition database for Chile documents.	
	ID_CN_EDC.rom	Recognition database for Chinese documents.	
	ID_CY_EDC.rom	Recognition database for Cyprus documents.	
	ID_CZ_EDC.rom	Recognition database for Czech documents.	
	ID_DE_EDC.rom	Recognition database for German documents.	
	ID_DZ_EDC.rom	Recognition database for Algerian documents.	
	ID_EE_EDC.rom	Recognition database for Estonian documents.	
	ID_EG_EDC.rom	Recognition database for Egyptian documents.	
	ID_ES_EDC.rom	Recognition database for Spanish documents.	
	ID_FI_EDC.rom	Recognition database for Finnish documents.	
	ID_FR_EDC.rom	Recognition database for French documents.	

Folder	File name	Description	Distribution
	ID_GE_EDC.rom	Recognition database for Georgian documents.	
	ID_GR_EDC.rom	Recognition database for Greek documents.	
	ID_HK_EDC.rom	Recognition database for Hong Kong documents.	
	ID_HR_EDC.rom	Recognition database for Croatian documents.	
	ID_HU_EDC.rom	Recognition database for Hungarian documents.	
	ID_IL_EDC.rom	Recognition database for Israeli documents.	
	ID_IN_EDC.rom	Recognition database for Indian documents.	
	ID_IT_EDC.rom	Recognition database for Italian documents.	
	ID_JP_EDC.rom	Recognition database for Japanese documents.	
	ID_KG_EDC.rom	Recognition database for Kyrgyzstani documents.	
	ID_KW_EDC.rom	Recognition database for Kuwait documents.	

Folder	File name	Description	Distribution
	ID_KZ_EDC.rom	Recognition database for Kazakhstan documents.	
	ID_LT_EDC.rom	Recognition database for Lithuanian documents.	
	ID_LV_EDC.rom	Recognition database for Latvian documents.	
	ID_MD_EDC.rom	Recognition database for documents of Republic of Moldova.	
	ID_MK_EDC.rom	Recognition database for Macedonian documents.	
	ID_MX_EDC.rom	Recognition database for Mexican documents.	
	ID_MY_EDC.rom	Recognition database for Malaysian documents.	
	ID_NG_EDC.rom	Recognition database for Nigerian documents.	
	ID_NO_EDC.rom	Recognition database for Norwegian documents.	
	ID_NZ_EDC.rom	Recognition database for New Zealand documents.	

Folder	File name	Description	Distribution
	ID_PH_EDC.rom	Recognition database for Philippine documents.	
	ID_PL_EDC.rom	Recognition database for Polish documents.	
	ID_PT_EDC.rom	Recognition database for Portuguese documents.	
	ID_RO_EDC.rom	Recognition database for Romanian documents.	
	ID_RS_EDC.rom	Recognition database for Serbian documents.	
	ID_RU_EDC.rom	Extended recognition database for Russian documents.	
	ID_SE_EDC.rom	Recognition database for Swedish documents.	
	ID_SG_EDC.rom	Recognition database for Singapore documents.	
	ID_SI_EDC.rom	Recognition database for Slovenian documents.	
	ID_SK_EDC.rom	Recognition database for Slovak documents.	
	ID_SV_EDC.rom	Recognition database for Salvadorean	

Folder	File name	Description	Distribution
		documents.	
	ID_SY_EDC.rom	Recognition database for Syrian documents.	
	ID_TJ_EDC.rom	Recognition database for Tajikistan documents.	
	ID_TR_EDC.rom	Recognition database for Turkish documents.	
	ID_UA_EDC.rom	Recognition database for Ukrainian documents.	
	ID_UK_EDC.rom	Recognition database for British documents.	
	ID_US_EDC.rom	Recognition database for USA documents.	
	ID_UY_EDC.rom	Recognition database for Uruguayn documents.	
	ID_UZ_EDC.rom	Recognition database for Uzbekistan documents.	
	ID_VN_EDC.rom	Recognition database for Vietnamese documents.	
	ID_ZA_EDC.rom	Recognition database for South African Republic documents.	

Folder	File name	Description	Distribution
assets/translation	Menu_CH-EN.trdic	Dictionary for translating menus from Chinese to English.	The files contain translation dictionaries. You need only the files for the language pairs you use.
	Menu_DE-EN.trdic	Dictionary for translating menus from German to English.	
	Menu_EN-CH.trdic	Dictionary for translating menus from Chinese to English.	
	Menu_EN-DE.trdic	Dictionary for translating menus from English to German.	
	Menu_EN-ES.trdic	Dictionary for translating menus from English to Spanish.	
	Menu_EN-FR.trdic	Dictionary for translating menus from English to French.	
	Menu_EN-ID.trdic	Dictionary for translating menus from English to Indonesian.	
	Menu_EN-JP.trdic	Dictionary for translating menus from English to Japanese.	
	Menu_EN-PL.trdic	Dictionary for translating menus	

Folder	File name	Description	Distribution
		from English to Polish.	
	Menu_EN-PTBR.trdic	Dictionary for translating menus from English to Portuguese (Brazil).	
	Menu_EN-RU.trdic	Dictionary for translating menus from English to Russian.	
	Menu_ES-EN.trdic	Dictionary for translating menus from Spanish to English.	
	Menu_FR-EN.trdic	Dictionary for translating menus from French to English.	
	Menu_ID-EN.trdic	Dictionary for translating menus from Indonesian to English.	
	Menu_JP-EN.trdic	Dictionary for translating menus from Japanese to English.	
	Menu_PL-EN.trdic	Dictionary for translating menus from Polish to English.	
	Menu_PTBR-EN.trdic	Dictionary for translating menus from Portuguese (Brazil) to English.	

Folder	File name	Description	Distribution
	Menu_RU-EN.trdic	Dictionary for translating menus from Russian to English.	
notice	All files in this folder.	Third party software components information and licenses.	These files have to be redistributed.

Available Recognition Languages

This section lists the languages available for text processing with ABBYY Mobile Capture SDK. Some of the languages have built-in dictionary support, which improves recognition quality but takes up additional memory.

See also Available Translation Dictionaries.

Internal name (Language enum constant)	Recognition language	Can be used for OCR	Can be used for BCR	Full dictionary support
Afrikaans	Afrikaans	+		
Albanian	Albanian	+		
Basque	Basque	+		
Belarusian	Belarusian	+		
Breton	Breton	+		
Bulgarian	Bulgarian	+		+
Catalan	Catalan	+		
Chechen	Chechen	+		

Internal name (Language enum constant)	Recognition language	Can be used for OCR	Can be used for BCR	Full dictionary support
ChineseSimplified	Chinese Simplified	+	+	
ChineseTraditional	Chinese Traditional	+	+	
CrimeanTatar	Crimean Tatar	+		
Croatian	Croatian	+		
Czech	Czech	+	+	+
Danish	Danish	+	+	+
DutchBelgian	Dutch (Belgium)	+	+	+
Dutch	Dutch (Netherlands)	+	+	+
English	English	+	+	+
Estonian	Estonian	+	+	+
Fijian	Fijian	+		
Finnish	Finnish	+	+	+
French	French	+	+	+
German	German (old spelling)	+	+	+
GermanNewSpelling	German (new spelling)	+	+	+

Internal name (Language enum constant)	Recognition language	Can be used for OCR	Can be used for BCR	Full dictionary support
Greek	Greek	+	+	+
Hawaiian	Hawaiian	+		
Hungarian	Hungarian	+		
Icelandic	Icelandic	+		
Indonesian	Indonesian	+	+	+
Irish	Irish	+		
Italian	Italian	+	+	+
Japanese	Japanese	+	+	
Kabardian	Kabardian	+		
Korean	Korean	+	+	
Latin	Latin	+		
Latvian	Latvian	+		
Lithuanian	Lithuanian	+		
Macedonian	Macedonian	+		
Malay	Malay	+		
Maori	Maori	+		
Moldavian	Moldavian	+		

Internal name (Language enum constant)	Recognition language	Can be used for OCR	Can be used for BCR	Full dictionary support
Mongol	Mongol	+		
NorwegianBokmal	Norwegian (Bokmal)	+	+	+
NorwegianNynorsk	Norwegian (Nynorsk)	+	+	+
Ossetic	Ossetic	+		
Polish	Polish	+	+	+
PortugueseBrazilian	Portuguese (Brazil)	+	+	+
Portuguese	Portuguese (Portugal)	+	+	+
Provencal	Provencal	+		
RhaetoRomanic	Rhaeto-Romanic	+		
Romanian	Romanian	+		
Russian	Russian	+	+	+
Samoan	Samoan	+		
Serbian	Serbian	+		
Slovak	Slovak	+		
Slovenian	Slovenian	+		

Internal name (Language enum constant)	Recognition language	Can be used for OCR	Can be used for BCR	Full dictionary support
Spanish	Spanish	+	+	+
Swahili	Swahili	+		
Swedish	Swedish	+	+	+
Tagalog	Tagalog	+		
Tatar	Tatar	+		
Turkish	Turkish	+	+	+
Ukrainian	Ukrainian	+	+	+
Welsh	Welsh	+		

Translation Dictionaries

In the distribution pack you can find several translation dictionaries. Currently all the dictionaries are intended for translating restaurant menus and may not work in other contexts. The following language pairs are available:

English to Chinese	Chinese to English
English to French	French to English
English to German	German to English
English to Indonesian	Indonesian to English
English to Japanese	Japanese to English
English to Polish	Polish to English
English to Portuguese (Brazil)	Portuguese (Brazil) to English
English to Russian	Russian to English
English to Spanish	Spanish to English

You can also create your own dictionary and use it for translation. Contact our technical support for advice on the required format.

Supported ID Documents

ABBYY Mobile Capture SDK supports a whole range of identity documents out of the box. Consult the table below for a full list. For the detailed profile specifications, see Data Capture Profiles.

Document	Supported in
All documents with Machine Readable Zone (MRZ)	All Countries
Bank cards: embossed and indent	All Countries
Driver's license	Albania, Armenia, Austria, Belarus, Belgium, Brazil, Bulgaria, Canada, Croatia, Czech Republic, Finland, Germany, Greece, Hungary, Israel, Italy, Japan, Kazakhstan, Kyrgyzstan, Moldova, New Zealand, Norway, Poland, Portugal, Romania, Russian Federation, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, UK, Ukraine, USA, Uzbekistan, Vietnam
International Passport	Albania, Algeria, Armenia, Austria, Brazil, Canada, China, Croatia, Czech Republic, Georgia, Germany, Greece, Hungary, India, Israel, Italy, Japan, Kazakhstan, Kyrgyzstan, Moldova, Philippines, Poland, Russian Federation, Slovakia, Slovenia, Spain, Sweden, Syria, Tajikistan, Turkey, UK, Ukraine, Uruguay, USA, Uzbekistan
National ID card	Albania, Armenia, Austria, Bahrain, Belgium, Brazil, Bulgaria, Chile, Croatia, Cyprus, Czech Republic, Egypt, Estonia, Finland, France, Georgia, Germany, Hong Kong, Hungary, Israel, Italy, Kazakhstan, Kuwait, Kyrgyzstan, Latvia, Lithuania, Macedonia, Malaysia, Mexico, Moldova, Nigeria, Norway, Poland, Portugal, Romania, El Salvador, Serbia, Slovakia, Slovenia, Singapore, South Africa, Spain, Switzerland, Turkey, UAE, Ukraine
National passport	Belarus, Russian Federation
INN	Russian Federation
Aadhaar card	India

Document	Supported in
Birth certificate	Russian Federation
Death Certificate	Russian Federation
Marriage Certificate	Russian Federation
Divorce Certificate	Russian Federation
Compulsory Health Insurance Certificate – OMS	Russian Federation
Personal insurance policy number	Russian Federation
Vehicle Registration Certificate (STS)	Azerbaijan, Belarus, Czech Republic, El Salvador, Kazakhstan, Russian Federation, Slovakia, Ukraine
Vehicle Passport - PTS	Russian Federation
VISA	Russian Federation, USA, Czech Republic, Slovakia
Border Crossing Card	USA
Passport Card	USA
Health insurance card	Japan
Work permit	Russian Federation, Singapore
Residence permit	Austria, Czech Republic, Germany, Russian Federation, Slovakia, Slovenia, Spain
Asylum Residence Permit	Austria
Migration Card	Russian Federation

Document	Supported in
Permanent residency card (Green card)	USA
Residence License	Brazil
Crew Member Certificate	South Africa
Military, Police and Soldier ID	Russian Federation

The list of supported documents and captured fields for each document differ depending on the country. You can find the detailed information in the Data Capture Profiles table.

Data Capture Profiles

The following table lists predefined capture profiles and corresponding result data schemes. Profile name is specified when creating a Data Capture service, and result scheme identifiers are returned by the service.Note that in some cases the result scheme depends on the type of your license. If you are not sure which profiles are enabled by your license, please contact support.

Document type	Profile name	Result scheme	Result description
Bank card	BankCards	BankCardEmbossed	Bank cards with embossed fields (front side)
		BankCardUnembossed	Bank cards with indent-printed fields (front side)
Business card	BusinessCards	BusinessCards	Business card of a person or a company.
International bank account number	IBAN	IBAN	International bank account number
Machine-readable document zone	MRZ	MRZ	MRZ of a passport
		MRZ_MRP	ICAO Doc 9303 machine-readable

Document type	Profile name	Result scheme	Result description
			passports (2 lines, 44 characters each)
		MRZ_MRV_A	ICAO Doc 9303 machine-readable visa MRV-A (2 lines, 44 characters each)
		MRZ_MRV_B	ICAO Doc 9303 machine-readable visa MRV-B (2 lines, 36 characters each)
		MRZ_TD1	ICAO Doc 9303 machine-readable travel document TD-1 (3 lines, 30 characters each)
		MRZ_TD2	ICAO Doc 9303 machine-readable travel document TD-2 (2 lines, 36 characters each)
		MRZ_BG_VEHICLEREGISTRATION	MRZ-like zone of the Bulgarian vehicle registration document (3 lines, 30 characters each)
		MRZ_CH_DRIVERLICENSE	MRZ-like zone of the Swiss driver's license (3 lines, 9, 30 and 30 characters)
		MRZ_FR_ID	MRZ-like zone of the French national identity card (2 lines, 36 characters each)

Document type	Profile name	Result scheme	Result description
		MRZ_RU_PASSPORT	MRZ-like zone of the Russian passport (2 lines, 44 characters each)
		MRZ_RU_VISA	MRZ-like zone of the Russian visa (2 lines, 44 characters each)
Albanian driver's license	DriverLicense_AL	DriverLicense_AL_TYPE 1	Albanian driver's license (Albanian emblem in the background)
Albanian ID card	ID_AL	ID_AL_TYPE1	Albanian ID Card (Albanian emblem in the background, front side; Albanian emblem in the background and top-left corner, back side)
Albanian passport	InternationalPassport_AL	InternationalPassport_AL_TYPE1	Albanian passport (Albanian emblem in the background)
		InternationalPassport_AL_TYPE2	Albanian passport (Albanian emblem in the background and top-left corner, red horizontal line along the entire document)
Algerian passport	InternationalPassport_DZ	InternationalPassport_DZ_TYPE1	Algerian passport (the contour of the country on the right and sun in the bottom-right of the photo, main page)
Armenian driver's license	DriverLicense_AM	DriverLicense_AM_TYPE 1	Armenian driver's license (stamp with Armenian emblem on the right, front)

Document type	Profile name	Result scheme	Result description
Armenian ID card	ID_AM	ID_AM_TYPE1	Armenian ID card (Armenian emblem on the background, front)
Armenian passport	InternationalPassport_AM	InternationalPassport_AM_TYPE1	Armenian passport (old type, framed photo, main page)
		InternationalPassport_AM_TYPE2	Armenian passport (line of patterns on the top, main page)
		InternationalPassport_AM_TYPE3	Armenian passport (new type, main page)
Austrian Asylum Residence Permit	AsylumResidencePermit_AT	AsylumResidencePermit_AT_RP_TYPE1	Austrian asylum residence permit (white background, front)
Austrian Residence Permit	ResidencePermit_AT	ResidencePermit_AT_TYPE2	Austrian residence permit (Austrian emblem on the left and biometrical symbol on the top, front)
Austrian passport	InternationalPassport_AT	InternationalPassport_AT	Austrian international passport (main page)
Austrian ID card	ID_AT	ID_AT_TYPE1	Austrian ID card (red stripes on the left, back; Austrian emblem on the left)
Austrian driver's license	DriverLicense_AT	DriverLicense_AT_TYPE1	Austrian driver's license with the title at the top (front side)

Document type	Profile name	Result scheme	Result description
		DriverLicense_AT_TYPE2	Austrian driver's license with the title in the top-right corner (front side)
Azerbaijan Vehicle Registration Certificate	VehicleRegistration_AZ	VehicleRegistration_AZ_TYPE1	Azerbaijan vehicle registration certificate (document without a personal photo, AZ sign in the top-left corner and the flag of Azerbaijan near it, main page)
Bahrain ID card	ID_BH	ID_BH_TYPE1	Bahrain ID card (front)
Belarusian passport	Passport_BY	Passport_BY_TYPE1	Belarusian passport (main page)
		Passport_BY_PAGE31_TYPE1	Belarusian passport (page 31 type 1)
		Passport_BY_PAGE31_TYPE2	Belarusian passport (page 31 type 2)
Belarusian driver's license	DriverLicense_BY	DriverLicense_BY_TYPE1	Belarusian driver's license (card-size, front side, horizontal)
		DriverLicense_BY_TYPE2	Belarusian driver's license (front side, vertical)
Belarusian Vehicle Registration Certificate	VehicleRegistration_BY	VehicleRegistration_BY_TYPE1	Belarusian vehicle registration certificate
Belgian ID card	ID_BE	ID_BE_TYPE1	Belgian ID card (front side)

Document type	Profile name	Result scheme	Result description
Belgian driver's license	DriverLicense_BE	DriverLicense_BE_TYPE1	Belgian driver's license (the sign of the European Union with letter B in the top-left corner and the contour of country on the bottom-right corner, front side)
Brazilian driver's license	DriverLicense_BR	DriverLicense_BR_TYPE1	Brazilian driver's license (Brazilian emblem in the top-left corner, front; green background, back)
Brazilian ID card	ID_BR	ID_BR_TYPE1	Brazilian ID Card (Brazilian emblem on the background, new type)
		ID_BR_TYPE2	Brazilian ID Card (Brazilian emblem on the background, old type, front)
Brazilian passport	InternationalPassport_BR	InternationalPassport_BR_TYPE1	Brazilian passport (Brazil on the background, main page)
		InternationalPassport_BR_TYPE2	Brazilian passport (barcode on the bottom, main page)
Brazilian Residence license	ResidenceLicense_BR	ResidenceLicense_BR_TYPE1	Brazilian real estate license (Brazilian emblem on the top-left corner, back; hummingbird in the middle, front)
British passport	InternationalPassport_UK	InternationalPassport_UK_TYPE1	British passport (bird on the background,

Document type	Profile name	Result scheme	Result description
			main page)
		InternationalPassport_UK_TYPE2	British passport (compass in the top-left corner, main page)
British driver's license	DriverLicense_UK	DriverLicense_UK_TYPE1	British driver's license (front side)
		DriverLicense_UK_TYPE2	British driver's license with a logo on the right (front side)
		DriverLicense_UK_TYPE3	British driver's license with a round stamp on the left (front side)
		DriverLicense_UK_PROVISIONAL_TYPE1	British driver's license, provisional (line of text Provisional on the top, front)
		DriverLicense_UK_PROVISIONAL_TYPE2	British driver's license, provisional (rubber stamp on the right, front)
		DriverLicense_UK_PROVISIONAL_TYPE3	British driver's license, provisional (round stamp on the left, front)
Bulgarian driver's license	DriverLicense_BG	DriverLicense_BG_TYPE1	Bulgarian driver's license (front side)
		DriverLicense_BG_TYPE2	Bulgarian driver's license (front side)

Document type	Profile name	Result scheme	Result description
Bulgarian ID card	ID_BG	ID_BG_TYPE1	Bulgarian ID card (new type, front side)
		ID_BG_TYPE2	Bulgarian ID card (old type, front side)
		ID_BG_TYPE3	Bulgarian ID card
Canadian driver's license	DriverLicense_CA	DriverLicense_CA_BC_TYPE1	Canadian driver's license - British Columbia (flag of British Columbia on the background and the coat of arms of British Columbia on the right, front side)
		DriverLicense_CA_ON_TYPE1	Canadian driver's license (the flower on the background, front side)
Canadian passport	InternationalPassport_CA	InternationalPassport_CA_TYPE1	Canadian passport (Canadian national symbols in the top-right corner, main page)
		InternationalPassport_CA_TYPE2	Canadian passport (biometric symbol in the top-right corner and Canadian coat of arms on the background, main page)
Czech Residence Permit	ResidencePermit_CZ	ResidencePermit_CZ_TYPE1	Czech Residence Permit (type 1)
		ResidencePermit_CZ_TYPE2	Czech Residence Permit (type 2)

Document type	Profile name	Result scheme	Result description
		ResidencePermit_CZ_TYPE3	Czech Residence Permit (type 3)
Chilean ID card	ID_CL	ID_CL_TYPE1	Chile identity card (front side)
Chinese passport	InternationalPassport_CN	InternationalPassport_CN_TYPE1	Chinese passport (China from the bottom in the background and barcode on the left, main page)
		InternationalPassport_CN_TYPE3	Chinese passport (biometric symbol in the top-right corner and a flower on the background, main page)
Croatian driver's license	DriverLicense_HR	DriverLicense_HR_TYPE1	Croatian driver's license (sign of the European Union with letters HR in the top-left corner, front side)
Croatian ID card	ID_HR	ID_HR_TYPE1	Croatian identity card (older type, front side)
		ID_HR_TYPE2	Croatian identity card (newer type, front side)
Croatian passport	InternationalPassport_HR	InternationalPassport_HR_TYPE1	Croatian passport (RH sign on the left, main page)
Cyprus ID card	ID_CY	ID_CY_TYPE1	ID Card of Cyprus (Cyprus coat of arms on the background, front side)

Document type	Profile name	Result scheme	Result description
		ID_CY_TYPE2	ID Card of Cyprus (Cyprus coat of arms on the top-left corner and biometric symbol, front side)
Czech driver's license	DriverLicense_CZ	DriverLicense_CZ_TYPE1	Czech driver's license card (front side)
Czech ID card	ID_CZ	ID_CZ_TYPE1	Czech ID card (front side)
		ID_CZ_TYPE2	Czech ID card (front side)
		ID_CZ_TYPE3	Czech ID card (front side)
Czech passport	InternationalPassport_CZ	InternationalPassport_CZ_TYPE1	Czech passport (stamp on the top, main page)
Czech vehicle registration certificate	VehicleRegistration_CZ	VehicleRegistration_CZ_TYPE1	Czech vehicle registration certificate (front side, back side)
Czech visa	Visa_CZ	Visa_CZ_TYPE1	Czech visa
Egyptian ID card	ID_EG	ID_EG_TYPE1	Egyptian ID card (Egyptian pyramids on the background, front side)
Estonian driver's license	DriverLicense_EE	DriverLicense_EE_TYPE1	Estonian driver's license card (front side)
		DriverLicense_EE_TYPE2	Estonian driver's license card (front side)

Document type	Profile name	Result scheme	Result description
		DriverLicense_EE_TYPE3	Estonian driver's license card (front side)
		DriverLicense_EE_TYPE4	Estonian driver's license card (front side)
		DriverLicense_EE_TYPE5	Estonian driver's license card (front side, back side)
Estonian ID card	ID_EE	ID_EE_TYPE1	Estonian ID card (front side)
		ID_EE_TYPE2	Estonian ID card (front side)
Estonian passport	InternationalPassport_EE	InternationalPassport_EE_TYPE1	Estonian passport (main page)
Finnish ID card	ID_FI	ID_FI_TYPE1	Finnish identity card (older type, front side)
		ID_FI_TYPE2	Finnish identity card (newer type, front side)
Finnish driver's license	DriverLicense_FI	DriverLicense_FI_TYPE1	Finnish driver's license (number-field under the personal photo, front side)
		DriverLicense_FI_TYPE2	Finnish driver's license (number-field in the right side of the photo, front side)

Document type	Profile name	Result scheme	Result description
French driver's license	DriverLicense_FR	DriverLicense_FR_TYPE1	French driver's license (the sign of the European Union with letter in the top-left corner, front)
French ID card	ID_FR	ID_FR_TYPE1	French identity card (front side)
French passport	InternationalPassport_FR	InternationalPassport_FR_TYPE1	French passport (RF sign in the photo corner, main page)
		InternationalPassport_FR_TYPE2	French passport (photo in the middle on the background, main page)
Georgian driver's license	DriverLicense_GE	DriverLicense_GE_TYPE1	Georgian driver's license (front side)
		DriverLicense_GE_TYPE2	Georgian driver's license (front side)
Georgian ID card	ID_GE	ID_GE_TYPE1	Georgian identity card (front side)
Georgian passport	InternationalPassport_GE	InternationalPassport_GE_TYPE1	Georgian passport (newer type, main page)
		InternationalPassport_GE_TYPE2	Georgian passport (older type, main page)
		InternationalPassport_GE_TYPE3	Georgian passport (main page)
Georgian vehicle registration certificate	VehicleRegistration_GE	VehicleRegistration_GE_TYPE1	Georgian vehicle registration certificate

Document type	Profile name	Result scheme	Result description
			(front side, back side)
German passport	InternationalPassport_DE	InternationalPassport_DE_TYPE1	German passport (the coat of arms of Germany on the right side, main page)
		InternationalPassport_DE_TYPE2	German passport (the coat of arms of Germany in the top-left corner and in the middle on the background, main page)
German ID card	ID_DE	ID_DE_TYPE1	German ID card (front side)
		ID_DE_TYPE2	German ID card with TD-1 MRZ on the front (front side)
German driver's license	DriverLicense_DE	DriverLicense_DE_TYPE1	German driver's license (sign of the European Union with letter D in the top-left corner and three road signs in the bottom-right corner, front side)
		DriverLicense_DE_TYPE2	German driver's license (sign of the European Union with letter D in the top-left corner and stamp with the silhouette of the letter D in the bottom-right corner, front side)
German residence permit	ResidencePermit_DE	ResidencePermit_DE_TYPE1	German residence permit (biometric

Document type	Profile name	Result scheme	Result description
			symbol in the top-left corner and a bull above the photo, front side)
Greek driver's license	DriverLicense_GR	DriverLicense_GR_TYPE1	Greek driver's license (the sign of the European Union with letter in the top-left corner, front)
Greek passport	InternationalPassport_GR	InternationalPassport_GR_TYPE1	Greek passport (Greek emblem on the background, main page)
Hong Kong ID card	ID_HK	ID_HK_TYPE1	Hong Kong identity card (front side)
Hungarian driver's license	DriverLicense_HU	DriverLicense_HU_TYPE1	Hungarian driver's license (the sign of the European Union with letter in the top-left corner, front)
Hungarian ID card	ID_HU	ID_HU_TYPE1	Hungarian identity card (older type, front side)
		ID_HU_TYPE2	Hungarian identity card (newer type, front side)
Hungarian passport	InternationalPassport_HU	InternationalPassport_HU_TYPE1	Hungarian passport (main page)
Indian Aadhaar card	Aadhaar_IN	Aadhaar_IN_TYPE1	Indian card with Aadhaar number
Indian passport	InternationalPassport_IN	InternationalPassport_IN	Indian passport (main page)

Document type	Profile name	Result scheme	Result description
Israel driver's license	DriverLicense_IL	DriverLicense_IL_TYPE1	Israel driver's license (the coat of arms of Israel in the top-right corner, front side)
Israel ID card	ID_IL	ID_IL_TYPE1	Israel ID card (front side)
		ID_IL_TYPE2	Israel ID card (front side)
Israel passport	InternationalPassport_IL	InternationalPassport_IL_TYPE1	Passport of Israel (the coats of arms of Israel all over the background, main page)
		InternationalPassport_IL_TYPE2	Passport of Israel (the coat of arms of Israel in the middle of the background, main page)
Italian ID card	ID_IT	ID_IT_TYPE1	Italian ID Card (Italian emblem on the top, page 1)
		ID_IT_TYPE2	Italian ID Card (Italian emblem in the top-left corner, front)
		ID_IT_TYPE3	Italian ID Card (biometric symbol the top-left corner, page 1)
Italian passport	InternationalPassport_IT	InternationalPassport_IT	Italian passport (Italian emblem on the background, main page)

Document type	Profile name	Result scheme	Result description
Italian driver's license	DriverLicense_IT	DriverLicense_IT_TYPE1	Italian driver's license (new type, front side)
		DriverLicense_IT_TYPE2	Italian driver's license (issued 2007-2013, front side)
Japanese passport	InternationalPassport_JP	InternationalPassport_JP	Japanese passport (Mount Fuji on the background and the Government Seal of Japan in the top-left and -right corner, main page)
Japanese driver's license	DriverLicense_JP	DriverLicense_JP_TYPE1	Japanese driver's license (front side)
Japanese health insurance	HealthInsurance_JP	HealthInsurance_JP	Japanese health insurance card (front side)
Kazakh driver's license	DriverLicense_KZ	DriverLicense_KZ_TYPE1	Kazakh driver's license (stamp with car on the middle, front)
		DriverLicense_KZ_TYPE2	Kazakh driver's license (chip on the right and Kazakh flag in the top-left corner, front)
Kazakh ID card	ID_KZ	ID_KZ_TYPE1	Kazakhstan ID card with 2-line MRZ (front and back sides)
		ID_KZ_TYPE2	Kazakhstan ID card with 3-line MRZ (front and back sides)

Document type	Profile name	Result scheme	Result description
Kazakh passport	InternationalPassport_KZ	InternationalPassport_KZ_TYPE1	Kazakh passport (stamp in the top-left corner on the photo, main page)
		InternationalPassport_KZ_TYPE2	Kazakh passport (Kazakh emblem on the bottom, main page)
Kazakh vehicle registration certificate	VehicleRegistration_KZ	VehicleRegistration_KZ_TYPE1	Kazakh vehicle registration certificate (KZ sign on the top, back)
Kuwait ID card	ID_KW	ID_KW_TYPE1	Kuwait ID card (card-size, front side)
Kyrgyz driver's license	DriverLicense_KG	DriverLicense_KG_TYPE1	Kyrgyz driver's license (KS sign in the top-left corner and the flag of Kyrgyzstan in the top-right corner, front side)
Kyrgyz ID card	ID_KG	ID_KG_TYPE1	Kyrgyz ID card (the coat of arms of Kyrgyzstan in the middle on the top, front side)
		ID_KG_TYPE2	Kyrgyz ID card (the coat of arms of Kyrgyzstan in the top-left corner and biomentric symbol in the top-right corner, front side)
Kyrgyz passport	InternationalPassport_KG	InternationalPassport_KG_TYPE1	Kyrgyz passport (the coat of arms of Kyrgyzstan in the top-right corner near the small personal photo, main page)

Document type	Profile name	Result scheme	Result description
Latvian driver's license	DriverLicense_LV	DriverLicense_LV_TYPE1	Latvian driver's license (a small personal photo and LV letters in the bottom-right corner, main page)
		DriverLicense_LV_TYPE2	Latvian driver's license (a personal photo in the middle on the background, main page)
Latvian ID card	ID_LV	ID_LV_TYPE1	Latvian ID card (front side)
Latvian passport	InternationalPassport_LV	InternationalPassport_LV_TYPE1	Latvian passport (a tracery on the right, main page)
		InternationalPassport_LV_TYPE2	Latvian passport (a goose in the top-right corner, main page)
		InternationalPassport_LV_TYPE3	Latvian passport (diplomatic document, main page)
		InternationalPassport_LV_TYPE4	Latvian passport (service document, main page)
		InternationalPassport_LV_TYPE5	Latvian passport (ordinary document, main page)
Lithuanian driver's license	DriverLicense_LT	DriverLicense_LT_TYPE1	Lithuanian driver's license (a small personal photo in the bottom- right corner, main page)

Document type	Profile name	Result scheme	Result description
		DriverLicense_LT_TYPE2	Lithuanian driver's license (a car on the top, main page)
		DriverLicense_LT_TYPE3	Lithuanian driver's license (cars in the bottom-right corner, main page)
Lithuanian ID card	ID_LT	ID_LT_TYPE1	Lithuanian ID card (front side)
		ID_LT_TYPE2	Lithuanian ID card (front side)
Lithuanian passport	InternationalPassport_LT	InternationalPassport_LT_TYPE1	Lithuanian passport (biometric symbol above the personal photo, main page)
		InternationalPassport_LT_TYPE2	Lithuanian passport (circle stamp in the top-right corner, main page)
		InternationalPassport_LT_TYPE3	Lithuanian passport (the coat of arms of Lithuania in the middle on the background, main page)
Macedonian ID card	ID_MK	ID_MK_TYPE1	Macedonian ID card (name of document in the top is written on two languages, front side)
		ID_MK_TYPE2	Macedonian ID card (ename of document in the top is written

Document type	Profile name	Result scheme	Result description
			on three languages, front side)
Malaysian ID card	ID_MY	ID_MY_TYPE1	Malaysian ID card (front side)
Mexican ID card	ID_MX	ID_MX_TYPE3	Mexican ID Card (Mexican emblem in the top-left corner, front)
Moldavian driver's license	DriverLicense_MD	DriverLicense_MD_TYPE1	driver's license of Republic of Moldova (flag of Republic of Moldova in the top-left corner, front)
		DriverLicense_MD_TYPE2	driver's license of Republic of Moldova (emblem of Republic of Moldova in the top-right corner, front)
Moldavian ID card	ID_MD	ID_MD_TYPE1	ID Card of Republic of Moldova (emblem of Republic of Moldova on the background, front)
		ID_MD_TYPE2	ID Card of Republic of Moldova (blue stamp with emblem of Republic of Moldova in the left and pink background, front)
		ID_MD_TYPE3	ID Card of Republic of Moldova (biometric symbol in the top-right corner, front)

Document type	Profile name	Result scheme	Result description
Moldavian passport	InternationalPassport_MD	InternationalPassport_MD_TYPE1	Passport of Republic of Moldova (biometric symbol in the top-left corner, main page)
		InternationalPassport_MD_TYPE2	Passport of Republic of Moldova (vertical field nationality on the right, main page)
New Zealand driver's license	DriverLicense_NZ	DriverLicense_NZ_TYPE1	New Zealand driver's license (flag of New Zealand above the personal photo, front side)
Nigerian ID card	ID_NG	ID_NG_TYPE1	Nigerian ID card (front side)
Norwegian driver's license	DriverLicense_NO	DriverLicense_NO_TYPE1	Norwegian driver's license (ninth poin under the photo and a watermark with Norwegian coat of arms to the right of the photo, front side)
		DriverLicense_NO_TYPE2	Norwegian driver's license (N sign in the top-left corner and ninth point under the signature, main page)
Norwegian ID card	ID_NO	ID_NO_TYPE1	Norwegian ID card (front side)
Passport of Syrian Arab Republic	InternationalPassport_SY	InternationalPassport_SY_TYPE1	Passport of Syrian Arab Republic (national coat of arms on the top, main page)

Document type	Profile name	Result scheme	Result description
Philippine passport	InternationalPassport_PH	InternationalPassport_PH_TYPE1	Philippine passport (the Philippine coat of arms on the background, main page)
		InternationalPassport_PH_TYPE2	Philippine passport (the Philippine flag in the top-left corner and biometric symbol on the top-right corner, main page)
Polish ID card	ID_PL	ID_PL_TYPE1	Polish ID card, older type (front and back)
		ID_PL_TYPE2	Polish ID card, newer type (front and back)
		ID_PL_TYPE3	Polish ID card (front and back)
Polish driver's license	DriverLicense_PL	DriverLicense_PL_TYPE1	Polish driver's license, old type (front side)
		DriverLicense_PL_TYPE2	Polish driver's license (front side, back side)
Polish passport	InternationalPassport_PL	InternationalPassport_PL_TYPE1	Polish passport (front side)
Portuguese ID card	ID_PT	ID_PT_TYPE1	Portuguese ID card (front side)
Portuguese driver's license	DriverLicense_PT	DriverLicense_PT_TYPE1	Portuguese driver's license (sign of the European Union with letter P in the top-left corner, front side)

Document type	Profile name	Result scheme	Result description
Romanian driver's license	DriverLicense_RO	DriverLicense_RO_TYPE1	Romanian driver's license (sign of the European Union with letters RO in the top-left corner, front side)
Romanian ID card	ID_RO	ID_RO_TYPE1	Romanian ID card (front side)
Russian international biometric passport	InternationalPassport_RU	InternationalPassport_RU	Russian international biometric passport (main page)
Russian visa	Visa_RU	Visa_RU_TYPE1	Russian visa
Russian passport	Passport_RU	Passport_RU	Russian passport (pages 2 and 3)
		MRZ_RU_PASSPORT	Russian passport (page 2, with signatures)
Russian birth certificate	BirthCertificate_RU	BirthCertificate_RU_TYPE1	Russian birth certificate
Russian death certificate	DeathCertificate_RU	DeathCertificate_RU_TYPE1	Russian death certificate
Russian divorce certificate	DivorceCertificate_RU	DivorceCertificate_RU_TYPE1	Russian divorce certificate
Russian insurance individual account number (SNILS)	SocialSecurityNumber_RU	SocialSecurityNumber_RU_TYPE1	Laminated SNILS (front side)
		SocialSecurityNumber_RU_TYPE2	Card-size SNILS (front side)
Russian health insurance	HealthInsurance_RU	HealthInsurance_RU_TYPE1	Russian health Insurance (round

Document type	Profile name	Result scheme	Result description
			stamp in the down-left corner, front side)
		HealthInsurance_RU_TYPE2	Russian health Insurance (round stamp in the down-right corner, front side)
		HealthInsurance_RU_TYPE3	Russian health Insurance (national coat of arms in the top-left corner and chip in the middle on the left, front side)
		HealthInsurance_RU_TYPE4	Russian Health Insurance (the coat of arms of Moscow in the top-right corner, front side)
Russian driver's license	DriverLicense_RU	DriverLicense_RU_TYPE1	Russian driver's license, old type (front side)
		DriverLicense_RU_TYPE2	Russian driver's license, old type, vertical (front side)
		DriverLicense_RU_TYPE3	Russian driver's license, new type (front side)
Russian ID card	ID_RU	ID_RU_MILITARY_TYPE1	Russian military ID card (front side)
		ID_RU_MILITARY_TYPE2	Russian military ID card (front side)

Document type	Profile name	Result scheme	Result description
		ID_RU_MILITARY_TYPE3	Russian military ID card (front side)
		ID_RU_MILITARY_TYPE4	Russian military ID card (front side)
		ID_RU_POLICE_TYPE1	Russian police ID card (front side)
		ID_RU_PROSECUTOR_TYPE1	Russian prosecutor ID card (front side)
		ID_RU_PROSECUTOR_TYPE2	Russian prosecutor ID card (front side)
		ID_RU_SOLDIER_TYPE1	Russian soldier ID card (front side)
Russian INN	INN_RU	INN_RU_CITIZEN_TYPE1	Russian INN for citizens (main page)
		INN_RU_CITIZEN_TYPE2	Russian INN for citizens (main page)
		INN_RU_CITIZEN_TYPE3	Russian INN for citizens (main page)
		INN_RU_CITIZEN_TYPE4	Russian INN for citizens (main page)
		INN_RU_ENTITY_TYPE1	Russian entity INN (main page)
		INN_RU_ENTITY_TYPE2	Russian entity INN (main page)
Russian marriage certificate	MarriageCertificate_RU	MarriageCertificate_RU_TYPE1	Russian marriage certificate (main

Document type	Profile name	Result scheme	Result description
			page)
Russian migration card	MigrationCard_RU	MigrationCard_RU_TYPE1	Russian migration card (front side)
Russian residence permit	ResidencePermit_RU	ResidencePermit_RU_TYPE1	Russian residence permit (main page)
		ResidencePermit_RU_TYPE2	Russian residence permit (main page)
Russian vehicle passport	VehiclePassport_RU	VehiclePassport_RU_TYPE1	Russian vehicle passport (front side)
Russian vehicle registration certificate	VehicleRegistration_RU	VehicleRegistration_RU_TYPE1	Russian vehicle registration certificate, old type (front and back sides)
		VehicleRegistration_RU_TYPE2	Russian vehicle registration certificate, new type (front and back sides)
Russian work permit	WorkPermit_RU	WorkPermit_RU_TYPE1	Russian work permit (front side)
Salvadorean ID card	ID_SV	ID_SV_TYPE1	Salvadorean ID card (front side)
Salvadorean vehicle registration	VehicleRegistration_SV	VehicleRegistration_SV_TYPE1	Salvadorean vehicle registration (front side)
Serbian driver's license	DriverLicense_RS	DriverLicense_RS_TYPE1	Serbian driver's license (SRB sign in the top-left corner and the coat of arms of Serbia in the top-

Document type	Profile name	Result scheme	Result description
			right corner, front side)
Serbian ID card	ID_RS	ID_RS_TYPE1	Serbian ID card (front side)
Singapore ID card	ID_SG	ID_SG_TYPE1	Singapore ID card (front side)
Singapore work permit	WorkPermit_SG	WorkPermit_SG_TYPE1	Singapore work permit (front side)
Slovakian driver's license	DriverLicense_SK	DriverLicense_SK_TYPE 1	Slovakian driver's license (the contour of country with letters SK on the right, main page)
		DriverLicense_SK_TYPE 2	Slovakian driver's license (the contour of country with letters SK in the bottom-right corner, main page)
		DriverLicense_SK_TYPE 3	Slovakian driver's license (leaves in the bottom-right corner, main page)
Slovakian ID card	ID_SK	ID_SK_TYPE1	ID Card of Slovakia (a round stamp in the top-right corner of the photo and leaves in the top-right corner, front side)
		ID_SK_TYPE2	ID Card of Slovakia (a round stamp under the photo and the national coat of arms on the background, main page)

Document type	Profile name	Result scheme	Result description
Slovakian passport	InternationalPassport_SK	InternationalPassport_SK_TYPE2	Passport of Slovakia (SVK sign in the left-bottom corner of photo, main page)
		InternationalPassport_SK_TYPE3	Passport of Slovakia (inscription with the name of country above the mrz zone, main page)
Slovakian vehicle registration certificate	VehicleRegistration_SK	VehicleRegistration_SK_TYPE1	Vehicle registration certificate of Slovakia
Slovakian residence permit	ResidencePermit_SK	ResidencePermit_SK_TYPE1	Residence permit of Slovakia (biometric symbol on the top, front side)
		ResidencePermit_SK_TYPE2	Residence permit of Slovakia (parallelogram on the top, front side)
Slovakian visa	Visa_SK	Visa_SK_TYPE1	Slovakian visa
Slovenian driver's license	DriverLicense_SI	DriverLicense_SI_TYPE1	Slovenian driver's license (country's name is written in one line, front side)
		DriverLicense_SI_TYPE2	Slovenian driver's license (country's name is written in two lines, front side)
Slovenian ID card	ID_SI	ID_SI_TYPE1	Slovenian ID card (the Slovenian coat of arms on the top, front side; cavalryman motif in the middle above

Document type	Profile name	Result scheme	Result description
			the mrz zone, back side)
Slovenian passport	InternationalPassport_SI	InternationalPassport_SI_TYPE1	Slovenian passport (a leaf in the top-right corner and a small personal photo on the right , main page)
Slovenian residence permit	ResidencePermit_SI	ResidencePermit_SI_TYPE1	Slovenian residence permit (a bull in the middle on the background and sign of the European Union in the top-left corner, front side)
		ResidencePermit_SI_TYPE2	Slovenian residence permit (a bull above the personal photo and a biometric symbol on the top, front side)
South African Republic ID card	ID_ZA	ID_ZA_TYPE1	South African Republic ID card (front side)
South African pilot's license	CrewMember_ZA	CrewMember_ZA_TYPE1	South African pilot's license (biometric symbol in the top-right corner, main page)
Spanish ID card	ID_ES	ID_ES_TYPE1	Spanish ID card (old type, front side)
		ID_ES_TYPE2	Spanish ID card (new type, front side)

Document type	Profile name	Result scheme	Result description
Spanish driver's license	DriverLicense_ES	DriverLicense_ES_TYPE1	Spanish driver's license (card-size, number field below the photo)
		DriverLicense_ES_TYPE2	Spanish driver's license (card-size, number field to the right of the photo)
Spanish passport	InternationalPassport_ES	InternationalPassport_ES_TYPE1	Spanish passport (new biometric passport, biometric symbol on the top, main page)
		InternationalPassport_ES_TYPE2	Spanish passport (old biometric, biometric symbol in the top-left corner and a personal photo on the background, main page)
Spanish residence permit	ResidencePermit_ES	ResidencePermit_ES_TYPE1	Spanish residence permit, blue color (front side)
		ResidencePermit_ES_TYPE2	Spanish residence permit, pink color (front side)
Swedish driver's license	DriverLicense_SE	DriverLicense_SE_TYPE1	Swedish driver's license with a photo near the signature (front side)
		DriverLicense_SE_TYPE2	Swedish driver's license with a logo on the right (front side)

Document type	Profile name	Result scheme	Result description
Swedish passport	InternationalPassport_SE	InternationalPassport_SE_TYPE1	Swedish passport (a biometric symbol in the top-right corner, main page)
		InternationalPassport_SE_TYPE2	Swedish passport (a square stamp in the top-right corner, main page)
Swiss ID card	ID_CH	ID_CH_TYPE1	Swiss ID card (front side)
Swiss driver's license	DriverLicense_CH	DriverLicense_CH_TYPE1	Swiss driver's license (front side)
Syrian passport	InternationalPassport_SY	InternationalPassport_SY	Syrian passport (main page)
Tajikistani passport	InternationalPassport_TJ	InternationalPassport_TJ_TYPE1	Passport of Tajikistan (the national flag in the top-left corner and a copy of personal photo in the right, main page)
		InternationalPassport_TJ_TYPE2	Passport of Tajikistan (a round stamp in the bottom-right corner of the photo, main page)
Turkish driver's license	DriverLicense_TR	DriverLicense_TR_TYPE1	Turkish driver's license (TR sign in the top-left corner and a car in the bottom-right corner, front side)
		DriverLicense_TR_TYPE2	Turkish driver's license (T.C. sign in

Document type	Profile name	Result scheme	Result description
			the top-left corner, front side)
Turkish ID card	ID_TR	ID_TR_TYPE1	Turkish ID card (national emblem of the Republic of Turkey on the right and a personal photo on the left, front side)
		ID_TR_TYPE2	Turkish ID card (national emblem of the Republic of Turkey on the left and a personal photo on the right, front side)
Turkish passport	InternationalPassport_TR	InternationalPassport_TR_TYPE1	Turkish passport (TR watermark in the top-right corner and a small personal photo on the right, main page)
UAE ID card	ID_AE	ID_AE_TYPE1	UAE ID card (front side)
Ukrainian driver's license	DriverLicense_UA	DriverLicense_UA_TYPE1	Ukrainian driver's license (front side)
		DriverLicense_UA_TYPE2	Ukrainian driver's license (front side)
		DriverLicense_UA_TYPE3	Ukrainian driver's license (front side)
Ukrainian ID card	ID_UA	ID_UA_TYPE1	Ukrainian ID card (front side)
Ukrainian passport	InternationalPassport_UA	InternationalPassport_UA_TYPE1	Ukrainian passport (main page)

Document type	Profile name	Result scheme	Result description
		InternationalPassport_UA_TYPE2	Ukrainian passport (main page)
Ukrainian vehicle registration certificate	VehicleRegistration_UA	VehicleRegistration_UA_TYPE1	Ukrainian vehicle registration certificate (card-sized, coat of arms of Ukraine on background)
USA border crossing	BorderCrossing_US	BorderCrossing_US_TYPE1	USA border crossing (front side)
		BorderCrossing_US_TYPE2	USA border crossing (front side)
USA passport	InternationalPassport_US	InternationalPassport_US_TYPE1	American passport (only for children, main page)
		InternationalPassport_US_TYPE2	American passport (a national flag and coat of arms on the background, main page)
USA passport card	PassportCard_US	PassportCard_US_TYPE1	USA passport card (front side)
		PassportCard_US_TYPE2	USA passport card (front side)
USA driver's license	DriverLicense_US_AK	DriverLicense_US_AK_TYPE1	USA driver's license - Alaska (mountains on the background, front)
		DriverLicense_US_AK_TYPE2	USA driver's license - Alaska (flag of Alaska on the background, front)

Document type	Profile name	Result scheme	Result description
	DriverLicense_US_AL	DriverLicense_US_AL_TYPE1	USA driver's license - Alabama (building on the background, front)
	DriverLicense_US_AR	DriverLicense_US_AR_TYPE1	USA driver's license - Arkansas (stamp with emblem of Arkansas on the background, front)
		DriverLicense_US_AR_TYPE2	USA driver's license - Arkansas (DL sign in the middle on the top, front)
	DriverLicense_US_AZ	DriverLicense_US_AZ_TYPE1	USA driver's license - Arizona (a horizontal card and a cactus silhouette on the right on the background, front side)
		DriverLicense_US_AZ_TYPE2	USA driver's license - Arizona (a vertical card and a cactus silhouette on the right on the background, front side)
		DriverLicense_US_AZ_TYPE3	USA driver's license - Arizona (the Grand Canyon on the background and a personal photo in the bottom-right corner, front side)
	DriverLicense_US_CA	DriverLicense_US_CA_TYPE1	USA driver's license - California (a horizontal card, bears on the background and a small personal

Document type	Profile name	Result scheme	Result description
			photo on the right, front side)
		DriverLicense_US_CA_TYPE2	USA driver's license - California (a vertical card, a small personal photo in the bottom-left corner, front side)
		DriverLicense_US_CA_TYPE3	USA driver's license - California (a horizontal card, a bear with a star above the man on the right on the background, front side)
		DriverLicense_US_CA_TYPE4	USA driver's license - California (a horizontal card, DMV sign in the top-right and in the top-left corner, front side)
	DriverLicense_US_CO	DriverLicense_US_CO_TYPE1	USA driver's license - Colorado (a horizontal card, a star in the top-right corner and curves on the bottom, front side)
		DriverLicense_US_CO_TYPE2	USA driver's license - Colorado (a horizontal card, DL sign and a star in a circle are near the state name, front side)
		DriverLicense_US_CO_TYPE3	USA driver's license - Colorado (a vertical card, DL sign and a star in a circle are

Document type	Profile name	Result scheme	Result description
			under the state name, front side)
	DriverLicense_US_CT	DriverLicense_US_CT_TYPE1	USA driver's license - Connecticut (a horizontal card, letters DL on the top, front side)
		DriverLicense_US_CT_TYPE2	USA driver's license - Connecticut (a vertical card, letters ALP in the top-left corner, front side)
		DriverLicense_US_CT_TYPE3	USA driver's license - Connecticut (a horizontal card, the document's name near the state name and a helicopter on the top, front side)
		DriverLicense_US_CT_TYPE4	USA driver's license - Connecticut (a vertical card, the document's name under the state name and a helicopter in the middle, front side)
		DriverLicense_US_CT_TYPE5	USA driver's license - Connecticut (a horizontal card, a lighthouse on the left on the background and letters DL in the top-right corner, front side)
	DriverLicense_US_DC	DriverLicense_US_DC_TYPE1	USA driver's license - Columbia (heart in the top-left corner and flag of Washington in

Document type	Profile name	Result scheme	Result description
			the down-right corner, front)
		DriverLicense_US_DC_TYPE2	USA driver's license - Columbia (stamp with emblem of district of Columbia on the right, front)
	DriverLicense_US_DE	DriverLicense_US_DE_TYPE1	USA driver's license - Delaware (blue rectangle on the top and star in the top-tight corner, front)
	DriverLicense_US_FL	DriverLicense_US_FL_TYPE1	USA driver's license - Florida (stamp with emblem of Florida on the left, front)
		DriverLicense_US_FL_TYPE2	USA driver's license - Florida (star in the circle in the top-right corner, front)
	DriverLicense_US_GA	DriverLicense_US_GA_TYPE1	USA driver's license - Georgia (copies of a personal photo in the bottom-right corner and a peach on the background, front)
		DriverLicense_US_GA_TYPE2	USA driver's license - Georgia (vertically oriented, front)
		DriverLicense_US_GA_TYPE3	USA driver's license - Georgia (a round stamp in the top-left corner of photo and three peaches on the top, front)

Document type	Profile name	Result scheme	Result description
	DriverLicense_US_HI	DriverLicense_US_HI_TYPE1	USA driver's license - Hawaii (a barcode under the photo, front)
		DriverLicense_US_HI_TYPE2	USA driver's license - Hawaii (the flag of state in the top-right corner, front)
	DriverLicense_US_IA	DriverLicense_US_IA_TYPE1	USA driver's license - Hawaii (windmill on the background, front)
		DriverLicense_US_IA_TYPE2	USA driver's license - Hawaii (windmill on the background - vertical card, front)
		DriverLicense_US_IA_TYPE3	USA driver's license - Hawaii (coat of arms of Iowa on the background, front)
	DriverLicense_US_ID	DriverLicense_US_ID_TYPE1	USA driver's license - Alaska (the seal of Idaho in the top-right corner of the personal photo, front side)
	DriverLicense_US_IL	DriverLicense_US_IL_TYPE1	USA driver's license - Illinois (Abraham Lincoln on the background, front side)
		DriverLicense_US_IL_TYPE2	USA driver's license - Illinois (the curves on the background, front side)

Document type	Profile name	Result scheme	Result description
		DriverLicense_US_IL_TYPE3	USA driver's license - Illinois (a personal photo on the right, front side)
	DriverLicense_US_IN	DriverLicense_US_IN_TYPE1	USA driver's license - Indiana (a horizontal card; a small personal photo in the bottom-right corner, front side)
		DriverLicense_US_IN_TYPE2	USA driver's license - Indiana (a vertical card; a small personal photo on the right, front side)
		DriverLicense_US_IN_TYPE3	USA driver's license - Indiana (a horizontal card, the seal of Indiana in the top-left corner, front side)
	DriverLicense_US_KS	DriverLicense_US_KS_TYPE1	USA driver's license - Kansas (ears of corn on the background, horizontal card, front)
		DriverLicense_US_KS_TYPE2	USA driver's license - Kansas (ears of corn on the background, vertical card, front)
		DriverLicense_US_KS_TYPE3	USA driver's license - Kansas (tractor and wagon on the background and star in the top-right corner, horizontal card, front)

Document type	Profile name	Result scheme	Result description
		DriverLicense_US_KS_TYPE4	USA driver's license - Kansas (tractor and wagon on the background and star in the top-right corner, vertical card, front)
		DriverLicense_US_KS_TYPE5	USA driver's license - Kansas (patterns on the bottom and DL sign in the top-right corner, front)
	DriverLicense_US_KY	DriverLicense_US_KY_TYPE1	USA driver's license - Kentucky (horizontal card, fence on the background, front)
		DriverLicense_US_KY_TYPE2	USA Instruction Permit - Kentucky (vertical card, fence on the background, front)
	DriverLicense_US_LA	DriverLicense_US_LA_TYPE1	USA driver's license - Louisiana (horizontal card, emblem of Louisisan in the top-right corner on the background, front)
		DriverLicense_US_LA_TYPE2	USA driver's license - Louisiana (vertical card, emblem of Louisian in the down-right corner on the background, front)
		DriverLicense_US_LA_TYPE3	USA driver's license - Louisiana (horizontal card, photo on the right, front)

Document type	Profile name	Result scheme	Result description
	DriverLicense_US_MA	DriverLicense_US_MA_TYPE1	USA driver's license - Massachusetts (a stamp with a bird in the centre, front)
		DriverLicense_US_MA_TYPE2	USA driver's license - Massachusetts (a personal photo on the left and a round stamp in the top-left corner of the photo, front)
		DriverLicense_US_MA_TYPE3	USA driver's license - Massachusetts (a personal photo on the right and the contour of state on the background, front)
		DriverLicense_US_MA_TYPE4	USA driver's license - Massachusetts (vertical card, front)
	DriverLicense_US_MD	DriverLicense_US_MD_TYPE1	USA driver's license - Maryland (the flag of the state in the top-left corner and a star on the top, front)
		DriverLicense_US_MD_TYPE2	USA driver's license - Maryland (a crab in the top right corner and a coat of arms of the state on the background, front)
	DriverLicense_US_ME	DriverLicense_US_ME_TYPE1	USA driver's license - Maine (a moose on the background, front)

Document type	Profile name	Result scheme	Result description
		DriverLicense_US_ME_TYPE2	USA driver's license - Maine (a moose on the background, front)
		DriverLicense_US_ME_TYPE3	USA driver's license - Maine (sunset view on the top, front)
	DriverLicense_US_MI	DriverLicense_US_MI_TYPE1	USA driver's license - Michigan (bridge on the top, horizontal card, front)
		DriverLicense_US_MI_TYPE2	USA driver's license - Michigan (bridge on the top, vertical card, front)
		DriverLicense_US_MI_TYPE3	USA Operator License - Michigan (bridge on the top, horizontal card, front)
	DriverLicense_US_MN	DriverLicense_US_MN_TYPE1	USA driver's license - Minnesota (emblem of Minnesota on the background, front)
	DriverLicense_US_MO	DriverLicense_US_MO_TYPE1	USA driver's license - Missouri (emblem of Missouri on the background, front)
		DriverLicense_US_MO_TYPE2	USA driver's license - Missouri (building on the background, front)
	DriverLicense_US_MS	DriverLicense_US_MS_TYPE1	USA driver's license - Mississippi (DL sign on the top, front)

Document type	Profile name	Result scheme	Result description
		DriverLicense_US_MS_TYPE2	USA driver's license - Mississippi (building on the background, front)
	DriverLicense_US_MT	DriverLicense_US_MT_TYPE1	USA driver's license - Montana (DL sign on the top and emblem of Montana on the background, front)
		DriverLicense_US_MT_TYPE2	USA driver's license - Montana (mountains and stars on the background, front)
	DriverLicense_US_NC	DriverLicense_US_NC_TYPE1	USA driver's license - (lighthouse on the bottom on the background, front)
		DriverLicense_US_NC_TYPE2	USA driver's license - (building on the middle on the background, front)
	DriverLicense_US_ND	DriverLicense_US_ND_TYPE1	USA driver's license - North Dakota (a horizontal card; letters DL in the top-right corner, front side)
		DriverLicense_US_ND_TYPE2	USA driver's license - North Dakota (a horizontal card; horses on the background, front side)
	DriverLicense_US_NE	DriverLicense_US_NE_TYPE1	USA driver's license - Nebraska (a horizontal card; the

Document type	Profile name	Result scheme	Result description
			great seal of Nebraska in the top-left corner, front side)
		DriverLicense_US_NE_TYPE2	USA driver's license - Nebraska (a vertical card; a star in the circle in the top-right corner, front side)
	DriverLicense_US_NH	DriverLicense_US_NH_TYPE1	USA driver's license - New Hampshire (a horizontal card; the contour of New Hampshire in the top-right corner, front side)
		DriverLicense_US_NH_TYPE2	USA driver's license - New Hampshire (a horizontal card; a small personal photo in the middle on the background, front side)
	DriverLicense_US_NJ	DriverLicense_US_NJ_TYPE1	USA driver's license - New Jersey (a horizontal card; a small personal photo in the bottom-right corner on the background, front side)
		DriverLicense_US_NJ_TYPE2	USA driver's license - New Jersey (a vertical card; a small personal photo in the middle on the right, front side)
	DriverLicense_US_NM	DriverLicense_US_NM_TYPE1	USA driver's license - New Mexico (a

Document type	Profile name	Result scheme	Result description
			horizontal card; flag of New Mexico in the top-left corner, front side)
	DriverLicense_US_NV	DriverLicense_US_NV_TYPE1	USA driver's license - Nevada (a horizontal card; an eagle in the bottom-right corner, front side)
		DriverLicense_US_NV_TYPE2	USA driver's license - Nevada (a vertical card; an eagle in the bottom-right corner, front side)
		DriverLicense_US_NV_TYPE3	USA driver's license - Nevada (a horizontal card; the great seal of Nevada in the top-left corner of personal photo on the right, front side)
	DriverLicense_US_NY	DriverLicense_US_NY_TYPE1	USA driver's license - New York (a horizontal card, emblem of New York on the right and statue of Liberty on the left on the background, front)
		DriverLicense_US_NY_TYPE2	USA driver's license - New York (statue of Liberty on the right on the background, front)
		DriverLicense_US_NY_TYPE3	USA driver's license - New York (emblem of New York on the middle on the

Document type	Profile name	Result scheme	Result description
			background and landscape on the top, front)
		DriverLicense_US_NY_TYPE4	USA driver's license - New York (a vertical card, emblem of New York on the bottom and statue of Liberty in the top-left corner on the background, front)
	DriverLicense_US_OH	DriverLicense_US_OH_TYPE1	USA driver's license - Ohio (horizontal card, flag of Ohio in the down-left corner, front)
		DriverLicense_US_OH_TYPE2	USA driver's license - Ohio (vertical card, flag of Ohio on the bottom, front)
	DriverLicense_US_OK	DriverLicense_US_OK_TYPE1	USA driver's license - Oklahoma (horizontal card, photo on the left and right, front)
		DriverLicense_US_OK_TYPE2	USA driver's license - Oklahoma (vertical card, photo on the left and right, front)
		DriverLicense_US_OK_TYPE3	USA driver's license - Oklahoma (horizontal card, photo on the right and middle, front)
	DriverLicense_US_OR	DriverLicense_US_OR_TYPE1	USA driver's license - Oregon (a horizontal card; the seal of

Document type	Profile name	Result scheme	Result description
			Oregon in the top-right corner of the personal photo, front side)
	DriverLicense_US_PA	DriverLicense_US_PA_TYPE1	USA driver's license - Pennsylvania (a horizontal card; the state's name is written vertically on the left, front side)
		DriverLicense_US_PA_TYPE2	USA driver's license - Pennsylvania (a vertical card; letters JR in the bottom-right corner and a personal photo in the bottom-left corner, front side)
		DriverLicense_US_PA_TYPE3	USA driver's license - Pennsylvania (a vertical card; a small personal photo with letters DL in the bottom-right corner, front side)
		DriverLicense_US_PA_TYPE4	USA driver's license - Pennsylvania (a horizontal card; a small personal photo with letters CDL in the bottom-right corner, front side)
	DriverLicense_US_RI	DriverLicense_US_RI_TYPE1	USA driver's license - Rhode Island (a horizontal card; letters DL in the bottom-right corner, front side)

Document type	Profile name	Result scheme	Result description
		DriverLicense_US_RI_TYPE2	USA driver's license - Rhode Island (a horizontal card; a bridge on the background and a small personal photo in the top-right corner, front side)
	DriverLicense_US_SC	DriverLicense_US_SC_TYPE1	USA driver's license - South Carolina (emblem of South Carolina on the background, front)
		DriverLicense_US_SC_TYPE2	USA driver's license - South Carolina (flag of South Carolina on the background, front)
	DriverLicense_US_SD	DriverLicense_US_SD_TYPE1	USA driver's license - South Dakota (Rushmore on the background, front)
		DriverLicense_US_SD_TYPE2	USA driver's license - South Dakota (emblem of South Dakota on the background, front)
	DriverLicense_US_TN	DriverLicense_US_TN_TYPE1	USA driver's license - Tennessee (building on the background, front)
		DriverLicense_US_TN_TYPE2	USA driver's license - Tennessee (flag of Tennessee in the top-right corner, front)

Document type	Profile name	Result scheme	Result description
	DriverLicense_US_TX	DriverLicense_US_TX_TYPE1	USA driver's license - Texas (a horizontal card; United States Capitol on the background, front side)
		DriverLicense_US_TX_TYPE2	USA driver's license - Texas (a vertical card; United States Capitol on the background, front side)
		DriverLicense_US_TX_TYPE3	USA driver's license - Texas (a horizontal card; the seal of Texas in the top-right corner and flag of Texas in the top-left corner, front side)
	DriverLicense_US_UT	DriverLicense_US_UT_TYPE1	USA driver's license - Utah (a horizontal card; United States Capitol on the background, front side)
		DriverLicense_US_UT_TYPE2	USA driver's license - Utah (a horizontal card; the great seal of Utah on the background, front side)
		DriverLicense_US_UT_TYPE3	USA driver's license - Utah (a vertical card; United States Capitol on the background, front side)
	DriverLicense_US_VA	DriverLicense_US_VA_TYPE1	USA driver's license - Virginia (a horizontal card; a new sample

Document type	Profile name	Result scheme	Result description
			with the seal of Virginia in the middle on the background, front side)
		DriverLicense_US_VA_TYPE2	USA driver's license - Virginia (a horizontal card; a star in the circle in the top-right corner and a small personal photo on the right, front side)
		DriverLicense_US_VA_TYPE3	USA driver's license - Virginia (a vertical card; the seal of Virginia in the middle on the background, front side)
		DriverLicense_US_VA_TYPE4	USA driver's license - Virginia (a horizontal card; an old sample with the seal of Virginia in the middle on the background, front side)
	DriverLicense_US_VT	DriverLicense_US_VT_TYPE1	USA operator's license - Vermont (flag of USA on the left and name of stat on the left, front)
		DriverLicense_US_VT_TYPE2	USA operator's license - Vermont (name of stat on the top-middle, front)
	DriverLicense_US_WA	DriverLicense_US_WA_TYPE1	USA driver's license - Washington (George Washington in the top-left corner, front)

Document type	Profile name	Result scheme	Result description
		DriverLicense_US_WA_TYPE2	USA driver's license - Washington (tree on the down-middle, front)
	DriverLicense_US_WI	DriverLicense_US_WI_TYPE1	USA driver's license - Wisconsin (house on the top and emblem of Wisconin on the background, front)
		DriverLicense_US_WI_TYPE2	USA driver's license - Wisconsin (building on the background, front)
		DriverLicense_US_WI_TYPE3	USA driver's license - Wisconsin (flag of USA in the top-left corner, front)
	DriverLicense_US_WV	DriverLicense_US_WV_TYPE1	USA driver's license - West Virginia (a coat of arms of a state in the top-left corner and the contour of state in the top-right corner, front)
	DriverLicense_US_WY	DriverLicense_US_WY_TYPE1	USA driver's license - Wyoming (a coat of arms of a state in the top-left corner and mountains on the background, front)
USA permanent residency card (Green card)	GreenCard_US	GreenCard_US_TYPE1	USA permanent residency card, also known as Green card (front side)
USA visa	Visa_US	Visa_US_TYPE1	USA visa (front side)

Document type	Profile name	Result scheme	Result description
Uruguayan passport	InternationalPassport_UY	InternationalPassport_UY_TYPE1	Uruguayan passport (main page)
		InternationalPassport_UY_TYPE2	Uruguayan passport (main page)
Uzbek passport	InternationalPassport_UZ	InternationalPassport_UZ_TYPE1	Uzbek passport (UZB sign on the right, main page)
		InternationalPassport_UZ_TYPE2	Uzbek passport (the coat of arms of Uzbekistan on the background, main page)
Vietnamese driver's license	DriverLicense_VN	DriverLicense_VN_TYPE1	Vietnamese driver's license (a circle watermark on the bottom of personal photo , front side)

The following table lists field identifiers used in result data schemes returned by the Data Capture service.

Scheme	Field	Field description	Comments
Aadhaar_IN_TYPE1	Number	Aadhaar number	
AsylumResidencePermit_AT_RP_TYPE1	DateOfBirth	Document holder's date of birth	
	Sex	Document holder's sex	
	FirstName	Document holder's first name	
	Nationality	Document holder's nationality	

Scheme	Field	Field description	Comments
	Number	Document number	
	LastName	Document holder's last name	
BankCardEmbossed BankCardUnembossed	Number	Card number	
	FirstName	Cardholder's first name	
	DateOfExpiry	Card expiry date	
BirthCertificate_RU_TYPE1	FullNumber	Full document number (series and number, including the number sign)	
	Series	Document series (two Latin and two Cyrillic letters, separated by a hyphen)	
	Number	Document number (not including the number sign)	
	DateOfIssue	Document issue date	
	DayOfIssue	The day of issue date	
	MonthOfIssue	The month of issue date	
	YearOfIssue	The year of issue date	
	Sex	Document holder's sex	

Scheme	Field	Field description	Comments
	LastName	Document holder's last name	
	FirstName	Document holder's first name	
	MiddleName	Document holder's patronymic name	
	FirstNameMiddleName	Document holder's first name and patronymic	
	DateOfBirth	Document holder's birth date	
	DateOfBirth_FULL	Document holder's full birth date	
	PlaceOfBirth	Document holder's place of birth	
BusinessCards	Name	Giver's name	
	Phone	Phone number	
	Fax	Fax number	
	Mobile	Cell phone number	
	Email	E-mail address	
	Web	Web address	
	Address	Mailing address	
	Company	Company name	

Scheme	Field	Field description	Comments
	Job	Job title	
	Text	Extra recognized text located on the card	
BorderCrossing_US_TYPE1 BorderCrossing_US_TYPE2	DateOfBirth	Document holder's birth date	
	DateOfExpiry	Card expiry date	
	Sex	Document holder's sex	
	DateOfIssue	Document issue date	
	FirstName	Document holder's first name	
	Number	Document number	
	LastName	Document holder's last name	
	Nationality	Document holder's nationality	In the BorderCrossing_US_TYPE2 only
CrewMember_ZA_TYPE1	DateOfBirth	Document holder's birth date	
	DateOfExpiry	Document expiry date	
	Sex	Document holder's sex	
	FirstName	Document holder's first name	

Scheme	Field	Field description	Comments
	Nationality	Document holder's nationality	
	Number	Document number	
	LastName	Document holder's last name	
DeathCertificate_RU_TYPE1	DateOfBirth	Document holder's full birth date	
	DayOfBirth	Document holder's birth day	
	MonthOfBirth	Document holder's month of birth	
	YearOfBirth	Document holder's year of birth	
	DateOfDeath	Date of death	
	DateOfIssue	Document issue date	
	DayOfIssue	The day of issue date	
	MonthOfIssue	The month of issue date	
	YearOfIssue	The year of issue date	
	LastName	Document holder's last name	
	FirstName	Document holder's first name	

Scheme	Field	Field description	Comments
	MiddleName	Document holder's patronymic name	
	FirstNameMiddleName	Document holder's first name and patronymic	
	Series	Document series	
	Number	Document number	
DivorceCertificate_RU_TYPE1	DateOfBirth_1	Birth date of partner 1	
	DateOfBirth_2	Birth date of partner 2	
	DateOfDivorce	Date of divorce	
	FullNumber	Full document number (series and number, including the number sign)	
	DateOfIssue	Document issue date	
	IssuedToFirstName	Document holder's first name	
	IssuedToMiddleName	Document holder's middle name	
	IssuedToLastName	Document holder's last name	
	FirstName_1	First name of partner 1	
	FirstName_2	First name of partner 2	

Scheme	Field	Field description	Comments
	LastName_NEW	Document holder's new last name	
	Number	Document number	
	MiddleName_1	Middle name of partner 1	
	MiddleName_2	Middle name of partner 2	
	Series	Document series	
	LastName_1	Last name of partner 1	
	LastName_2	Last name of partner 2	
	DateOfVerdict	Date of verdict	
DriverLicense_AL_TYPE 1	DateOfBirth	Driver's date of birth	
	PlaceOfBirth	Driver's place of birth	
	DateOfExpiry	Document expiry date	
	DateOfIssue	Document issue date	
	FirstName	Driver's first name	
	Number	License number	
	Residence	Driver's residence	
	LastName	Driver's last name	

Scheme	Field	Field description	Comments
DriverLicense_AM_TYPE1	IssuedBy	The authority that issued the license	
	DateOfBirth	Driver's date of birth	
	DateOfExpiry	Document expiry date	
	PlaceOfBirth	Driver's place of birth	
	PersonalCode	Driver's personal code	
	DateOfIssue	Document issue date	
	FirstName	Driver's first name	
	FirstName_EN	Driver's first name in English	
	FirstName	Driver's first name in Russian	
	Nationality	Driver's nationality	
	Number	License number	
	Residence_EN	Driver's residence in English	
	Residence_RU	Driver's residence in Russian	
	LastName	LastName	
	LastName_EX	Driver's last name in English	

Scheme	Field	Field description	Comments
	LastName	LastName in Russian	
DriverLicense_AT_TYPE1 DriverLicense_AT_TYPE2	Number	License number	
	LastName	Driver's last name	
	FirstName	Driver's first name	
	DateOfBirth	Driver's date date of birth	
	DateOfIssue	Document issue date	
	DateOfExpiry	Document expiry date	In the DriverLicense_AT_TYPE1 scheme only
	PlaceOfIssue	Region where the license was issued	
	PlaceOfBirth	Driver's place of birth	
DriverLicense_BE_TYPE1	DateOfIssue	License issue date	
	LastName	Driver's last name	
	FirstName	Driver's first name	
	Number	License number	
	DateOfExpiry	License expiry date	
	DateOfBirth	Driver's date of birth	
DriverLicense_BG_TYPE1	DateOfBirth	Driver's date of birth	

Scheme	Field	Field description	Comments
DriverLicense_BG_TYPE2	DateOfExpiry	License expiry date	
	Sex	Driver's sex	
	PersonalCode	Driver's personal code	
	DateOfIssue	License issue date	
	FirstName	Driver's first name	
	Number	License number	
	MiddleName	Driver's patronymic name	
	LastName	Driver's last name	
DriverLicense_BR_TYPE1	CPF	Driver's CPF number	
	UF	Driver's UF number	
	CatHab	Driver's license class code	
	DateOfBirth	Driver's date of birth	
	DateOfIssue	License issue date	
	DocumentID	License ID	
	FileNumber	File number	
	Filiation_LINE1	Filiation first line	
	Filiation_LINE2	Filiation second line	

Scheme	Field	Field description	Comments
	License	Driver's license	
	Local	Place of Issue	
	FirstName	Driver's first name	
	Number	License number	
	IssuedBy	The authority that issued the license	
	RegistrationNumber	License registration number	
	Validity	License expiry date	
DriverLicense_BY_TYPE1 DriverLicense_BY_TYPE2	Number	License number	
	LastName	Driver's last name	
	FirstName	Driver's first name	
	MiddleName	Driver's patronymic name	
	FirstNameMiddleName	Driver's first and patronymic names	In the DriverLicense_BY_TYPE1 scheme only
	DateOfBirth	Driver's date of birth	
	PlaceOfBirth_EN	Driver's place of birth in English	
	PlaceOfBirth_RU	Driver's place of birth in Russian	

Scheme	Field	Field description	Comments
	DateOfIssue	License issue date	
	DateOfExpiry	License expiry date	
	PlaceOfIssue_EN	Region where the license was issued in English	In the DriverLicense_BY_TYPE1 scheme only
	PlaceOfIssue_RU	Region where the license was issued in Russian	
	RegistrationPlace_EN	Region where the license was registered in English	In the DriverLicense_BY_TYPE2 scheme only
	RegistrationPlace_RU	Region where the license was registered in Russian	
	Series	Document series	
	FirstName_EX	Driver's first name in English	
	LastName_EX	Driver's last name in English	
DriverLicense_CA_BC_TYPE1 DriverLicense_CA_ON_TYPE1	Address	Driver's address	
	DateOfBirth	Driver's date of birth	
	Class	Vehicle class	In the DriverLicense_CA_BC_TYPE1 scheme only
	Endorsements	License endorsements	
	DateOfExpiry	License expiry date	

Scheme	Field	Field description	Comments
	Eyes	Driver's eye color	In the DriverLicense_CA_BC_TYPE1 scheme only
	Sex	Driver's sex	
	Hair	Driver's hair color	In the DriverLicense_CA_BC_TYPE1 scheme only
	Height	Driver's height	
	DateOfIssue	License issue date	
	FirstName	Driver's first name	
	Number	License number	
	LastName	Driver's last name	
	Weight	Driver's weight	In the DriverLicense_CA_BC_TYPE1 scheme only
	Category	License category	In the DriverLicense_CA_ON_TYPE1 scheme only
	Condition	License endorsements	
	DocumentID	License ID	
DriverLicense_CH_TYPE1	Number	License number	
	Number_MRZ	Document number from MRZ	
	LastName	Driver's last name	

Scheme	Field	Field description	Comments
	LastName_MRZ	Document holder's last name from MRZ	
	FirstName	Driver's first name	
	FirstName_MRZ	Driver's first name from MRZ	
	DateOfBirth	Driver's date of birth	
	DateOfBirth_MRZ	Driver's date of birth from MRZ	
	MRZ	Full contents of the machine-readable zone	
	MRZ_LINE1	The first line from MRZ	
	MRZ_LINE2	The second line from MRZ	
	MRZ_LINE3	The third line from MRZ	
	Nationality_MRZ	Document holder's nationality from MRZ	
	PlaceOfBirth	Driver's place of birth	
	PlaceOfIssue	Region where the license was issued	
	DateOfIssue	License issue date	
	DateOfExpiry	License expiry date	

Scheme	Field	Field description	Comments
	DateOfExpiry_MRZ	Document expiry date from MRZ	
	OptionalData_MRZ_LINE1	Optional second line of MRZ	
	Sex_MRZ	Document holder's from MRZ	
DriverLicense_CZ_TYPE1	IssuedBy	The authority that issued the license	
	DateOfBirth	Driver's date of birth	
	PlaceOfBirth	Driver's place of birth	
	DriverID	Driver's personal identifier	
	Class	Vehicle class	
	DateOfExpiry	License expiry date	
	DateOfIssue	License issue date	
	FirstName	Driver's first name	
	Number	License number	
	Number_BACK	License number on back side	
	Residence	Driver's residence	
	LastName	Driver's last name	

Scheme	Field	Field description	Comments
DriverLicense_DE_TYPE1 DriverLicense_DE_TYPE2	Number	License number	
	LastName	Driver's last name	
	LastName_LINE2	Second line of the driver's last name	
	FirstName	Driver's first name	
	DateOfExpiry	License expiry date	In the DriverLicense_DE_TYPE2 scheme only
	DateOfIssue	License issue date	
	PlaceOfBirth	Driver's place of birth	
	DateOfBirth	Driver's date of birth	
	PlaceOfIssue	Region where the license was issued	
	PlaceOfIssue_LINE2	Region where the license was issued, continued	
DriverLicense_EE_TYPE1 DriverLicense_EE_TYPE2 DriverLicense_EE_TYPE3 DriverLicense_EE_TYPE4 DriverLicense_EE_TYPE5	IssuedBy	The authority that issued the license	
	DateOfBirth	Driver's date of birth	
	PlaceOfBirth	Driver's place of birth	In the DriverLicense_EE_TYPE1, DriverLicense_EE_TYPE3 and DriverLicense_EE_TYPE4 scheme only

Scheme	Field	Field description	Comments
	DateOfExpiry	License expiry date	
	DateOfIssue	License issue date	In the DriverLicense_EE_TYPE1, DriverLicense_EE_TYPE3, DriverLicense_EE_TYPE4 and DriverLicense_EE_TYPE5 scheme only
	LicenseNumber	License number	In the DriverLicense_EE_TYPE1 scheme only
	FirstName	Driver's first name	
	PersonalNumber	Driver's personal number	In the DriverLicense_EE_TYPE1, DriverLicense_EE_TYPE3, DriverLicense_EE_TYPE4 and DriverLicense_EE_TYPE5 scheme only
	SerialNumber	License serial number	In the DriverLicense_EE_TYPE1 scheme only
	LastName	Driver's last name	
	MRZ	Full contents of the machine-readable zone	In the DriverLicense_EE_TYPE3 scheme only
	Number	License number	In the DriverLicense_EE_TYPE2, DriverLicense_EE_TYPE3

Scheme	Field	Field description	Comments
			, DriverLicense_EE_TYPE4 and DriverLicense_EE_TYPE5 scheme only
	Nationality	Driver's nationality	In the DriverLicense_EE_TYPE2 scheme only
DriverLicense_ES_TYPE1 DriverLicense_ES_TYPE2	DateOfIssue	License issue date	
	DateOfBirth	Driver's date of birth	
	FirstName	Driver's first name	
	LastName	Driver's last name	
	IssuedBy	The authority that issued the license	
	PlaceOfBirth	Driver's place of birth	
	Number	License number	
	DateOfExpiry	License expiry date	
DriverLicense_FI_TYPE1 DriverLicense_FI_TYPE2	Number	License number	
	DriverID	Driver's personal identifier	
	LastName	Driver's last name	
	FirstName	Driver's first name	

Scheme	Field	Field description	Comments
	Nationality	Driver's nationality	
	DateOfBirth	Driver's date of birth	
	DateOfIssue	License issue date	
	DateOfExpiry	License expiry date	
	PlaceOfIssue	Region where the license was issued	
DriverLicense_FR_TYPE1	DateOfBirth	Driver's date of birth	
	DateOfExpiry	License expiry date	
	DateOfIssue	License issue date	
	MRZ	Full contents of the machine-readable zone	
	FirstName	Driver's first name	
	Number	License number	
	LastName	Driver's last name	
DriverLicense_GE_TYPE1 DriverLicense_GE_TYPE2	IssuedBy	The authority that issued the license	In the DriverLicense_GE_TYPE1 scheme only
	IssuedBy_EN	The authority that issued the license in English	In the DriverLicense_GE_TYPE1 scheme only
	DateOfBirth	Driver's date of birth	

Scheme	Field	Field description	Comments
	PlaceOfBirth	Driver's place of birth	
	PlaceOfBirth_EN	Driver's place of birth in English	
	Class	Vehicle class	In the DriverLicense_GE_TYPE1 scheme only
	DateOfExpiry	License expiry date	
	Sex	Driver's sex	In the DriverLicense_GE_TYPE1 scheme only
	Sex_EN	Driver's sex in English	In the DriverLicense_GE_TYPE1 scheme only
	PersonalCode	Driver's personal code	
	DateOfIssue	License issue date	
	FirstName	Driver's first name	
	FirstName_EX	Driver's first name in English	
	Number	License number	
	LastName	Driver's last name	
	LastName_EX	Driver's last name in English	
DriverLicense_GR_TYPE1	LastName	Driver's last name	

Scheme	Field	Field description	Comments
	FirstName	Driver's first name	
	DateOfBirth	Driver's birth date	
	DateOfIssue	License issue date	
	DateOfExpiry	License expiry date	
	IssuedBy	The authority that issued the license	
	PersonalCode	Driver's personal code	
	Number	License number	
	Number_BACK	License number on back side	
DriverLicense_HR_TYPE1	IssuedBy	The authority that issued the license	
	DateOfBirth	Driver's birth date	
	Class	Vehicle class	
	DateOfExpiry	License expiry date	
	DateOfIssue	License issue date	
	MRZ	Full contents of the machine-readable zone	
	FirstName	Driver's first name	
	Number	License number	

Scheme	Field	Field description	Comments
	LastName	Driver's last name	
DriverLicense_HU_TYPE1	FirstName	Driver's first name	
	LastName	Driver's last name	
	DateOfIssue	License issue date	
	DateOfExpiry	License expiry date	
	DateOfBirth	Driver's birth date	
	Number	License number	
DriverLicense_IL_TYPE1	Number	License number	
	Address	Driver's address	
	DriverID	Driver's personal identifier	
	LastName	Driver's last name	
	LastName_EN	Driver's last name in English	
	FirstName	Driver's first name	
	FirstName_EN	Driver's first name in English	
	DateOfBirth	Driver's date of birth	
	DateOfIssue	License issue date	

Scheme	Field	Field description	Comments
	DateOfExpiry	License expiry date	
	Number_BACK	License number on back side	
DriverLicense_IT_TYPE1 DriverLicense_IT_TYPE2	IssuedBy	The authority that issued the license	
	Number	License number	
	LastName	Driver's last name	
	FirstName	Driver's first name	
	PlaceOfBirth	Driver's place of birth	
	DateOfBirth	Driver's date of birth	
	DateOfIssue	License issue date	
	DateOfExpiry	License expiry date	
DriverLicense_JP_TYPE1	Number	License number	
DriverLicense_KG_TYPE1	Address	Driver's address	
	IssuedBy	The authority that issued the license	
	DateOfBirth	Driver's date of birth	
	PlaceOfBirth	Driver's place of birth	
	DateOfExpiry	License expiry date	

Scheme	Field	Field description	Comments
	PersonalCode	Document holder's personal code	
	DateOfIssue	License issue date	
	FirstName	Driver's first name	
	Number	License number	
	LastName	Driver's last name	
DriverLicense_KZ_TYPE1 DriverLicense_KZ_TYPE2	IssuedBy	The authority that issued the license	In the DriverLicense_KZ_TYPE2 scheme only
	DateOfBirth	Driver's date of birth	
	DateAndPlaceOfBirth	Driver's date and place of birth	In the DriverLicense_KZ_TYPE1 scheme only
	PlaceOfBirth	Driver's place of birth	
	DateOfExpiry	License expiry date	
	PIN	License PIN	In the DriverLicense_KZ_TYPE2 scheme only
	DateOfIssue	License issue date	
	FirstName	Driver's first name	
	FirstNameMiddleName	Driver's first and middle names	In the DriverLicense_KZ_TYPE1 scheme only

Scheme	Field	Field description	Comments
	Number	License number	
	MiddleName	Driver's middle name	
	Residence	Driver's residence	In the DriverLicense_KZ_TYPE1 scheme only
	Residence_EN	Driver's residence in English	In the DriverLicense_KZ_TYPE1 scheme only
	LastName	Driver's last name	
DriverLicense_LT_TYPE1 DriverLicense_LT_TYPE2 DriverLicense_LT_TYPE3	IssuedBy	The authority that issued the license	
	DateOfBirth	Driver's date of birth	
	DateOfExpiry	License expiry date	
	DateOfIssue	License issue date	
	FirstName	Driver's first name	
	Number	License number	
	PersonalNumber	Personal number	
	LastName	Driver's last name	
DriverLicense_LV_TYPE1 DriverLicense_LV_TYPE2	IssuedBy	The authority that issued the license	
	DateOfBirth	Driver's date of birth	

Scheme	Field	Field description	Comments
	PlaceOfBirth	Driver's place of birth	
	DateOfExpiry	License expiry date	
	PersonalCode	Personal code	
	DateOfIssue	License issue date	
	FirstName	Driver's first name	
	Nationality	Document holder's nationality	
	Number	License number	
	LastName	Driver's last name	
	DocumentType	Document type	
DriverLicense_MD_TYPE1 DriverLicense_MD_TYPE2	DateOfBirth	Driver's date of birth	
	DateOfExpiry	License expiry date	
	PersonalCode	Personal code	
	DateOfIssue	License issue date	
	FirstName	Driver's first name	
	Number	License number	
	LastName	Driver's last name	
DriverLicense_NO_TYPE1	FirstName	Driver's first name	

Scheme	Field	Field description	Comments
DriverLicense_NO_TYPE2	LastName	Driver's last name	
	DateOfIssue	License issue date	
	DateOfExpiry	License expiry date	
	DateOfBirth	Driver's birth date	
	Number	License number	
	IssuedBy	The authority that issued the license	
	ReferenceNumber	Reference number	
	Field_7	License seventh field	In the DriverLicense_NO_TYPE2 scheme only
	PersonalCode	Personal code	In the DriverLicense_NO_TYPE2 scheme only
DriverLicense_NZ_TYPE1	Number	License number	
	Version	License version	
	DateOfBirth	Driver's birth date	
	LastName	Driver's last name	
	FirstName	Driver's first name	
	FullName_LINE2	Additional line for driver's name	

Scheme	Field	Field description	Comments
DriverLicense_PL_TYPE1 DriverLicense_PL_TYPE2	LastName	Driver's last name	
	FirstName	Driver's first name	
	Number	License number	
	DateOfBirth	License birth date	
	DateOfIssue	License issue date	
	Address	Driver's address	
	IssuedBy	The authority that issued the license	
	PlaceOfBirth	Driver's place of birth	
	DateOfExpiry	License expiry date	
	Number_BACK	License number on the back side	
	NumberID	License ID number	
DriverLicense_PT_TYPE1	Number	License number	
	DriverID	Driver's personal identifier	
	LastName	Driver's last name	
	FirstName	Driver's first name	
	DateOfBirth	Driver's date of birth	

Scheme	Field	Field description	Comments
	DateOfIssue	License issue date	
	DateOfExpiry	License expiry date	
DriverLicense_RO_TYPE1	IssuedBy	The authority that issued the license	
	DateOfBirth	Driver's date of birth	
	PlaceOfBirth	Driver's place of birth	
	Class	Vehicle class	
	DateOfExpiry	License expiry date	
	PersonalCode	Personal code	
	DateOfIssue	License issue date	
	FirstName	Driver's first name	
	Number	License number	
	LastName	Driver's last name	
DriverLicense_RS_TYPE1	FirstName	Driver's first name	
	LastName	Driver's last name	
	DateOfExpiry	License expiry date	
	DateOfIssue	License issue date	
	Number	License number	

Scheme	Field	Field description	Comments
	IssuedBy	The authority that issued the license	
DriverLicense_RU_TYPE1 DriverLicense_RU_TYPE2 DriverLicense_RU_TYPE3	Number	License number	
	Number_EX	License number	In the DriverLicense_RU_TYPE3 scheme only. Some licenses of this type contain an additional field that repeats the license number. The numbers recognized from the Number and Number_EX fields should be the same.
	Number_BACK	License number on back side	Except the DriverLicense_RU_TYPE2 schemes only.
	Number2_BACK	License number on back side	In the DriverLicense_RU_TYPE3 scheme only.
	LastName	Driver's last name	
	FirstName	Driver's first name	
	MiddleName	Driver's patronymic name	
	FirstNameMiddleName	Driver's first and patronymic names	In the DriverLicense_RU_TYPE1 schemes only
	Sex	Driver's sex	
	DateOfBirth	Driver's date of birth	

Scheme	Field	Field description	Comments
	PlaceOfBirth	Driver's place of birth	
	Residence	Driver's region of residence	
	IssuedBy	The authority that issued the license	Except the DriverLicense_RU_TYPE 2 schemes only
	DateOfIssue	License issue date	
	DateOfExpiry	License expiry date	
DriverLicense_SE_TYPE 1 DriverLicense_SE_TYPE 2	IssuedBy	The authority that issued the license	
	Number	License number	
	DriverID	Driver's personal identifier	
	LastName	Driver's last name	
	FirstName	Driver's first name	
	DateOfBirth	Driver's date of birth	
	DateOfIssue	License issue date	
	DateOfExpiry	License expiry date	
DriverLicense_SI_TYPE 1 DriverLicense_SI_TYPE 2	Address	Driver's address	
	IssuedBy	The authority that issued the license	

Scheme	Field	Field description	Comments
	DateOfBirth	Driver's date of birth	
	PlaceOfBirth	Driver's place of birth	
	DateOfExpiry	License expiry date	
	PersonalCode	Personal code	
	DateOfIssue	License issue date	
	FirstName	Driver's first name	
	Nationality	Driver's nationality	
	Number	License number	
	Number_BACK	License number on the back side	
	LastName	Driver's last name	
DriverLicense_SK_TYPE1 DriverLicense_SK_TYPE2 DriverLicense_SK_TYPE3	IssuedBy	The authority that issued the license	
	DateOfBirth	Driver's date of birth	
	PlaceOfBirth	Driver's place of birth	
	Class	Vehicle class	In the DriverLicense_SK_TYPE1 only
	DateOfExpiry	License expiry date	
	DateOfIssue	License issue date	

Scheme	Field	Field description	Comments
	FirstName	Driver's first name	
	Number	License number	
	LastName	Driver's last name	
	PersonalCode	Personal code	In the DriverLicense_SK_TYPE2 only
DriverLicense_TR_TYPE 1 DriverLicense_TR_TYPE 2	Number	License number	
	IssuedBy	The authority that issued the license	
	DriverID	Driver's personal identifier	In the DriverLicense_TR_TYPE1 only
	LastName	Driver's last name	
	FirstName	Driver's first name	
	DateOfBirth	Driver's date of birth	
	PlaceOfBirth	Driver's place of birth	
	PersonalCode	Driver's personal code	In the DriverLicense_TR_TYPE1 only
	Father	Driver's father	
	Mother	Driver's mother	
	DateOfIssue	License issue date	

Scheme	Field	Field description	Comments
	PlaceOfIssue	Region where the license was issued	In the DriverLicense_TR_TYPE1 only
	ProvinceOfIssue	Province where the license was issued	
	Locality	Driver's locality	
	DateOfExpiry	License expiry date	
	Number_1		In the DriverLicense_TR_TYPE1 only
	Number_EX		
	Number_3		
DriverLicense_UA_TYPE1 DriverLicense_UA_TYPE2 DriverLicense_UA_TYPE3	IssuedBy	The authority that issued the license	
	IssuedBy_EN	The authority that issued the license in English	In the DriverLicense_UA_TYPE1 only
	DateOfBirth	Driver's date of birth	
	PlaceOfBirth	Driver's place of birth	
	PlaceOfBirth_EN	Driver's place of birth in English	In the DriverLicense_UA_TYPE1 only
	DateOfExpiry	License expiry date	
	DateOfIssue	License issue date	
	FirstName	Driver's first name	

Scheme	Field	Field description	Comments
	FirstName_EX	Driver's first name in English	
	Number	License number	
	MiddleName	Driver's middle name	
	LastName	Driver's last name	
	LastName_EX	Driver's last name in English	
	PlaceOfResidence	Driver's place of residence	In the DriverLicense_UA_TYPE 3 only
	PlaceOfResidence_EN	Driver's place of residence in English	In the DriverLicense_UA_TYPE 3 only
DriverLicense_UK_TYPE1 DriverLicense_UK_TYPE2 DriverLicense_UK_TYPE3 DriverLicense_UK_PROVISIONAL_TYPE1 DriverLicense_UK_PROVISIONAL_TYPE2 DriverLicense_UK_PROVISIONAL_TYPE3	Number	License number	
	LastName	Driver's last name	
	FirstName	Driver's first name	
	DateOfBirth	Driver's date of birth	
	PlaceOfBirth	Driver's place of birth	
	Residence	Driver's place of residence	
	DatesOfIssueAndExpiry	License issue date and expiry date	In the DriverLicense_UK_TYPE 3 and

Scheme	Field	Field description	Comments
			DriverLicense_UK_PROVISIONAL_TYPE3 only
	DateOfIssue	License issue date	
	DateOfExpiry	License expiry date	
	IssuedBy	The authority that issued the license	
DriverLicense_US_AK_TYPE1 DriverLicense_US_AK_TYPE2 DriverLicense_US_AL_TYPE1 DriverLicense_US_AR_TYPE1 DriverLicense_US_AR_TYPE2 DriverLicense_US_AZ_TYPE1 DriverLicense_US_AZ_TYPE2 DriverLicense_US_AZ_TYPE3 DriverLicense_US_CA_TYPE1 DriverLicense_US_CA_TYPE2 DriverLicense_US_CA_TYPE3 DriverLicense_US_CA_TYPE4 DriverLicense_US_CO_TYPE1 DriverLicense_US_CO_TYPE2 DriverLicense_US_CO_TYPE3 DriverLicense_US_CT_TYPE1 DriverLicense_US_CT_TYPE2 DriverLicense_US_CT_TYPE3	Address	Driver's address	

Scheme	Field	Field description	Comments
DriverLicense_US_CT_TYPE4 DriverLicense_US_CT_TYPE5 DriverLicense_US_DC_TYPE1 DriverLicense_US_DC_TYPE2 DriverLicense_US_DE_TYPE1 DriverLicense_US_FL_TYPE1 DriverLicense_US_FL_TYPE2 DriverLicense_US_GA_TYPE1 DriverLicense_US_GA_TYPE2 DriverLicense_US_GA_TYPE3 DriverLicense_US_HI_TYPE1 DriverLicense_US_HI_TYPE2 DriverLicense_US_IA_TYPE1 DriverLicense_US_IA_TYPE2 DriverLicense_US_IA_TYPE3 DriverLicense_US_ID_TYPE1 DriverLicense_US_IL_TYPE1 DriverLicense_US_IL_TYPE2 DriverLicense_US_IL_TYPE3 DriverLicense_US_IN_TYPE1 DriverLicense_US_IN_TYPE2 DriverLicense_US_IN_TYPE3 DriverLicense_US_KS_TYPE1 DriverLicense_US_KS_TYPE2 DriverLicense_US_KS_TYPE3	Audit	License's audit number	In the DriverLicense_US_LA_TYPE1, DriverLicense_US_LA_TYPE2, DriverLicense_US_LA_TYPE3 only

Scheme	Field	Field description	Comments
DriverLicense_US_KS_TYPE4 DriverLicense_US_KS_TYPE5 DriverLicense_US_KY_TYPE1 DriverLicense_US_KY_TYPE2 DriverLicense_US_LA_TYPE1 DriverLicense_US_LA_TYPE2 DriverLicense_US_LA_TYPE3 DriverLicense_US_MA_TYPE1 DriverLicense_US_MA_TYPE2 DriverLicense_US_MA_TYPE3 DriverLicense_US_MA_TYPE4 DriverLicense_US_MD_TYPE1 DriverLicense_US_MD_TYPE2 DriverLicense_US_ME_TYPE1 DriverLicense_US_ME_TYPE2 DriverLicense_US_ME_TYPE3 DriverLicense_US_MI_TYPE1 DriverLicense_US_MI_TYPE2 DriverLicense_US_MI_TYPE3 DriverLicense_US_MN_TYPE1 DriverLicense_US_MO_TYPE1 DriverLicense_US_MO_TYPE2 DriverLicense_US_MS_TYPE1 DriverLicense_US_MS_TYPE2 DriverLicense_US_MT_TYPE1	IssuedBy	The authority that issued the license	In the DriverLicense_US_CA_TYPE4, DriverLicense_US_SC_TYPE1, DriverLicense_US_SC_TYPE2 only

Scheme	Field	Field description	Comments
DriverLicense_US_MT_TYPE2 DriverLicense_US_NC_TYPE1 DriverLicense_US_NC_TYPE2 DriverLicense_US_ND_TYPE1 DriverLicense_US_ND_TYPE2 DriverLicense_US_NE_TYPE1 DriverLicense_US_NE_TYPE2 DriverLicense_US_NH_TYPE1 DriverLicense_US_NH_TYPE2 DriverLicense_US_NJ_TYPE1 DriverLicense_US_NJ_TYPE2 DriverLicense_US_NM_TYPE1 DriverLicense_US_NV_TYPE1 DriverLicense_US_NV_TYPE2 DriverLicense_US_NV_TYPE3 DriverLicense_US_NY_TYPE1 DriverLicense_US_NY_TYPE2 DriverLicense_US_NY_TYPE3 DriverLicense_US_NY_TYPE4 DriverLicense_US_OH_TYPE1 DriverLicense_US_OH_TYPE2 DriverLicense_US_OK_TYPE1 DriverLicense_US_OK_TYPE2 DriverLicense_US_OK_TYPE3 DriverLicense_US_OR_TYPE1	DateOfBirth	Driver's date of birth	

Scheme	Field	Field description	Comments
DriverLicense_US_PA_TYPE1 DriverLicense_US_PA_TYPE2 DriverLicense_US_PA_TYPE3 DriverLicense_US_PA_TYPE4 DriverLicense_US_RI_TYPE1 DriverLicense_US_RI_TYPE2 DriverLicense_US_SC_TYPE1 DriverLicense_US_SC_TYPE2 DriverLicense_US_SD_TYPE1 DriverLicense_US_SD_TYPE2 DriverLicense_US_TN_TYPE1 DriverLicense_US_TN_TYPE2 DriverLicense_US_TX_TYPE1 DriverLicense_US_TX_TYPE2 DriverLicense_US_TX_TYPE3 DriverLicense_US_UT_TYPE1 DriverLicense_US_UT_TYPE2 DriverLicense_US_UT_TYPE3 DriverLicense_US_VA_TYPE1 DriverLicense_US_VA_TYPE2 DriverLicense_US_VA_TYPE3 DriverLicense_US_VA_TYPE4 DriverLicense_US_VT_TYPE1 DriverLicense_US_VT_TYPE2 DriverLicense_US_WA_TYPE1	CDL	Class of CDL License	In the DriverLicense_US_KY_TYPE1, DriverLicense_US_KY_TYPE2 only

Scheme	Field	Field description	Comments
DriverLicense_US_WA_TYPE2 DriverLicense_US_WI_TYPE1 DriverLicense_US_WI_TYPE2 DriverLicense_US_WI_TYPE3 DriverLicense_US_WV_TYPE1 DriverLicense_US_WY_TYPE1	CDLClass	Class of CDL License	In the DriverLicense_US_KS_TYPE1 DriverLicense_US_KS_TYPE5 only
	City	Driver's city of living	
	Class	Vehicle class	Except the DriverLicense_US_FL_TYPE1, DriverLicense_US_KS_TYPE1, DriverLicense_US_KS_TYPE5, DriverLicense_US_NH_TYPE1
	County	Driver's county	In the DriverLicense_US_GA_TYPE3 only
	CSC	License's two-dimensional bar codes	In the DriverLicense_US_GA_TYPE3 only
	DD	License's document discriminator	Except the DriverLicense_US_AZ_TYPE3, DriverLicense_US_CA_TYPE4, DriverLicense_US_CO_TYPE1, DriverLicense_US_CT_TYPE5, DriverLicense_US_DE_TYPE1, DriverLicense_US_FL_TYPE1, DriverLicense_US_HI_TYPE1, DriverLicense_US_HI_TYPE2, DriverLicense_US_ID_TYPE1,

Scheme	Field	Field description	Comments
			DriverLicense_US_IL_TYPE2, DriverLicense_US_IL_TYPE3, DriverLicense_US_IN_TYPE1, DriverLicense_US_IN_TYPE2, DriverLicense_US_IN_TYPE3, DriverLicense_US_KS_TYPE5, DriverLicense_US_LA_TYPE1, DriverLicense_US_LA_TYPE2, DriverLicense_US_LA_TYPE3, DriverLicense_US_MA_TYPE3, DriverLicense_US_MD_TYPE1, DriverLicense_US_MD_TYPE2, DriverLicense_US_ME_TYPE1, DriverLicense_US_MN_TYPE1, DriverLicense_US_MO_TYPE2, DriverLicense_US_MS_TYPE1, DriverLicense_US_MT_TYPE1, DriverLicense_US_NC_TYPE1, DriverLicense_US_ND_TYPE1, DriverLicense_US_NH_TYPE1, DriverLicense_US_NH_TYPE2, DriverLicense_US_NM_TYPE1, DriverLicense_US_NV_TYPE3, DriverLicense_US_NY_TYPE1, DriverLicense_US_NY_TYPE2,

Scheme	Field	Field description	Comments
			DriverLicense_US_NY_TYPE3 DriverLicense_US_NY_TYPE4, DriverLicense_US_OH_TYPE1, DriverLicense_US_OH_TYPE2, DriverLicense_US_OK_TYPE1, DriverLicense_US_OK_TYPE2, DriverLicense_US_OK_TYPE3, DriverLicense_US_OR_TYPE1, DriverLicense_US_PA_TYPE1, DriverLicense_US_PA_TYPE2, DriverLicense_US_RI_TYPE1, DriverLicense_US_SC_TYPE1, DriverLicense_US_SC_TYPE2, DriverLicense_US_SD_TYPE1, DriverLicense_US_TN_TYPE1, DriverLicense_US_VA_TYPE1, DriverLicense_US_VA_TYPE2, DriverLicense_US_VA_TYPE3, DriverLicense_US_VA_TYPE4, DriverLicense_US_VT_TYPE2, DriverLicense_US_WI_TYPE1, DriverLicense_US_WY_TYPE1
	DLClass	Class of DL License	In the DriverLicense_US_KS_TYPE1

Scheme	Field	Field description	Comments
			DriverLicense_US_KS_TYPE5 only
	Duplicate	License duplicate	In the DriverLicense_US_FL_TYPE1 only
	Endorsement	Driver's endorsement	Except the DriverLicense_US_AZ_TYPE3, DriverLicense_US_CA_TYPE4, DriverLicense_US_IL_TYPE3, DriverLicense_US_LA_TYPE3, DriverLicense_US_MA_TYPE3, DriverLicense_US_MD_TYPE1, DriverLicense_US_MD_TYPE2, DriverLicense_US_MN_TYPE1, DriverLicense_US_NH_TYPE1
	DateOfExpiry	License expiry date	
	Fee	License fee	In the DriverLicense_US_GA_TYPE3 only
	Eyes	Driver's eyes color	Except the DriverLicense_US_FL_TYPE1, DriverLicense_US_FL_TYPE2, DriverLicense_US_GA_TYPE3, DriverLicense_US_MA_TYPE1, DriverLicense_US_MA_TYPE2, DriverLicense_US_MA_T

Scheme	Field	Field description	Comments
			YPE3, DriverLicense_US_MA_TYPE4, DriverLicense_US_MD_TYPE1, DriverLicense_US_MD_TYPE2, DriverLicense_US_MS_TYPE1
	FirstIssue	License's first Issue	In the DriverLicense_US_OR_TYPE1, DriverLicense_US_SD_TYPE1
	Address_FULL	Driver's full address	
	Sex	Driver's sex	
	Hair	Driver's hair color	Except the DriverLicense_US_AR_TYPE2, DriverLicense_US_CO_TYPE1, DriverLicense_US_CT_TYPE3, DriverLicense_US_CT_TYPE4, DriverLicense_US_CT_TYPE5, DriverLicense_US_DC_TYPE1, DriverLicense_US_DC_TYPE2, DriverLicense_US_DE_TYPE1, DriverLicense_US_FL_TYPE1, DriverLicense_US_FL_TYPE2, DriverLicense_US_GA_TYPE1, DriverLicense_US_GA_TYPE2, DriverLicense_US_GA_T

Scheme	Field	Field description	Comments
			YPE3, DriverLicense_US_IA_TYPE1, DriverLicense_US_IA_TYPE2, DriverLicense_US_IA_TYPE3, DriverLicense_US_IL_TYPE1, DriverLicense_US_IL_TYPE2, DriverLicense_US_IL_TYPE3, DriverLicense_US_KS_TYPE1, DriverLicense_US_KS_TYPE2, DriverLicense_US_KS_TYPE3, DriverLicense_US_KS_TYPE4, DriverLicense_US_KS_TYPE5, DriverLicense_US_KY_TYPE1, DriverLicense_US_KY_TYPE2, DriverLicense_US_LA_TYPE1, DriverLicense_US_LA_TYPE2, DriverLicense_US_LA_TYPE3, DriverLicense_US_MA_TYPE1, DriverLicense_US_MA_TYPE2, DriverLicense_US_MA_TYPE3, DriverLicense_US_MA_TYPE4, DriverLicense_US_MD_TYPE1, DriverLicense_US_MD_TYPE2, DriverLicense_US_MI_TYPE1, DriverLicense_US_MI_TYPE2, DriverLicense_US_MI_TY

Scheme	Field	Field description	Comments
			PE3, DriverLicense_US_MN_TYPE1, DriverLicense_US_MO_TYPE1, DriverLicense_US_MO_TYPE2, DriverLicense_US_MS_TYPE1, DriverLicense_US_MS_TYPE2, DriverLicense_US_MT_TYPE1, DriverLicense_US_MT_TYPE2, DriverLicense_US_NJ_TYPE1, DriverLicense_US_NJ_TYPE2, DriverLicense_US_NM_TYPE1, DriverLicense_US_NY_TYPE1, DriverLicense_US_NY_TYPE4, DriverLicense_US_OK_TYPE1, DriverLicense_US_OK_TYPE2, DriverLicense_US_OK_TYPE3, DriverLicense_US_PA_TYPE1, DriverLicense_US_PA_TYPE2, DriverLicense_US_PA_TYPE3, DriverLicense_US_PA_TYPE4, DriverLicense_US_RI_TYPE1, DriverLicense_US_SC_TYPE1, DriverLicense_US_SC_TYPE2, DriverLicense_US_TN_TYPE1, DriverLicense_US_TN_TYPE2, DriverLicense_US_TX_TY

Scheme	Field	Field description	Comments
			PE1, DriverLicense_US_TX_TYPE2, DriverLicense_US_TX_TYPE3, DriverLicense_US_VA_TYPE1, DriverLicense_US_VT_TYPE1, DriverLicense_US_VT_TYPE2, DriverLicense_US_WA_TYPE1, DriverLicense_US_WA_TYPE2, DriverLicense_US_WV_TYPE1, DriverLicense_US_WY_TYPE1
	Height	Driver's height	
	DateOfIssue	License issue date	Except the DriverLicense_US_NH_TYPE1
	MiddleName	Driver's middle name	Except the DriverLicense_US_NY_TYPE4
	FirstName	Driver's first name	Except the DriverLicense_US_DC_TYPE1
	FullName	Driver's full name	In the DriverLicense_US_DC_TYPE1 only
	NameSuffix	Driver's name suffix	
	Number	License number	

Scheme	Field	Field description	Comments
	Office	Office number	In the DriverLicense_US_LA_TYPE1, DriverLicense_US_LA_TYPE2, DriverLicense_US_LA_TYPE3 only
	Parish	Parish number	In the DriverLicense_US_LA_TYPE1, DriverLicense_US_LA_TYPE2, DriverLicense_US_LA_TYPE3 only
	Restriction	Restriction for license	Except the DriverLicense_US_AZ_TYPE3.
	SSN	Social security number	In the DriverLicense_US_NH_TYPE2 only
	State	Driver's state	
	LastName	Driver's last name	
	Transaction	License transaction	In the DriverLicense_US_IN_TYPE1, DriverLicense_US_IN_TYPE2 only
	TransactionNumber	License transaction number	In the DriverLicense_US_IN_TYPE3 only
	DocumentType	Type of issued document	In the DriverLicense_US_CO_TYPE1, DriverLicense_US_CO_T

Scheme	Field	Field description	Comments
			YPE2, DriverLicense_US_CO_TYPE3, DriverLicense_US_GA_TYPE3, DriverLicense_US_IL_TYPE1, DriverLicense_US_IL_TYPE2, DriverLicense_US_IL_TYPE3, DriverLicense_US_KY_TYPE1, DriverLicense_US_KY_TYPE2, DriverLicense_US_LA_TYPE3 DriverLicense_US_MD_TYPE2, DriverLicense_US_ME_TYPE2, DriverLicense_US_ME_TYPE3, DriverLicense_US_MI_TYPE3
	Weight	Driver's weight	Except the DriverLicense_US_AR_TYPE1, DriverLicense_US_AR_TYPE2, DriverLicense_US_CT_TYPE3, DriverLicense_US_CT_TYPE4, DriverLicense_US_CT_TYPE5, DriverLicense_US_FL_TYPE1, DriverLicense_US_FL_TYPE2, DriverLicense_US_IA_TYPE1, DriverLicense_US_IA_TYPE1, DriverLicense_US_IA_TYPE3, DriverLicense_US_KY_TYPE1,

Scheme	Field	Field description	Comments
			DriverLicense_US_KY_TYPE2, DriverLicense_US_MA_TYPE1, DriverLicense_US_MA_TYPE2, DriverLicense_US_MA_TYPE3, DriverLicense_US_MA_TYPE4, DriverLicense_US_MI_TYPE1, DriverLicense_US_MI_TYPE2, DriverLicense_US_MS_TYPE2, DriverLicense_US_NC_TYPE1, DriverLicense_US_NC_TYPE2, DriverLicense_US_NJ_TYPE1, DriverLicense_US_NJ_TYPE2, DriverLicense_US_NY_TYPE1, DriverLicense_US_NY_TYPE4, DriverLicense_US_PA_TYPE1, DriverLicense_US_PA_TYPE2, DriverLicense_US_PA_TYPE3, DriverLicense_US_PA_TYPE4, DriverLicense_US_TN_TYPE1, DriverLicense_US_TN_TYPE2, DriverLicense_US_TX_TYPE1, DriverLicense_US_TX_TYPE2, DriverLicense_US_TX_TYPE3, DriverLicense_US_VA_TYPE1

Scheme	Field	Field description	Comments
	ZIP	ZIP code	
DriverLicense_VN_TYPE1	DateOfBirth	Driver's date of birth	
	Class	Vehicle class	
	FirstName	Driver's first name	
	Nationality	Driver's nationality	
	Number	License number	
GreenCard_US_TYPE1	LastName	Document holder's last name	
	FirstName	Document holder's first name	
	Number	Document number	
	Category	Category of residency	
	DateOfBirth	Document holder's birth date	
	Sex	Document holder's sex	
	DateOfExpiry	Document expiry date	
	ResidentSince	The residency start date	
HealthInsuranceCard_JP	SerialNumber	Insurance number	
	InsuranceType	Insurance type	

Scheme	Field	Field description	Comments
	InsurerNumber	Insurer number	
	OrganizationCode	Insurer code	
HealthInsurance_RU_TYPE1 HealthInsurance_RU_TYPE2 HealthInsurance_RU_TYPE3 HealthInsurance_RU_TYPE4	DateOfBirth	Driver's date of birth	Except the HealthInsurance_RU_TYPE3
	Sex	Document holder's sex	In the HealthInsurance_RU_TYPE1 and HealthInsurance_RU_TYPE2 only
	DateOfIssue	Document issue date	In the HealthInsurance_RU_TYPE1 only
	LastName	Document holder's last name	Except the HealthInsurance_RU_TYPE3
	FirstName	Document holder's first name	Except the HealthInsurance_RU_TYPE3
	MiddleName	Document holder's middle name	In the HealthInsurance_RU_TYPE1 and HealthInsurance_RU_TYPE2 only
	Number	Document number	
IBAN	IBAN	International bank account number	
ID_AE_TYPE1	Number	Document number	

Scheme	Field	Field description	Comments
	FirstName	Document holder's first name	
	FullName_LINE2	Additional line for document holder's name	
	Nationality	Document holder's nationality	
ID_AL_TYPE1	IssuedBy	The authority that issued the license	
	DateOfBirth	Document holder's birth date	
	DateOfBirth_MRZ	Document holder's birth date from MRZ	
	PlaceOfBirth	Document holder's birth place	
	DateOfExpiry	Document expiry date	
	DateOfExpiry_MRZ	Document expiry date from MRZ	
	FirstName	Document holder's first name	
	MRZ	Full contents of the machine-readable zone	
	Sex	Document holder's gender	
	Sex_MRZ	Document holder's from MRZ	

Scheme	Field	Field description	Comments
	DateOfIssue	Document issue date	
	LastName_MRZ	Document holder's last name from MRZ	
	MRZ_LINE1	The first line from MRZ	
	MRZ_LINE2	The second line from MRZ	
	MRZ_LINE3	The third line from MRZ	
	FirstName_MRZ	Document holder's name from MRZ	
	Nationality	Document holder's nationality	
	Nationality_MRZ	Document holder's nationality from MRZ	
	Number	Document number	
	Number_MRZ	Document number from MRZ	
	OptionalData_MRZ_LINE2	Optional second line of MRZ	
	PersonalNumber	Document holder's personal number	
	LastName	Document holder's surname	
ID_AM_TYPE1	LastName	Document holder's last name	

Scheme	Field	Field description	Comments
	LastName_EX	Document holder's last name in English	
	FirstName	Document holder's first name	
	FirstName_EX	Document holder's first name in English	
	MiddleName	Document holder's patronymic name	
	Sex	Document holder's sex	
	DateOfBirth	Document holder's date of birth	
	DateOfExpiry	Document expiry date	
	Number	Document number	
ID_AT_TYPE1	Number	Document number	
	LastName	Document holder's last name	
	FirstName	Document holder's first name	
	Sex	Document holder's sex	
	DateOfBirth	Document holder's date of birth	
	IssuedBy	The authority that issued the license	

Scheme	Field	Field description	Comments
	DateOfBirth_MRZ	Driver's date of birth from MRZ	
	PlaceOfBirth	Document holder's birth place	
	BackNumber	Document back number	
	DVRNumber	DVR number	
	DateOfExpiry	Document expiry date	
	DateOfExpiry_MRZ	Document expiry date from MRZ	
	EyeColor	Document holder's eye color	
	FirstName_MRZ	Document holder's first name from MRZ	
	MRZ	Full contents of the machine-readable zone	
	Height	Document holder's height	
	DateOfIssue	Document issue date	
	LastName_MRZ	Document holder's last name from MRZ	
	MRZ_LINE1	The first line from MRZ	
	MRZ_LINE2	The second line from MRZ	

Scheme	Field	Field description	Comments
	MRZ_LINE3	The third line from MRZ	
	Nationality	Document holder's nationality	
	Nationality_MRZ	Document holder's nationality from MRZ	
	Number_MRZ	Document number from MRZ	
	Residence	Document holder's residence	
ID_BE_TYPE1	Number	Document number	
	LastName	Document holder's last name	
	FirstName	Document holder's first name	
	Sex	Document holder's sex	
	Nationality	Nationality of the document holder	
	DateOfIssue	Document issue date	
	DateOfExpiry	Document expiry date	
ID_BG_TYPE1 ID_BG_TYPE2 ID_BG_TYPE3	Number	Document number	
	PersonalCode	Document holder's personal code	

Scheme	Field	Field description	Comments
	LastName	Document holder's last name	
	FirstName	Document holder's first name	
	FirstName_EN	Document holder's first name in English	In the ID_BG_TYPE3 scheme only
	MiddleName	Document holder's patronymic name	
	Sex	Document holder's sex	
	DateOfBirth	Document holder's date of birth	
	PlaceOfBirth	Document holder's place of birth	In the ID_BG_TYPE3 scheme only
	Address	Document holder's address	
	DateOfIssue	Document issue date	
	PlaceOfIssue	Region where the document was issued	In the ID_BG_TYPE3 scheme only
	PlaceOfIssue_EN	Region where the document was issued in English	In the ID_BG_TYPE3 scheme only
	DateOfExpiry	Document expiry date	
	City	The city where the document was issued	From the back side; in the ID_BG_TYPE2 scheme only

Scheme	Field	Field description	Comments
	RegionOfResidence	Document holder's region of residence	From the back side
	MunicipalityAndCity	Municipal district and city	From the back side; in the ID_BG_TYPE2 scheme only
	MRZ	Full contents of the machine-readable zone	
	Number_MRZ	Document number from MRZ	
	PersonalCode_MRZ	Document holder's personal code from MRZ	
	LastName_MRZ	Document holder's last name from MRZ	
	FirstName_MRZ	Document holder's first name from MRZ	
	Nationality	Document holder's nationality	In the ID_BG_TYPE3 scheme only
	Nationality_EN	Document holder's nationality in English	In the ID_BG_TYPE3 scheme only
	Sex_MRZ	Document holder's sex from MRZ	
	DateOfBirth_MRZ	Document holder's date of birth from MRZ	
	DateOfBirth_FORMATTED	Formatted document holder's date of birth from MRZ	

Scheme	Field	Field description	Comments
	DateOfExpiry_MRZ	Document expiry date from MRZ	
	DateOfExpiry_FORMATTED	Formatted document expiry date from MRZ	
	TypeOfPermission	Type of permission	
	TypeOfPermission_EN	Type of permission in English	In the ID_BG_TYPE3 scheme only
ID_BH_TYPE1	Number	Document number	In the ID_BG_TYPE3 scheme only
	FullName	Document holder's full name	
	DateOfExpiry	Document expiry date	
ID_BR_TYPE1 ID_BR_TYPE2	CPF	Document holder's number	
	DispatchDate	Document dispatch date	
	DateOfBirth	Document holder's date of birth	
	DocumentOrigin	Document origin	
	Filiation_LINE1	Filiation first line	
	Filiation_LINE2	Filiation second line	
	Nationality	Document holder's nationality	

Scheme	Field	Field description	Comments
	FirstName	Document holder's first name	
	Number_EX	Secondary document number	
	GeneralRegistration	Number of General Registry	
	porto_alegre	Porto Alegre	
ID_CH_TYPE1	IssuedBy	The authority that issued the document	
	DateOfBirth	Document holder's date of birth	
	DateOfBirth_MRZ	Document holder's date of birth from MRZ	
	PlaceOfBirth	Document holder's place of birth	
	DateOfExpiry	Document expiry date	
	DateOfExpiry_MRZ	Document expiry date from MRZ	
	FirstName_MRZ	Document holder's first name from MRZ	
	MRZ	Full contents of the machine-readable zone	
	Sex	Document holder's sex	

Scheme	Field	Field description	Comments
	Sex_MRZ	Document holder's sex from MRZ	
	Height	Document holder's height	
	DateOfIssue	Document issue date	
	LastName_MRZ	Document holder's last name from MRZ	
	MRZ_LINE1	The first line from MRZ	
	MRZ_LINE2	The second line from MRZ	
	MRZ_LINE3	The third line from MRZ	
	FirstName	Document holder's first name	
	Nationality	Document holder's nationality	
	Nationality_MRZ	Document holder's nationality from MRZ	
	Number	Document number	
	Number_BACK	Document back side number	
	Number_MRZ	Document number from MRZ	
	OptionalData_MRZ_LINE2	Optional second line of MRZ	

Scheme	Field	Field description	Comments
	LastName	Document holder's last name	
ID_CL_TYPE1	LastName	Document holder's last name	
	LastName_LINE2	Second line of the Document holder's last name	
	FirstName	Document holder's first name	
	Nationality	Document holder's nationality	
	Sex	Document holder's sex	
	DateOfBirth	Document holder's date of birth	
	DateOfIssue	Document issue date	
	DateOfExpiry	Document expiry date	
	Number	Document number	
ID_CY_TYPE1 ID_CY_TYPE2	DateOfBirth	Document holder's date of birth	
	DateOfBirth_MRZ	Document holder's date of birth from MRZ	In the ID_CY_TYPE2 scheme only
	PlaceOfBirth	Document holder's place of birth	

Scheme	Field	Field description	Comments
	PlaceOfBirth_GR	Document holder's place of birth in Greek	
	DateOfExpiry	Document expiry date	
	DateOfExpiry_MRZ	Document expiry date from MRZ	In the ID_CY_TYPE2 scheme only
	FatherFirstName	Document holder's father first name	
	FatherFirstName_GR	Document holder's father first name in Greek	
	FatherLastName	Document holder's father last name	
	FatherLastName_GR	Document holder's father last name in Greek	
	Sex	Document holder's sex	
	Sex_GR	Document holder's sex in Greek	
	MotherFirstName	Document holder's mother first name	
	MotherFirstName_GR	Document holder's mother first name in Greek	
	MotherLastName	Document holder's mother last name	

Scheme	Field	Field description	Comments
	MotherLastName_GR	Document holder's mother last name in Greek	
	FirstName	Document holder's first name	
	FirstName_GR	Document holder's first name in Greek	
	Nationality	Nationality of the document holder	
	Nationality_GR	Nationality of the document holder in Greek	
	Number	Document number	
	LastName	Document holder's last name	
	LastName_GR	Document holder's last name in Greek	
	FirstName_MRZ	Document holder's first name from MRZ	In the ID_CY_TYPE2 scheme only
	MRZ	Full contents of the machine-readable zone	In the ID_CY_TYPE2 scheme only
	Sex_MRZ	Document holder's sex from MRZ	In the ID_CY_TYPE2 scheme only
	Height	Document holder's height	In the ID_CY_TYPE2 scheme only

Scheme	Field	Field description	Comments
	PersonalCode	Document holder's personal code	In the ID_CY_TYPE2 scheme only
	DateOfIssue	Document issue date	In the ID_CY_TYPE2 scheme only
	PlaceOfIssue	Region where the document was issued	In the ID_CY_TYPE2 scheme only
	PlaceOfIssue_GR	Region where the document was issued in Greek	In the ID_CY_TYPE2 scheme only
	LastName_MRZ	Document holder's last name from MRZ	In the ID_CY_TYPE2 scheme only
	MRZ_LINE1	The first line from MRZ	In the ID_CY_TYPE2 scheme only
	MRZ_LINE2	The second line from MRZ	In the ID_CY_TYPE2 scheme only
	MRZ_LINE3	The third line from MRZ	In the ID_CY_TYPE2 scheme only
	Nationality_MRZ	Nationality of the document holder from MRZ	In the ID_CY_TYPE2 scheme only
	Number_MRZ	Document number from MRZ	In the ID_CY_TYPE2 scheme only
ID_CZ_TYPE1 ID_CZ_TYPE2 ID_CZ_TYPE3	Address	Document holder's address	
	IssuedBy	The authority that issued the license	

Scheme	Field	Field description	Comments
	DateOfBirth	Document holder's birth date	
	DateOfBirth_MRZ	Document holder's birth date from MRZ	
	PlaceOfBirth	Document holder's birth place	
	DateOfExpiry	Document expiry date	
	DateOfExpiry_MRZ	Document expiry date from MRZ	
	MaritalStatus	Document holder's marital status	
	FirstName_MRZ	Document holder's first name from MRZ	
	MRZ	Full contents of the machine-readable zone	
	Sex	Document holder's sex	
	Sex_MRZ	Document holder's sex from MRZ	
	DateOfIssue	Document issue date	
	LastName_MRZ	Document holder's last name from MRZ	
	MRZ_LINE1	The first line from MRZ	
	MRZ_LINE2	The second line from MRZ	

Scheme	Field	Field description	Comments
	MRZ_LINE3	The third line from MRZ	In the ID_CZ_TYPE1 scheme only
	FirstName	Document holder's name	
	Nationality	Document holder's nationality	
	Nationality_MRZ	Document holder's nationality from MRZ	
	Number	Document number	
	Number_MRZ	Document number from MRZ	
	OptionalData_MRZ_LINE2	Optional second line of MRZ	
	PersonalNumber	Document holder's personal number	
	LastName	Document holder's surname	
	LastNameAtBirth	Document holder's surname at birth	Except the ID_CZ_TYPE1 scheme
	Titul	Document titul	Except the ID_CZ_TYPE3 scheme
ID_DE_TYPE1 ID_DE_TYPE2	Number	Document number	
	LastName	Document holder's last name	

Scheme	Field	Field description	Comments
	LastName_LINE2	Second line of the Document holder's last name	
	FirstName	Document holder's first name	
	DateOfBirth	Document holder's date of birth	
	DateOfBirthAndNationality	Document holder's date of birth and nationality	In the ID_DE_TYPE1 scheme only
	DateOfBirthPlaceOfBirth	Document holder's date and place of birth	In the ID_DE_TYPE2 scheme only
	PlaceOfBirth	Document holder's place of birth	
	Address	Document holder's full address	
	Address_LINE1	Document holder's address	In the ID_DE_TYPE1 scheme only
	Address_LINE2	Document holder's address, continued	In the ID_DE_TYPE1 scheme only
	Address_LINE3	Document holder's address, continued	In the ID_DE_TYPE1 scheme only
	Nationality	Nationality of the document holder	
	Nationality_MRZ	Document holder's nationality from MRZ	

Scheme	Field	Field description	Comments
	Height	Document holder's height	In the ID_DE_TYPE1 scheme only
	EyeColor	Document holder's eye color	In the ID_DE_TYPE1 scheme only
	IssuedBy	The authority that issued the license	In the ID_DE_TYPE1 scheme only
	DateOfIssue	Document issue date	In the ID_DE_TYPE1 scheme only
	DateOfExpiry	Document expiry date	
	RFID	RFID number	In the ID_DE_TYPE1 scheme only
	MRZ	Full contents of the machine-readable zone	
	MRZ_LINE1	The first line from MRZ	
	MRZ_LINE2	The second line from MRZ	
	MRZ_LINE3	The third line from MRZ	In the ID_DE_TYPE1 scheme only
	Number_MRZ	Document number from MRZ	
	LastName_MRZ	Document holder's last name from MRZ	
	FirstName_MRZ	Document holder's first name from MRZ	

Scheme	Field	Field description	Comments
	DateOfBirth_MRZ	Document holder's date of birth from MRZ	
	DateOfExpiry_MRZ	Document expiry date from MRZ	
ID_EE_TYPE1 ID_EE_TYPE2	Number	Document number	
	PersonalNumber	Document holder's personal number	
	LastName	Document holder's last name	
	FirstName	Document holder's first name	
	FirstName_EX	Document holder's first name, continued	
	Sex	Document holder's sex	
	Nationality	Nationality of the document holder	
	DateOfBirth	Document holder's date of birth	
	DateOfExpiry	Document expiry date	
	DateOfBirth_MRZ	Document holder's date of birth from MRZ	
	PlaceOfBirth	Document holder's place of birth	

Scheme	Field	Field description	Comments
	PlaceOfBirth_EN	Document holder's place of birth in English	
	DateOfExpiry_MRZ	Document expiry date from MRZ	
	FirstName_MRZ	Document holder's first name from MRZ	
	MRZ	Full contents of the machine-readable zone	
	Sex_EN	Document holder's sex in English	
	Sex_MRZ	Document holder's sex from MRZ	
	DateOfIssue	Document issue date	
	LastName_MRZ	Document holder's last name from MRZ	
	MRZ_LINE1	The first line from MRZ	
	MRZ_LINE2	The second line from MRZ	
	MRZ_LINE3	The third line from MRZ	
	Nationality_MRZ	Document holder's nationality from MRZ	
	Number_MRZ	Document number from MRZ	

Scheme	Field	Field description	Comments
	OptionalData_MRZ_LINE2	Optional second line of MRZ	
ID_EG_TYPE1	IDCode	Document holder's ID code	
	Number	Document number	
ID_ES_TYPE1 ID_ES_TYPE2	Number	Document number	
	Number_MRZ	Document number from MRZ	
	IssuedBy	The authority that issued the document	
	IDESP	Identity card serial number	
	LastName	Document holder's last name	
	LastName_LINE2	Second line of the Document holder's last name	
	DateOfBirth_MRZ	Document holder's date of birth from MRZ	
	MunicipalityOfBirth	Document holder's municipality of birth	In the ID_ES_TYPE1 scheme only
	ProvinceOfBirth	Document holder's province of birth	
	FirstName	Document holder's first name	

Scheme	Field	Field description	Comments
	DateOfExpiry_MRZ	Document expiry date from MRZ	
	FirstName_MRZ	Document holder's first name from MRZ	
	MRZ	Full contents of the machine-readable zone	
	Sex	Document holder's sex	
	Sex_MRZ	Document holder's sex from MRZ	
	LastName_MRZ	Document holder's last name from MRZ	
	MRZ_LINE1	The first line from MRZ	
	MRZ_LINE2	The second line from MRZ	
	MRZ_LINE3	The third line from MRZ	
	Nationality	Nationality of the document holder	
	Municipality	Document municipality	
	ProvinceOfIssue	Province of issue	
	Residence	Document holder's residence	
	Nationality_MRZ	Document holder's nationality from MRZ	

Scheme	Field	Field description	Comments
	OptionalData_MRZ_LINE1	Optional second line of MRZ	
	DateOfBirth	Document holder's date of birth	
	ParentsFirstNames	Document holder's parents' first names	
	DateOfExpiry	Document expiry date	
	RFID	RFID number	In the ID_ES_TYPE2 scheme only
ID_FI_TYPE1 ID_FI_TYPE2	LastName	Document holder's last name	
	FirstName	Document holder's first name	
	DateOfIssue	Document issue date	
	DateOfExpiry	Document expiry date	
	DateOfBirth	Document holder's date of birth	
	Number	Document number	
	Sex	Document holder's sex	In the ID_FI_TYPE2 scheme only
ID_FR_TYPE1	Number	Document number	
	LastName	Document holder's last name	

Scheme	Field	Field description	Comments
	FirstName	Document holder's first name	
	DateOfBirth	Document holder's date of birth	
	Sex	Document holder's sex	
	MRZ	Full contents of the machine-readable zone	
	FirstName_MRZ	Document holder's first name from MRZ	
	LastName_MRZ	Document holder's last name from MRZ	
	Number_MRZ	Document number from MRZ	
	Sex_MRZ	Document holder's sex from MRZ	
	DateOfBirth_MRZ	Document holder's date of birth from MRZ	
	OptionalData_MRZ_LINE1	Optional MRZ line	
	FirstName_0	Document holder's first name	
	FirstName_1	Document holder's first name	
	Address	Document holder's address	

Scheme	Field	Field description	Comments
	Address_0	Document holder's address	
	Address_1	Document holder's address	
	IssuedBy	The authority that issued the license	
	PlaceOfBirth	Document holder's place of birth	
	DateOfExpiry	Document expiry date	
	Height	Document holder's height	
	DateOfIssue	Document issue date	
	MRZ_LINE1	The first line from MRZ	
	MRZ_LINE2	The second line from MRZ	
ID_GE_TYPE1	IssuedBy	The authority that issued the license	
	IssuedBy_EN	The authority that issued the license in English	
	DateOfBirth	Document holder's birth date	
	DateOfBirth_MRZ	Document holder's date of birth from MRZ	

Scheme	Field	Field description	Comments
	PlaceOfBirth	Document holder's place of birth	
	PlaceOfBirth_EN	Document holder's place of birth in English	
	DateOfExpiry	Document expiry date	
	DateOfExpiry_MRZ	Document expiry date from MRZ	
	FirstName_MRZ	Document holder's first name from MRZ	
	MRZ	Full contents of the machine-readable zone	
	Sex	Driver's sex	
	Sex_EN	Driver's sex in English	
	Sex_MRZ	Document holder's sex from MRZ	
	PersonalCode	Document holder's personal code	
	DateOfIssue	Document issue date	
	LastName_MRZ	Document holder's last name from MRZ	
	FirstName	Document holder's first name	
	FirstName_EX	Document holder's first name in English	

Scheme	Field	Field description	Comments
	Nationality	Nationality of the document holder	
	Nationality_MRZ	Document holder's nationality from MRZ	
	Number	Document number	
	Number_MRZ	Document number from MRZ	
	OptionalData_MRZ_LINE2	Optional MRZ line	
	LastName	Document holder's last name	
	LastName_EX	Document holder's last name in English	
ID_HK_TYPE1	Number	Document number	
	Code	Document code	
	FullName	Document holder's full name	
	DateOfBirth	Document holder's birth date	
	DateOfIssue	Document issue date	
ID_HR_TYPE1 ID_HR_TYPE2	LastName	Document holder's last name	
	FirstName	Document holder's first name	

Scheme	Field	Field description	Comments
	DateOfBirth	Document holder's birth date	
	DateOfExpiry	Document expiry date	
	Number	Document number	
	Sex	Document holder's sex	
	Nationality	Nationality of the document holder	
ID_HU_TYPE1 ID_HU_TYPE2	FullName	Document holder's full name	
	Number	Document number	
	DateOfBirth	Document holder's birth date	In ID_HU_TYPE2 scheme only
	DateOfExpiry	Document expiry date	In ID_HU_TYPE2 scheme only
	Sex	Document holder's sex	In ID_HU_TYPE2 scheme only
	CardAccessNumber	Card access number	In ID_HU_TYPE2 scheme only
ID_IL_TYPE1 ID_IL_TYPE2	IssuedBy	The authority that issued the license	In ID_IL_TYPE2 scheme only
	DateOfBirth	Document holder's birth date	
	DateOfBirth_TEXT	Document holder's birth date by text	

Scheme	Field	Field description	Comments
	DateOfExpiry	Document expiry date	In ID_IL_TYPE1 scheme only
	DateOfExpiry_TEXT	Document expiry date by text	In ID_IL_TYPE1 scheme only
	FirstName	Document holder's first name	
	Number	Document number	
	LastName	Document holder's last name	
	PlaceOfBirth	Document holder's place of birth	In ID_IL_TYPE2 scheme only
	Father	Document holder's father's name	In ID_IL_TYPE2 scheme only
	Sex	Document holder's sex	In ID_IL_TYPE2 scheme only
	Mother	Document holder's mother's name	In ID_IL_TYPE2 scheme only
	DateOfIssue	Document issue date	
	DateOfIssue_TEXT	Document issue date by text	
ID_IT_TYPE1 ID_IT_TYPE2 ID_IT_TYPE3	IssuedBy	The authority that issued the license	In ID_IT_TYPE2 scheme only
	Address	Document holder's address	In ID_IT_TYPE1 scheme only

Scheme	Field	Field description	Comments
	DateOfBirth	Document holder's birth date	
	DateOfBirth_MRZ	Document holder's date of birth from MRZ	In ID_IT_TYPE2 scheme only
	PlaceOfBirth	Document holder's place of birth	
	Nationality	Nationality of the document holder	
	City	Document holder's city	In ID_IT_TYPE1 scheme only
	Job	Document holder's job	In ID_IT_TYPE1 scheme only
	Residence	Document holder's residence	In ID_IT_TYPE1 scheme only
	MaritalStatus	Document holder's marital status	In ID_IT_TYPE1 scheme only
	LastName	Document holder's last name	
	DateOfExpiry_MRZ	Document expiry date from MRZ	In ID_IT_TYPE2 scheme only
	FirstName_MRZ	Document holder's first name from MRZ	In ID_IT_TYPE2 scheme only
	MRZ	Full contents of the machine-readable zone	In ID_IT_TYPE2 scheme only
	Height	Document holder's height	

Scheme	Field	Field description	Comments
	LastName_MRZ	Document holder's last name from MRZ	
	MRZ_LINE1	The first line from MRZ	In ID_IT_TYPE2 scheme only
	MRZ_LINE2	The second line from MRZ	In ID_IT_TYPE2 scheme only
	MRZ_LINE3	The third line from MRZ	In ID_IT_TYPE2 scheme only
	FirstName	Document holder's first name	
	Nationality_MRZ	Document holder's nationality from MRZ	In ID_IT_TYPE2 scheme only
	Number	Document number	
	Number_MRZ	Document number from MRZ	In ID_IT_TYPE2 scheme only
	Sex	Document holder's sex	In ID_IT_TYPE2 and ID_IT_TYPE3 scheme only
	DateOfExpiry	Document expiry date	In ID_IT_TYPE3 scheme only
	ENumber	Number of identity card	In ID_IT_TYPE3 scheme only
	DateOfIssue	Document issue date	In ID_IT_TYPE3 scheme only
ID_KG_TYPE1 ID_KG_TYPE2	Number	Document number	

Scheme	Field	Field description	Comments
	PersonalCode	Document holder's personal code	
	LastName	Document holder's last name	
	LastName_EN	Document holder's last name in English	In ID_KG_TYPE2 scheme only
	FirstName	Document holder's first name	
	FirstName_EN	Document holder's first name in English	In ID_KG_TYPE2 scheme only
	MiddleName	Document holder's patronymic name	
	Sex	Document holder's sex	
	Sex_EN	Document holder's sex in English	In ID_KG_TYPE2 scheme only
	Nationality	Nationality of the document holder	
	DateOfBirth	Document holder's date of birth	
	PlaceOfBirth	Document holder's place of birth	
	MaritalStatus	Document holder's marital status	In ID_KG_TYPE1 scheme only
	Address	Document holder's address	In ID_KG_TYPE1 scheme only

Scheme	Field	Field description	Comments
	IssuedBy	The authority that issued the document	
	DateOfIssue	Document issue date	
	DateOfExpiry	Document expiry date	
	MRZ	Full contents of the machine-readable zone	
	Number_MRZ	Document number from MRZ	
	PersonalCode_MRZ	Document holder's personal code from MRZ	
	LastName_MRZ	Document holder's last name from MRZ	
	LastName_EN	Document holder's last name in English	
	FirstName_MRZ	Document holder's first name from MRZ	
	Sex_MRZ	Document holder's sex from MRZ	
	DateOfBirth_MRZ	Document holder's date of birth from MRZ	
	DateOfExpiry_MRZ	Document expiry date from MRZ	
ID_KW_TYPE1	DateOfBirth	Document holder's date of birth	

Scheme	Field	Field description	Comments
	DateOfBirth_MRZ	Document holder's date of birth from MRZ	
	DateOfExpiry	Document expiry date	
	DateOfExpiry_MRZ	Document expiry date from MRZ	
	FirstName_MRZ	Document holder's first name from MRZ	
	MRZ	Full contents of the machine-readable zone	
	Sex	Document holder's sex	
	Sex_MRZ	Document holder's sex from MRZ	
	SerialNumber	Document serial number	
	LastName_MRZ	Document holder's last name from MRZ	
	FullName	Document holder's full name	
	MRZ_LINE1	The first line from MRZ	
	MRZ_LINE2	The second line from MRZ	
	MRZ_LINE3	The third line from MRZ	
	Number2_BACK	Document number on back side	

Scheme	Field	Field description	Comments
	Number3_BACK	Document number on back side	
	Nationality	Document holder's nationality	
	Nationality_MRZ	Document holder's nationality from MRZ	
	Number	Document number	
	Number_MRZ	Document number from MRZ	
	OptionalData_MRZ_LINE1	Optional first line of MRZ	
	OptionalData_MRZ_LINE2	Optional second line of MRZ	
ID_KZ_TYPE1 ID_KZ_TYPE2	The first line from MRZ	The authority that issued the document	
	DateOfIssue	Document issue date	
	Number	Document number	
	PIN	Personal PIN (VIZ)	
	LastName	Document holder's last name	
	FirstName	Document holder's first name	
	MiddleName	Document holder's patronymic name	

Scheme	Field	Field description	Comments
	DateOfBirth	Document holder's date of birth	
	DateOfExpiry	Document expiry date	
	PlaceOfBirth	Document holder's place of birth	
	Nationality	Document holder's nationality	
	Nationality_MRZ	Document holder's nationality from MRZ	
	MRZ	Full contents of the machine-readable zone	
	MRZ_LINE1	The first line from MRZ	
	MRZ_LINE2	The second line from MRZ	
	MRZ_LINE3	The third line from MRZ	
	Number_MRZ	Document number from MRZ	
	PIN_MRZ	Personal PIN (VIZ) from MRZ	In the ID_KZ_TYPE2 scheme only
	LastName_MRZ	Document holder's last name from MRZ	
	FirstName_MRZ	Document holder's first name from MRZ	

Scheme	Field	Field description	Comments
	Sex_MRZ	Document holder's sex from MRZ	
	DateOfBirth_MRZ	Document holder's date of birth from MRZ	
	OptionalData_MRZ_LINE2	Optional second line of MRZ	
	DateOfExpiry_MRZ	Document expiry date from MRZ	
	Residence	Document holder's residence	
ID_LT_TYPE1 ID_LT_TYPE2	IssuedBy	The authority that issued the document	
	DateOfBirth	Document holder's date of birth	
	DateOfBirth_MRZ	Document holder's date of birth from MRZ	
	DateOfExpiry	Document expiry date	
	DateOfExpiry_MRZ	Document expiry date from MRZ	
	FirstName_MRZ	Document holder's first name from MRZ	
	MRZ	Full contents of the machine-readable zone	
	Sex	Document holder's sex	

Scheme	Field	Field description	Comments
	Sex_EN	Document holder's sex in English	
	Sex_MRZ	Document holder's sex from MRZ	
	DateOfIssue	Document issue date	
	LastName_MRZ	Document holder's last name from MRZ	
	MRZ_LINE1	The first line from MRZ	
	MRZ_LINE2	The second line from MRZ	
	MRZ_LINE3	The third line from MRZ	
	FirstName	Document holder's first name	
	Nationality_MRZ	Document holder's nationality from MRZ	
	Number	Document number	
	Number_BACK	Document number on the back side	In the ID_LT_TYPE1 scheme only
	Number_MRZ	Document number from MRZ	
	OptionalData_MRZ_LINE2	Optional MRZ line	
	PersonalCode	Document holder's personal code	

Scheme	Field	Field description	Comments
	LastName	Document holder's last name	
	Nationality	Nationality of the document holder	In the ID_LT_TYPE2 scheme only
ID_LV_TYPE1	IssuedBy	The authority that issued the document	
	DateOfBirth	Document holder's date of birth	
	DateOfBirth_MRZ	Document holder's date of birth from MRZ	
	DateOfExpiry	Document expiry date	
	DateOfExpiry_MRZ	Document expiry date from MRZ	
	FirstName_MRZ	Document holder's first name from MRZ	
	MRZ	Full contents of the machine-readable zone	
	FullName	Document holder's full name	
	Sex	Document holder's sex	
	Sex_EN	Document holder's sex in English	
	Sex_MRZ	Document holder's sex from MRZ	

Scheme	Field	Field description	Comments
	Height	Document holder's height	
	PersonalCode	Document holder's personal code	
	DateOfIssue	Document issue date	
	LastName_MRZ	Document holder's last name from MRZ	
	MRZ_LINE1	The first line from MRZ	
	MRZ_LINE2	The second line from MRZ	
	MRZ_LINE3	The third line from MRZ	
	FirstName	Document holder's first name	
	Nationality_MRZ	Document holder's nationality from MRZ	
	Number	Document number	
	Number_MRZ	Document number from MRZ	
	OptionalData_MRZ_LINE2	Optional second line of MRZ	
	LastName	Document holder's last name	
	LastName_EX	Document holder's last name in English	

Scheme	Field	Field description	Comments
ID_MY_TYPE1	Number	Document number	
	FullName	Document holder's full name	
	Sex	Document holder's sex	
	Nationality	Nationality of the document holder	
	DateOfBirth	Document holder's date of birth	
	PlaceOfBirth	Document holder's place of birth	
	Confession	Document holder's confession	
	Address_LINE1	Document holder's address	
	Address_LINE2	Document holder's address, continued	
	Address_LINE3	Document holder's address, continued	
	Address_LINE4	Document holder's address, continued	
	Address_LINE5	Document holder's address, continued	
ID_MD_TYPE1 ID_MD_TYPE2 ID_MD_TYPE3	DateOfBirth	Document holder's birth date	

Scheme	Field	Field description	Comments
	DateOfExpiry	Document expiry date	
	Sex	Document holder's sex	
	DateOfIssue	Document issue date	
	FirstName	Document holder's first name	
	Number	Document number	
	LastName	Document holder's last name	
ID_MK_TYPE1 ID_MK_TYPE2	DateOfBirth	Document holder's birth date	
	DateOfExpiry	Document expiry date	
	Sex	Document holder's sex	
	DateOfIssue	Document issue date	
	FirstName	Document holder's first name	
	FirstName_EX	Document holder's first name in English	In the ID_MK_TYPE1 scheme only
	Number	Document number	
	PersonalNumber	Personal number	
	LastName	Document holder's last name	

Scheme	Field	Field description	Comments
	LastName_EX	Document holder's last name in English	In the ID_MK_TYPE1 scheme only
ID_MX_TYPE3	Address	Document holder's address	
	YearOfExpiry	Document expiry year	
	Sex	Document holder's sex	
	YearOfIssue	Document issue year	
	FirstName	Document holder's first name	
	Number	Document number	
ID_NG_TYPE1	FirstName	Document holder's first name	
	LastName	Document holder's last name	
	Sex	Document holder's sex	
	DateOfBirth	Document holder's birth date	
	Height	Document holder's height	
	MiddleName	Document holder's middle name	
ID_NO_TYPE1	FirstName	Document holder's first name	

Scheme	Field	Field description	Comments
	LastName	Document holder's last name	
	Sex	Document holder's sex	
	Number	Document number	
	DateOfBirth	Document holder's birth date	
	DateOfIssue	Document issue date	
	DateOfExpiry	Document expiry date	
	IssuedBy	The authority that issued the document	
	PersonalNumber	Personal number	
ID_PL_TYPE1 ID_PL_TYPE2 ID_PL_TYPE3	IssuedBy	The authority that issued the document	
	Number	Document number	
	PersonalNumber	PESEL number from the back side	In the ID_PL_TYPE1 and ID_PL_TYPE2 scheme only
	LastName	Document holder's last name	
	FirstName	Document holder's first name	
	FamilyName	Document holder's family name (last name at birth)	Except the ID_PL_TYPE3 scheme

Scheme	Field	Field description	Comments
	ParentsFirstNames	First names of document holder's parents	Except the ID_PL_TYPE3 scheme
	Sex	Document holder's sex	
	Sex_MRZ	Document holder's sex from MRZ	
	DateOfBirth	Document holder's date of birth	
	DateOfExpiry	Document expiry date	
	DateOfIssue	Document issue date	Except the ID_PL_TYPE3 scheme
	MRZ	Full contents of the machine-readable zone	
	MRZ_LINE1	The first line from MRZ	
	MRZ_LINE2	The second line from MRZ	
	MRZ_LINE3	The third line from MRZ	
	Number_MRZ	Document number from MRZ	Except the ID_PL_TYPE1 scheme
	Eyes	Document holder's eye color	In the ID_PL_TYPE1 scheme only
	Height	Document holder's height	In the ID_PL_TYPE1 scheme only

Scheme	Field	Field description	Comments
	LastName_MRZ	Document holder's last name from MRZ	
	FirstName_MRZ	Document holder's first name from MRZ	
	DateOfBirth_MRZ	Document holder's date of birth from MRZ	
	DateOfExpiry_MRZ	Document expiry date from MRZ	
	Nationality	Document holder's nationality	In the ID_PL_TYPE2 and ID_PL_TYPE3 scheme only
	Nationality_MRZ	Document holder's nationality from MRZ	
	Number_MRZ	Document number from MRZ	In the ID_PL_TYPE1 scheme only
	PlaceOfBirth	Document holder's place of birth	
	Residence	Document holder's residence	In the ID_PL_TYPE1 scheme only
	YearOfExpiry	Document expiry year	In the ID_PL_TYPE1 scheme only
	OptionalData_MRZ_LINE2	Optional second line of MRZ	Except the ID_PL_TYPE1 scheme
ID_PT_TYPE1	Number	Document number	
	LastName	Document holder's last name	

Scheme	Field	Field description	Comments
	FirstName	Document holder's first name	
	Sex	Document holder's sex	
	DateOfBirth	Document holder's date of birth	
	DateOfExpiry	Document expiry date	
ID_PY_TYPE1 ID_PY_TYPE2	IssuedBy	The authority that issued the document	
	DateOfBirth	Document holder's date of birth	
	DateOfBirth_MRZ	Document holder's date of birth from MRZ	
	PlaceOfBirth	Document holder's place of birth	
	DateOfExpiry	Document expiry date	
	DateOfExpiry_MRZ	Document expiry date from MRZ	
	MaritalStatus	Document holder's marital status	
	FirstName_MRZ	Document holder's first name from MRZ	
	MRZ	Full contents of the machine-readable zone	
	Sex	Document holder's sex	

Scheme	Field	Field description	Comments
	Sex_MRZ	Document holder's sex from MRZ	
	PersonalCode	Document holder's personal code	
	DateOfIssue	Document issue date	
	LastName_MRZ	Document holder's last name from MRZ	
	FirstName	Document holder's first name	
	Nationality	Document holder's nationality	
	Nationality_MRZ	Document holder's nationality from MRZ	
	Number	Document number	
	Number_MRZ	Document number from MRZ	
	OptionalData_MRZ_LINE2	Optional second line of MRZ	
	LastName	Document holder's last name	
ID_RO_TYPE1	Address	Document holder's address	
	Address_LINE2	Second line for document holder's address	

Scheme	Field	Field description	Comments
	CNPNumber	CNP Number	
	LastName	Document holder's last name	
	FirstName	Document holder's first name	
	MRZ	Full contents of the machine-readable zone	
	MRZ_LINE1	The first line from MRZ	
	MRZ_LINE2	The second line from MRZ	
	Number_MRZ	Document number from MRZ	
	LastName_MRZ	Document holder's last name from MRZ	
	FirstName_MRZ	Document holder's first name from MRZ	
	Nationality_MRZ	Document holder's nationality from MRZ	
	DateOfBirth_MRZ	Document holder's date of birth from MRZ	
	DateOfExpiry_MRZ	Document expiry date from MRZ	
	OptionalData_MRZ_LINE2	Optional second line of MRZ	

Scheme	Field	Field description	Comments
ID_RS_TYPE1	LastName	Document holder's last name	
	FirstName	Document holder's first name	
	DateOfBirth	Document holder's birth date	
	Sex	Document holder's sex	
	Number	Document number	
	DateOfIssue	Document issue date	
	DateOfExpiry	Document expiry date	
ID_RU_MILITARY_TYPE1 ID_RU_MILITARY_TYPE2 ID_RU_MILITARY_TYPE3 ID_RU_MILITARY_TYPE4 ID_RU_POLICE_TYPE1 ID_RU_PROSECUTOR_TYPE1 ID_RU_PROSECUTOR_TYPE2 ID_RU_SOLDIER_TYPE1	Number	Document number	
	DateOfExpiry	Document expiry date	In the ID_RU_POLICE_TYPE1 only
	DateOfIssue	Document issue date	In the ID_RU_POLICE_TYPE1 only
	FirstName	Document holder's first name	In the ID_RU_POLICE_TYPE1, ID_RU_PROSECUTOR_TYPE1, ID_RU_PROSECUTOR_TYPE2, ID_RU_SOLDIER_TYPE1
	Number	Document number	

Scheme	Field	Field description	Comments
	MiddleName	Document holder's middle name	In the ID_RU_POLICE_TYPE1, ID_RU_PROSECUTOR_TYPE1, ID_RU_PROSECUTOR_TYPE2, ID_RU_SOLDIER_TYPE1
	PersonalNumber	Document holder's personal number	In the ID_RU_POLICE_TYPE1
	Post	Post	In the ID_RU_POLICE_TYPE1
	Post_LINE1	Post line 1	In the ID_RU_POLICE_TYPE1
	Post_LINE2	Post line 1	In the ID_RU_POLICE_TYPE1
	Rank	Document holder's rank	In the ID_RU_POLICE_TYPE1, ID_RU_PROSECUTOR_TYPE1, ID_RU_PROSECUTOR_TYPE2, ID_RU_SOLDIER_TYPE1
	Series	Document series	In the ID_RU_POLICE_TYPE1, ID_RU_PROSECUTOR_TYPE1, ID_RU_PROSECUTOR_TYPE2, ID_RU_SOLDIER_TYPE1
	LastName	Document holder's last name	In the ID_RU_POLICE_TYPE1, ID_RU_PROSECUTOR_TYPE1, ID_RU_PROSECUTOR_TYPE2, ID_RU_SOLDIER_TYPE1

Scheme	Field	Field description	Comments
ID_SG_TYPE1	Number	Document number	
	FullName	Document holder's full name	
	FullName_EX	Document holder's full name, continued	
	FullName_EX2	Document holder's full name, continued	
	Sex	Document holder's sex	
	DateOfBirth	Document holder's date of birth	
	CountryOfBirth	Document holder's country of birth	
	Nationality	Nationality of the document holder	
ID_SI_TYPE1	IssuedBy	The authority that issued the document	
	DateOfBirth	Document holder's date of birth	
	DateOfBirth_MRZ	Document holder's date of birth from MRZ	
	DateOfExpiry	Document expiry date	
	DateOfExpiry_MRZ	Document expiry date from MRZ	

Scheme	Field	Field description	Comments
	FirstName_MRZ	Document holder's first name from MRZ	
	MRZ	Full contents of the machine-readable zone	
	Sex	Document holder's sex	
	Sex_MRZ	Document holder's sex from MRZ	
	PersonalCode	Document holder's personal code	
	DateOfIssue	Document issue date	
	LastName_MRZ	Document holder's last name from MRZ	
	MRZ_LINE1	The first line from MRZ	
	MRZ_LINE2	The second line from MRZ	
	MRZ_LINE3	The third line from MRZ	
	FirstName	Document holder's first name	
	Nationality	Document holder's nationality	
	Nationality_MRZ	Document holder's nationality from MRZ	
	Number	Document number	

Scheme	Field	Field description	Comments
	Number_MRZ	Document number from MRZ	
	OptionalData_MRZ_LINE2	Optional MRZ line	
	Residence	Document holder's residence	
	LastName	Document holder's last name	
ID_SK_TYPE1 ID_SK_TYPE2	Address	Document holder's address	
	IssuedBy	The authority that issued the document	
	DateOfBirth	Document holder's date of birth	
	DateOfBirth_MRZ	Document holder's date of birth from MRZ	In the ID_SK_TYPE1 only
	PlaceOfBirth	Document holder's birth place	
	DateOfExpiry	Document expiry date	
	DateOfExpiry_MRZ	Document expiry date from MRZ	In the ID_SK_TYPE1 only
	FirstName_MRZ	Document holder's first name from MRZ	In the ID_SK_TYPE1 only
	LastName_1	Document holder's first surname	

Scheme	Field	Field description	Comments
	MRZ	Full contents of the machine-readable zone	In the ID_SK_TYPE1 only
	Sex	Document holder's sex	
	Sex_MRZ	Document holder's sex from MRZ	In the ID_SK_TYPE1 only
	DateOfIssue	Document issue date	
	LastName_MRZ	Document holder's last name from MRZ	In the ID_SK_TYPE1 only
	FirstName	Document holder's first name	
	Nationality	Document holder's nationality	In the ID_SK_TYPE1 only
	Nationality_MRZ	Document holder's nationality from MRZ	In the ID_SK_TYPE1 only
	Number	Document number	
	Number_MRZ	Document number from MRZ	In the ID_SK_TYPE1 only
	OptionalData_MRZ_LINE2	Optional MRZ line	In the ID_SK_TYPE1 only
	PersonalNumber	Document holder's personal number	
	LastName	Document holder's last name	

Scheme	Field	Field description	Comments
ID_SV_TYPE1	LastName	Document holder's last name	
	FirstName	Document holder's first name	
	Number	Document number	
	Sex	Document holder's sex	
	DateOfBirth	Document holder's birth date	
ID_TR_TYPE1 ID_TR_TYPE2	IssuedBy	The authority that issued the document	
	DateOfBirth	Document holder's date of birth	
	DateOfBirth_MRZ	Document holder's date of birth from MRZ	In the ID_TR_TYPE1 only
	DateOfExpiry	Document expiry date	In the ID_TR_TYPE1 only
	DateOfExpiry_MRZ	Document expiry date from MRZ	In the ID_TR_TYPE1 only
	Father	Document holder's father	
	Mother	Document holder's mother	
	FirstName	Document holder's first name	

Scheme	Field	Field description	Comments
	FirstName_MRZ	Document holder's first name from MRZ	In the ID_TR_TYPE1 only
	MRZ	Full contents of the machine-readable zone	In the ID_TR_TYPE1 only
	Sex	Document holder's sex	In the ID_TR_TYPE1 only
	Sex_EN	Document holder's sex in English	In the ID_TR_TYPE1 only
	Sex_MRZ	Document holder's sex from MRZ	In the ID_TR_TYPE1 only
	PersonalCode	Document holder's personal code	
	LastName	Document holder's last name	
	LastName_MRZ	Document holder's last name from MRZ	In the ID_TR_TYPE1 only
	LastName_LAST	Document holder's latest last name	In the ID_TR_TYPE2 only
	Nationality	Document holder's nationality	In the ID_TR_TYPE1 only
	Nationality_EN	Document holder's nationality in English	In the ID_TR_TYPE1 only
	Nationality_MRZ	Document holder's nationality from MRZ	In the ID_TR_TYPE1 only
	Number	Document number	

Scheme	Field	Field description	Comments
	Number_MRZ	Document number from MRZ	In the ID_TR_TYPE1 only
	Number_1	First extra line for document number	In the ID_TR_TYPE2 only
	Number_EX	Extra line for document number	In the ID_TR_TYPE2 only
	Number_3	Third extra line for document number	In the ID_TR_TYPE2 only
	OptionalData_MRZ_LINE1	Optional line of MRZ	In the ID_TR_TYPE1 only
	PlaceOfBirth	Document holder's place of birth	In the ID_TR_TYPE2 only
	District	Document holder's district	In the ID_TR_TYPE2 only
	Locality	Document holder's locality	In the ID_TR_TYPE2 only
	ProvinceOfIssue	Province where the document was issued	In the ID_TR_TYPE2 only
	MaritalStatus	Document holder's marital status	In the ID_TR_TYPE2 only
	DateOfIssue	Document issue date	In the ID_TR_TYPE2 only
	IssueNumber	Document issue number	In the ID_TR_TYPE2 only
	ReasonOfIssue	Reason of issue	In the ID_TR_TYPE2 only

Scheme	Field	Field description	Comments
	Religion	Document holder's religion	In the ID_TR_TYPE2 only
	Series	Document series	In the ID_TR_TYPE2 only
ID_UA_TYPE1	DateOfBirth	Document holder's date of birth	
	DateOfExpiry	Document expiry date	
	Sex	Document holder's sex	
	Sex_EN	Document holder's sex in English	
	FirstName	Document holder's first name	
	FirstName_EN	Document holder's first name in English	
	Number	Document number	
	MiddleName	Document holder's middle name	
	RecordNumber	Record number	
	LastName	Document holder's last name	
	LastName_EN	Document holder's last name	
ID_ZA_TYPE1	LastName	Document holder's last name in English	

Scheme	Field	Field description	Comments
	FirstName	Document holder's first name	
	DateOfBirth	Document holder's birth date	
	Sex	Document holder's sex	
	Number	Document number	
	Nationality	Document holder's nationality	
INN_RU_CITIZEN_TYPE1 INN_RU_CITIZEN_TYPE2 INN_RU_CITIZEN_TYPE3 INN_RU_CITIZEN_TYPE4 INN_RU_ENTITY_TYPE1 INN_RU_ENTITY_TYPE2	FullName	Document holder's full name	In the INN_RU_CITIZEN_TYPE1, INN_RU_CITIZEN_TYPE2, INN_RU_CITIZEN_TYPE3, INN_RU_CITIZEN_TYPE4
	PIN	Document holder's PIN	
	FirstName	Document holder's first name	In the INN_RU_CITIZEN_TYPE1, INN_RU_CITIZEN_TYPE2, INN_RU_CITIZEN_TYPE3, INN_RU_CITIZEN_TYPE4
	Number	Document number	In the INN_RU_CITIZEN_TYPE1, INN_RU_CITIZEN_TYPE2, INN_RU_CITIZEN_TYPE3, INN_RU_ENTITY_TYPE1, INN_RU_ENTITY_TYPE2
	MiddleName	Document holder's middle name	In the INN_RU_CITIZEN_TYPE1, INN_RU_CITIZEN_TYPE2, INN_RU_CITIZEN_TYPE3,

Scheme	Field	Field description	Comments
			INN_RU_CITIZEN_TYPE4
	Series	Document series	In the INN_RU_CITIZEN_TYPE1, INN_RU_CITIZEN_TYPE2, INN_RU_CITIZEN_TYPE3, INN_RU_ENTITY_TYPE1, INN_RU_ENTITY_TYPE2
	LastName	Document holder's last name	In the INN_RU_CITIZEN_TYPE1, INN_RU_CITIZEN_TYPE2, INN_RU_CITIZEN_TYPE3, INN_RU_CITIZEN_TYPE4
	KPP	Document holder's KPP	In the INN_RU_ENTITY_TYPE1, INN_RU_ENTITY_TYPE2
	OGRN	Document holder's OGRN	In the INN_RU_ENTITY_TYPE1, INN_RU_ENTITY_TYPE2
InternationalPassport_AL_TYPE1 InternationalPassport_AL_TYPE2	IssuedBy	The authority that issued the license	
	DateOfBirth	Document holder's birth date	
	DateOfBirth_MRZ	Document holder's birth date from MRZ	
	PlaceOfBirth	Document holder's birth place	
	DateOfExpiry	Document expiry date	

Scheme	Field	Field description	Comments
	DateOfExpiry_MRZ	Document expiry date from MRZ	
	Eyes	Document holder's eyes color	
	FirstName_MRZ	Document holder's first name from MRZ	
	MRZ	Full contents of the machine-readable zone	
	Sex_EN	Document holder's gender in English	In the InternationalPassport_AL_TYPE1 only
	Sex_MRZ	Document holder's from MRZ	
	Height	Document holder's height	In the InternationalPassport_AL_TYPE2 only
	PersonalCode	Document holder's personal code	In the InternationalPassport_AL_TYPE2 only
	DateOfIssue	Document issue date	
	LastName_MRZ	Document holder's last name from MRZ	
	MRZ_LINE1	The first line from MRZ	
	MRZ_LINE2	The second line from MRZ	

Scheme	Field	Field description	Comments
	FirstName	Document holder's name	
	Nationality	Document holder's nationality	
	Nationality_MRZ	Document holder's nationality from MRZ	
	Number	Document number	
	Number_MRZ	Document number from MRZ	
	PersonalNumber	Document holder's personal number	
	LastName	Document holder's surname	
InternationalPassport_AM_TYPE1 InternationalPassport_AM_TYPE2 InternationalPassport_AM_TYPE3	IssuedBy	The authority that issued the license	In the InternationalPassport_AM_TYPE3 scheme only
	DateOfBirth	Document holder's birth date	
	DateOfBirth_MRZ	Document holder's birth date from MRZ	
	DateOfExpiry	Document expiry date	
	DateOfExpiry_MRZ	Document expiry date from MRZ	
	FirstName_MRZ	Document holder's name from MRZ	

Scheme	Field	Field description	Comments
	MRZ	Full contents of the machine-readable zone	
	Sex	Document holder's gender	
	Sex_MRZ	Document holder's from MRZ	
	DateOfIssue	Document issue date	
	LastName_MRZ	Document holder's last name from MRZ	
	MRZ_LINE1	The first line from MRZ	
	MRZ_LINE2	The second line from MRZ	
	FirstName	Document holder's first name	
	Nationality_MRZ	Document holder's nationality from MRZ	
	Number	Document number	
	Number_MRZ	Document number from MRZ	
	LastName	Document holder's last name	
	PlaceOfBirth	Document holder's place of birth	In the InternationalPassport_AM_TYPE3 scheme only

Scheme	Field	Field description	Comments
	Field_4	Document forth field	In the InternationalPassport_AM_TYPE3 scheme only
	PersonalCode	Document holder's personal code	In the InternationalPassport_AM_TYPE3 scheme only
InternationalPassport_AT	IssuedBy	The authority that issued the license	
	DateOfBirth	Document holder's date of birth	
	DateOfBirth_MRZ	Document holder's date of birth from MRZ	
	PlaceOfBirth	Document holder's place of birth	
	DVRNumber	DVR number	
	DateOfExpiry	Document expiry date	
	DateOfExpiry_MRZ	Document expiry date from MRZ	
	FirstName_MRZ	Document holder's first name from MRZ	
	MRZ	Full contents of the machine-readable zone	
	Sex	Document holder's sex	
	Sex_MRZ	Document holder's from MRZ	

Scheme	Field	Field description	Comments
	Height	Document holder's height	
	DateOfIssue	Document issue date	
	LastName_MRZ	Document holder's last name from MRZ	
	MRZ_LINE1	The first line from MRZ	
	MRZ_LINE2	The second line from MRZ	
	FirstName	Document holder's first name	
	Nationality_MRZ	Nationality of the document holder from MRZ	
	Number	Document number	
	Number_MRZ	Document number from MRZ	
	LastName	Document holder's last name	
InternationalPassport_BR_TYPE1 InternationalPassport_BR_TYPE2	IssuedBy	The authority that issued the license	
	DateOfBirth	Document holder's date of birth	
	DateOfBirth_MRZ	Document holder's birth date from MRZ	

Scheme	Field	Field description	Comments
	PlaceOfBirth	Document holder's place of birth	
	DateOfExpiry	Document expiry date	
	DateOfExpiry_MRZ	Document expiry date from MRZ	
	FirstName_MRZ	Document holder's first name from MRZ	
	MRZ	Full contents of the machine-readable zone	
	Sex_EN	Document holder's gender in English	
	Sex_MRZ	Document holder's from MRZ	
	DateOfIssue	Document issue date	
	LastName_MRZ	Document holder's last name from MRZ	
	MRZ_LINE1	The first line from MRZ	
	MRZ_LINE2	The second line from MRZ	
	FirstName	Document holder's first name	
	Nationality	Nationality of the document holder	

Scheme	Field	Field description	Comments
	Nationality_MRZ	Nationality of the document holder from MRZ	
	Number	Document number	
	Number_MRZ	Document number from MRZ	
	LastName	Document holder's last name	
InternationalPassport_CA_TYPE1 InternationalPassport_CA_TYPE2	IssuedBy	The authority that issued the license	
	DateOfBirth	Document holder's date of birth	
	DateOfBirth_MRZ	Document holder's birth date from MRZ	
	PlaceOfBirth	Document holder's place of birth	
	DateOfExpiry	Document expiry date	
	DateOfExpiry_MRZ	Document expiry date from MRZ	
	FirstName_MRZ	Document holder's first name from MRZ	
	MRZ	Full contents of the machine-readable zone	
	Sex	Document holder's sex	

Scheme	Field	Field description	Comments
	Sex_MRZ	Document holder's from MRZ	
	DateOfIssue	Document issue date	
	LastName_MRZ	Document holder's last name from MRZ	
	MRZ_LINE1	The first line from MRZ	
	MRZ_LINE2	The second line from MRZ	
	FirstName	Document holder's first name	
	Nationality	Nationality of the document holder	
	Nationality_MRZ	Nationality of the document holder from MRZ	
	Number	Document number	
	Number_MRZ	Document number from MRZ	
	PersonalNumber	Document holder's personal number	
	LastName	Document holder's last name	
InternationalPassport_CN_TYPE1 InternationalPassport_	DateOfBirth	Document holder's date of birth	

Scheme	Field	Field description	Comments
	DateOfBirth_MRZ	Document holder's date of birth from MRZ	
	PlaceOfBirth	Document holder's place of birth	
	DateOfExpiry	Document expiry date	
	DateOfExpiry_MRZ	Document expiry date from MRZ	
	FirstName_MRZ	Document holder's first name from MRZ	
	MRZ	Full contents of the machine-readable zone	
	Sex	Document holder's sex	
	Sex_MRZ	Document holder's sex from MRZ	
	DateOfIssue	Document issue date	
	PlaceOfIssue	Region where the document was issued	
	LastName_MRZ	Document holder's last name from MRZ	
	MRZ_LINE1	The first line from MRZ	
	MRZ_LINE2	The second line from MRZ	
	FirstName	Document holder's first name	

Scheme	Field	Field description	Comments
	FirstName_CN	Document holder's first name in chinese	In the InternationalPassport_CN_TYPE1 scheme only
	Nationality	Nationality of the document holder	In the InternationalPassport_CN_TYPE3 scheme only
	Nationality_MRZ	Document holder's nationality from MRZ	
	Number	Document number	
	Number_MRZ	Document number from MRZ	
	Optional_MRZ_LINE2	Optional second line of MRZ	
	LastName	Document holder's last name	In the InternationalPassport_CN_TYPE1 scheme only
	LastName_CN	Document holder's last name in chinese	In the InternationalPassport_CN_TYPE1 scheme only
	LastNameFirstName_CN	Document holder's last name and fisrt name in chinese	In the InternationalPassport_CN_TYPE3 scheme only
InternationalPassport_CZ_TYPE1	IssuedBy	The authority that issued the license	
	IssuedBy_EN	The authority that issued the license in English	

Scheme	Field	Field description	Comments
	DateOfBirth	Document holder's date of birth	
	DateOfBirth_MRZ	Document holder's date of birth from MRZ	
	PlaceOfBirth	Document holder's place of birth	
	PlaceOfBirth_EN	Document holder's place of birth in English	
	DateOfExpiry	Document expiry date	
	DateOfExpiry_MRZ	Document expiry date from MRZ	
	FirstName_MRZ	Document holder's first name from MRZ	
	FirstName_EN	Document holder's first name in English	
	MRZ	Full contents of the machine-readable zone	
	Sex	Document holder's sex	
	Sex_MRZ	Document holder's sex from MRZ	
	PersonalCode	Document holder's personal code	
	DateOfIssue	Document issue date	

Scheme	Field	Field description	Comments
	LastName_MRZ	Document holder's last name from MRZ	
	LastName_EN	Document holder's last name in English	
	FirstName	Document holder's first name	
	Nationality	Nationality of the document holder	
	Nationality_EN	Nationality of the document holder in English	
	Number	Document number	
	Number_MRZ	Document number from MRZ	
	OptionalData_MRZ_LINE2	Optional MRZ line	
	LastName	Document holder's last name	
InternationalPassport_DE_TYPE1 InternationalPassport_DE_TYPE2	IssuedBy	The authority that issued the document	
	DateOfBirth	Document holder's date of birth	
	DateOfBirth_MRZ	Document holder's date of birth from MRZ	
	PlaceOfBirth	Document holder's place of birth	

Scheme	Field	Field description	Comments
	DateOfExpiry	Document expiry date	
	DateOfExpiry_MRZ	Document expiry date from MRZ	
	FirstName_MRZ	Document holder's first name from MRZ	
	MRZ	Full contents of the machine-readable zone	
	Sex	Document holder's sex	
	Sex_MRZ	Document holder's sex from MRZ	
	DateOfIssue	Document issue date	
	LastName_MRZ	Document holder's last name from MRZ	
	MRZ_LINE1	The first line from MRZ	
	MRZ_LINE2	The second line from MRZ	
	FirstName	Document holder's first name	
	Nationality	Nationality of the document holder	
	Nationality_MRZ	Document holder's nationality from MRZ	
	Number	Document number	

Scheme	Field	Field description	Comments
	Number_MRZ	Document number from MRZ	
	LastName	Document holder's last name	
	LastName_LINE2	Second line of the document holder's last name	
InternationalPassport_DZ_TYPE1	IssuedBy	The authority that issued the document	
	DateOfBirth_MRZ	Document holder's date of birth from MRZ	
	PlaceOfBirth	Document holder's place of birth	
	DateOfExpiry_MRZ	Document expiry date from MRZ	
	FirstName_MRZ	Document holder's first name from MRZ	
	MRZ	Full contents of the machine-readable zone	
	Sex	Document holder's sex	
	Sex_MRZ	Document holder's sex from MRZ	
	LastName_MRZ	Document holder's last name from MRZ	
	MRZ_LINE1	The first line from MRZ	

Scheme	Field	Field description	Comments
	MRZ_LINE2	The second line from MRZ	
	FirstName	Document holder's first name	
	FirstNameMiddleName	Document holder's first name and middle name	
	Nationality_MRZ	Document holder's nationality from MRZ	
	Number	Document number	
	Number_MRZ	Document number from MRZ	
	MiddleName	Document holder's patronymic name	
	PersonalNumber	Document holder's personal number	
	LastName	Document holder's last name	
InternationalPassport_EE_TYPE1	IssuedBy	The authority that issued the license	
	DateOfBirth	Document holder's date of birth	
	DateOfBirth_MRZ	Document holder's date of birth from MRZ	
	PlaceOfBirth	Document holder's place of birth	

Scheme	Field	Field description	Comments
	PlaceOfBirth_EN	Document holder's place of birth in English	
	DateOfExpiry	Document expiry date	
	DateOfExpiry_MRZ	Document expiry date from MRZ	
	FirstName_MRZ	Document holder's first name from MRZ	
	MRZ	Full contents of the machine-readable zone	
	Sex	Document holder's sex	
	Sex_EN	Document holder's sex in English	
	Sex_MRZ	Document holder's sex from MRZ	
	DateOfIssue	Document issue date	
	LastName_MRZ	Document holder's last name from MRZ	
	MRZ_LINE1	The first line from MRZ	
	MRZ_LINE2	The second line from MRZ	
	FirstName	Document holder's first name	
	Nationality	Nationality of the document holder	

Scheme	Field	Field description	Comments
	Nationality_MRZ	Document holder's nationality from MRZ	
	Number	Document number	
	Number_MRZ	Document number from MRZ	
	PersonalNumber	Document holder's personal number	
	LastName	Document holder's last name	
InternationalPassport_ES_TYPE1 InternationalPassport_ES_TYPE2	IssuedBy	The authority that issued the license	In the InternationalPassport_ES_TYPE1 scheme only
	DateOfBirth	Document holder's date of birth	In the InternationalPassport_ES_TYPE1 scheme only
	DateOfBirth_MRZ	Document holder's date of birth from MRZ	
	PlaceOfBirth	Document holder's place of birth	In the InternationalPassport_ES_TYPE1 scheme only
	DateOfExpiry	Document expiry date	In the InternationalPassport_ES_TYPE1 scheme only
	DateOfExpiry_MRZ	Document expiry date from MRZ	
	FirstName_MRZ	Document holder's first name from MRZ	

Scheme	Field	Field description	Comments
	MRZ	Full contents of the machine-readable zone	
	Sex	Document holder's sex	In the InternationalPassport_ES_TYPE1 scheme only
	Sex_MRZ	Document holder's sex from MRZ	
	PersonalCode	Document holder's personal code	In the InternationalPassport_ES_TYPE1 scheme only
	DateOfIssue	Document issue date	In the InternationalPassport_ES_TYPE1 scheme only
	LastName_MRZ	Document holder's last name from MRZ	
	MRZ_LINE1	The first line from MRZ	
	MRZ_LINE2	The second line from MRZ	
	FirstName	Document holder's first name	In the InternationalPassport_ES_TYPE1 scheme only
	Nationality	Nationality of the document holder	In the InternationalPassport_ES_TYPE1 scheme only
	Nationality_MRZ	Document holder's nationality from MRZ	
	Number	Document number	In the InternationalPassport_E

Scheme	Field	Field description	Comments
			S_TYPE1 scheme only
	Number_MRZ	Document number from MRZ	
	OptionalData_MRZ_LINE2	Optional second line of MRZ	
	RFID	Number of RFID chip	In the InternationalPassport_ES_TYPE1 scheme only
	LastName	Document holder's last name	In the InternationalPassport_ES_TYPE1 scheme only
InternationalPassport_FR_TYPE1 InternationalPassport_FR_TYPE2	IssuedBy	The authority that issued the document	
	DateOfBirth	Document holder's date of birth	
	DateOfBirth_MRZ	Document holder's date of birth from MRZ	
	PlaceOfBirth	Document holder's place of birth	
	DateOfExpiry	Document expiry date	
	DateOfExpiry_MRZ	Document expiry date from MRZ	
	EyeColor	Document holder's eyes color	
	FirstName_MRZ	Document holder's first name from MRZ	

Scheme	Field	Field description	Comments
	MRZ	Full contents of the machine-readable zone	
	Sex	Document holder's sex	
	Sex_MRZ	Document holder's sex from MRZ	
	Height	Document holder's height	
	DateOfIssue	Document issue date	
	LastName_MRZ	Document holder's last name from MRZ	
	MRZ_LINE1	The first line from MRZ	
	MRZ_LINE2	The second line from MRZ	
	FirstName	Document holder's first name	
	Nationality_MRZ	Document holder's nationality from MRZ	
	Number	Document number	
	Number_MRZ	Document number from MRZ	
	LastName	Document holder's last name	
	Residence	Document holder's residence	In theInternationalPasspor

Scheme	Field	Field description	Comments
			t_FR_TYPE2 scheme only
InternationalPassport_GE_TYPE1 InternationalPassport_GE_TYPE2 InternationalPassport_GE_TYPE3	IssuedBy	The authority that issued the license	
	IssuedBy_EN	The authority that issued the license in English	
	DateOfBirth	Document holder's date of birth	
	DateOfBirth_MRZ	Document holder's date of birth from MRZ	
	PlaceOfBirth	Document holder's place of birth	
	PlaceOfBirth_EN	Document holder's place of birth in English	
	DateOfExpiry	Document expiry date	
	DateOfExpiry_MRZ	Document expiry date from MRZ	
	FirstName_MRZ	Document holder's first name from MRZ	
	MRZ	Full contents of the machine-readable zone	
	Sex	Document holder's sex	
	Sex_EN	Document holder's sex in English	

Scheme	Field	Field description	Comments
	Sex_MRZ	Document holder's sex from MRZ	
	PersonalCode	Document holder's personal code	
	DateOfIssue	Document issue date	
	LastName_MRZ	Document holder's last name from MRZ	
	MRZ_LINE1	The first line from MRZ	In the InternationalPassport_GE_TYPE1,InternationalPassport_GE_TYPE3
	MRZ_LINE2	The second line from MRZ	In the InternationalPassport_GE_TYPE1,InternationalPassport_GE_TYPE3
	FirstName	Document holder's first name	
	FirstName_EN	Document holder's first name in English	
	Nationality_MRZ	Document holder's nationality from MRZ	
	Number	Document number	
	Number_MRZ	Document number from MRZ	
	OptionalData_MRZ_LINE2	Optional MRZ line	

Scheme	Field	Field description	Comments
	LastName	Document holder's last name	
	LastName_EN	Document holder's last name in English	
InternationalPassport_GR_TYPE1	IssuedBy	The authority that issued the document	
	DateOfBirth	Document holder's date of birth	
	DateOfBirth_MRZ	Document holder's date of birth from MRZ	
	PlaceOfBirth	Document holder's place of birth	
	DateOfExpiry	Document expiry date	
	DateOfExpiry_MRZ	Document expiry date from MRZ	
	FirstName_MRZ	Document holder's first name from MRZ	
	MRZ	Full contents of the machine-readable zone	
	Sex_EN	Document holder's sex in English	
	Sex_MRZ	Document holder's sex from MRZ	
	Height	Document holder's height	

Scheme	Field	Field description	Comments
	DateOfIssue	Document issue date	
	LastName_MRZ	Document holder's last name from MRZ	
	MRZ_LINE1	The first line from MRZ	
	MRZ_LINE2	The second line from MRZ	
	FirstName	Document holder's first name	
	Nationality	Nationality of the document holder	
	Nationality_MRZ	Nationality of the document holder from MRZ	
	Number	Document number	
	Number_MRZ	Document number from MRZ	
	LastName	Document holder's last name	
InternationalPassport_HR_TYPE1	IssuedBy	The authority that issued the document	
	DateOfBirth	Document holder's date of birth	
	DateOfBirth_MRZ	Document holder's date of birth from MRZ	

Scheme	Field	Field description	Comments
	PlaceOfBirth	Document holder's place of birth	
	DateOfExpiry	Document expiry date	
	DateOfExpiry_MRZ	Document expiry date from MRZ	
	FirstName_MRZ	Document holder's first name from MRZ	
	MRZ	Full contents of the machine-readable zone	
	Sex	Document holder's sex	
	Sex_MRZ	Document holder's sex from MRZ	
	DateOfIssue	Document issue date	
	LastName_MRZ	Document holder's last name from MRZ	
	FirstName	Document holder's first name	
	Nationality	Nationality of the document holder	
	Number	Document number	
	Number_MRZ	Document number from MRZ	
	LastName	Document holder's last name	

Scheme	Field	Field description	Comments
InternationalPassport_HU_TYPE1	IssuedBy	The authority that issued the document	
	DateOfBirth	Document holder's date of birth	
	DateOfBirth_MRZ	Document holder's date of birth from MRZ	
	NameAtBirth	Document holder's name at birth	
	PlaceOfBirth	Document holder's place of birth	
	DateOfExpiry	Document expiry date	
	DateOfExpiry_MRZ	Document expiry date from MRZ	
	FirstName_MRZ	Document holder's first name from MRZ	
	MRZ	Full contents of the machine-readable zone	
	Sex	Document holder's sex	
	Sex_MRZ	Document holder's sex from MRZ	
	DateOfIssue	Document issue date	
	LastName_MRZ	Document holder's last name from MRZ	

Scheme	Field	Field description	Comments
	FirstName	Document holder's first name	
	Nationality	Nationality of the document holder	
	Number	Document number	
	Number_MRZ	Document number from MRZ	
	LastName	Document holder's last name	
InternationalPassport_IL_TYPE1 InternationalPassport_IL_TYPE2	IssuedBy	The authority that issued the document	
	IssuedBy_EN	The authority that issued the document in English	In the InternationalPassport_IL_TYPE2 only
	DateOfBirth	Document holder's date of birth	
	DateOfBirth_MRZ	Document holder's date of birth from MRZ	
	PlaceOfBirth	Document holder's place of birth	
	PlaceOfBirth_EN	Document holder's place of birth in English	
	Nationality	Document holder's citizenship	
	DateOfExpiry	Document expiry date	

Scheme	Field	Field description	Comments
	DateOfExpiry_MRZ	Document expiry date from MRZ	
	FirstName_MRZ	Document holder's first name from MRZ	
	MRZ	Full contents of the machine-readable zone	
	Sex_EN	Document holder's sex in English	
	Sex_MRZ	Document holder's sex from MRZ	
	DateOfIssue	Document issue date	
	LastName_MRZ	Document holder's last name from MRZ	
	MRZ_LINE1	The first line from MRZ	
	MRZ_LINE2	The second line from MRZ	
	FirstName	Document holder's first name	
	FirstName_EN	Document holder's first name in English	
	Nationality	Nationality of the document holder	
	Nationality_MRZ	Nationality of the document holder from MRZ	

Scheme	Field	Field description	Comments
	Number	Document number	
	Number_MRZ	Document number from MRZ	
	PersonalNumber	Document holder's personal number	
	LastName	Document holder's last name	
	LastName_EN	Document holder's last name in English	
InternationalPassport_IN	DateOfBirth	Document holder's date of birth	
	DateOfBirth_MRZ	Document holder's date of birth from MRZ	
	PlaceOfBirth	Document holder's place of birth	
	DateOfExpiry	Document expiry date	
	DateOfExpiry_MRZ	Document expiry date from MRZ	
	FirstName_MRZ	Document holder's first name from MRZ	
	MRZ	Full contents of the machine-readable zone	
	Sex	Document holder's sex	

Scheme	Field	Field description	Comments
	Sex_MRZ	Document holder's sex from MRZ	
	DateOfIssue	Document issue date	
	PlaceOfIssue	The region where the document was issued	
	LastName_MRZ	Document holder's last name from MRZ	
	MRZ_LINE1	The first line of MRZ	
	MRZ_LINE2	The second line of MRZ	
	FirstName	Document holder's first name	
	Nationality	Nationality of the document holder	
	Nationality_MRZ	Nationality of the document holder from MRZ	
	Number	Document number	
	Number_MRZ	Document number from MRZ	
	LastName	Document holder's last name	
InternationalPassport_IT	DateOfBirth	Document holder's date of birth	

Scheme	Field	Field description	Comments
	DateOfBirth_MRZ	Document holder's date of birth from MRZ	
	PlaceOfBirth	Document holder's place of birth	
	DateOfExpiry	Document expiry date	
	DateOfExpiry_MRZ	Document expiry date from MRZ	
	FirstName_MRZ	Document holder's first name from MRZ	
	MRZ	Full contents of the machine-readable zone	
	Sex	Document holder's sex	
	Sex_MRZ	Document holder's sex from MRZ	
	DateOfIssue	Document issue date	
	LastName_MRZ	Document holder's last name from MRZ	
	MRZ_LINE1	The first line of MRZ	
	MRZ_LINE2	The second line of MRZ	
	FirstName	Document holder's first name	
	Nationality	Nationality of the document holder	

Scheme	Field	Field description	Comments
	Nationality_MRZ	Nationality of the document holder from MRZ	
	Number	Document number	
	Number_MRZ	Document number from MRZ	
	LastName	Document holder's last name	
InternationalPassport_JP	DateOfBirth	Document holder's date of birth	
	DateOfBirth_MRZ	Document holder's date of birth from MRZ	
	PlaceOfBirth	Document holder's place of birth	
	DateOfExpiry	Document expiry date	
	DateOfExpiry_MRZ	Document expiry date from MRZ	
	FirstName_MRZ	Document holder's first name from MRZ	
	MRZ	Full contents of the machine-readable zone	
	Sex	Document holder's sex	
	Sex_MRZ	Document holder's sex from MRZ	

Scheme	Field	Field description	Comments
	DateOfIssue	Document issue date	
	LastName_MRZ	Document holder's last name from MRZ	
	MRZ_LINE1	The first line of MRZ	
	MRZ_LINE2	The second line of MRZ	
	FirstName	Document holder's first name	
	Nationality	Nationality of the document holder	
	Nationality_MRZ	Nationality of the document holder from MRZ	
	Number	Document number	
	Number_MRZ	Document number from MRZ	
	LastName	Document holder's last name	
InternationalPassport_KG_TYPE1	IssuedBy	The authority that issued the document	
	DateOfBirth	Document holder's date of birth	
	DateOfBirth_MRZ	Document holder's date of birth from MRZ	

Scheme	Field	Field description	Comments
	PlaceOfBirth	Document holder's place of birth	
	Nationality	Nationality of the document holder	
	DateOfExpiry	Document expiry date	
	DateOfExpiry_MRZ	Document expiry date from MRZ	
	FirstName_MRZ	Document holder's first name from MRZ	
	MRZ	Full contents of the machine-readable zone	
	Sex	Document holder's sex	
	Sex_MRZ	Document holder's sex from MRZ	
	PersonalCode	Personal code	
	DateOfIssue	Document issue date	
	LastName_MRZ	Document holder's last name from MRZ	
	FirstName	Document holder's first name	
	Number	Document number	
	Number_MRZ	Document number from MRZ	

Scheme	Field	Field description	Comments
	OptionalData_MRZ_LINE2	Optional MRZ line	
	LastName	Document holder's last name	
InternationalPassport_KZ_TYPE1 InternationalPassport_KZ_TYPE2	IssuedBy	The authority that issued the document	
	DateOfBirth	Document holder's date of birth	
	DateOfBirth_MRZ	Document holder's date of birth from MRZ	
	PlaceOfBirth	Document holder's place of birth	
	DateOfExpiry	Document expiry date	
	DateOfExpiry_MRZ	Document expiry date from MRZ	
	FirstName_MRZ	Document holder's first name from MRZ	
	MRZ	Full contents of the machine-readable zone	
	Sex	Document holder's sex	
	Sex_MRZ	Document holder's sex from MRZ	
	PersonalCode	Personal code	In the InternationalPassport_KZ_TYPE1 scheme only

Scheme	Field	Field description	Comments
	DateOfIssue	Document issue date	
	LastName_MRZ	Document holder's last name from MRZ	
	MRZ_LINE1	The first line of MRZ	
	MRZ_LINE2	The second line of MRZ	
	FirstName	Document holder's first name	
	FirstName_EN	Document holder's first name in English	In the InternationalPassport_KZ_TYPE1 scheme only
	Nationality	Nationality of the document holder	
	Nationality_MRZ	Nationality of the document holder from MRZ	
	Number	Document number	
	Number_MRZ	Document number from MRZ	
	OptionalData_MRZ_LINE2	Optional MRZ line	
	LastName	Document holder's last name	
	LastName_EN	Document holder's last name in English	In the InternationalPassport_KZ_TYPE1 scheme only

Scheme	Field	Field description	Comments
InternationalPassport_LT_TYPE1 InternationalPassport_LT_TYPE2 InternationalPassport_LT_TYPE3	IssuedBy	The authority that issued the document	
	DateOfBirth	Document holder's date of birth	
	DateOfBirth_MRZ	Document holder's date of birth from MRZ	
	PlaceOfBirth	Document holder's place of birth	
	DateOfExpiry	Document expiry date	
	DateOfExpiry_MRZ	Document expiry date from MRZ	
	FirstName_MRZ	Document holder's first name from MRZ	
	MRZ	Full contents of the machine-readable zone	
	Sex	Document holder's sex	Except the InternationalPassport_LT_TYPE3 scheme only
	Sex_EN	Document holder's sex in English	Except the InternationalPassport_LT_TYPE3 scheme only
	Sex_MRZ	Document holder's sex from MRZ	
	PersonalCode	Personal code	Except the InternationalPassport_LT_TYPE3 scheme only

Scheme	Field	Field description	Comments
	DateOfIssue	Document issue date	
	LastName_MRZ	Document holder's last name from MRZ	
	MRZ_LINE1	The first line of MRZ	
	MRZ_LINE2	The second line of MRZ	
	FirstName	Document holder's first name	
	Nationality	Nationality of the document holder	
	Nationality_MRZ	Nationality of the document holder from MRZ	
	Number	Document number	
	Number_MRZ	Document number from MRZ	
	OptionalData_MRZ_LINE2	Optional MRZ line	
	LastName	Document holder's last name	
InternationalPassport_LV_TYPE1 InternationalPassport_LV_TYPE2 InternationalPassport_LV_TYPE3 InternationalPassport_LV_TYPE4	IssuedBy	The authority that issued the document	

Scheme	Field	Field description	Comments
InternationalPassport_LV_TYPE5	DateOfBirth	Document holder's date of birth	
	DateOfBirth_MRZ	Document holder's date of birth from MRZ	
	PlaceOfBirth	Document holder's place of birth	
	DateOfExpiry	Document expiry date	
	DateOfExpiry_MRZ	Document expiry date from MRZ	
	FirstName_MRZ	Document holder's first name from MRZ	
	MRZ	Full contents of the machine-readable zone	
	Sex	Document holder's sex	
	Sex_EN	Document holder's sex in English	
	Height	Document holder's height	
	PersonalCode	Personal code	
	DateOfIssue	Document issue date	
	LastName_MRZ	Document holder's last name from MRZ	
	MRZ_LINE1	The first line of MRZ	

Scheme	Field	Field description	Comments
	MRZ_LINE2	The second line of MRZ	
	FirstName	Document holder's first name	
	Nationality	Nationality of the document holder	
	Nationality_MRZ	Nationality of the document holder from MRZ	
	Number	Document number	
	Number_MRZ	Document number from MRZ	
	LastName	Document holder's last name	
	DocumentType	Document type	
InternationalPassport_MD_TYPE1 InternationalPassport_MD_TYPE2	IssuedBy	The authority that issued the document	
	DateOfBirth	Document holder's date of birth	
	DateOfBirth_MRZ	Document holder's date of birth from MRZ	
	PlaceOfBirth	Document holder's place of birth	
	DateOfExpiry	Document expiry date	

Scheme	Field	Field description	Comments
	DateOfExpiry_MRZ	Document expiry date from MRZ	
	FirstName_MRZ	Document holder's first name from MRZ	
	MRZ	Full contents of the machine-readable zone	
	Sex	Document holder's sex	
	Sex_MRZ	Document holder's sex from MRZ	
	PersonalCode	Personal code	
	DateOfIssue	Document issue date	
	LastName_MRZ	Document holder's last name from MRZ	
	FirstName	Document holder's first name	
	Nationality	Nationality of the document holder	
	Number	Document number	
	Number_MRZ	Document number from MRZ	
	OptionalData_MRZ_LINE2	Optional MRZ line	
	LastName	Document holder's last name	

Scheme	Field	Field description	Comments
InternationalPassport_MK_TYPE1 InternationalPassport_MK_TYPE2	IssuedBy	The authority that issued the document	
	IssuedBy_AL	The authority that issued the document in Albanian	
	IssuedBy_EN	The authority that issued the document in English	
	DateOfBirth	Document holder's date of birth	
	DateOfBirth_MRZ	Document holder's date of birth from MRZ	
	PlaceOfBirth	Document holder's place of birth	
	PlaceOfBirth_AL	Document holder's place of birth in Albanian	
	PlaceOfBirth_EN	Document holder's place of birth in English	
	DateOfExpiry	Document expiry date	
	DateOfExpiry_MRZ	Document expiry date from MRZ	
	FirstName_MRZ	Document holder's first name from MRZ	
	MRZ	Full contents of the machine-readable zone	

Scheme	Field	Field description	Comments
	Sex	Document holder's sex	
	Sex_EN	Document holder's sex in English	
	Sex_MRZ	Document holder's sex from MRZ	
	PersonalCode	Personal code	
	DateOfIssue	Document issue date	
	LastName_MRZ	Document holder's last name from MRZ	
	MRZ_LINE1	The first line of MRZ	
	MRZ_LINE2	The second line of MRZ	
	FirstName	Document holder's first name	
	FirstName_AL	Document holder's first name in Albanian	
	FirstName_EN	Document holder's first name in English	
	Nationality	Nationality of the document holder	
	Nationality_AL	Nationality of the document holder in Albanian	
	Nationality_EN	Nationality of the document holder in	

Scheme	Field	Field description	Comments
		English	
	Nationality_MRZ	Nationality of the document holder from MRZ	
	Number	Document number	
	Number_MRZ	Document number from MRZ	
	OptionalData_MRZ_LINE2	Optional MRZ line	
	LastName	Document holder's last name	
	LastName_AL	Document holder's last name in Albanian	
	LastName_EN	Document holder's last name in English	
InternationalPassport_PL_TYPE1	IssuedBy	The authority that issued the document	
	DateOfBirth	Document holder's date of birth	
	DateOfBirth_MRZ	Document holder's date of birth from MRZ	
	PlaceOfBirth	Document holder's place of birth	
	DateOfExpiry	Document expiry date	

Scheme	Field	Field description	Comments
	DateOfExpiry_MRZ	Document expiry date from MRZ	
	FirstName_MRZ	Document holder's first name from MRZ	
	MRZ	Full contents of the machine-readable zone	
	Sex_EN	Document holder's sex in English	
	Sex_MRZ	Document holder's sex from MRZ	
	DateOfIssue	Document issue date	
	LastName_MRZ	Document holder's last name from MRZ	
	MRZ_LINE1	The first line of MRZ	
	MRZ_LINE2	The second line of MRZ	
	FirstName	Document holder's first name	
	Nationality_MRZ	Nationality of the document holder from MRZ	
	Number	Document number	
	Number_MRZ	Document number from MRZ	
	PersonalNumber	Personal number	

Scheme	Field	Field description	Comments
	LastName	Document holder's last name	
InternationalPassport_PH_TYPE1 InternationalPassport_PH_TYPE2	DateOfBirth	Document holder's date of birth	
	DateOfBirth_MRZ	Document holder's date of birth from MRZ	
	PlaceOfBirth	Document holder's place of birth	
	DateOfExpiry	Document expiry date	
	DateOfExpiry_MRZ	Document expiry date from MRZ	
	FirstName_MRZ	Document holder's first name from MRZ	
	MRZ	Full contents of the machine-readable zone	
	Sex	Document holder's sex	
	Sex_MRZ	Document holder's sex from MRZ	
	DateOfIssue	Document issue date	
	LastName_MRZ	Document holder's last name from MRZ	
	MiddleName	Document holder's patronymic name	

Scheme	Field	Field description	Comments
	MRZ_LINE1	The first line of MRZ	In the InternationalPassport_PH_TYPE1 only
	MRZ_LINE2	The second line of MRZ	In the InternationalPassport_PH_TYPE1 only
	FirstName	Document holder's first name	
	Nationality	Nationality of the document holder	In the InternationalPassport_PH_TYPE2 only
	Nationality_MRZ	Nationality of the document holder from MRZ	
	Number	Document number	
	Number_MRZ	Document number from MRZ	
	OptionalData_MRZ_LINE2	Optional MRZ line	
	LastName	Document holder's last name	
InternationalPassport_RU	IssuedBy	The authority that issued the document	
	DateOfBirth	Document holder's date of birth	
	DateOfBirth_MRZ	Document holder's date of birth from MRZ	

Scheme	Field	Field description	Comments
	PlaceOfBirth	Document holder's place of birth	
	DateOfExpiry	Document expiry date	
	DateOfExpiry_MRZ	Document expiry date from MRZ	
	FirstName_MRZ	Document holder's first name from MRZ	
	MRZ	Full contents of the machine-readable zone	
	Sex	Document holder's sex	
	Sex_MRZ	Document holder's sex from MRZ	
	DateOfIssue	Document issue date	
	LastName_MRZ	Document holder's last name from MRZ	
	MRZ_LINE1	The first line of MRZ	
	MRZ_LINE2	The second line of MRZ	
	FirstName	Document holder's first name	
	Nationality_MRZ	Nationality of the document holder from MRZ	
	Number	Document number	

Scheme	Field	Field description	Comments
	Number_MRZ	Document number from MRZ	
	MiddleName	Document holder's patronymic name	
	LastName	Document holder's last name	
InternationalPassport_SE_TYPE1 InternationalPassport_SE_TYPE2	IssuedBy	The authority that issued the document	
	DateOfBirth	Document holder's date of birth	
	DateOfBirth_MRZ	Document holder's date of birth from MRZ	
	PlaceOfBirth	Document holder's place of birth	
	DateOfExpiry	Document expiry date	
	DateOfExpiry_MRZ	Document expiry date from MRZ	
	FirstName_MRZ	Document holder's first name from MRZ	
	MRZ	Full contents of the machine-readable zone	
	Sex	Document holder's sex	
	Sex_EN	Document holder's sex in English	

Scheme	Field	Field description	Comments
	Sex_MRZ	Document holder's sex from MRZ	
	Height	Document holder's height	
	PersonalCode	Personal code	
	DateOfIssue	Document issue date	
	LastName_MRZ	Document holder's last name from MRZ	
	MRZ_LINE1	The first line of MRZ	
	MRZ_LINE2	The second line of MRZ	
	FirstName	Document holder's first name	
	Nationality	Nationality of the document holder	
	Nationality_MRZ	Nationality of the document holder from MRZ	
	Number	Document number	
	Number_MRZ	Document number from MRZ	
	OptionalData_MRZ_LINE2	Optional MRZ line	
	LastName	Document holder's last name	

Scheme	Field	Field description	Comments
InternationalPassport_SI_TYPE1	IssuedBy	The authority that issued the document	
	DateOfBirth	Document holder's date of birth	
	DateOfBirth_MRZ	Document holder's date of birth from MRZ	
	PlaceOfBirth	Document holder's place of birth	
	DateOfExpiry	Document expiry date	
	DateOfExpiry_MRZ	Document expiry date from MRZ	
	FirstName_MRZ	Document holder's first name from MRZ	
	MRZ	Full contents of the machine-readable zone	
	Sex	Document holder's sex	
	Sex_MRZ	Document holder's sex from MRZ	
	PersonalCode	Personal code	
	DateOfIssue	Document issue date	
	LastName_MRZ	Document holder's last name from MRZ	
	MRZ_LINE1	The first line of MRZ	

Scheme	Field	Field description	Comments
	MRZ_LINE2	The second line of MRZ	
	FirstName	Document holder's first name	
	Nationality	Nationality of the document holder	
	Nationality_MRZ	Nationality of the document holder from MRZ	
	Number_MRZ	Document number from MRZ	
	LastName	Document holder's last name	
InternationalPassport_SK_TYPE2 InternationalPassport_SK_TYPE3	IssuedBy	The authority that issued the document	
	IssuedBy_MRZ	The authority that issued the document from MRZ	
	IssuedBy_EN	The authority that issued the document in English	
	DateOfBirth	Document holder's date of birth	
	DateOfBirth_MRZ	Document holder's date of birth from MRZ	
	PlaceOfBirth	Document holder's place of birth	

Scheme	Field	Field description	Comments
	PlaceOfBirth_EN	Document holder's place of birth in English	
	DateOfExpiry	Document expiry date	
	DateOfExpiry_MRZ	Document expiry date from MRZ	
	FirstName_MRZ	Document holder's first name from MRZ	
	FirstName_EN	Document holder's first name in English	
	MRZ	Full contents of the machine-readable zone	
	MRZ_LINE1	The first line of MRZ	
	MRZ_LINE2	The second line of MRZ	
	OptionalData_MRZ_LINE2	Optional MRZ line	
	Sex	Document holder's sex	
	Sex_MRZ	Document holder's sex from MRZ	
	PersonalCode	Personal code	
	DateOfIssue	Document issue date	
	LastName_MRZ	Document holder's last name from MRZ	

Scheme	Field	Field description	Comments
	LastName_EN	Document holder's last name in English	
	DocumentType_MRZ	Document type from MRZ	
	FirstName	Document holder's first name	
	Nationality	Nationality of the document holder	
	Nationality_MRZ	Nationality of the document holder from MRZ	
	Nationality_EN	Nationality of the document holder in English	
	Number	Document number	
	Number_MRZ	Document number from MRZ	
	LastName	Document holder's last name	
InternationalPassport_SY	DateOfBirth	Document holder's date of birth	
	DateOfBirth_MRZ	Document holder's date of birth from MRZ	
	DateOfExpiry_MRZ	Document expiry date from MRZ	

Scheme	Field	Field description	Comments
	FirstName_MRZ	Document holder's first name from MRZ	
	MRZ	Full contents of the machine-readable zone	
	Sex_MRZ	Document holder's sex from MRZ	
	LastName_MRZ	Document holder's last name from MRZ	
	MRZ_LINE1	The first line of MRZ	
	MRZ_LINE2	The second line of MRZ	
	Nationality_MRZ	Nationality of the document holder from MRZ	
	Number_MRZ	Document number from MRZ	
	OptionalData_MRZ_LINE2	Optional MRZ line	
InternationalPassport_TJ_TYPE1 InternationalPassport_TJ_TYPE2	IssuedBy	The authority that issued the document	In the InternationalPassport_TJ_TYPE1 only
	IssuedBy_EN	The authority that issued the document in English	
	DateOfBirth	Document holder's birth date	

Scheme	Field	Field description	Comments
	DateOfBirth_MRZ	Document holder's birth date from MRZ	
	PlaceOfBirth	Document holder's place of birth	In the InternationalPassport_TJ_TYPE1 only
	DateOfExpiry	Document expiry date	
	DateOfExpiry_MRZ	Document expiry date from MRZ	
	FirstName_MRZ	Document holder's first name from MRZ	
	MRZ	Full contents of the machine-readable zone	
	Sex	Document holder's sex	In the InternationalPassport_TJ_TYPE1 only
	Sex_EN	Document holder's sex in English	In the InternationalPassport_TJ_TYPE2 only
	Sex_MRZ	Document holder's sex from MRZ	
	DateOfIssue	Document issue date	
	LastName_MRZ	Document holder's last name from MRZ	
	MRZ_LINE1	The first line of MRZ	
	MRZ_LINE2	The second line of MRZ	

Scheme	Field	Field description	Comments
	FirstName	Document holder's first name	
	FirstName_EN	Document holder's first name in English	
	Nationality	Document holder's nationality	
	Nationality_EN	Nationality of the document holder in English	In the InternationalPassport_TJ_TYPE2 only
	Nationality_MRZ	Nationality of the document holder from MRZ	
	Number	Document number	
	Number_MRZ	Document number from MRZ	
	OptionalData_MRZ_LINE2	Optional MRZ line	
	MiddleName	Document holder's middle name	In the InternationalPassport_TJ_TYPE2 only
	LastName	Document holder's last name	
	LastName_EN	Document holder's last name in English	
InternationalPassport_TR_TYPE1	IssuedBy	The authority that issued the document	

Scheme	Field	Field description	Comments
	DateOfBirth	Document holder's date of birth	
	DateOfBirth_MRZ	Document holder's date of birth from MRZ	
	PlaceOfBirth	Document holder's place of birth	
	DateOfExpiry	Document expiry date	
	DateOfExpiry_MRZ	Document expiry date from MRZ	
	FirstName_MRZ	Document holder's first name from MRZ	
	MRZ	Full contents of the machine-readable zone	
	Sex	Document holder's sex	
	Sex_EN	Document holder's sex in English	
	Sex_MRZ	Document holder's sex from MRZ	
	PersonalCode	Personal code	
	DateOfIssue	Document issue date	
	LastName_MRZ	Document holder's last name from MRZ	
	FirstName	Document holder's first name	

Scheme	Field	Field description	Comments
	Nationality	Document holder's nationality	
	Number	Document number	
	Number_MRZ	Document number from MRZ	
	OptionalData_MRZ_LINE2	Optional MRZ line	
	LastName	Document holder's last name	
InternationalPassport_UA_TYPE1 InternationalPassport_UA_TYPE2	IssuedBy	The authority that issued the document	
	DateOfBirth	Document holder's date of birth	
	DateOfBirth_MRZ	Document holder's date of birth from MRZ	In the InternationalPassport_UA_TYPE1 only
	PlaceOfBirth	Document holder's place of birth	
	PlaceOfBirth_EN	Document holder's place of birth in English	
	DateOfExpiry	Document expiry date	
	DateOfExpiry_MRZ	Document expiry date from MRZ	In the InternationalPassport_UA_TYPE1 only
	FirstName_MRZ	Document holder's first name from MRZ	In the InternationalPassport_U

Scheme	Field	Field description	Comments
			A_TYPE1 only
	MRZ	Full contents of the machine-readable zone	
	Sex	Document holder's sex	
	Sex_EN	Document holder's sex in English	
	Sex_MRZ	Document holder's sex from MRZ	In the InternationalPassport_UA_TYPE1 only
	PersonalCode	Personal code	
	DateOfIssue	Document issue date	
	LastName_MRZ	Document holder's last name from MRZ	In the InternationalPassport_UA_TYPE1 only
	FirstName	Document holder's first name	
	FirstName_EN	Document holder's first name in English	
	Nationality	Document holder's nationality	In the InternationalPassport_UA_TYPE1 only
	Nationality_MRZ	Document holder's nationality from MRZ	In the InternationalPassport_UA_TYPE1 only
	Number	Document number	

Scheme	Field	Field description	Comments
	Number_MRZ	Document number from MRZ	In the InternationalPassport_UA_TYPE1 only
	LastName	Document holder's last name	
	LastName_EN	Document holder's last name in English	
InternationalPassport_UK_TYPE1 InternationalPassport_UK_TYPE2	IssuedBy	The authority that issued the document	
	DateOfBirth	Document holder's date of birth	
	DateOfBirth_MRZ	Document holder's date of birth from MRZ	
	PlaceOfBirth	Document holder's place of birth	
	DateOfExpiry	Document expiry date	
	DateOfExpiry_MRZ	Document expiry date from MRZ	
	FirstName_MRZ	Document holder's first name from MRZ	
	MRZ	Full contents of the machine-readable zone	
	Sex	Document holder's sex	
	Sex_MRZ	Document holder's sex from MRZ	

Scheme	Field	Field description	Comments
	DateOfIssue	Document issue date	
	LastName_MRZ	Document holder's last name from MRZ	
	MRZ_LINE1	The first line of MRZ	
	MRZ_LINE2	The second line of MRZ	
	FirstName	Document holder's first name	
	Nationality	Nationality of the document holder	
	Nationality_MRZ	Nationality of the document holder from MRZ	
	Number	Document number	
	Number_MRZ	Document number from MRZ	
	LastName	Document holder's last name	
InternationalPassport_US_TYPE1 InternationalPassport_US_TYPE2	DateOfBirth	Document holder's date of birth	
	DateOfBirth_MRZ	Document holder's date of birth from MRZ	
	PlaceOfBirth	Document holder's place of birth	In the InternationalPassport_US_TYPE2 only

Scheme	Field	Field description	Comments
	DateOfExpiry	Document expiry date	
	DateOfExpiry_MRZ	Document expiry date from MRZ	
	FirstName_MRZ	Document holder's first name from MRZ	
	MRZ	Full contents of the machine-readable zone	
	Sex	Document holder's sex	
	Sex_MRZ	Document holder's sex from MRZ	
	DateOfIssue	Document issue date	
	LastName_MRZ	Document holder's last name from MRZ	
	MRZ_LINE1	The first line of MRZ	
	MRZ_LINE2	The second line of MRZ	
	FirstName	Document holder's first name	
	Nationality_MRZ	Nationality of the document holder from MRZ	
	Number	Document number	
	Number_MRZ	Document number from MRZ	

Scheme	Field	Field description	Comments
	Optional_MRZ_LINE2	Optional second line of MRZ	In the InternationalPassport_US_TYPE2 only
	LastName	Document holder's last name	
InternationalPassport_UY_TYPE1 InternationalPassport_UY_TYPE2	Address	Document holder's address	In the InternationalPassport_UY_TYPE1 only
	IssuedBy	The authority that issued the document	
	DateOfBirth	Document holder's date of birth	
	DateOfBirth_MRZ	Document holder's date of birth from MRZ	
	PlaceOfBirth	Document holder's place of birth	
	Code	Document code	In the InternationalPassport_UY_TYPE1 only
	DateOfExpiry	Document expiry date	
	DateOfExpiry_MRZ	Document expiry date from MRZ	
	FirstName_MRZ	Document holder's first name from MRZ	
	MRZ	Full contents of the machine-readable zone	

Scheme	Field	Field description	Comments
	Sex	Document holder's sex	
	Sex_MRZ	Document holder's sex from MRZ	
	PersonalCode	Personal code	
	DateOfIssue	Document issue date	
	LastName_MRZ	Document holder's last name from MRZ	
	MRZ_LINE1	The first line of MRZ	
	MRZ_LINE2	The second line of MRZ	
	FirstName	Document holder's first name	
	Nationality	Nationality of the document holder	
	Nationality_MRZ	Nationality of the document holder from MRZ	
	Number	Document number	
	Number_MRZ	Document number from MRZ	
	LastName	Document holder's last name	
	DocumentType	Document type	In the InternationalPassport_UY_TYPE1 only

Scheme	Field	Field description	Comments
InternationalPassport_UZ_TYPE1 InternationalPassport_UZ_TYPE2	IssuedBy	The authority that issued the document	In the InternationalPassport_UZ_TYPE1 only
	IssuedBy_EN	The authority that issued the document in English	
	DateOfBirth	Document holder's birth date	
	DateOfBirth_MRZ	Document holder's birth date from MRZ	
	PlaceOfBirth	Document holder's place of birth	In the InternationalPassport_UZ_TYPE1 only
	PlaceOfBirth_EN	Document holder's place of birth in English	
	Nationality	Document holder's nationality	In the InternationalPassport_UZ_TYPE1 only
	DateOfExpiry	Document expiry date	
	DateOfExpiry_MRZ	Document expiry date from MRZ	
	FirstName_MRZ	Document holder's first name from MRZ	
	MRZ	Full contents of the machine-readable zone	
	Sex	Document holder's sex	In the InternationalPassport_UZ_TYPE1 only

Scheme	Field	Field description	Comments
	Sex_EN	Document holder's sex in English	
	Sex_MRZ	Document holder's sex from MRZ	
	DateOfIssue	Document issue date	
	LastName_MRZ	Document holder's last name from MRZ	
	MRZ_LINE1	The first line of MRZ	
	MRZ_LINE2	The second line of MRZ	
	FirstName	Document holder's first name	
	FirstName_EN	Document holder's first name in English	
	Nationality_EN	Document holder's nationality in English	
	Nationality_MRZ	Document holder's nationality from MRZ	
	Number	Document number	
	Number_MRZ	Document number from MRZ	
	OptionalData_MRZ_LINE2	Optional MRZ line	In the InternationalPassport_UZ_TYPE1 only

Scheme	Field	Field description	Comments
	MiddleName	Document holder's middle name	In the InternationalPassport_UZ_TYPE1 only
	LastName	Document holder's last name	
	LastName_EN	Document holder's last name in English	
MarriageCertificate_RU_TYPE1	DateOfBirth_1	Birth date of partner 1	
	DateOfBirth_2	Birth date of partner 2	
	PlaceOfBirth_1	Birth place of partner 1	
	PlaceOfBirth_2	Birth place of partner 2	
	FullNumber	Document full number	
	HusbandLastName	Last name of husband	
	DateOfIssue	Document issue date	
	DateOfMarriage	Date of marriage	
	FirstName_1	First name of partner 1	
	FirstName_2	First name of partner 2	
	Number	Document number	
	MiddleName_1	Middle name of partner 1	

Scheme	Field	Field description	Comments
	MiddleName_2	Middle name of partner 2	
	Series	Document series	
	LastName_1	Last name of partner 1	
	LastName_2	Last name of partner 2	
	WifeLastName	Last name of wife	
MigrationCard_RU_TYPE1	DateOfBirth	Document holder's date of birth	
	FirstName	Document holder's first name	
	PersonalCode	Personal code	
	Number	Document number	
	Series	Document series	
	LastName	Document holder's last name	
	LastName_EN	Document holder's last name-EN	
MRZ	Number	Document number	
	DocumentType	Document type	
	DocumentSubtype	Document subtype	

Scheme	Field	Field description	Comments
	LastName	Document holder's last name	
	FirstName	Document holder's first name	
	DateOfBirth	Document holder's date of birth	
	Sex	Document holder's sex	
	Nationality	Nationality of the document holder	
	PersonalNumber	Document holder's personal number	
	IssuingCountry	The country where the document was issued	
	DateOfExpiry	Document expiry date	
	OptionalData	Optional MRZ data	
MRZ_CH_DRIVERLICENSE MRZ_FR_ID MRZ_MRP MRZ_MRV_A MRZ_MRV_B MRZ_RU_VISA MRZ_TD1 MRZ_TD2	MRZ	Full contents of the MRZ	
	MRZ_LINE1	The first line of MRZ	
	MRZ_LINE2	The second line of MRZ	
	MRZ_LINE3	The third line of MRZ	In the MRZ_TD1 and MRZ_CH_DRIVERLICENSE schemes only
	Number_MRZ	Document number from MRZ	

Scheme	Field	Field description	Comments
	DocumentType_MRZ	Document type from MRZ	
	LastName_MRZ	Document holder's last name from MRZ	
	FirstName_MRZ	Document holder's first name from MRZ	
	DateOfBirth_MRZ	Document holder's date of birth from MRZ	
	Sex_MRZ	Document holder's sex from MRZ	
	Nationality_MRZ	Nationality of the document holder from MRZ	Except the MRZ_FR_ID scheme
	DateOfIssue_MRZ	Document issue date from MRZ	In the MRZ_RU_VISA, MRZ_RU_VISA and MRZ_FR_ID schemes
	PersonalCode_MRZ	Document's PersonalCode from MRZ	In the MRZ_RU_VISA scheme only
	IDVisa_MRZ	Visa ID from MRZ	In the MRZ_RU_VISA scheme only
	InvitationNumber_MRZ	Number of invitation from MRZ	In the MRZ_RU_VISA scheme only
	DateOfExpiry_MRZ	Document expiry date from MRZ	Except the MRZ_CH_DRIVERLICENSE and MRZ_RU_PASSPORT schemes

Scheme	Field	Field description	Comments
	IssuedBy_MRZ	Issuer of the document from MRZ	
	OptionalData_MRZ_LINE1	Optional MRZ line	In the MRZ_CH_DRIVERLICENSE, MRZ_FR_ID, MRZ_RU_VISA and MRZ_TD1 schemes
	OptionalData_MRZ_LINE2	Optional MRZ line	Except MRZ_FR_ID scheme
	VehicleNumber_MRZ	Vehicle's number from MRZ	In MRZ_CH_DRIVERLICENSE scheme only
MRZ_RU_PASSPORT	DepartmentCode_MRZ	Code of the authority that issued the document from MRZ	
	DateOfBirth_MRZ	Document holder's date of birth from MRZ	
	DocumentType_MRZ	Document type from MRZ	
	FirstName_MRZ	Document holder's first name from MRZ	
	MRZ	Full contents of the MRZ	
	Sex_MRZ	Document holder's sex from MRZ	
	DateOfIssue_MRZ	Document issue date from MRZ	

Scheme	Field	Field description	Comments
	IssuedBy_MRZ	Document's issuer from MRZ	
	LastName_MRZ	Document holder's last name from MRZ	
	MRZ_LINE1	The first line of MRZ	
	MRZ_LINE2	The second line of MRZ	
	Nationality_MRZ	Nationality of the document holder from MRZ	
	Number_MRZ	Document number from MRZ	
	OptionalData_MRZ_LINE2	Optional MRZ line	
MRZ_BG_VEHICLEREGISTRATION	MRZ	Full contents of the MRZ	
	MRZ_LINE1	The first line of MRZ	
	MRZ_LINE2	The second line of MRZ	
	MRZ_LINE3	The third line of MRZ	
	DateOfBirth_MRZ	Document holder's date of birth from MRZ	
	DateOfExpiry_MRZ	Document's expiry date from MRZ	
	FirstName_MRZ	Document holder's first name from MRZ	

Scheme	Field	Field description	Comments
	Sex_MRZ	Document holder's sex from MRZ	
	DateOfIssue_MRZ	Date of document's issue from MRZ	
	LastName_MRZ	Document holder's last name from MRZ	
	Nationality_MRZ	Nationality from MRZ	
	Number_MRZ	Document number from MRZ	
	DocumentType_MRZ	Document type from MRZ	
	IssuedBy_MRZ	Issuer of the document from	
	VehicleNumber_MRZ	Vehicle license number from MRZ	
	VIN_MRZ	Vehicle identification number (VIN) from MRZ	
	OptionalData_MRZ_LINE1	Optional MRZ line	
	OptionalData_MRZ_LINE2	Optional MRZ line	
Passport_BY_TYPE1 Passport_BY_PAGE31_TYPE1 Passport_BY_PAGE31_	Number	Document number	In the Passport_BY_TYPE1 scheme only

Scheme	Field	Field description	Comments
	LastName	Document holder's last name	
	FirstName	Document holder's first name	
	MiddleName	Document holder's middle name	Except the Passport_BY_TYPE1 scheme
	PersonalCode	Document's personal code	
	IssuedBy	Document's issuer	
	IssuedBy_RU	Document's issuer in Russian language	In the Passport_BY_PAGE31_TYPE2 scheme only
	Sex	Document holder's sex	In the Passport_BY_TYPE1 scheme only
	DateOfBirth	Document holder's date of birth	
	PlaceOfBirth	Document holder's place of birth	
	PlaceOfBirth_RU	Document holder's place of birth in Russian language	Except the Passport_BY_TYPE1 scheme
	DateOfIssue	Document issue date	
	DateOfExpiry	Document expiry date	

Scheme	Field	Field description	Comments
	Nationality	Nationality of the document holder from MRZ	In the Passport_BY_TYPE1 scheme only
	MRZ	Full contents of the machine-readable zone	In the Passport_BY_TYPE1 scheme only
	Number_MRZ	Document number from MRZ	In the Passport_BY_TYPE1 scheme only
	LastName_MRZ	Document holder's last name from MRZ	In the Passport_BY_TYPE1 scheme only
	FirstName_MRZ	Document holder's first name from MRZ	In the Passport_BY_TYPE1 scheme only
	Sex_MRZ	Document holder's sex from MRZ	In the Passport_BY_TYPE1 scheme only
	DateOfBirth_MRZ	Document holder's date of birth from MRZ	In the Passport_BY_TYPE1 scheme only
	DateOfExpiry_MRZ	Document expiry date from MRZ	In the Passport_BY_TYPE1 scheme only
	OptionalData_MRZ_LINE2	MRZ optional line	In the Passport_BY_TYPE1 scheme only
Passport_RU	Series	Document series	
	Number	Document number	

Scheme	Field	Field description	Comments
	LastName	Document holder's last name	
	FirstName	Document holder's first name	
	MiddleName	Document holder's patronymic name	
	Sex	Document holder's sex	
	DateOfBirth	Document holder's date of birth	
	PlaceOfBirth	Document holder's place of birth	
	IssuedBy	The authority that issued the document	
	DepartmentCode	The code of the authority that issued the document	
	DateOfIssue	Document issue date	
	MRZ	Full contents of the machine-readable zone	
	DateOfBirth_MRZ	Date of birth from MRZ	
	DateOfIssue_MRZ	Date of issue from MRZ	
	DepartmentCode_MRZ	Department code from MRZ	

Scheme	Field	Field description	Comments
	Sex_MRZ	Document holder's sex from MRZ	
	Series_MRZ	Series from MRZ	
	FirstName_MRZ	First name from MRZ	
	MiddleName_MRZ	Middle name from MRZ	
	LastName_MRZ	Last name from MRZ	
	Number_MRZ	Number from MRZ	
PassportCard_US_TYPE1 PassportCard_US_TYPE2	DateOfBirth	Document holder's date of birth	
	PlaceOfBirth	Document holder's place of birth	
	DateOfExpiry	Document expiry date	
	Sex	Document holder's sex	
	DateOfIssue	Document issue date	
	FirstName	Document holder's first name	
	Nationality	Nationality of the document holder	
	Number	Document number	
	LastName	Document holder's last name	

Scheme	Field	Field description	Comments
ResidencePermit_AT_TYPE2	IssuedBy	The authority that issued the document	
	DateOfBirth	Document holder's date of birth	
	DateOfBirth_MRZ	Document holder's date of birth from MRZ	
	PlaceOfBirth	Document holder's place of birth	
	DateAndPlaceOfBirth	Document holder's date and place of birth	
	DVRNumber	Document DVR Number	
	DateOfExpiry	Document expiry date	
	DateOfExpiry_MRZ	Document expiry date from MRZ	
	FirstName_MRZ	Document holder's first name from MRZ	
	MRZ	Full contents of the machine-readable zone	
	Sex	Document holder's sex	
	DateOfIssue	Document issue date	
	PlaceOfIssue	Place of issue	
	LastName_MRZ	Document holder's last name from MRZ	

Scheme	Field	Field description	Comments
	MRZ_LINE1	The first line of MRZ	
	MRZ_LINE2	The second line of MRZ	
	MRZ_LINE3	The third line of MRZ	
	FirstName	Document holder's first name	
	Nationality	Nationality of the document holder	
	Nationality_MRZ	Nationality of the document holder from MRZ	
	Number	Document number	
	Number_MRZ	Document number from MRZ	
	OtherInfo	Other Info about document holder	
	Comments	Comments	
	Number	Number	
	LastName	Document holder's last name	
	TypeOfPermit	Type of permit	
ResidenceLicense_BR_TYPE1	CPF	Document holder's number	

Scheme	Field	Field description	Comments
	Registration_No_Creci	CRECI registration number	
	DateOfSubscription_No_Creci	CRECI registration number's date of Issue	
	DateOfBirth	Document holder's date of birth	
	Filiation_LINE1	Filiation first line	
	Filiation_LINE2	Filiation second line	
	Nationality	Document holder's nationality	
	FirstName	Document holder's first name	
	Number	Document number	
	Validity	Document expiry date	
ResidencePermit_CZ_TYPE1 ResidencePermit_CZ_TYPE2 ResidencePermit_CZ_TYPE3	IssuedBy	Authority that issued the document	Except the ResidencePermit_CZ_TYPE2 scheme
	DateOfBirth	Document holder's birth date	Except the ResidencePermit_CZ_TYPE3 scheme
	DateOfBirth_MRZ	Date of birth from MRZ	Except the ResidencePermit_CZ_TYPE2 scheme
	PlaceOfBirth	Document holder's birth place	Except the ResidencePermit_CZ_TYPE3 scheme

Scheme	Field	Field description	Comments
	DateOfExpiry	Expiry date of the document	Except the ResidencePermit_CZ_TYPE2 scheme
	DateOfExpiry_MRZ	Date of expiry from MRZ	Except the ResidencePermit_CZ_TYPE2 scheme
	FirstName_MRZ	First name from MRZ	Except the ResidencePermit_CZ_TYPE2 scheme
	FirstName_EX	First name in English language	In the ResidencePermit_CZ_TYPE2 scheme only
	MRZ	Full contents of the MRZ	Except the ResidencePermit_CZ_TYPE2 scheme
	Sex	Document holder's sex	Except the ResidencePermit_CZ_TYPE3 scheme
	Sex_MRZ	Sex from MRZ	Except the ResidencePermit_CZ_TYPE2 scheme
	PersonalCode	Personal code	In the ResidencePermit_CZ_TYPE1 scheme only
	PersonalNumber	Personal number	In the ResidencePermit_CZ_TYPE2 scheme only
	DateOfIssue	Date of issue	Except the ResidencePermit_CZ_TYPE2 scheme

Scheme	Field	Field description	Comments
	DateAndPlaceOfIssue	Date and place of issue	In the ResidencePermit_CZ_TYPE1 scheme only
	LastName_MRZ	Last name from MRZ	Except the ResidencePermit_CZ_TYPE2 scheme
	MRZ_LINE1	The first line of MRZ	In the ResidencePermit_CZ_TYPE1 scheme only
	MRZ_LINE2	The second line of MRZ	In the ResidencePermit_CZ_TYPE1 scheme only
	MRZ_LINE3	The third line of MRZ	In the ResidencePermit_CZ_TYPE1 scheme only
	FirstName	Document holder's first name	
	Nationality	Document holder's nationality	Except the ResidencePermit_CZ_TYPE3 scheme
	Nationality_MRZ	Nationality from MRZ	In the ResidencePermit_CZ_TYPE1 scheme only
	Number	Number	
	Number_MRZ	Number from MRZ	Except the ResidencePermit_CZ_TYPE2 scheme
	OptionalData_MRZ_LINE2	The second optional line from MRZ	Except the ResidencePermit_CZ_TYPE2 scheme

Scheme	Field	Field description	Comments
	Comments	Comments	Except the ResidencePermit_CZ_TYPE2 scheme
	LastName	Document holder's last name	Except the ResidencePermit_CZ_TYPE3 scheme
	DocumentType	Type of the document	Except the ResidencePermit_CZ_TYPE2 scheme
ResidencePermit_DE_TYPE1	IssuedBy	The authority that issued the document	
	DateOfBirth	Document holder's date of birth	
	DateOfBirth_MRZ	Document holder's date of birth from MRZ	
	PlaceOfBirth	Document holder's place of birth	
	ChipNumber	Number of contactless chip	built into the card
	DateOfExpiry	Document expiry date	
	DateOfExpiry_MRZ	Document expiry date from MRZ	
	EyeColor	Document holder's eyes color	
	FirstName_MRZ	Document holder's first name from MRZ	

Scheme	Field	Field description	Comments
	MRZ	Full contents of the machine-readable zone	
	Sex	Document holder's sex	
	Sex_MRZ	Document holder's sex from MRZ	
	Height	Document holder's height	
	DateOfIssue	Document issue date	
	LastName_MRZ	Document holder's last name from MRZ	
	MRZ_LINE1	The first line of MRZ	
	MRZ_LINE2	The second line of MRZ	
	MRZ_LINE3	The third line of MRZ	
	FirstName	Document holder's first name	
	Nationality	Nationality of the document holder	
	Nationality_MRZ	Nationality of the document holder from MRZ	
	Notation	Document notation	
	Number	Document number	

Scheme	Field	Field description	Comments
	Number_MRZ	Document number from MRZ	
	PlaceOfIssue	Place of issue	
	Residence	Document holder's residence	
	TypeOfResidence	Type of residence	
	LastName	Document holder's last name	
ResidencePermit_ES_TYPE1 ResidencePermit_ES_TYPE2	Number	Document number	
	NIENumber	NIE number	
	FullName	Document holder's full name	
	DateOfBirth	Document holder's date of birth	In the ResidencePermit_ES_TYPE2 only
	DateOfExpiry	Document's expiry date	In the ResidencePermit_ES_TYPE1 only
	DateOfIssue	Date of issue	In the ResidencePermit_ES_TYPE1 only
	PlaceOfIssue	Place of issue	In the ResidencePermit_ES_TYPE1 only
	TypeOfPermission	The type of permission	In the ResidencePermit_ES_TY

Scheme	Field	Field description	Comments
			PE1 only
	Nationality	Nationality of the document holder	In the ResidencePermit_ES_TYPE2 only
	Address	Document holder's address	
	Address_LINE2	Second line of the document holder's address	
	DateOfRegistration	Date of resident registration	In the ResidencePermit_ES_TYPE2 only
	ProvinceOfIssue	Province of issue	
	PlaceOfIssue	Place of issue	
ResidencePermit_RU_TYPE1 ResidencePermit_RU_TYPE2	IssuedBy	The authority that issued the document	Except ResidencePermit_RU_TYPE2
	DateOfBirth	Document holder's date of birth	Except ResidencePermit_RU_TYPE2
	DateOfBirth_MRZ	Document holder's date of birth from MRZ	
	PlaceOfBirth	Document holder's place of birth	Except ResidencePermit_RU_TYPE2
	DateOfExpiry	Document expiry date	Except ResidencePermit_RU_TYPE2

Scheme	Field	Field description	Comments
	DateOfExpiry_MRZ	Document expiry date from MRZ	
	FirstName_MRZ	Document holder's first name from MRZ	
	MRZ	Full contents of the machine-readable zone	
	Sex	Document holder's sex	Except ResidencePermit_RU_TYPE2
	Sex_MRZ	Document holder's sex from MRZ	
	Hologram	Document hologram	Except ResidencePermit_RU_TYPE2
	DateOfIssue	Document issue date	Except ResidencePermit_RU_TYPE2
	LastName_MRZ	Document holder's last name from MRZ	
	MRZ_LINE1	The first line of MRZ	Except ResidencePermit_RU_TYPE2
	MRZ_LINE2	The second line of MRZ	Except ResidencePermit_RU_TYPE2
	FirstName	Document holder's first name	Except ResidencePermit_RU_TYPE2

Scheme	Field	Field description	Comments
	Nationality_MRZ	Nationality of the document holder from MRZ	
	Number	Document number	Except ResidencePermit_RU_TYPE2
	Number_MRZ	Document number from MRZ	
	MiddleName	Document holder's middle name	Except ResidencePermit_RU_TYPE2
	LastName	Document holder's last name	Except ResidencePermit_RU_TYPE2
ResidencePermit_SI_TYPE1 ResidencePermit_SI_TYPE2	IssuedBy	The authority that issued the document	
	DateOfBirth	Document holder's date of birth	
	DateOfBirth_MRZ	Document holder's date of birth from MRZ	
	DateOfExpiry	Document expiry date	
	DateOfExpiry_MRZ	Document expiry date from MRZ	
	FirstName_MRZ	Document holder's first name from MRZ	
	MRZ	Full contents of the machine-readable zone	

Scheme	Field	Field description	Comments
	Sex	Document holder's sex	
	Sex_EN	Document holder's sex in English	
	Sex_MRZ	Document holder's sex from MRZ	
	DateOfIssue	Document issue date	
	LastName_MRZ	Document holder's last name from MRZ	
	MRZ_LINE1	The first line of MRZ	
	MRZ_LINE2	The second line of MRZ	
	FirstName	Document holder's first name	
	Nationality_MRZ	Nationality of the document holder from MRZ	
	Number	Document number	
	Number_MRZ	Document number from MRZ	
	Position	Document holder's position	
	DocumentType	Document type	
	PlaceOfBirth	Document holder's place of birth	In the ResidencePermit_SI_TYPE2 only

Scheme	Field	Field description	Comments
	MRZ_LINE3	The third line of MRZ	In the ResidencePermit_SI_TYPE2 only
	Nationality	Nationality of the document holder	In the ResidencePermit_SI_TYPE2 only
	OptionalData_MRZ_LINE2	Optional MRZ line	In the ResidencePermit_SI_TYPE2 only
	Comments	Additional information	In the ResidencePermit_SI_TYPE2 only
	LastName	Document holder's last name	In the ResidencePermit_SI_TYPE2 only
	Type_EN	Document type in English	In the ResidencePermit_SI_TYPE2 only
ResidencePermit_SK_TYPE1 ResidencePermit_SK_TYPE2	IssuedBy	The authority that issued the document	
	DateOfBirth	Document holder's date of birth	
	DateOfBirth_MRZ	Document holder's date of birth from MRZ	
	PlaceOfBirth	Document holder's place of birth	
	DateOfExpiry	Document expiry date	

Scheme	Field	Field description	Comments
	DateOfExpiry_MRZ	Document expiry date from MRZ	
	FirstName_MRZ	Document holder's first name from MRZ	
	MRZ	Full contents of the machine-readable zone	
	Sex	Document holder's sex	
	Sex_MRZ	Document holder's sex from MRZ	
	PersonalCode	Owner identification number	
	DateOfIssue	Document issue date	
	ReasonOfIssue	Reason of issue	
	LastName_MRZ	Document holder's last name from MRZ	
	FirstName	Document holder's first name	
	Nationality	Nationality of the document holder	
	Nationality_MRZ	Nationality of the document holder from MRZ	
	Number	Document number	

Scheme	Field	Field description	Comments
	Number_MRZ	Document number from MRZ	
	OptionalData_MRZ_LINE2	Optional MRZ line	
	Comments_BACK	Remarks on the back side	
	Comments_FRONT	Remarks on the front side	In the ResidencePermit_SL_TYPE1 only
	LastName	Document holder's last name	
SocialSecurityNumber_RU_TYPE1 SocialSecurityNumber_RU_TYPE2	Number	Document number	
	LastName	Document holder's last name	
	FirstName	Document holder's first name	
	MiddleName	Document holder's patronymic name	
	DateOfBirth	Document holder's date of birth	
	PlaceOfBirth	Document holder's place of birth	In the SocialSecurityNumber_RU_TYPE1 only
VehiclePassport_RU_TYPE1	DateOfIssue	Document issue date	
	Number	Document number	

Scheme	Field	Field description	Comments
	VIN	Vehicle identification number	
VehicleRegistration_AZ_TYPE1	Body	Document body	
	ChassisNumber	Vehicle chassis number	
	EngineCapacity	Vehicle engine capacity	
	EngineNumber	Vehicle engine number	
	YearOfManufacture	Vehicle manufacture year	
	Model	Vehicle model	
	Number	Vehicle number	
	RegistrationNumber	Vehicle registration number	
	DocumentType	Document type	
VehicleRegistration_BY_TYPE1	FirstName_EN	Document holder's first name in English	
	FirstName	Document holder's first name	
	Number	Primary document number	
	MiddleName	Document holder's patronymic name	

Scheme	Field	Field description	Comments
	RegistrationPlate	Vehicle registration plate	
	Series	Document series	
	LastName_EN	Document holder's last name in English	
	LastName	Document holder's last name	
	VIN	Vehicle identification number	
VehicleRegistration_CZ_TYPE1	Address	Document holder's address	
	BusinessName	Document holder's business name	
	Capacity	Vehicle engine capacity	
	Color	Vehicle color	
	CouplingDevice	Vehicle coupling device	
	DateOfFirstRegistration	Date of first registration	
	DateOfRegistration	Date of registration	
	TypeOfFuel	Type of fuel	
	Make	Vehicle make	
	Mass_1	Vehicle mass 1	

Scheme	Field	Field description	Comments
	Mass_2	Vehicle mass 2	
	Mass_3	Vehicle mass 3	
	MaxMass	Vehicle max mass	
	MaxPower_1	Vehicle max power 1	
	MaxPower_2	Vehicle max power 2	
	MaxSpeed	Vehicle max speed	
	Model	Vehicle model	
	Number	Document number	
	Number_EX	Document second number	
	NumberOfSeats	Number of seats	
	NumberOfStandingPlaces	Number of standing places	
	Power	Vehicle engine power	
	Reference	Vehicle reference	
	Comments	Additional information	
	TrailerMass_1	Trailer mass 1	
	TrailerMass_2	Trailer mass 2	
	Transmission	Vehicle transmission	

Scheme	Field	Field description	Comments
	DocumentType	Type of document	
	VIN	Vehicle identification number	
VehicleRegistration_GE_TYPE1	Address	Document holder's address	
	Address_EN	Document holder's address in English	
	Capacity	Vehicle engine capacity	
	Color	Vehicle color	
	Color_EN	Vehicle color in English	
	DateOfFirstRegistration	Date of first registration	
	DateOfRegistration	Date of registration	
	EngineNumber	Vehicle engine number	
	TypeOfFuel	Type of fuel	
	TypeOfFuel_EN	Type of fuel in English	
	PersonalCode	Personal code	
	Make	Vehicle make	
	Mass	Vehicle mass	
	MaxMass	Vehicle max mass	

Scheme	Field	Field description	Comments
	MaxPower	Vehicle max power	
	Model	Vehicle model	
	FirstName	Document holder's first name	
	FirstName_EN	Document holder's first name in English	
	Number	Primary document number	
	NumberOfSeats	Number of seats	
	NumberOfStandingPlaces	Number of standing places	
	Power	Vehicle power	
	RegistrationNumber	Vehicle registration number	
	Comments	Additional information	
	Comments_EN	Additional information in English	
	LastName	Document holder's last name	
	LastName_EN	Document holder's last name in English	
	DocumentType	Type of document	

Scheme	Field	Field description	Comments
	Type_EN	Type of document in English	
	UnladenMass	Vehicle unladen mass	
	VIN	Vehicle identification number	
	YearOfManufacture	Year of manufacture	
VehicleRegistration_KZ_TYPE1	Apartment	Document holder's address	
	Body	Document body	
	Building	Building	
	Category	Vehicle category	
	Chassis	Vehicle chassis	
	City	City	
	Color	Vehicle color	
	District	District	
	Engine	Vehicle engine	
	DateOfIssue	Document issue date	
	MaxWeight	Vehicle max weight	
	Model	Vehicle model	

Scheme	Field	Field description	Comments
	FirstName	Document holder's first name	
	FirstName_BACK	Document holder's first name	on the back side
	Note	Additional information	
	Number	Document number	
	Number_BACK	Document number	on the back side
	MiddleName	Document holder's middle name	
	MiddleName_BACK	Document holder's middle name	on the back side
	RegistrationNumber	Vehicle registration number	
	RegionOfResidence	Document holder's region of residence	
	Street	Document holder's street	
	LastName	Document holder's last name	
	LastName_BACK	Document holder's last name	on the back side
	Volume	Engine volume	
	Weight	Vehicle weight	

Scheme	Field	Field description	Comments
	Year	Year of manifacture	
VehicleRegistration_RU_TYPE1 VehicleRegistration_RU_TYPE2	Number	Document number	
	LicensePlate	Vehicle registration number	
	VIN	Vehicle identification number	
VehicleRegistration_SK_TYPE1	Address	Document holder's address	
	IssuedBy	The authority that issued the document	
	BusinessName	Document holder's business name	
	Capacity	Vehicle engine capacity	
	Category	Vehicle category	
	Color	Vehicle color	
	DateOfFirstRegistration	Date of first registration	
	DateOfRegistration	Date of registration	
	DateOfExpiry	Document expiry date	
	TypeOfFuel	Type of fuel	
	Make	Vehicle make	

Scheme	Field	Field description	Comments
	Mass	Vehicle mass	
	MaxMass	Vehicle max mass	
	MaxPower	Vehicle max power	
	MaxSpeed	Vehicle max speed	
	Model	Vehicle model	
	Number_EX	Document second number	
	Number_3	Document third number	
	Number_4	Document forth number	
	NumberOfSeats	Number of seats	
	NumberOfStandingPlaces	Number of standing places	
	Name_EX	Other document's holder name	
	PermissibleMass	Vehicle permissible mass	
	Power	Vehicle engine power	
	RegistrationNumber	Vehicle registration number	
	DocumentType	Type of document	

Scheme	Field	Field description	Comments
	NumberOfType	Identifier of type	
	TypeVariantVersion	Vehicle type	
	VIN	Vehicle identification number	
	VIN_FRONT	Vehicle identification number (only front side)	
VehicleRegistration_SV_TYPE1	ChassisNumber	Vehicle chassis number	
	Color	Vehicle color	
	FirstName	Document holder's first name	
	Nit	ID number	
	Number	Document number	
	VIN	Vehicle identification number	
VehicleRegistration_UA_TYPE1	DateOfFirstRegistration	Date of first registration	
	DateOfRegistration	Date of registration	
	Description	Vehicle description	
	Make	Vehicle make	
	MaxMass	Vehicle max mass	

Scheme	Field	Field description	Comments
	FirstName	Document holder's first name	
	FirstName_EN	Document holder's first name in English	
	Number	Document number	
	MiddleName	Document holder's middle name	
	RegistrationNumber	Vehicle registration number	
	LastName	Document holder's last name	
	LastName_EN	Document holder's last name in English	
	DocumentType	Document type	
	VIN	Vehicle identification number	
	YearOfManufacture	Year of manufacture	
Visa_CZ_TYPE1	DateOfBirth_MRZ	Date of birth from MRZ	
	Duration	Duration of visa	
	EntriesNumber	Number of entries	
	DateOfEntry	Date of entry	

Scheme	Field	Field description	Comments
	DateOfExpiry_MRZ	Date of expiry from MRZ	
	FirstName_MRZ	First name from MRZ	
	MRZ	Full contents of the MRZ	
	Sex_MRZ	Sex from MRZ	
	DateOfIssue	Date of the document's issue	
	PlaceOfIssue	Place of the document's issue	
	LastName_MRZ	Last name from MRZ	
	FirstName	Document holder's first name	
	Nationality_MRZ	Nationality from MRZ	
	Number	Visa number	
	Number_MRZ	Number from MRZ	
	OptionalData_MRZ_LINE2	The second optional line from MRZ	
	PassportNumber	Passport number	
	Comments	Comments	
	DocumentType	The type of the document	

Scheme	Field	Field description	Comments
	StayUntilDate	The date until document's holder can stay in the country	
Visa_SK_TYPE1	DateOfBirth_MRZ	Date of birth from MRZ	
	Duration	Duration of visa	
	EntriesNumber	Number of entries	
	DateOfEntry	Date of entry	
	DateOfExpiry_MRZ	Date of expiry from MRZ	
	FirstName_MRZ	First name from MRZ	
	MRZ	Full contents of the MRZ	
	Sex_MRZ	Sex from MRZ	
	DateOfIssue	Date of the document's issue	
	PlaceOfIssue	Place of the document's issue	
	LastName_MRZ	Last name from MRZ	
	FirstName	Document holder's first name	
	Nationality_MRZ	Nationality from MRZ	
	Number	Visa number	

Scheme	Field	Field description	Comments
	Number_MRZ	Number from MRZ	
	OptionalData_MRZ_LINE2	The second optional line from MRZ	
	PassportNumber	Passport number	
	Comments	Comments	
	DocumentType	The type of the document	
	StayUntilDate	The date until document's holder can stay in the country	
Visa_RU_TYPE1	DocumentType	Type of visa	
	Number	Visa number	
	PassportNumber	Document holder's passport number	
	FullName	Document holder's full name	
	FullName_EN	Document holder's full name in English	
	Sex	Document holder's sex	
	DateOfBirth	Document holder's date of birth	
	Nationality	Nationality of the document holder	

Scheme	Field	Field description	Comments
	InvitationNumber	The number of invitation	
	VisaId	Visa ID	
	FromTo	Duration of stay	
	DateOfIssue	Visa issue date	
	EntryFromDate	Entry from date	
	StayUntilDate	Stay until date	
	Duration	Duration of visa	
	MRZ	Full contents of the machine-readable zone	
	LastName_MRZ	Document holder's last name from MRZ	
	FirstName_MRZ	Document holder's first name from MRZ	
	Sex_MRZ	Document holder's sex from MRZ	
	DateOfBirth_MRZ	Document holder's date of birth from MRZ	
	Nationality_MRZ	Nationality of the document holder from MRZ	
	IDVisa_MRZ	Visa ID from MRZ	

Scheme	Field	Field description	Comments
	InvitationNumber_MRZ	Invitation number from MRZ	
	MRZ_LINE1	The first line of MRZ	
	MRZ_LINE2	The second line of MRZ	
	Number_MRZ	Number from MRZ	
Visa_US_TYPE1	DateOfBirth	Document holder's date of birth	
	DateOfBirth_MRZ	Document holder's date of birth from MRZ	
	ControlNumber	Document control number	
	DateOfExpiry	Document expiry date	
	DateOfExpiry_MRZ	Document expiry date from MRZ	
	FirstName_MRZ	Document holder's first name from MRZ	
	MRZ	Full contents of the machine-readable zone	
	Sex	Document holder's sex	
	Sex_MRZ	Document holder's sex from MRZ	
	DateOfIssue	Visa issue date	

Scheme	Field	Field description	Comments
	PlaceOfIssue	Place of issue	
	LastName_MRZ	Document holder's last name from MRZ	
	MRZ_LINE1	The first line of MRZ	
	MRZ_LINE2	The second line of MRZ	
	FirstName	Document holder's first name	
	Nationality	Nationality of the document holder	
	Nationality_MRZ	Nationality of the document holder from MRZ	
	Number_MRZ	Document number from MRZ	
	OptionalData_MRZ_LINE2	Optional MRZ line	
	PassportNumber	Passport number	
	LastName	Document holder's last name	
WorkPermit_RU_TYPE1	Activity	Document holder's activity	
	DateOfBirth	Document holder's date of birth	

Scheme	Field	Field description	Comments
	Nationality	Nationality of the document holder	
	DateOfExpiry	Document expiry date	
	DateOfIssue	Document issue date	
	FirstName	Document holder's first name	
	Number	Document number	
	MiddleName	Document holder's middle name	
	Series	Document series	
	LastName	Document holder's last name	
WorkPermit_SG_TYPE1	DocumentType	Type of permit	
	Number	Primary document number	
	Number_EX	Secondary document number	
	FullName	Document holder's full name	
	Sector	Occupation sector	
	Employer	Employer company name	

Scheme	Field	Field description	Comments
	Occupation	Occupational title	
	DateOfApplication	Work application date	
	DateOfIssue	Document issue date	
	DateOfExpiry	Document expiry date	

Regular Expressions

This section describes the regular expression syntax supported by the ABBYY Mobile Capture SDK engine for capturing custom data fields (see How to Capture a Custom Data Field).

Note: *All matches are always greedy (match as much as possible). The search stops at the first match: if a string contains two or more substrings matching your regular expression, only the first one (closest to the beginning) is matched.*

Supported syntax

Pattern	Syntax	Examples and comments
Literal	any character or text, except metacharacters \^$.|?*+()[{	*pill* matches "pill" in "caterpillar" *a* matches the first "a" in "caterpillar" but not the second (the search stops at the first match) Metacharacters are part of regular expression syntax; to match these literally, you have to escape them with a backslash. If you want to match *1+1*, the correct expression is *1\+1* — otherwise "+" has a special meaning.
Any character	. (dot)	*s.t* matches "sat", "sit" but not "seat"

Pattern	Syntax	Examples and comments
Character set	[]	*gr[ae]y* matches both "gray" and "grey" but not "greay"
Character range in a set	- (minus)	*[0-9]* matches a single digit concatenation is allowed: *[a-zA-Z0-9]* matches an alphanumeric character
Negated character set	[^]	*[^0-9]* matches anything that is not a digit
Shorthand classes	\s — any whitespace \S — anything that is not a whitespace \d — any digit \D — anything that is not a digit \w — a word character, which includes alphanumerics and punctuation marks \W — a non-word character \R — a new line character or the CR LF sequence \v — a new line character but not the CR LF sequence \V — a non-new line character \h — a horizontal white space character \H — anything except horizontal white space	
Non-printable characters	\n — line feed LF \r — carriage return CR \t — tab character \f — form feed \a — bell character \u0007 \e — escape character	
Unicode character	\uFFFF \x{FFFF}	*\u20AC* or *\x{20AC}* matches the euro currency sign.

Pattern	Syntax	Examples and comments
Character by its hexadecimal index	\xFF	*\xA9* matches the copyright character in the Latin-1 character set
Alternation	|	*abc|123* matches either "abc" or "123" *|word* matches either an empty string "" or "word"
Repetitions	+ * ? {n} {n,m} {n,} {,m}	+ matches once or more times * matches zero or more times *?* matches zero times or once (optional match) *{n}* matches exactly n times *{n,m}* matches n to m times times *{n,}* matches n or more times *{,m}* matches zero or more times up to m Note that all repetitions are greedy (prefer to match as much as possible): *c.+r* will match "caterpillar", not stopping with "cater". If you want to match up to the first occurence of a certain character, use its negation: *c[^r]+r* will match "cater" in "caterpillar".
Grouping	()	*(word)*+ matches "word", "wordword" and so on

Unsupported syntax

The following regular expression syntax features are not yet supported in ABBYY Mobile Capture SDK:

- Anchors: ^ (beginning of a line), $ (end of a line), \b (word boundary) and its negation \B, and other.
- Lazy quantifiers such as +? or {n,m}? that prefer to match as few times as possible.
- Concatenation with nested character sets such as [[a-z][0-9]].
- Advanced features such as lookarounds, backreferences, possessive matches, named groups, non-capturing and atomic match groups, evaluation flag settings and other.

Copyright and Trademark Notices

ABBYY® Mobile Capture © 2019 ABBYY Production LLC.
ABBYY is a registered trademark or a trademark of ABBYY Software Ltd.

Working with JPEG image format:
This software is based in part on the work of the Independent JPEG Group.

Libtiff:

Copyright (c) 1988-1997 Sam Leffler
Copyright (c) 1991-1997 Silicon Graphics, Inc.
Permission to use, copy, modify, distribute, and sell this software and its documentation for any purpose is hereby granted without fee, provided that (i) the above copyright notices and this permission notice appear in all copies of the software and related documentation, and (ii) the names of Sam Leffler and Silicon Graphics may not be used in any advertising or publicity relating to the software without the specific, prior written permission of Sam Leffler and Silicon Graphics.
THE SOFTWARE IS PROVIDED "AS-IS" AND WITHOUT WARRANTY OF ANY KIND, EXPRESS, IMPLIED OR OTHERWISE, INCLUDING WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.
IN NO EVENT SHALL SAM LEFFLER OR SILICON GRAPHICS BE LIABLE FOR ANY SPECIAL, INCIDENTAL, INDIRECT OR CONSEQUENTIAL DAMAGES OF ANY KIND, OR ANY DAMAGES WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER OR NOT ADVISED OF THE POSSIBILITY OF DAMAGE, AND ON ANY THEORY OF LIABILITY, ARISING OUT OF OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE.

Libwebp:

Copyright (c) 2010, Google Inc. All rights reserved.
Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

- Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer;
- Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution;
- Neither the name of Google nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT HOLDER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

Protobuf:

This license applies to all parts of Protocol Buffers except the following:

- Atomicops support for generic gcc, located in
  src/google/protobuf/stubs/atomicops_internals_generic_gcc.h.
  This file is copyrighted by Red Hat Inc.
- Atomicops support for AIX/POWER, located in
  src/google/protobuf/stubs/atomicops_internals_power.h.

This file is copyrighted by Bloomberg Finance LP.

Copyright 2014, Google Inc. All rights reserved.
Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

- Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer;
- Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
- Neither the name of Google Inc. nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
Code generated by the Protocol Buffer compiler is owned by the owner of the input file used when generating it. This code is not standalone and requires a support library to be linked with it. This support library is itself covered by the above license.

Libzip:

Copyright (C) 1999-2014 Dieter Baron and Thomas Klausner
The authors can be contacted at <libzip@nih.at>
Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
3. The names of the authors may not be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE AUTHORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE AUTHORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

Eigen:

This Source Code Form is subject to the terms of the Mozilla Public License, v. 2.0. If a copy of the MPL was not distributed with this file, you can obtain one at https://mozilla.org/MPL/2.0/.

zlib

zlib.h -- interface of the 'zlib' general purpose compression library
version 1.2.3, July 18th, 2005
Copyright (C) 1995-2005 Jean-loup Gailly and Mark Adler

This software is provided 'as-is', without any express or implied warranty. In no event will the authors be held liable for any damages arising from the use of this software.

Permission is granted to anyone to use this software for any purpose, including commercial applications, and to alter it and redistribute it freely, subject to the following restrictions:

1. The origin of this software must not be misrepresented; you must not claim that you wrote the original software. If you use this software in a product, an acknowledgment in the product documentation would be appreciated but is not required.
2. Altered source versions must be plainly marked as such, and must not be misrepresented as being the original software.
3. This notice may not be removed or altered from any source distribution.

Jean-loup Gailly Mark Adler
jloup@gzip.org madler@alumni.caltech.edu

LZMA SDK

LZMA SDK is placed in the public domain.
Anyone is free to copy, modify, publish, use, compile, sell, or distribute the original LZMA SDK code, either in source code form or as a compiled binary, for any purpose, commercial or non-commercial, and by any means.

dlmalloc

This is a version (aka dlmalloc) of malloc/free/realloc written by Doug Lea and released to the public domain, as explained at http://creativecommons.org/publicdomain/zero/1.0/ Send questions, comments, complaints, performance data, etc to dl@cs.oswego.edu

HTML help

All rights, title, and copyrights in and to the SOFTWARE PRODUCT (including, but not limited to, any images, photographs, animations, video, audio, music, text, and "applets" incorporated into the SOFTWARE PRODUCT) and any copies of the SOFTWARE PRODUCT are owned by Microsoft or its suppliers. You may not copy the printed materials, if any, accompanying the SOFTWARE PRODUCT.

All other trademarks and copyrights are the property of their respective owners.

Contact ABBYY

In this section you can find the contacts of ABBYY sales offices and technical support.

How to Buy

You can order ABBYY Mobile Capture or other ABBYY products by contacting an ABBYY office in your region. You can find contact details of the ABBYY offices on http://www.abbyy.com/contacts/.

Technical Support

If you have questions regarding the use of ABBYY Mobile Capture, please visit the ABBYY Knowledgebase or Developer Forum, to find answers to your questions or post your own questions in the forum. If neither of the mentioned sources was helpful, please contact ABBYY Technical Support by submitting a request at global ABBYY Help Center.