Acuant Android SDK API Documentation

Last updated on – 08/30/2016

Contents

1   Introduction

The AcuantAndroidMobileSDK is designed to simplify your development efforts.
Processing of the captured images takes place via Acuant's Web Services. Acuant's Web Services offer fast data extraction and authentication with zero downtime.

Benefits:
- ❖ Process Enhancement: Faster data extraction and authentication is performed on the captured images via Acuant's Web Services.
- ❖ Easy to set up and deploy.
- ❖ No maintenance and support: All maintenance and updates are done on Acuant servers.
- ❖ Secured Connection: Secured via SSL and HTTPS AES 256-bit encryption.

Acuant Web Services supports processing of drivers licenses, state IDs, other govt issued IDs, custom IDs, driver's license barcodes, passports, medical insurance cards etc. It also supports document authentication and facial recognition to verify and authenticate the identity.

For IDs from Asia, Australia, Europe, South America, Africa – we are support dd-mm-yyyy date format.
For IDs from Canada, USA – we are support mm-dd-yyyy date format.

For a complete list of regions, states, and countries supported for ID processing, please see Appendix F of ScanW document - http://www.id-reader.com/ftp/applications/sdk/docs/ScanW.pdf

To execute any Acuant Android Mobile SDK method, a valid license key is required. Please contact sales@acuantcorp.com to obtain a license key.

This Acuant Android Mobile SDK API documentation document has the detailed description of all the important functions a developer would need to write integration with Acuant Android Mobile SDK.

2   Requirements

- AndroidSDK Version 17 or later.
- 5 MP camera resolution or higher.
- The card image must be taken in an acceptable light conditions to avoid glare and overhead lights for example.
- The card must preferably be fitted with in the brackets on the camera screen, to allow the picture to be taken at a maximum resolution.

3 Integration

A   Add AcuantAndroidMobileSDK SDK

a   Using Gradle
In order to add the framework to your project, add the AcuantAndroidMobileSDK.aar dependencies

a.1   Local file
Add the following code in your build.gradle to avoid file collision.

```
dependencies {
      configurations.create("default")
      artifacts.add("default", file('acuantMobileSDK.aar'))
}

android{
   packagingOptions {
      exclude 'META-INF/NOTICE'
      exclude 'META-INF/LICENSE'
      exclude 'META-INF/DEPENDENCIES'
      exclude 'META-INF/DEPENDENCIES.txt'
      exclude 'META-INF/LICENSE.txt'
      exclude 'META-INF/NOTICE.txt'
   }
}

repositories {

maven { url 'http://maven.microblink.com' }

}

dependencies {
      compile 'com.microblink:pdf417.mobi:5.5.2@aar'
      compile ('com.android.support:appcompat-v7:24.0.0')
      compile ('com.google.code.gson:gson:2.5')
      compile ('com.squareup.okhttp3:okhttp:3.2.0')
}
```

a.2   Maven repositories
In order to add the framework to your project, add the AcuantAndroidMobileSDK dependencies from Maven

```
repositories {
maven { url 'https://dl.bintray.com/acuant/Acuant' }
maven { url 'http://maven.microblink.com' }
}

dependencies {
        compile 'com.acuant.mobilesdk:acuantMobileSDK:4.4'

        compile 'com.microblink:pdf417.mobi:5.5.2@aar'

        compile ('com.android.support:appcompat-v7:24.0.0')

        compile ('com.google.code.gson:gson:2.5')

        compile ('com.squareup.okhttp3:okhttp:3.2.0')

}
```

Add the following code in your build.gradle to avoid some file collision
```
android{
    packagingOptions {
        exclude 'META-INF/NOTICE'
        exclude 'META-INF/LICENSE'
        exclude 'META-INF/DEPENDENCIES'
        exclude 'META-INF/DEPENDENCIES.txt'
        exclude 'META-INF/LICENSE.txt'
        exclude 'META-INF/NOTICE.txt'
    }
}
```

B   Obfuscation

If you are using ProGaurd to obfuscate, make sure to add the following rules

```
-keep class com.microblink.** { *; }
-keepclassmembers class com.microblink.** { *; }
-dontwarn android.hardware.**
-dontwarn android.support.v4.**
```

C   Add views into manifest

Add the followings activities into manifest.xml file:

```xml
<uses-permission android:name="android.permission.CAMERA"/>
<uses-permission android:name="android.permission.WRITE_EXTERNAL_STORAGE"/>
<uses-permission android:name="android.permission.READ_EXTERNAL_STORAGE"/>
<uses-permission android:name="android.permission.READ_PHONE_STATE"/>
<uses-permission android:name="android.permission.ACCESS_NETWORK_STATE"/>
<uses-permission android:name="android.permission.INTERNET"/>
```

```
<activity
      android:name="com.acuant.mobilesdk.detect.CameraCardDetectManual">
</activity>
<activity
      android:name="com.acuant.mobilesdk.detect.PDF417.CameraPDF417">
</activity>
<activity
   android:name="com.acuant.mobilesdk.detect.Camera2CardDetectManual">
</activity>
```

D   Multiple APK Support (Optional)

Multiple APK support is a feature on Google Play that allows to split the large APK file into smaller APKs for different CPU architectures. This helps in keeping the application size small for the end user. Please follow the instructions from Google to split the application as specified at https://developer.android.com/google/play/publishing/multiple-apks.html

4   Activating the license key

In order to activate the license key, use the following method:

```
AcuantAndroidMobileSDKControllerInstance.setWebServiceListener(th
is);
```

then, call the web service:

```
AcuantAndroidMobileSDKControllerInstance.callActivateLicenseKeySe
rvice(key);
```

the callback method `activateLicenseKeyCompleted` in the listener will be called when the activation finishes.

Note: The license key only needs to be activated once. Execute this method only one time. Some licensees are issued by Acuant pre-activated and don't need further actions.

5   Initialize and create the SDK's instance
Implement WebServiceListener interface in your activity

A   With activity and license key.

Pass an activity to initialize the AcuantAndroidMobileSDKController class, and the license key.

```
AcuantAndroidMobileSDKController.getInstance(activity,
licenseKey);
```

B   With activity, cloud address and license Key

Pass an activity to initialize the AcuantAndroidMobileSDKController class, the cloud address and the license key. The cloud Address must not contain "https://". Ex: "https://cloud.myAddress.com/" must be written "cloud.myAddress.com". Note: Only set cloud address if you are hosting Acuant web services in your own data center. By default, Android MobileSDK communicates with the Acuant data center.

```
AcuantAndroidMobileSDKController.getInstance(activity,
"cloud.myAddress.com", licenseKey);
```

C   With activity.

Pass an activity to initialize the AcuantAndroidMobileSDKController class, the entry point to the library:

```
AcuantAndroidMobileSDKController.getInstance(activity);
```

D   If your instance was created previously.

Once the controller was created, you can obtain it through:

```
AcuantAndroidMobileSDKController.getInstance();
```

6   Capturing and cropping a card
Implement CardCroppingListener interface in your activity

A   Add the card capture method.
In order to show the camera interface, you need to know the card type that you want to capture.

If you need to capture driver's license card or medical card or passport you will need to use the manual camera interfaces.

If you need to capture Driver's License, you need to call 2 times: for the front side card and for the back side card.

a   Validating a license key and show the camera interface

```
AcuantAndroidMobileSDKControllerInstance.setWidth(myWidth);

AcuantAndroidMobileSDKControllerInstance.setPdf417BarcodeImageDrawable(getResources()
.getDrawable(R.drawable.barcode));

AcuantAndroidMobileSDKControllerInstance.
getInstanceAndShowCameraInterface(contextActivity, license, activity, cardType,
region, isBarcodeSide);
```

The width values are mandatory, they are set to indicate the width and height of the cropped cardimage.
A Drawable can be provided before calling `getInstanceAndShowCameraInterface` method in order to be displayed in the barcode scanning functionality. If not, no image will be shown.
`currentOptionType` is one of the AcuantCardType possibilities: Driver License, Medical Insurance or Passport.
`stringMessage`Message to show.
`currentOptionType` is one of the AcuantCardType possibilities: passport.

b   Show the manual camera interface methods

```
AcuantAndroidMobileSDKControllerInstance.setWidth(myWidth);

acuantAndroidMobileSdkControllerInstance.showManualCameraInterface(mainActivity,
CardType.DRIVERS_LICENSE, cardRegion, isBackSide);
```

The width values are mandatory, they are set to indicate the width and height of the cropped cardimage.

After the user taps the screen, the cropping process begins, there are two callback methods:

- **public void** onCardCroppedStart(Activity activity);

   `activity:` the activity of the full screen Window, or the activity owner of the modal dialog (in case of Passport and Tablet for example)

- **public void** onCardCroppedFinish(Bitmap bitmap);

   `bitmap:` the image card result
   This function returns the cropped card image is returned.

- **public void** onCardCroppedFinish(final Bitmap bitmap, boolean scanBackSide);

   `bitmap:` the image card result
   This function returns the cropped card image is returned.
   `scanBackSide:` A flag to alert the user to capture the back side of the card.

- **public void** onOriginalCapture(Bitmap bitmap);

`bitmap:` the image before the cropping process begins.
This function returns the card image without crop process.

- **`public void`** `onCancelCapture();`

Called when the user tap the back button.

- If the application is targeted for Android API 23 and above, the control will return to the following method after the user taps on allow/deny for camera permission. The requestCode will be Permission.PERMISSION_CAMERA. If the permission is already given manually then the control won't come here.

```java
//Override this only for API 23 and Above
@Override
public void onRequestPermissionsResult(int requestCode,
                String permissions[], int[] grantResults) {
        switch (requestCode) {
        case Permission.PERMISSION_CAMERA: {
                // If request is cancelled, the result arrays are empty.
                if (grantResults.length > 0
                && grantResults[0] ==
PackageManager.PERMISSION_GRANTED) {
                // Permission granted
        } else {
                // permission denied
        }
        return;
        }
        }
    }
```

c   Show the barcode camera methods

```java
AcuantAndroidMobileSDKControllerInstance.setWidth(myWidth);

AcuantAndroidMobileSDKControllerInstance.setPdf417BarcodeImageDrawable(getResources()
.getDrawable(R.drawable.barcode));

acuantAndroidMobileSdkControllerInstance.showCameraInterfacePDF417(mainActivity,
CardType.DRIVERS_LICENSE, cardRegion);
```

The width values are mandatory, they are set to indicate the width and height of the cropped cardimage.
A Drawable can be provided before calling `showCameraInterfacePDF417` method in order to be displayed in the barcode scanning functionality. If not, no image will be shown.

After the user opens the camera, the detection process begins, there are only one callback methods:

- **public void** onPDF417Finish (String result);

  result: the barcode string result

- **public void** onBarcodeTimeOut();

  This function will trigger to alert that the capture is pending without closing the camera view

- **getBarcodeCameraContext**();

  return: The current barcode camera context.
  This function return null if the barcode camera is close.

- **pauseScanningBarcodeCamera**();

  This function pause the barcode camera detection

- **resumeScanningBarcodeCamera**();

  return: The current barcode camera context.
  This function resume the barcode camera detection

- **finishScanningBarcodeCamera**();

  return: The current barcode camera context.
  This function close the barcode camera.

- **public void** onCancelCapture();

  Called when the user tap the back button.

B   Optional, Add the following methods to customize.

setPdf417BarcodeImageDrawable: Customize the barcode interface with an image, default empty.
AcuantAndroidMobileSDKControllerInstance.setPdf417BarcodeImageDrawable(getResources()
.getDrawable(R.drawable.barcode));

setWatermarkText: method to see the watermark on your camera
AcuantAndroidMobileSDKController.setWatermarkText("Powered By Acuant",0,0,30,0);

setInitialMessageDescriptor: Customize the initial message, default implementation says "Align and Tap" or "Tap to Focus".

setInitialMessageDescriptor(R.layout.hold_steady);

setInitialMessageDescriptor(message, red, green, blue, alpha);

setFinalMessageDescriptor : Customize the capturing message, default implementation says
"hold steady".
setFinalMessageDescriptor(R.layout.align_and_tap);
setFinalMessageDescriptor(message, red, green, blue, alpha);

setFlashlight: Enable or disable the flashlight, by default is false.
setFlashlight(showFlashlight);
setFlashlight(left, top, right, bottom);

setCropBarcode: Enable or disable the barcode image cropping. By default is false.
setCropBarcode(canCropBarcode);

setShowActionBar: Enable or disable the action bar. By default is false.
setShowActionBar (false);

setShowStatusBar: Enable or disable the status bar. By default is false.
setShowStatusBar (false);

setShowInitialMessage: Enable or disable the barcode camera message. By default is false.
setShowInitialMessage (false);

setCanShowBracketsOnTablet: Enable or disable the guiding brackets for tablets
setCanShowBracketsOnTablet(true);

C   Add the following methods to set the size of the card.

If the proper card size is not set, MobileSDK will not be able to process the card.

For Driver's License Cards
LicenseDetails details ; // license details obtained during license key validation
if(details.isAssureIDAllowed()){
    AcuantAndroidMobileSDKControllerInstance.setWidth(**2024**);
}**else** {
    AcuantAndroidMobileSDKControllerInstance.setWidth(**1250**);
}

For Medical Insurance Cards
AcuantAndroidMobileSDKControllerInstance.setWidth(1500);

For Passport Documents

```
AcuantAndroidMobileSDKControllerInstance.setWidth(1478);
```

7   Processing a card

After the capture and the crop process, you can retrieve information through processing of the cropped image.

A   Add a callback for the web service.

```
AcuantAndroidMobileSDKControllerInstance.setWebServiceListener(callback);
```

B   Call the web service to process the card image

a   For Driver's License Cards

```
ProcessImageRequestOptions options =
ProcessImageRequestOptions.getInstance();
options.autoDetectState = true;
options.stateID = -1;
options.reformatImage = true;
options.reformatImageColor = 0;
options.DPI = 150;
options.cropImage = false;
options.faceDetec = true;
options.signDetec = true;
options.iRegion = region;
options.imageSource = 101;
options.acuantCardType = cardType;
```

```
AcuantAndroidMobileSDKControllerInstance.callProcessImageServices(frontSideCardImage, backSideCardImage, barcodeString,callerActivity, options);
```

Explanation of the parameters:

region - Integer parameter for the Region ID. Parameter value -
United States – 0
Australia – 4
Asia – 5
Canada – 1
America – 2
Europe – 3

Africa – 7
General Documents – 6

autoDetectState- Boolean value. True – SDK will auto detect the state of the ID. False – SDK wont auto detect the state of the ID and will use the value of ProcState integer.

stateID - Integer value of the state to which ID belongs to. If AutoDetectState is true, SDK automatically detects the state of the ID and stateID value is ignored. If AutoDetectState is false, SDK uses stateID integer value for processing. For a complete list of the different countries supported by the SDK and their different State integer values, please see Appendix F of ScanW document - http://www.id-reader.com/ftp/applications/sdk/docs/ScanW.pdf

faceDetec - Boolean value. True - Return face image. False – Won't return face image.

signDetec - Boolean value. True – Return signature image. False – Won't return signature image.

reformatImage - Boolean value. True – Return formatted processed image. False – Won't return formatted image. Values of ReformatImageColor and ReformatImageDpi will be ignored.

reformatImageColor - Integer value specifying the color value to reformat the image. Values –
Image same color – 0
Black and White – 1
Grayscale 256 – 2
Color 256 – 3
True color – 4
Enhanced Image – 5

DPI - Integer value up to 600. Reformats the image to the provided DPI value. Size of the image will depend on the DPI value. Lower value (150) is recommended to get a smaller image.

cropImage – Boolean value. When true, cloud will crop the RAW image. Boolean value. Since MobileSDK crops the image, leave this flag to false.

imageSource – To identify the source of the image. 101 is the value for MobileSDK.

b   For Medical Insurance Cards

```
ProcessImageRequestOptions options
=ProcessImageRequestOptions.getInstance();
options.reformatImage = true;
options.reformatImageColor = 0;
options.DPI = 150;
options.cropImage = false;
options.acuantCardType = cardType;

AcuantAndroidMobileSDKControllerInstance.callProcessImageServices(frontSideCa
rdImage, backSideCardImage, null, callerActivity, options);
```

Explanation of the parameters:

reformatImage - Boolean value. True – Return formatted processed image. False – Won't return formatted image. Values of ReformatImageColor and ReformatImageDpi will be ignored.

reformatImageColor - Integer value specifying the color value to reformat the image. Values –
Image same color – 0
Black and White – 1
Grayscale 256 – 2
Color 256 – 3
True color – 4
Enhanced Image – 5

DPI - Integer value up to 600. Reformats the image to the provided DPI value. Size of the image will depend on the DPI value. Lower value (150) is recommended to get a smaller image.

cropImage – Boolean value. When true, cloud will crop the RAW image. Boolean value. Since MobileSDK crops the image, leave this flag to false.

c   For Passport Cards

```
ProcessImageRequestOptions options =
ProcessImageRequestOptions.getInstance();
options.reformatImage = true;
options.reformatImageColor = 0;
options.DPI = 150;
options.cropImage = false;
options.faceDetec = true;
options.signDetec = true;
options.acuantCardType = cardType;
options.imageSource = 101;


AcuantAndroidMobileSDKControllerInstance.callProcessImageServices(frontSideCardImage, null, null, callerActivity, options);
```

Explanation of the parameters:

faceDetec - Boolean value. True - Return face image. False – Won't return face image.

signDetec- Boolean value. True – Return signature image. False – Won't return signature image.

reformatImage - Boolean value. True – Return formatted processed image. False – Won't return formatted image. Values of ReformatImageColor and ReformatImageDpi will be ignored.

reformatImageColor - Integer value specifying the color value to reformat the image. Values –
Image same color – 0
Black and White – 1

Grayscale 256 – 2
Color 256 – 3
True color – 4
Enhanced Image – 5

DPI - Integer value up to 600. Reformats the image to the provided DPI value. Size of the image will depend on the DPI value. Lower value (150) is recommended to get a smaller image.

cropImage – Boolean value. When true, cloud will crop the RAW image. Boolean value. Since MobileSDK crops the image, leave this flag to false.

C   Finally, do your post-processing of the card information

The callback method:

processImageServiceCompleted(AcuantCard card)

`card`: a 'card ' object with the scanned information
`status`: one of the constants of AcuantErrorType
`message`: error message from the server

is called when the web service completes. A 'card' with the card information is returned. It will be an instance of DRIVERS_LICENSE, PASSPORT, MEDICAL_INSURANCE according to the original card type you passed to the web service. You can retrieve state, signature, name, etc. from this class, for example for license driver's card, these are some properties:

String `name`;
String `licenceID`;
String `address`;
String `city`;
String `zip`;
String `state`;
String `idCountry`;
String `eyeColor`;
String `hair`;
String `height`;
String `weight`;
String `licenceClass`;
String `restriction`;
String `sex`;
String `county`;
String `dateOfBirth`;
String `expirationDate`;
String `nameLast`;
String `nationality`;
String `placeOfBirth`;

```java
Bitmap faceImage;
Bitmap signImage;
Bitmap reformatImage;
String authenticationResult;
ArrayList<String> authenticationResultSummaryList
```

You can retrieve the name through:

card.getName()

also, you can check all the properties for all the card types in the API doc.

This is the implementation in the Sample project:

```java
/**
 *
 */
@Override
public void processImageServiceCompleted(Card card) {
   if (Util.LOG_ENABLED) {
      Utils.appendLog(TAG, "public void processImageServiceCompleted(CSSNCard card, int status, String errorMessage)");
   }
   isProcessing = false;

   Util.dismissDialog(progressDialog);

   String dialogMessage = null;

   try {
     DataContext.getInstance().setCardType(mainActivityModel.getCurrentOptionType());

     if (card == null || card.isEmpty()) {
        dialogMessage = "No data found for this license card!";
     } else {

        switch (mainActivityModel.getCurrentOptionType()) {
          case CardType.DRIVERS_LICENSE:
            DataContext.getInstance().setProcessedLicenseCard((DriversLicenseCard) card);
            break;

          case CardType.MEDICAL_INSURANCE:
            DataContext.getInstance().setProcessedMedicalCard((MedicalCard) card);
            break;
```

```
            case CardType.PASSPORT:
                DataContext.getInstance().setProcessedPassportCard((PassportCard) card);
                break;

            default:
                throw new IllegalStateException("There is not implementation for processing the
card type '"
                    + mainActivityModel.getCurrentOptionType() + "'");
        }

        Util.unLockScreen(MainActivity.this);

        Intent showDataActivityIntent = new Intent(this, ShowDataActivity.class);
        this.startActivity(showDataActivityIntent);
    }

  } catch (Exception e) {
    Utils.appendLog(TAG, e.getMessage());
    dialogMessage = "Sorry! Internal error has occurred, please contact us!";

  }

  if (dialogMessage != null) {
    Util.dismissDialog(alertDialog);
    alertDialog = Util.showDialog(this, dialogMessage,new DialogInterface.OnClickListener()
{

        @Override
        public void onClick(DialogInterface dialog, int which) {
            isShowErrorAlertDialog = false;
        }
    });
    isShowErrorAlertDialog = true;
  }
}
```

8 Facial Recognition and Match Feature

Acuant FRM (Facial Recognition Match) is a person authentication solution for mobile devices based on biometric face recognition.

Acuant FRM
  • Opens the front camera

- Ensures the user is correctly placed in front of the camera

- Detects a live person

- Detects spoofing attacks by presenting eye blink challenge

- Acquires biometric samples

- Verifies the identity of a user

- All the steps are done in real time.

Benefits of Acuant FRM

- Helps in reducing fraud by matching the face biometrics to the face image on the driver's license or passport.

- Easy to integrate

- Secure

- Fast and convenient

- Real time checks and processing within seconds

The Acuant FRM performs following checks to recognize a live face and match face biometrics to the face picture on the driver's license or passport.

1) Face position checks: check that the face is well detected, correctly centered and in a good distance from the camera.

   a) Distance to person algorithm ensures that person's face is at optimal distance from the front camera.
   b) Ensures that person is only presenting frontal face (Side faces are rejected).
2) Tracks eye blinks as an added layer to check for face liveliness and avoid spoofing attacks.
3) Captures face biometrics and matches it to the face picture on the driver's license or passport.

Following are the APIs/Classes to use the Facial Match feature.

a. FacialRecognitionListener
   This is the listener to be used to get the call back from the SDK interface. It has two interfaces

   i.   `public void onFacialRecognitionCompleted(final Bitmap bitmap);`

         This is called when a live face is successfully recognized. The parameter "`bitmap`" contains the face image recognized by facial recognition.

    ii.   Public void onFacialRecognitionCanceled();
        This is called when the user cancels facial recognition.

    b. Show facial recognition user interface

To show the facial recognition interface, call the following method:
AcuantAndroidMobileSDKController.*getInstance*().showManualFacialCameraInterface(**Activity activity**);

To customize "Blink Slowly" instruction message, use the following API.

setInstructionText(String instructionStr, int left, int top,Paint paint)

Parameters :
instructionStr : instruction to be displayed
left : left padding
top : top padding
paint : Paint object to specify color,text font etc

    c. Facial Match function call

The facial match function call can be made the same way as the other card processing function calls. Below is an example:

public void processImageValidation(Bitmap faceImage,Bitmap idCropedFaceImage)
{
    //code
    ProcessImageRequestOptions options = ProcessImageRequestOptions.*getInstance*();
    options.**acuantCardType** = CardType.*FACIAL_RECOGNITION*;
    acuantAndroidMobileSdkControllerInstance.callProcessImageServices(faceImage,
idCropedFaceImage, **null**, **this**, options);
    //Code
}

The following web service call back method will be called after the above function call returns

    @Override
    public void processImageServiceCompleted(Card card) {
    //Code
    if(**mainActivityModel**.getCurrentOptionType()==CardType.*FACIAL_RECOGNITIO N*) {
        FacialData **processedFacialData** = (FacialData) card;

```
        }
      //Code

    }
```

d. FacialData
   This class is the data class for facial results. Following are the methods to get the facial data

   public boolean getFacialMatch()

   public String getTransactionId() // Facial match transaction id

   public Boolean getFacialEnabled() // If facial feature is enabled.

   public Boolean getFaceLivelinessDetection() // If a live face was detected.

   public String getFacialMatchConfidenceRating() // Confidence level out of 100

9   Errors handling

In order to handle the errors or alert over SDK's action , you will receive the error on didFailWithError(int code, String message) method.

Implement AcuantErrorListener interface in your Activity.

This is the implementation in the Sample project:

```
@Override
public void didFailWithError(int code, String message) {
   Util.dismissDialog(progressDialog);
   Util.unLockScreen(MainActivity.this);
   String msg = message;
   if (code == ErrorType.AcuantErrorCouldNotReachServer) {
      msg = getString(R.string.no_internet_message);
   }else if (code == ErrorType.AcuantErrorUnableToCrop){
      updateModelAndUIFromCroppedCard(originalImage);
   }
   alertDialog = Util.showDialog(this, msg, new DialogInterface.OnClickListener() {
      @Override
      public void onClick(DialogInterface dialog, int which) {
         isShowErrorAlertDialog = false;
      }
   });
   isShowErrorAlertDialog = true;
```

```
if (Util.LOG_ENABLED) {
    Utils.appendLog(TAG, "didFailWithError:" + message);
}
// message dialogs
isValidating = false;
isProcessing = false;
isActivating = false;

}
```

10 Error Types

public final static int *AcuantErrorCouldNotReachServer* = 0; //check internet connection
public final static int *AcuantErrorUnableToAuthenticate* = 1; //keyLicense are incorrect
public final static int *AcuantErrorUnableToProcess* = 2; //image received by the server was unreadable, take a new one
public final static int *AcuantErrorInternalServerError* = 3; //there was an error in our server, try again later
public final static int *AcuantErrorUnknown* = 4; //there was an error but we were unable to determine the reason, try again later
public final static int *AcuantErrorTimedOut* = 5; //request timed out, may be because internet connection is too slow
public final static int *AcuantErrorAutoDetectState* = 6; //Error when try to detect the state
public final static int *AcuantErrorWebResponse* = 7; //the json was received by the server contain error
public final static int *AcuantErrorUnableToCrop* = 8; //the received image can't be cropped.
public final static int *AcuantErrorInvalidLicenseKey* = 9; //Is an invalid license key.
public final static int *AcuantErrorInactiveLicenseKey* = 10; //Is an inactive license key.
public final static int *AcuantErrorAccountDisabled* = 11; //Is an account disabled.
public final static int *AcuantErrorOnActiveLicenseKey* = 12; //there was an error on activation key.
public final static int *AcuantErrorValidatingLicensekey* = 13; //The validation is still in process.
public final static int *AcuantErrorCameraUnauthorized* = 14; //The privacy settings are preventing us from accessing your camera.
public final static int *AcuantNoneError* = 200; //The privacy settings are preventing us from accessing your camera.

11 Change Log

Acuant Android MobileSDK version 4.4.

Changes:

- Added callback for camera runtime permission for target API level 23 and above.