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Integration Guide

SZM Mobile Applications alternative solution for the measurement of hybrid apps

SZM Library v2.0

Contents

1 Introduction

1.1 About this document

The present document describes a special form of the integration of the hybrid apps measurement in environments where the use of the native SZM libraries cannot be implemented consistently.

Across platforms, this document exclusively describes the **specifications of the alternative solution for the integration of the hybrid apps measurement** All additional information can be found in the platform-specific Integration Guides and supplementary documentation of INFOnline.

### 1.1.1 Concerning mobile enabled websites (MEWs) and static websites

In general, hybrid apps get the external website content from websites, that are optimized for mobile devices. In the following these types of websites will be referred to as MEW (=mobile enabled website). In case your hybrid app gets its content from a so-called static website optimized to be displayed on PCs and Notebooks, then all terms and conditions specified in our technical document referring to MEWs apply to static websites as well.

1.2 Measurement of hybrid apps (standard solution)

The SZM library is able to measure the utilization of hybrid apps, e.g. user actions in mobile contents displayed in so-called web views can also be included and combined with the measurement data of the native app framework.

The following diagram shows an overview of the mobile utilization in the SZM:

Messung mobiler Nutzung SZM
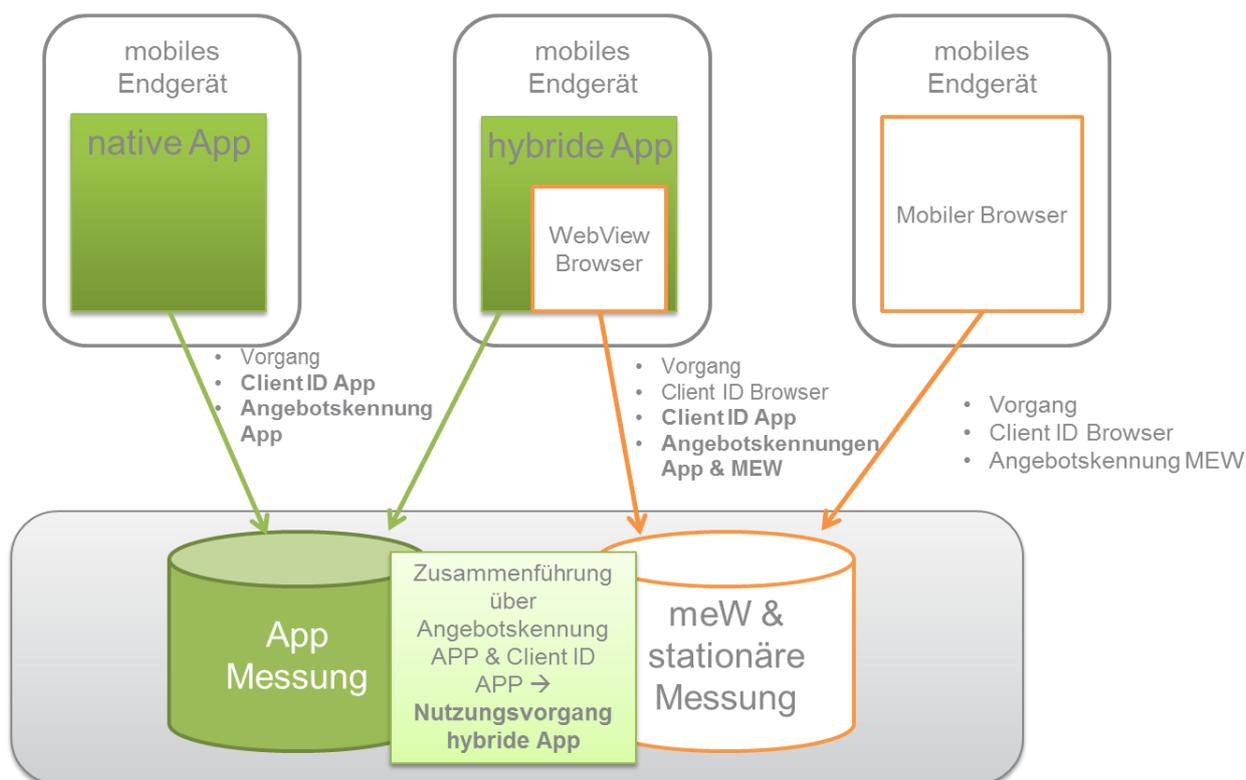
The prerequisite for the integration of the utilization measurement from the app framework and MEW is that the websites visited via the web view are likewise tagged with the SZM tag 2.0 for mobile-enabled websites. The app and the MEWs retrieved by the app have to use different offer identifications, which are assigned by INFOnline. An additional prerequisite is that the web view retrieval from the app code is adjusted and called up through the IOLWebView class in order to provide the app identification characteristics (currently primarily the client ID and the offer identification of the app) in the web view.

It is described in the platform-specific Integration Guides how the utilization measurement of hybrid apps can be implemented with the consistent use of the native SZM libraries (standard solution).

1.3 Alternative solution for the measurement of hybrid apps

Besides the native programming of apps, additional options are available in practice for developing an app. Accordingly for example, development frameworks such as PhoneGap or Titanium support the cross-platform development with a large portion of web contents. At the same time, these platforms limit the possibilities of influence in the area of the native app code in that they, e.g. prohibit the adjustment of the web view retrieval. This has the consequence that the hybrid measurement is not completely possible according to the standard procedure by means of the SZM libraries.

INFOnline describes in this document how the measurement of hybrid apps **can be implemented without using the adjusted web view retrieval ("IOLWebView") provided by the SZM Library** (alternative solution).

1.4 Support

The support for the SZM measurement is provided by INFOnline.

This support includes:

- organizational support (e.g., questions about the process);
- technical support for the measurement (e.g., analysis of received request);
- development support (e.g., questions about the installation of the SZM library).

The service and support team can be reached from Mondays to Fridays from 9 a.m. to 6 p.m. by

phone: 0228 / 410 29 - 77

e-mail: support@INFOnline.de

2 Alternative Integration Solution

2.1 Differences between standard / alternative solution integration

The alternative solution for the integration of the hybrid apps measurement is based on the process described in 1.2 wherein

- the app identification attributes are transferred from the app framework into the web view

- and transferred there to the SZM system by retrieval of the MEW tags.

It is thereby possible to link the user actions in the app framework with those of the MEW utilization into one utilization process.

In comparison to the standard solution, the alternative solution for the integration differs in one aspect:

- the transfer of the app identification attributes from the app framework into the web view is done manually (standard solution: automatically by retrieval of the IOLWebView).

2.2 Requirements

For the measurement of the hybrid app utilizations according to the alternative procedure, the following requirements have to be fulfilled:

- the platform-specific SZM Library (starting from version 2.0) must be integrated in the app framework and initialized in the start of the app;

- the contents called up in the web view must be tagged with the version of the SZM Tag 2.0 for mobile-enabled websites (MEW), which supports the hybrid measurement;

- the parameter transfer between the app framework and the web view used must take place as described in *0*

Using the SZM Library (starting from version 2.0) in the app frame is obligatory, because

- classification attributes of the app are formed via the SZM Library and transferred to the SZM system for the classification of the utilization process,

- the Library transfers automatic start-stop events to the app, which are relevant for the interpretation of the utilization process,

- the app identification attributes are formed according to the definitions of the SZM measurement and provided for further use (see 2.3.2)

2.3 Technical Integration

2.3.1 SZM Library

The platform-specific SZM Library must be implemented according to the requirements of the relevant Integration Guide. The Library must be initialized in the start of the app. At least version 2.0 of the SZM Library must be used.

2.3.2 Retrieval of the app identification characteristics

For the determination of the app identification characteristics, the SZM Library provides a deduced getter function that can be retrieved from the code of the app. The result is a JSON string, which has to be stored in a string variable and used when calling up the set multi-identifier method (see 0). The result of getMultiIdentifier() is a JSON-Object as String with escaped quote signs.

Examples for calling up the method:

iOS:

Starting with the SZM-Library v2.0.0 the class IOLWebView is available in two variants, which can be considered identical with regard to the result:

recommended: `[IOLWKWebView multiIdentifierString];`

alternativ: `[IOLUIWebView multiIdentifierString];`

We recommend to use the IOLWKWebView (which references the SDK basis class "WKWebView"), because the SDK basis class "UIWebView" (which is the basis of the IOLU-IWebView) is marked as deprecated starting with iOS 12 and will be omitted in the future.

NOTE: The SFSafariViewController **cannot** be used for SZM measurement because it does not support JavaScript injection!

Android:

SZM-Messung:

```
IOLSession.getSessionForType(IOLSessionType.SZM).requestMultiIdentifier
(IOLSession.MultiIdentifierCallback   multiIdentifierCallback);
```

The MultiIdentifierCallback is an interface which passes back the "MultiIdentifier" via the method onMultiIdentifier(Stringidentifier) once the "MultiIdentifier" is available. According to the Google guidelines the collection of the AdvertisingIdentifier has to happen asynchronous.

With Android it has to be assured that JavaScript and Dom-Storage are activated. This is not necessarily the case in a standard WebView:

```
webView.getSettings().setJavaScriptEnabled(true);
webView.getSettings().setDomStorageEnabled(true);
```

NOTICE: **It has to be ensured that a session in the respective SZM Library has been initialized before calling up these methods!**

2.3.3   Transfer of the app identification attributes in the web view utilization

For the transfer of the app identification attributes from the app framework into the web view utilization, INFOnline provides the JavaScript

```
iom.setMultiIdentifier(identifier:string)
```

function.

identifier:string   denotes the variable to which the event of the function retrieval described in 2.3.2 was saved.

This function must be called up in the web view with every retrieval of an URL.

2.3.4   Settings of websites for recording the hybrid utilization

The websites that are retrieved in a utilization process of the hybrid app by means of the web view and whose utilization is to be recorded must be provided with the tag described in the document "INFOnline_SZM Tag_2.0_MEW" in the chapter "Special SZM Tag 2.0 for Participation in a Measurement".

3 Contact

You can contact the Service & Support team any working day between 9 a.m. and 6 p.m. by

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