

UDC 004.05

PUSHWOOSH NOTIFICATION SERVICE IN THE MOBILE APPLICATION "MUSICIANS OF RUSSIA" FOR THE ANDROID OPERATING SYSTEM

NIKITA SHERSHNEV, YURI KRAVCHENKO
Polotsk State University, Belarus

This article describes the way how we can use the service PushWoosh in our applications. This service provides a push notification system, which we can use on all modern platforms. There are advantages of the PushWoosh service and examples of using this notification system on mobile application "Musician of Russia", which was written in Java for Android system.

Introduction. Push notifications are short pop-up alerts that appear on the screen of a mobile phone or computer and report you about important events and updates. With effective use, these brief informative messages are a powerful marketing tool. The main purpose of push notifications is to inform users about updates on websites or applications, added new content, or any other news [1].

According to statistics, provided by the world-famous company Localytics, which has a huge experience in analytics and application marketing, it is possible to note the following:

- 1) push notifications increase user engagement by 88%;
- 2) if the notifications is turned on, 65% of users return to the application within 30 days;
- 3) > 50% of users switch on push notifications and consider these messages useful;
- 4) push notifications increase the number of application starts by 27%;
- 5) correctly configured notification system increases interaction with customers 3 times [1].

The given statistical data make it clear that for the successful promotion of the application it is necessary to use the notification system. For this reason, push notifications have found wide application in the development of mobile applications.

PushWoosh is an excellent free solution for implementing a user notification system. This service is cross-platform, that allows it to use on more than 20 different platforms. Figure 1 shows the systems that support PushWoosh.

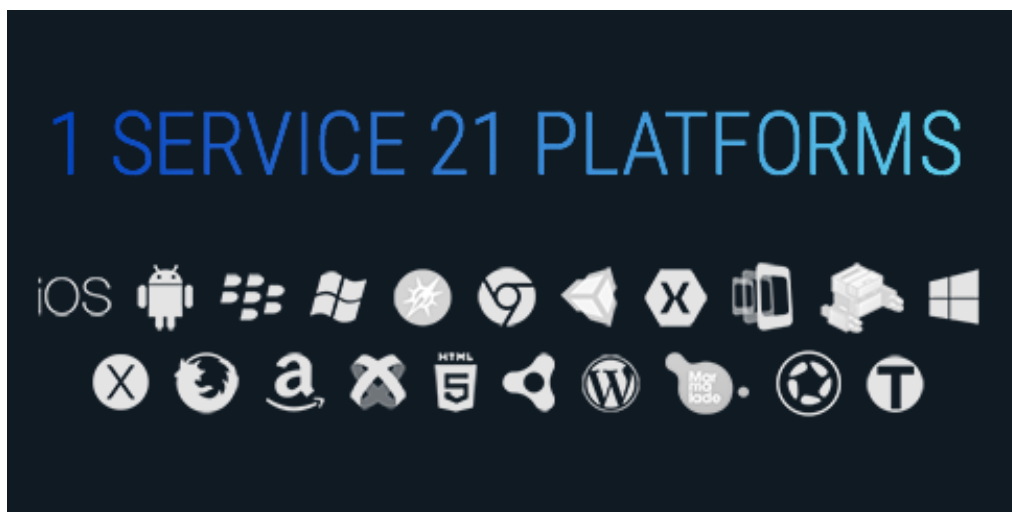


Fig. 1. Platforms for working with PushWoosh service

Main features of PushWoosh. PushWoosh has many features that make it solution more useable compared to its competitors. Among the most significant are the following:

- 1) Private Cloud. Each user is provided with a secure cloud storage. Service PushWoosh carefully save privacy of your personal data;
- 2) High Speed. The service works with incredibly fast speed. Every day PushWoosh sends over 250 million push-Referrals;

ITC, Electronics, Programming

3) Mult-language. PushWoosh always knows which language is installed on the device that is signed for updates. This allows you to create a unique set of alert messages, adapted for each language, which easily allows you to overcome the language barrier;

4) Geozones. This PushWoosh feature can be used on devices running IOS, Android or Windows Phone. It allows you to create areas on the map, with an accuracy of 50 meters, to send notifications to users in a specific location;

5) Timezone Sensitive. Service PushWoosh provides the ability to send notifications to the user in accordance with his time zone. This allows you to make your push messages timely for each specific user and, as a result, more attractive [2].

Example of using PushWoosh in the mobile application "Musicians of Russia". PushWoosh service has proved itself and it is the best solution for working with push notifications. For this reason, when we created a mobile application "Musicians of Russia" for the Android operating system, it was decided to use this particular service. Next, an example of using this service in a mobile application written in the Java programming language will be considered. The process of integration of this service is quite simple, on the official site you can find detailed instructions on how to use PushWoosh on any platform, so let's move on to describing the application logic.

The main idea of the mobile application "Musicians of Russia" is to provide users with detailed information about music partners around the country. By musical partners are understood: concert venues and rehearsal bases, music labels and online stores, training bases as well as concert agencies. Was developed loyalty program, which means providing customers with personal bonus cards with discounts on the services of music partners. Also, the user is always aware of all important musical events [3].

An important role in the application "Musicians of Russia" is played Push Notifications. After all, they allow you to know in time about discounts and promotions in music stores, about changes in the schedule of visiting rehearsal bases and music labels, about imminent important events in the world of music. The system of notifications is based on the PushWoosh service. Below is an example of how you can use this service in your application.

First of all, you need to inherit the MainActivity from the FragmentActivity class and implement the PushEventListener interface (Listing 1).

Listing 1 – Implementing the PushEventListener interface

```
public class MainActivity extends FragmentActivity implements PushEventListener
```

```
In the onCreate method, we call the PushFragment.init(this); method (Listing 2).
```

Listing 2 – Initialization of the PushFragment

```
@Override
```

```
protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    // initialize PushWoosh Fragment
    PushFragment.init(this);
}
```

Next, create the onNewIntent method and call the PushFragment.onNewIntent(this, intent); (Listing 3).

Listing 3 – Creation of onNewIntent method

```
@Override
```

```
public void onNewIntent(Intent intent)
{
    super.onNewIntent(intent);
    // check if we have a new intent with push notification
    PushFragment.onNewIntent(this, intent);
}
```

After that, you need to implement the PushEventListener interface methods. The most important for us will be the doOnMessageReceive (String message) method, which is called when we receive a new notification from the PushWoosh service. This method implements the processing and output of a pop-up notification to the screen of the mobile device (Listing 4).

Listing 4 – Processing and displaying the notification on the user's screen

```
@Override
```

```
public void doOnMessageReceive(String message)
{
```

```

String show = parsePushNotification(message); // the message comes in JSON format, so it must be parsed
NotificationCompat.Builder builder = new NotificationCompat.Builder( getApplicationContext())
    // create a notification
    .setSmallIcon(R.drawable.info) // set a small icon for our message .setContentTitle("Музыканты
России") // set the title
    .setContentText(show) // place the text of the message
    .setVibrate(new long[]{10, 1000}) // add vibration to our alert
    .setColor(Color.rgb(255,45,192,233))
    .setAutoCancel(true); // the message automatically disappears from the notification menu
when the user touches it
Intent intent = new Intent(getApplicationContext(), MainActivity.class); // create a new instance of Intent
PendingIntent pendingIntent = PendingIntent.getActivity(getApplicationContext(), 0, intent, 0); // grant the
rights to the PushWoosh service to execute a code fragment
NotificationManager notificationManager = (NotificationManager) getApplicationCon-
text().getSystemService(Context.NOTIFICATION_SERVICE); // Notification Manager – Android system service that
manages all notifications
builder.setContentIntent(pendingIntent); // provide a response that will be received when you click on the noti-
fication
Notification notification = builder.build(); // we merge all the properties that were set for notification and re-
turn an instance of the Notification class
notificationManager.notify(1, notification); // the notification object is passed to the system by calling the noti-
ficationManager.notify()
}

```

Conclusion. As you can easily notice, the processing of push notifications in the mobile application "Musicians of Russia" for the Android operating system is quite simple and does not require any additional knowledge. All you need is to carefully read the instructions on the official website and take all the necessary steps step by step. This simple way to integrate push notifications with PushWoosh is one of the best modern solutions for implementing push notifications in your application.

REFERENCES

1. Push-уведомления: взрывная статистика [Electronic resource]. – Mode of access: <http://app-global.ru/blog/push-uedomleniya-vzryivnaya-statistika/>. – Date of access: 16.01.2018.
2. PushWoosh – Features [Electronic resource]. – Mode of access: <https://www.pushwoosh.com/features/>. – Date of access: 16.01.2018.
3. Музыканты России – Main Page [Electronic resource]. – Mode of access: <http://rusmuzikant.ru>. – Date of access: 16.01.2018.