REVIEW OF MOBILE APPLICATION MANAGEMENT SYSTEMS IN THE ANDROID OS

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Mobile applications are becoming a part of our lives more and more firmly. Today, the most popular smartphones are those running Android and OC IOS. However, the use of devices running Android OS keeps at the level of 50-55%, making this platform the most popular. Thus, the development of an application to monitor the state of the network is an urgent task.

The development of modern mobile applications has become more relevant than ever. According to global research, more and more people prefer mobile devices to computers. Thus, developers are being forced to develop applications for mobile devices, in particular those running on Android.

The Android OS began its development in 2003. It was founded by a group of talented developers who began to experiment and create designs for gadgets that could go online and run on the open-source operating system they wrote [1]. Perhaps the most famous person in their team is Andy Rubin.

The domain android.com, which they once bought, became the name of their development. By the year 2005 the working version of Android was created and, after negotiations in August 2005, Google bought the Android company for $130 million, and the development team moved to Google. As time has shown, the deal turned out to be an extremely profitable investment for Google [2].

It took a long time to improve the platform, but in 2008 there was the first smartphone on the open operating system Android, released for sale (it was presented by the brand NTS), which in the future received an update to the system available to all users [3].

The new convenient open-source system allowed anyone to write programs for it, the mass appearance of which was not long in coming. Thus, the Android platform provided flexible and easy ways to personalize any smartphone for a particular user.

Android is one of the first to be able to update software over the air, that is, without using a computer for this purpose. Each subsequent version fixes bugs of the previous one. The closer the device model is to the top model, the longer support for updates it will receive.

Given the advantages of this OS, users are loyal to such disadvantages as a record load on the battery, compared with competitors, not the highest system

stability, often low-grade applications, openness to viruses and low level of security of user data.

And, despite the fact that the brand NTS noticeably lost its prevalence at this time, in 2009 a lot of devices running Android OS began to gain mass popularity. For the average consumer the benefits of Android are manifested in the following: the ability to configure the smartphone by yourself, the choice of appearance of the menu, the choice of a variety of programs, the ability to support files in different formats, the rapid transfer of information from the device to another device, etc.

Thus, cell phones are not only a means of communication, but are beginning to replace the full-fledged computers with their own environment, their own applications and their own features. But in spite of all the mentioned, the main task of the mobile device is to keep in touch.

For the convenient use of cell phones will be appropriate to develop a software package, which will monitor the status of the mobile network of the 2nd user and notify the 1st user about it, provided they both install and provide permissions. Thus the application will work on the principle of peer-to-peer.

Communication between peer-to-peer networks should take place by transmitting information through the mobile Internet of each device. This method has a clear disadvantage: today there are large areas where there is no coverage by mobile operators. However, despite this disadvantage, this method has advantages: simplicity and convenience. Thus, the use of a mobile network is the most rational for this task.

References:

1. Vitalii Tkachov, Anna Budko, Kateryna Hvozdetska and Daryna Hrebeniuk. Method of Building Dynamic Multi-hop VPN Chains for Ensuring Security of Terminal Access Systems // IEEE International Scientific-Practical Conference Problems of Infocommunications, Science and Technology (PIC S&T): Kharkiv 06-09 oct. 2020, Kharkiv.

2. Tkachov, V., Bondarenko, M., Ulyanov, O., & Reznichenko, O. (2019, December). Overlay Network Infrastructure for Remote Control of Radio Astronomy Observatory. In 2019 IEEE International Conference on Advanced Trends in Information Theory (ATIT) (pp. 161-165).

3. Tkachov, V., Hunko, M., Volotka, V.: Scenarios for Implementation of Nested Virtualization Technology in Task of Improving Cloud Firewall Fault Tolerance. In 2019 IEEE International Scientific-Practical Conference Problems of Infocommunications, Science and Technology (PIC S&T), pp. 759-763. IEEE (2019).