Выводы

На основании проведенных комплексных расчетно-теоретических исследований и полевых инструментальных мониторинговых наблюдений за устойчивостью существующих зданий и сооружений, расположенных вблизи от глубокого котлована с удерживающими стенами после длительного периода временной приостановки строительства, можно сделать следующие выводы:

1. Для широкомасштабной, с высокой степенью достоверности, оценки устойчивости окружающих стен глубокого котлована и установления напряженно-деформированного состояния (НДС) несущих остовов различных зданий и сооружений, расположенных в зоне взаимо влияния, возникает необходимость в инженерном и геотехническом исследовании предшествующей формирования и развития НДС во времени. Практика и опыт исследований позволяет констатировать, что для установления НДС в грунтовом массиве и остове объектов следует применять комплексно-технологический подход с использованием системы: расчет - численное моделирование – инструментальное освидетельствование - геодезический мониторинг, которые взаимно дополняют и обогащают друг друга.

2. Опыт и результаты расчетно-теоретических исследований НДС при помощи современных расчетных программных комплексов и для сложной пространственной конструктивной системы здание-фундамент-грнт основании с глубоким котлованом с реалистичными вариантами численного моделирования его работы на разных этапах строительства и эксплуатации, позволяют принять ответственное решение, с учетом физического износа, по надежным методам устройства глубоких котлованов в тесной городской застройке современного города.

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UDC 004

“EVENTMAP” MOBILE APPLICATION

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The terms “mobile technologies”, “mobile applications” and “mobile learning” are increasingly foundin the last decade. Introduction of mobile technologies makes it possible to bring the sphere of human activity to a qualitatively new and modern level.

Wireless technologies and applications for mobile devices have experienced an incredible evolution over the past 10-15 years. For many researchers, mobile technologies have become one of the main areas of research. Today, in the light of the “Digital Kazakhstan” State program mobile technologies are a strategic direction for the innovative development of Kazakhstani society [1].

UNESCO defines mobile technologies as hardware, operating systems, networks and software, including content, training platforms and applications. What is more, both mobile phones and tablets, and pocket PCs, MP3-players, memory cards, e-book readers and smartphones are classified as mobile devices [2].

The British scientist A. Kukulksa-Hulme shares the same opinion. The scientist classifies mobile phones (cell phones), mp3 / mp4 players, tablet computers, netbooks and small laptops to mobile learning devices [3].

It should be noted that the list of mobile devices increases every day. Game consoles, digital voice recorder, e-book readers, electronic dictionaries, as well as various auxiliary devices for students with disabilities can be included in this list.

Today, an important aspect for students and Master’s students in the field of computer science is not only the use of finished mobile applications, but also the ability to develop a mobile application independently.
Students and Master’s students in the field of computer science have in the modular academic programs such disciplines as “Mobile applications development”, “Mobile and cloud computing”, “Java programming”, etc. The developed mobile applications serve as a finished product ready for use. One of which is the author’s mobile application for the Android operating system, which gives people the opportunity to:

- take an active part in the social and cultural development of the region;
- buy a ticket online to an event in the region.

The main principle of this application is the EVENT MAP events format. The application offers the user the following information: where to go, with whom to go, what to do, whom to call, feeling bored and there is nothing to do, make acquaintance with someone, share the event, find out what and where it is and who is there (Figures 1-9).

The application helps the user to find a company, select an event, assess the situation before going there, and invite people with whom it will be interesting to create/hold an entertaining event. All this is fast and convenient. The developed mobile application is ready for use. To run, a mobile application needs to be on android, which includes OSM maps and geo-positions, and the admin panel on the server.

The essence of the application: the users can publish their events and look through the events of other
users in the region (taking into account the location) in the general event feed.

To add their own events, the users must log in to the Facebook social network (hereinafter referred to as the FB). Viewing of the event feed is available to unauthorized users (guest). An authorized user can also repost events in their FB profile (not a link, but an automatic creation of a post in the FB).

When the user authorizes a profile photo (avatar), the name and surname in their profile in the FB are read and stored on the server. Also, authorization is stored in the cache on the user's device for subsequent automatic login to the profile.

Each event is necessarily linked to a point on the map (by the user's location, or to the indicated address or point on the map), the event category is pointed out (food and gatherings, dances and music, entertainment and games, movies and concerts, etc.) may have a description (the maximum length is 500 characters) and the photo is necessary (download from the device or camera). Also, the date and time of publication, the author and the counter of unique views (something similar to likes) are automatically linked to the event. Guests are not taken into consideration. Authorized users can leave comments under the events (comments can be deleted both by the author of the post, and by the author of the comment).

All events are stored 24 hours and then they are deleted automatically, they can also be deleted earlier by the author.

In the event feed, posts can be sorted by 2 items: the publication time, of the most interest. Sorting by defaults is set to “top display”. Interesting events are determined by the number of likes. In the feed, events are displayed in a short list: author, location, photo, short description up to 3 lines, number of likes and comments, category, date and time of publication. There is a button “more” under the photo, when clicked on, the current event is displayed in a new window in a detailed form: the same structure as in the short form, but full display of text and all comments. The user can also leave a comment in this window.

In addition to the feed, it is possible to display events on the map. The location of the user is also indicated on the map. Events on the map are marked. When you click on the mark, a brief description of the event opens: author, photo, text description, publication time, category. When you click on the short content, the complete content is displayed in a new window. When you click on a map, or another mark, the summary of the current event is closed, the summary of the new mark that the user has selected opens.

All events at the time of publication are sent to the server and written to the database. In the event feed, all data is read from the server according to the filters set (region and categories that the user can select in the settings) and displayed on the user's device. Also, users data are stored on the server: authorization, nickname, avatar, selected settings, the number of publications, selected events (those which they liked). On the profile page, the users can change their data, settings, avatar, go to favorites.

The administration panel is located on the server. One can access the panel through the site, using administrator login and password. The administrator can view and edit the whole database, block/delete/edit user profiles, posts, comments, set the timer to store events on the server (by default is 24 hours), after which they are deleted from the server automatically. When deleting events, they are also deleted from the list of favorites in the user profile, and all comments to this event are deleted. In addition, the administrator has access to statistics of guests, authorized users, events for all time, for a specific period (day/week/month/3 months/year), by category, by region. The photos are compressed to 800x800 size, user avatar: 200x200, maps load only the current user region and events within the region.

The developed mobile application is not a complete version, it is still being developed and improved. At the moment, it is popular among the students of S. Toraighyrov PSU. In our opinion, this mobile application has a perspective for further development.

References

УЧЁТ ЦИКЛИЧЕСКОЙ НЕСТАБИЛЬНОСТИ И ОДНОСТОРОННЕГО НАКОПЛЕНИЯ ПЛАСТИЧЕСКИХ ДЕФОРМАЦИЙ ПРИ МАЛОЦИКЛОВОЙ УСТАЛОСТИ

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