

We argue that the biggest challenge is to resolve the gaps between the appropriation of new technologies by the adult and young population. It is well known fact that young used to use ICT in a faster manner, making them the pioneers of their use and teaching. However, adult population is responsible of assisting them in the formation of the new generations; they cannot be relaxing in this situation. On the other hand, it should motivate learning of all the technological tools to stimulate a link to the new social dynamics.

We should also point out the fact that the versatility of these technologies have promoted the ease of communication for individuals with disabilities, as those persons with speech or hearing problems. Thus, such situation promotes the social inclusion and the breakup of barriers to access communication and socialization of different groups of people. Likewise, the use of mobile phones and instant messaging are excellent allies to stimulate interaction processes in different contexts.

Furthermore, one should not forget that new tendencies associated to the use of ICT have emerged. First and foremost, we should point out telework – an opportunity that new technologies afford to work from home. Such possibility beneficiates those people in particular conditions that require a work connection or employability, as in the case of parents with little children and even population with disabilities. We can observe how these situations have configured new ways of working. Now it is possible to be realized from home in an easy way, on account of the diversity of electronic devices and connectivity dimensions.

To draw the conclusion, one can say that ICT have influenced and modified economic, politic, social and cultural structures. We state that it is pertinent to encourage further researches to evaluate the ICT impact in the relation processes from a qualitative approach and through longitudinal studies, and exploring how new technologies have redefined the concepts of life in modern societies.

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## **INFORMATION SYSTEM OF AUTOMATED LOCALIZATION OF OBJECTS ON THE MAP ON THE BASIS OF PHOTOGRAPHIC IMAGES OF THE EARTH SURFACE**

The use of unmanned aerial vehicles (UAVs) is an important part of the research based on the methods of analysis of the earth surface. In particular, in the agrarian field it is possible to automate the process of obtaining statistical data of the quality of germination of crops by performing aerial photography of the area with the help of UAVs. This saves the time spent by the agronomist to bypass all the fields, since UAVs fly much faster and improve the completeness of the data obtained by analyzing the entire surface of the field, and not just its vicinity, as it is now.

Most programs that perform statistical, figurative and informational processing of photographs from UAVs have a number of drawbacks that prevent from using them to solve this problem. Free online services (Google Earth, Google Maps, foursquare, AlterGeo, 2GIS) are primarily aimed at locating the user and searching for individual infrastructure objects on a "people's map" that is filled in by other users or employees of the service in the "designer" mode. A group of highly specialized tools such as ImageJ, ImageExpert, JMicroVision, Endrov, which are designed to solve specific problems, cannot be used.

The process of analyzing the image and constructing the flight path of the UAVs can be divided into five stages. At the first stage a user in a dialog mode downloads necessary images in the strictly defined order to the program; 1) the general picture of the terrain, 2) the image of local areas in the order of the date and time of their creation. At the second stage, if necessary, the pre-processing of images is performed, during which one removes third-party glares, shadows and noise that can interfere with the efficient operation of the algorithm.

The third step is to invoke the SIFT method, in the process of which occurs the search for key points (i.e. points that are significantly allocated on the general background) are searched on all images. Also, at this stage, pairwise comparison of obtained key points of all images of local areas with key points of the overall picture of the area is performed. In the case that the level of their similarity exceeds the threshold specified by the user (from 0 to 1), a conformity between two key points is built.

The fourth stage is the display of these correspondences by constructing coloured lines from a point at the image of a local area to the corresponding point of the same object on the general photo. The fifth stage is the construction of a UAV flight route based on the sequence of snapshots and the download of data.

Developed on the basis of SIFT algorithm, the information system of automated localization of individual areas on the basis of their aerial photographs allows to accelerate significantly the work on the construction of a flight route of an unmanned aerial vehicle. The area of application of this information system is, first of all, the automation of the process of constructing the UAV flight route based on photographs of the earth surface, with the subsequent attachment of these images to a particular area and their semantic analysis.

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## **HOW TO PROTECT YOUR COMPUTER FROM VIRUSES**

Nowadays, computers are used for everything. They contain a lot of personal information, which we do not want to lose. Many people do not know how to protect their information from viruses.

A computer virus is software with the capabilities to copy itself, the implementation in the system code and other software products as well as irreparable damage to the computer hardware and information stored on media.

Once in the computer, virus programme starts "hosting" and "bringing orders". The malicious application starts up and does various actions. Viruses can be of different types: file viruses, worms and Trojans.

File viruses infect other programmes and files by adding them in the code of the programme. When you run the infected programme or file the malicious code is executed. If a virus infects the system files, malicious code is launched automatically each time the computer is booted.

The worm is a self-replicating virus. Once on the user's computer, the worm duplicates itself repeatedly, locates many of its copies in different folders with different names, which complicates its removal. Worms can also be copied via LAN to the shared folders on other computers to send itself by email, using the messaging programme with the help of network attacks.