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GPR survey, as one of the best geophysical methods for social and industrial needs

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This paper is about ways and methods of applying non-invasive geophysical method – Ground penetrating radar (GPR) survey in different spheres of science, industry, social life and culture. Author would like to show that geological methods could be widely used for solving great variety of industrial, human safety and other problems. In that article, we take GPR survey as an example of such useful geophysical methods.
It is a fact that investigation of near surface underground medium is important process, which influence on development of different spheres of science and social life: investigation of near surface geology (layering, spreading of rock types, identification of voids, etc.), hydrogeology (depth to water horizons, their thickness), preparation step for construction of roads and buildings (civil geology, engineering geology), investigation of cultural heritage (burial places, building remains,...), ecological investigations (land slides, variation in underground water level, etc.), glaciology. These tasks can be solved by geological methods, but as usual, geophysical survey takes a lot of time and energy (especially electric current and resistivity methods, seismic survey).
Author claims that GPR survey can be performed faster than other geophysical surveys and results of GPR survey are informative enough to make proper conclusions. Some problems even cannot be solved without GPR. For example, identification of burial place (one of author's research objects): results of magnetic and electric resistivity tomography survey do not contain enough information to identify burial place, but according to anomalies on GPR survey radarograms, presence of burial place can be proven. Identification of voids and non-magnetic objects also hardly can be done by another non-invasive geophysics surveys and GPR is applicable for that purpose.
GPR can be applied for monitoring of dangerous processes in geological medium under roads, buildings, parks and other places of human activity. Monitoring of such hazards as landslides, underground erosion, variation in ground water level can help prevent dangerous processes with destructive consequences, which can result in peoples' injuries and even death.
Moreover, GPR can be used in other spheres of life, where investigation of hidden (under or behind conductive for electromagnetic wave material) objects is needed: rescue operations (finding of people after natural and human-made disasters under snow, under debris of building material); military purpose (security systems, identification of people presence through walls, doors, ground etc.).
Author work on algorithms (first of all for VIY GPRs (http://viy.ua/)), which will help more precisely find objects of interest on radarograms and even solve inverse problem of geophysics.
According to information in that article, geophysical methods can be widely used to solve great variety of tasks and help to investigate humans' past (researches of cultural heritage) and provide information to create safe and comfortable future (preventing of natural hazards and better planning of construction).