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Geo augmented visualisation for improving safe operations of natural gas pipeline network

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s the utilization range of smart devices for infrastructure has widen its application owing to flourishing of smart devices, studies on the technologies to graft IT onto underground utilities are actively carried out. In particular, as underground utilities have a characteristic of invisibility, studies on a management system converged with augmented reality are demanded for the efficient management in underground utilities. Accordingly, in this paper database was built of underground utilities in order to produce accurate locations and information about underground utilities in a visualized form, and by analyzing the data, build a system which automatically generates cross section of the underground utility at the location where the user requires. Also, the user will provide efficiency in identifying accurate locations of the underground utility and in information management by producing the exact location of the underground utility as data on the basis of augmented reality and by visualizing it in realistic data. Augmented Reality (AR) is a technology which shows a view of the real world merged upon a digital image in real time, and provides users with more improved sense of reality. In particular, mobile AR is a technology which serves the information about the object and environment the user sees at present by converging it on the screen of a mobile device. By popular use of smartphones, mobile AR combines information about diverse sensors (slope, azimuth), focused on display field, situational recognition through input/output devices and hardware control, and thus studies on AR with this technology have been popular. Based on this, diverse applications are developed through mobile AR technology by managing geographical information data converged with GIS (Geographical Information System) and by newly processing the data through collecting and analyzing. This paper is discuss about the system which control the geospatial data in underground utilities, and the key content, if the location is selected, is about the technique which can produce output of the underground utilities information of the location by analysing the information about the pipes, water pipeline, optical fiber cable buried underground.