Spatial Planning and Management Using Augmented Reality

Hyejung Ko (Republic of Korea)

Key words: Land management; AR, Land use, Land use planning, underground facility

SUMMARY

There is a rising interest on Augmented Reality because of the recent 'Pokemon Go' game. The Augmented Reality is a technique by which an image can be shown as the three dimension virtual image overlaps a real image or background. To apply such a technique, we need a GPS system that sends and receives geographic or location information, a gravitational sensor, applications, and IT devices. By using AR, it is possible to be provided with land information through IT devices within one's hands, which relied on documents and experiences of the person in charge. Before constructing a building, it is possible to check and verify land boundaries, land use plans, and underground facilities in reality based on the user's location. Especially, it is very difficult to manage underground facilities which are invisible and are always exposed to the danger of being flooded and collapsed. In reality, they have been managed so far just by the haphazard development which relied on documents and experiences of the person in charge. This will cause enormous repair costs and frequent changes in construction. With AR, we will be able to overcome the existing limits that we just guess the location of underground facilities and we won't dug the ground anymore actually. Businesses using AR are the ones that create high added values in future. Therefore, businesses of space planning and management using AR make it possible to quickly find out and manage the exact boundary of the estate, land use planning, and underground facilities through IT devices and based on the user's location, considering reality and accuracy.