An Educational Cadastral Surveying Simulator Applying a Metaverse Platform

Jang Chan Woo (Republic of Korea)

Key words: Cadastre; Capacity building; Education; Geoinformation/GI; Metaverse; VR; Digital Twin

SUMMARY

In Korea, there are many cases where the boundary on the cadastral map and the actual one do not correspond. Therefore, the boundary needs to be determined by surveyors who have professional knowldege and know-how. However, there are temporal and spatial limitations in terms of capacity building because the cadastral survey is conducted on site. As a result, a host of time and cost for training is needed. This paper is to suggest the development of a cadastral surveying simulator to minimize the limitation. In particular, the simulator is able to contribute to sharing education and know-how and strengthening work skills.

By using VR, cadastral surveyors are able to cooperate with other stakeholders in virtual space for cadastral surveying. Simulator will help observe sites, determine boundaries, and prevent safety accidents by using surveying instruments in virtual spaces. And Furthermore, Simulator will improve to be a metaverse platform that can simulate every action occurring on the land including sectors like construction, civil engineering, firefighting, and traffic.