

## **BIM Application and Construction Schedule Simulation for the Horizontal Work Area**

**Authors :** Hyeon-Seong Kim, Sang-Mi Park, Seul-Gi Kim, Seon-Ju Han, Leen-Seok Kang

**Abstract :** The use of BIM, including 4D CAD system, in a construction project is gradually increasing. Since the building construction works repeatedly in the vertical space, it is relatively easy to confirm the interference effect when applying the BIM, but the interference effect for the civil engineering project is relatively small because the civil works perform non-repetitive processes in the horizontal space. For this reason, it is desirable to apply BIM to the construction phase when applying BIM to the civil engineering project, and the most active BIM tool applied to the construction phase is the 4D CAD function for the schedule management. This paper proposes the application procedure of BIM by the construction phase of civil engineering project and a linear 4D CAD construction methodology suitable for the civil engineering project in which linear work is performed.

**Keywords :** BIM, 4D CAD, linear 4D simulation, VR

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