

A. MONTASER, O. MOSELI. **4D and tablet PC for progress reporting.** *Gerontechnology* 2012;11(2):187; doi:10.4017/gt.2012.11.02.181.00 **Purpose** The purpose of this paper is to present automated methodology utilizing BIM 4D-modeling and tablet PC for progress reporting in construction job sites. **Method** By integrating project schedule and BIM, a 4D-model is generated to simulate planned construction sequence. Tablet PC capabilities have increased considerably in recent years; integrating various automated data acquisition technologies such as, RFID readers, barcode readers, wireless communication (Wi-Fi and Bluetooth), GPS and camera for video clips and digital images (Figure 1) in addition to the traditional advantages of durability, mobility, expressivity of display and user friendliness. The developed method utilizes 4D with its visualization capabilities and a tablet PC with its enhanced automated data acquisition technologies to facilitate tracking and progress-reporting of onsite construction operations. Site personal has the tablet PC that incorporates the 4D-model and adjusts the model to the current date to have a planned visualized model that represents current project status. Site engineers while walking inside and outside the facilities under construction collect the as-built progress data utilizing the automated data technologies capabilities of the tablet PC to capture ongoing progress data in various formats such as RFID-data scanned, barcode data scanned, images, notes, sounds and video clips. The collected data is then used to update project status on the 4D-model, which is subsequently used for comparison with the as-planned conditions. **Results & Discussion** An example project applied the proposed methodology on construction jobsite of research laboratory building in the west end of Montreal. Near-real-time automated data acquisition of onsite operations facilitates early detection of discrepancies between actual and planned performances and supports project managers in taking timely corrective measures. This methodology is expected to enhance traditional tracking and progress reporting procedures and makes it more objective, less time consuming and less costly.

Keywords: BIM, 4D, tablet PC, automated site data acquisition, progress reporting

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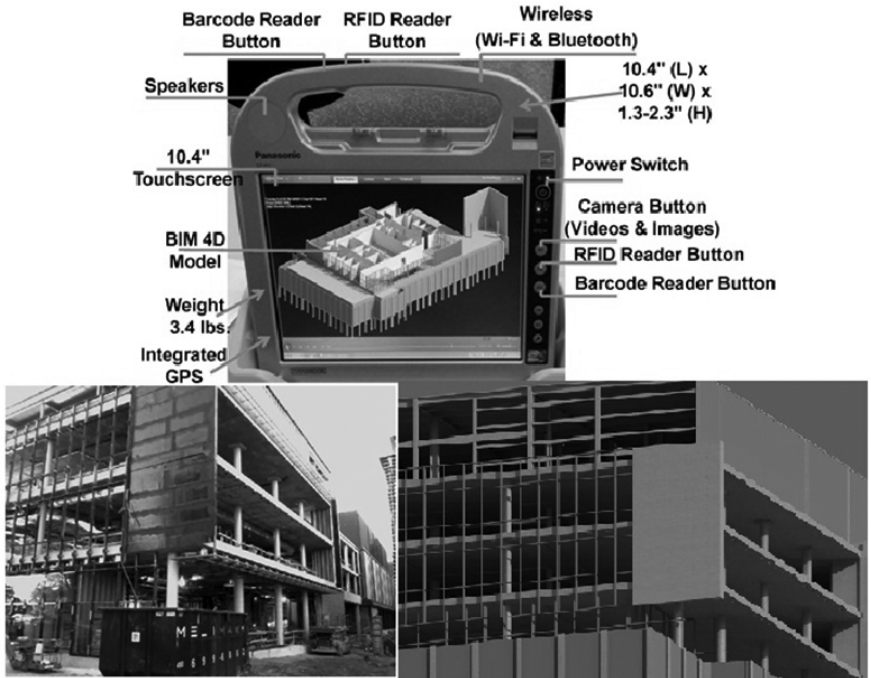


Figure 1. Case study - Construction facility of the center for structural and functional Genomics at Concordia University