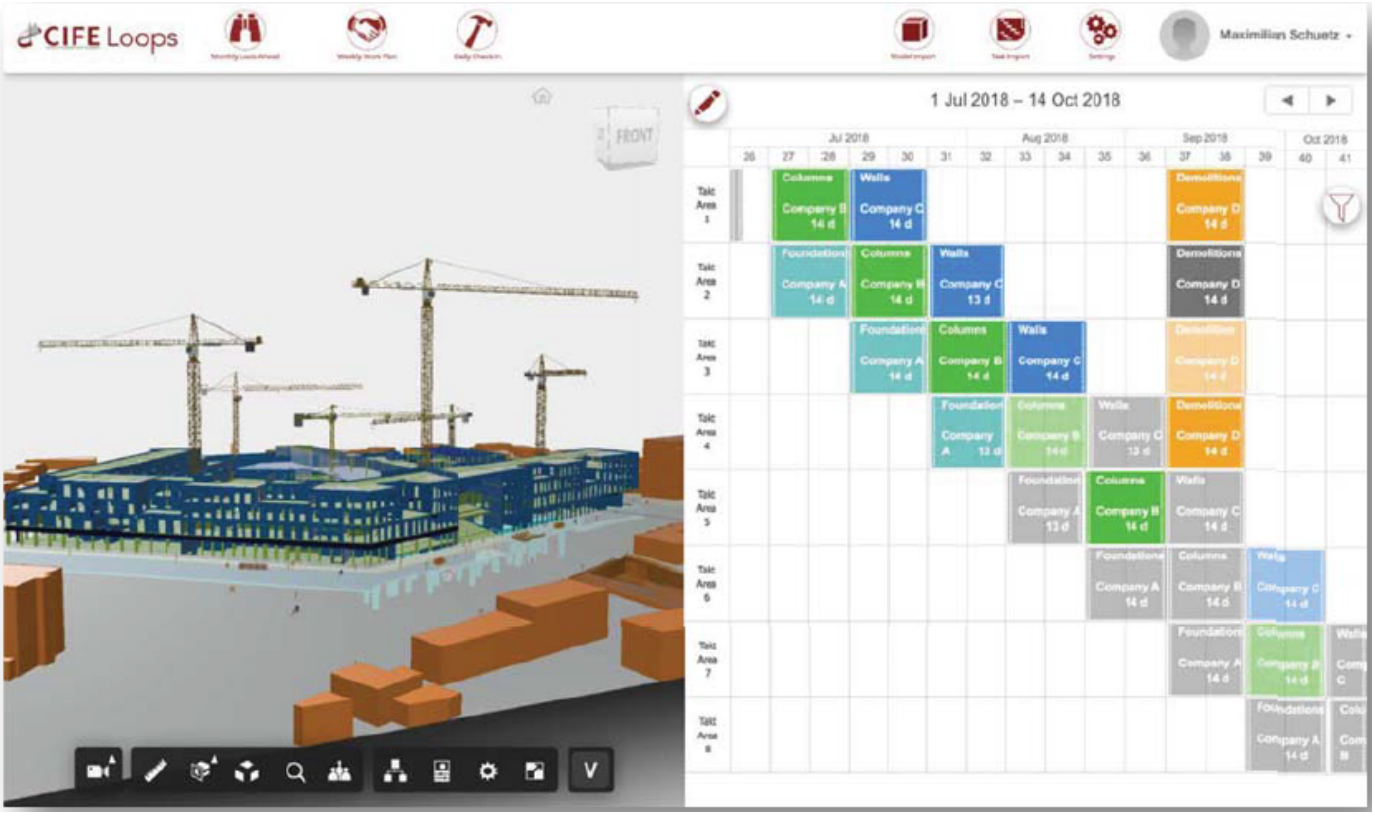
Docket #: S18-269

Loops - Dynamic Look-Ahead Windows based on project performance feedback loops

Stanford researchers have developed an intuitive, dynamic construction scheduling software tool called Loops. Loops is both Building Information Modeling (BIM) based and Lean-enabled. This customizable, cloud-based system accommodates and synchronizes all planning cycles within one platform. The length and focus of each planning cycle is constantly and automatically adjusted based on: corporate standards input and user preference, which feeds back into the machine learning. Loops is simple and intuitive to use, bringing information together for clear project snapshots (daily, weekly and monthly) - allowing users to focus on doing, not planning.



Loops Look Ahead Window

Stage of Research

Loops has been implemented and used in 3 different construction project case studies, including field testing with three construction projects: a medical center, residential building, and sports arena. Field-testing at three construction projects showed a weekly 58% reduction in planning time. Owners were able to understand change order impact on supply chain schedules. Daily, weekly and monthly schedule accuracy improved; and planning cycles were better connected.

Applications

- Construction Project Management

Advantages

- Reduces planning time and effort (58% reduction achieved during field implementation)

    - Simple and intuitive with a touch-enabled user interface – no need for an expert to run the system
    - Cloud based and accessible through Autodesk^{TM}ID
- More reliable, accurate scheduling
    - BIM based, Lean enabled, and location-based Takt time planning
    - Integrates with other systems (over 68 3D model formats available)
    - Imports existing schedules and plans, and links in upstream tasks
    - Dynamically adjusts look ahead window
    - Learns from project performance and adapts automatically to known project delays.

Innovators

- Maximilian Schuetz

Licensing Contact

Imelda Oropeza

Senior Licensing Manager, Physical Sciences

Email