Whiting-Turner Plantgrid Implementation on Oakland Global Logistics Center: A Case Study

As construction project complexity continues to rise, there will be an increasing importance placed on a company’s ability to manage project information. This management is aided by the use of project management information systems (PMIS). These systems are made up of applications that help managers track project progress from start to finish. Whiting-Turner uses the application Plantgrid within their PMIS. This paper will explore how Whiting-Turner implements Plantgrid on the currently being constructed Oakland Global Logistics Center. In addition, this paper will review the fundamental concepts behind a PMIS, the framework of mobile cloud computing applications, and the features of leading cloud-based software. Whiting-Turner’s Plantgrid implementation for this project has been broken down into use, effectiveness, and areas that Plantgrid could further develop. The core uses of Plantgrid for this project include: a set of mobile electronic plans that assist in field decision making, a tool for documenting task progress and safety measures, and a means of document encapsulation where RFI s and submittals are linked to plan sheets. Overall, the project team found Plantgrid to be effective within their PMIS. However, areas for Plantgrid to further develop include: the desktop interface, project party collaboration, and integration with other applications.

Current Mobile Framework

- Tier 3: Client layer
  - Site monitoring
  - Task management
  - Information sharing

- Tier 2: Platform layer
  - CCTV, wireless technologies, mobile device (GPS, digital camera, gyroscope, touchscreen …), application

- Tier 1: Database layer
  - Task information, cost/time information, site image data, CAD drawings ...

Plangrid Use

- Markup and Rough Takeoff
- Sheet and Document Hyperlinking
- Punchlist Creation and Tracking
- In-app Camera Access and Photo Linking
- RFI Creation and Assignment

Plangrid Areas for Further Development

Collaborative Features for All Project Parties
- No subcontractors or designers using Plantgrid for this project
- Primarily being used by general contractors
- Further document management capability desired
  - Whiting-Turner and designers prefer Newforma

Integration
- Opportunity to incorporate information from other management applications into Plantgrid
  - Increase info sharing between management and field
  - More informed decision making in field

Desktop Interface
- Currently lacking in tool variety for tasks such as detailed markup and accurate takeoff
- Users prefer Bluebeam while at desktop

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