GSA Shares Cutting-Edge
Building Information Modeling Practices

On March 25, GSA Project Technology Specialist Steve DeVito conducted a best practices presentation on integrating Building Information Modeling (BIM) with facilities management practices at the International Facility Management Association (IFMA) Facility Fusion Conference and Expo in Boston, MA. Approximately 60 participants heard DeVito discuss the implementation plan used to define rules and responsibilities to collect and exchange building data through his case study on the NASA New Town Program, a 15-year facility modernization program at the NASA Langley Research Center (LaRC) in Hampton, VA.

The New Town Program consists of five phases to construct six new buildings and renovate two existing buildings within NASA LaRC campus, with all phases implementing BIM technology. NASA facility managers and maintenance contractors manage roughly 275 various LaRC facilities utilizing a Computerized Maintenance and Management System, IBM Maximo, for ordering and documenting work orders. The first phase of New Town consists of a new Langley Headquarters Building, which is currently completing its construction phase. This building, like all new GSA prospectus level construction projects since 2007, was designed using BIM technology.

Steve DeVito, GSA Project Technology Specialist

BIM is a sophisticated database which can be queried by end-users to view a building's 3D geometry, spatial program, equipment schedules, equipment manufacturer information, and attached files including PDF and JPG files, all in one place. The beauty of BIM models is that they can be integrated with any Information System that uses database technology as a platform for sharing information. They maximize the ability for co-locating extensive building data and making it interoperable.

When NASA's first phase for New Town was underway, there was a need identified early in the project to develop a strategic plan to integrate NASA's existing asset management software, IBM Maximo, with the on-going design updates in BIM throughout the construction phase and beyond. The challenge was unique, forward-thinking, rather advanced for the building industry, and was met head on through a task order issued through GSA BIM Indefinite Delivery Indefinite Quantity (IDIQ) contractor, EcoDomus.

The NASA Langley Headquarters Building project proved the BIM Model could be integrated with the NASA IBM Maximo System because they are both databases. BIM is revolutionizing the turnover of project documents from the general contractor to the building owner on capital projects. What used to be the turnover of tens of thousands of documents provided in many different formats including paper, and digital files such as CDs, DVDs, FTP sites, etc., is now a turnover of only a few BIM files transferred via one medium. The BIM files, or databases, contain all of these tens of thousands of documents in a formatted manner which can be specified to be compliant with the owners asset management, portfolio management, project management, and geographic information systems, as well as building automation systems and energy management systems.

DeVito and EcoDomus president, Igor Starkov, both presented details to IFMA conference attendees of how to incorporate BIM into facility management plans, the lessons they learned in doing so, and demonstrated the actual integration between the AOB1 BIM Models and the IBM Maximo Computerized Maintenance and Management System. They shared software solutions available for bringing BIM to facility management, and discussed the time savings and cost benefits of using BIM in facility management practices. For example, if there were 24,000 work orders issued in a given year, and two hours savings per work order at a cost of $50 an hour, there would be $2.4M savings on maintenance costs alone due to BIM's ability to quickly, through automation, detect and pinpoint sources of and information about faulty mechanical, electrical, plumbing, and HVAC operations. This integration process enables facility managers to reconcile and analyze information about their facilities to more efficiently and effectively perform maintenance and manage their inventory. By doing so, building owners will ensure a higher level of tenant satisfaction, while simultaneously saving significantly in portfolio operations costs.

For more details and/or lessons learned about BIM practices, please visit **www.gsa.gov/bim** or contact GSA Mid-Atlantic BIM Champion **Steve DeVito** at **steve.devito@gsa.gov** or **(215) 446-5724**.