Generic AEC/FM BIM View Specification

Concept Design BIM 2010

Reference	GSA-005	**Version**	1.0 -- 15-Jul-09	**Status**	Candidate
History	Composite MVD that includes all of the following: • GSA-001 - Design to Spatial Program Validation • GSA-002 - Design to Circulation/Security Analysis • BSA-002 - Design to Energy Performance Analysis • BSA-001 - Design to Quantity Takeoff/Cost Estimating				
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Document Owner	US General Services Administration (GSA), Statsbygg, Senate				

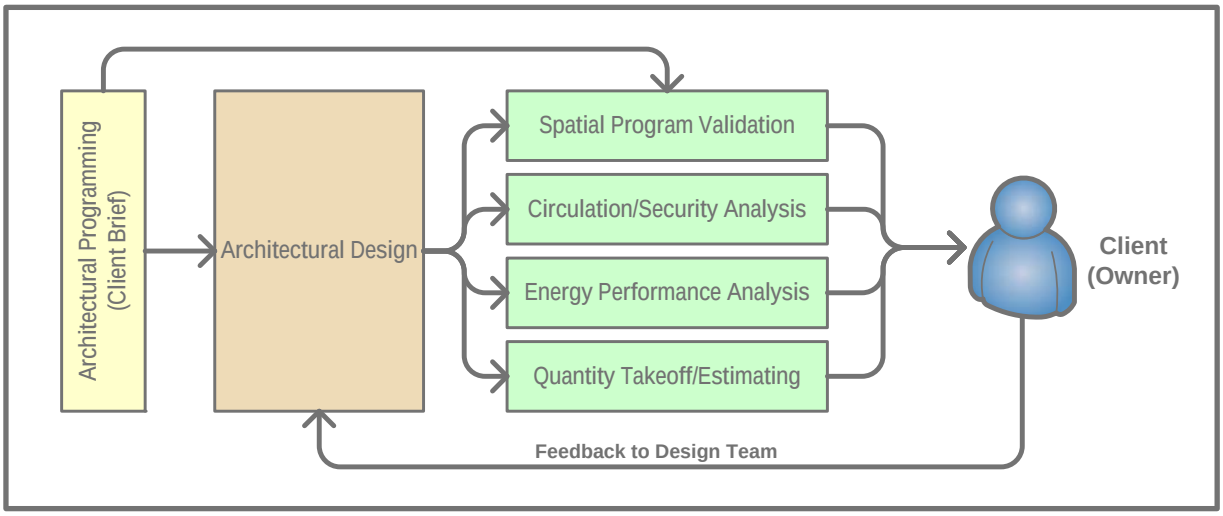
Description

The US General Services Administration (GSA) has been requiring architects to submit BIMs during Concept Design stage of all significant projects since 2007. These BIMs have been used by GSA to measure the performance of the building design, relative to the space program given to the design team initially. This analysis is call Spatial Program Validation. Instructions for development of such BIMs is provided in the form of a GSA BIM Guide.

In developing the Concept Design BIM 2010 GSA partnered with Statsbygg (= GSA of Norway), Senate (= GSA of Finland), and the Construction Specifications Institute (CSI). The high level goal in developing the Model View Definition (MVD) for 'Concept Design BIM 2010' has been to enable the following 4 types of analysis early enough in the design process that decisions can be made by these building owners in order to optimize the design in each of these four analysis areas.

- Spatial Program Validation (updated from the 2007 MVD)
- Human Circulation and Security Analysis
- Energy Performance Analysis
- Quantity Takeoff and Cost Estimating

The flow of information, analyses, and resulting client feedback to the designer is described by the following diagram:.



The information in exchnged in this BIM includes:

- Project - Identification, major project participants, project units system, project geometric representation types, spatial containment hierarchy
- Site - Identification, geo location, summary properties, site quantities, placement and geometry
- Building - Identification, summary properties, classification, building quantities, placement
- Building Storey - Identification, summary properties, classification, building story quantities, placement
- Space - Identification, summary properties, classification, thermal simulation schedule, design parameters, & comfort criteria, space quantities, zone assignments, occupant assignment, space boundaries, placement and geometry
- Space Occupant - identification, classification, space occupancy assignment
- Spatial Zone - identification, classification, thermal simulation systems assignment, member spaces

- Beam - Identification, type definition, classification, quantities, placement and geometry, voiding and connections
- Column - Identification, type definition, classification, quantities, placement and geometry, voiding and connections
- Curtain Wall - Identification, type definition, classification, quantities, placement and geometry, voiding and connections
- Door - Identification, type definition, classification, quantities, placement and geometry, voiding and connections
- Equipment - Identification, type definition, classification, quantities, placement and geometry, voiding and connections
- Structural Member - Identification, type definition, classification, quantities, placement and geometry, voiding and connections
- Plumbing Fixture - Identification, type definition, classification, quantities, placement and geometry, voiding and connections
- Railing - Identification, type definition, classification, quantities, placement and geometry, voiding and connections
- Ramp - Identification, type definition, classification, quantities, placement
- Ramp Flight - Identification, type definition, classification, quantities, placement and geometry
- Slab - Identification, type definition, classification, quantities, placement and geometry, voiding and connections
- Stair - Identification, type definition, classification, quantities, placement
- Stair Flight - Identification, type definition, classification, quantities, placement and geometry
- Wall - Identification, type definition, classification, quantities, placement and geometry, voiding and connections
- Window - Identification, type definition, classification, quantities, placement and geometry
- HVAC System - Identification, classification, component aggregation, service connection
- Vertical Circulation System - Identification, classification, component aggregation, service connection
- Electrical Power System - Identification, classification, component aggregation, service connection
- Electrical Lighting System - Identification, classification, component aggregation, service connection
- Cold Water System - Identification, classification, component aggregation, service connection
- Hot Water System - Identification, classification, component aggregation, service connection
- Waste Water System - Identification, classification, component aggregation, service connection

This model view can be used in any phase of buiding design/construction projects -- or even during building operation.

Currently, this view includes only information created or gathered by the architect. Future versions may include BIM information created by various engineering disciplines.

This model view defines the information that is exchanged -- not how it is created or how it is used. Those topics are left to the Information Delivery manual and BIM Guides from the Building Owner organizations

This document uses the official IAI View Definition Format version 1.0.11.