

## Early Design Information Exchange (ED)

### **NBIMS Overview**

The National Building Information Model Standard (NBIMS) is a set of interoperable standards for exchange of facility and infrastructure data through the life-cycle of a project. NBIMS is a joint project coordinated by National Institute of Building Sciences (NIBS) in conjunction with the International Alliance for Interoperability (IAI) and many other facilities-related associations and software companies.

### **Business Case**

During the process of facility programming, planning, and early design, owners' requirements, especially large owners, are provided in many forms: design and construction criteria, functional requirements, functional adjacencies and programmatic area allowances. These requirements are handed off to the planner/designer to collate into a cohesive plan including building code, site, cost, and engineering requirements. The goal of creating an Early Design (ED) view is to capture these in a comprehensive and computable exchange format to pass to downstream technologies such as design modeling, and engineering analysis technologies. Once in a standard computable format, this early design information can be used to validate proposed design solutions against requirements. It also provides the ability to compare alternative designs for life-cycle costing and other best practice design solutions.

### **Objectives**

The objective of this work is to create a standard view definition based on Industry Foundation Classes (IFC) for the exchange of information between project planning, programming (Project Brief), and early design and downstream applications. The view will contain owner requirements as well as constraints (i.e.: areas, non-graphic properties).

### **Implementation**

The Early Design View will be documented as an IFC Model View Definition (MVD). It will be based on the current IFC Coordination View.

### **Results to Date**

- Initial IDM Exchange Requirements and Process Views have been developed.
- First Draft of IFC from a single programming tool has been distributed to the North American Implementers Support Team members.
- This draft is being reviewed by vendors as well as the IAI Modeling Support Group for validation.
- Second Draft IFC file has been distributed and is awaiting comments.

### **Future Applications**

Once the Early Design MVD is fully developed, the capability of adding locally applicable property sets as an appendix to the view will be investigated.

### **Contact Information**

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### **Acknowledgements**

This project was originally begun as a continuation of AR-5 Early Design Specification project of the IAI. AR-5 was a joint endeavor between the North American and UK chapters of the IAI.

The newly formed North American Implementers Support group took on the mission to work the Early Design interoperability issues as a test case.

Also, the work on-going by the GSA for spatial standards, is an integral part of the success of this project.

