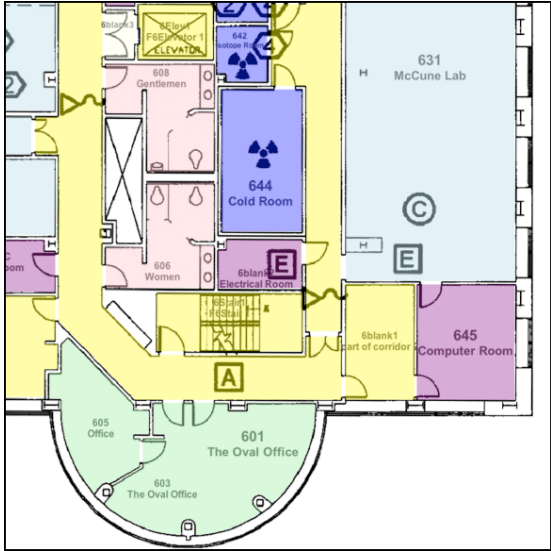
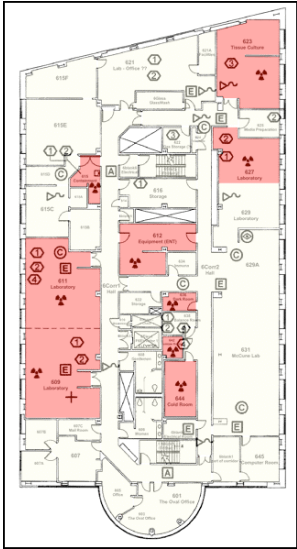
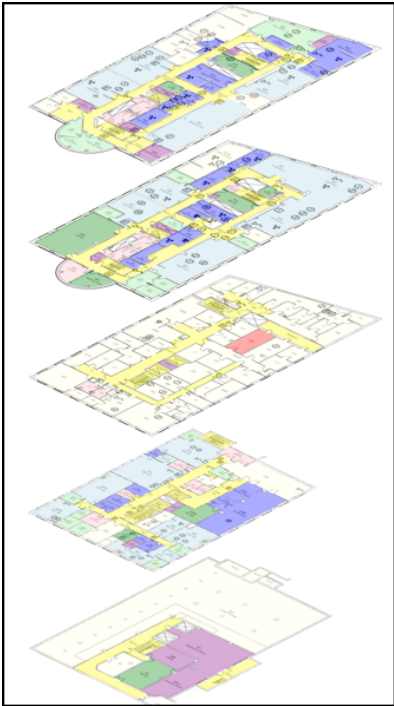


OFPD/X
Open Floor Plan
Display & eXchange

Progress Update October 2009

Simple, Lightweight File Format

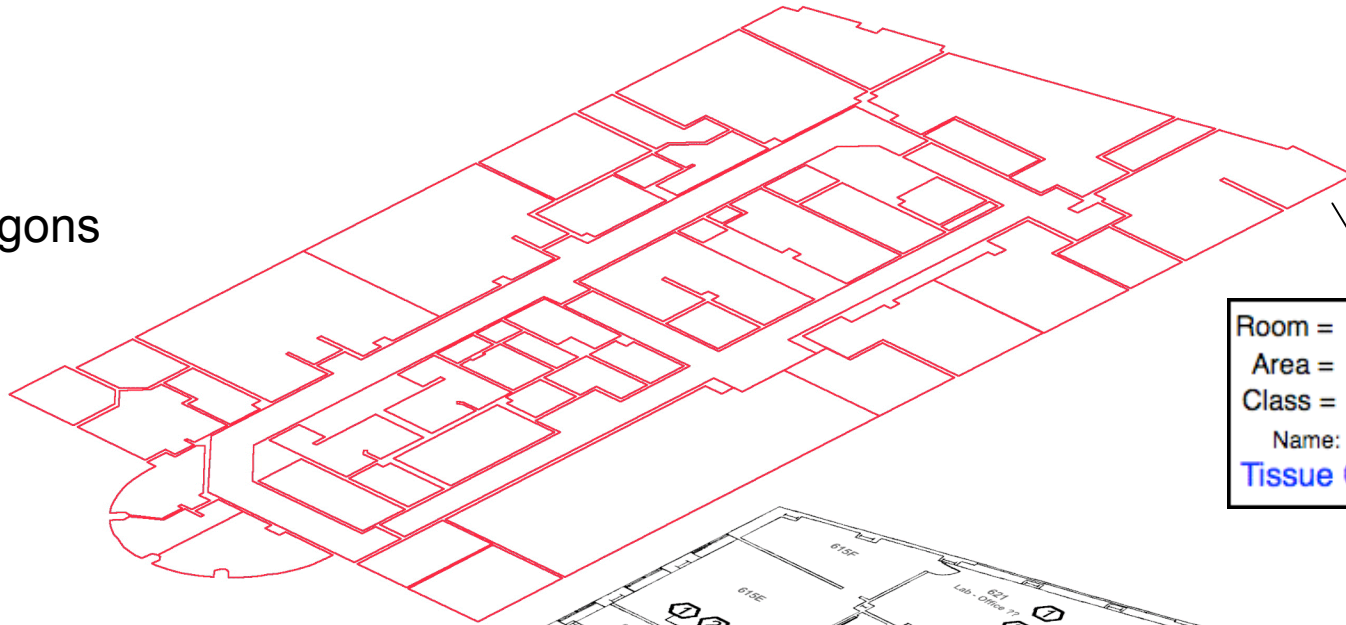


B3F6.svg

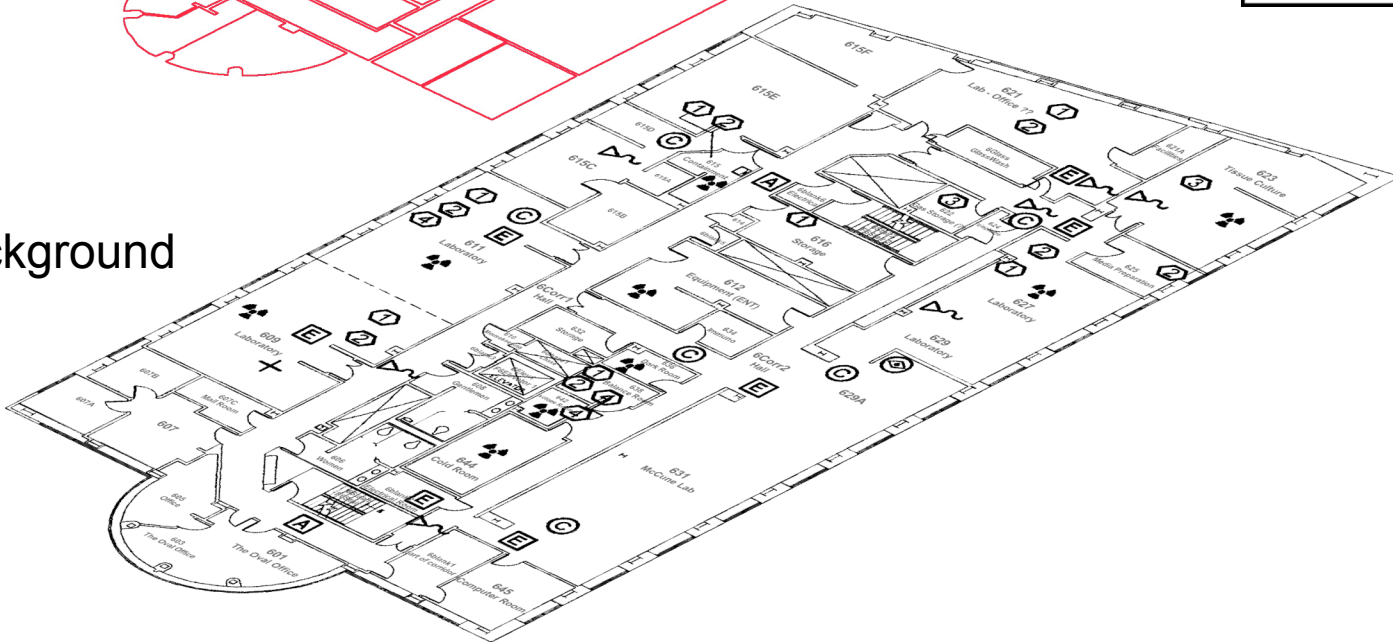
Building Information Display

Basic Layer Composition

Vector Polygons



Raster Background



Room = L623
Area = 610.8
Class = LabSupport
Name:
Tissue Culture

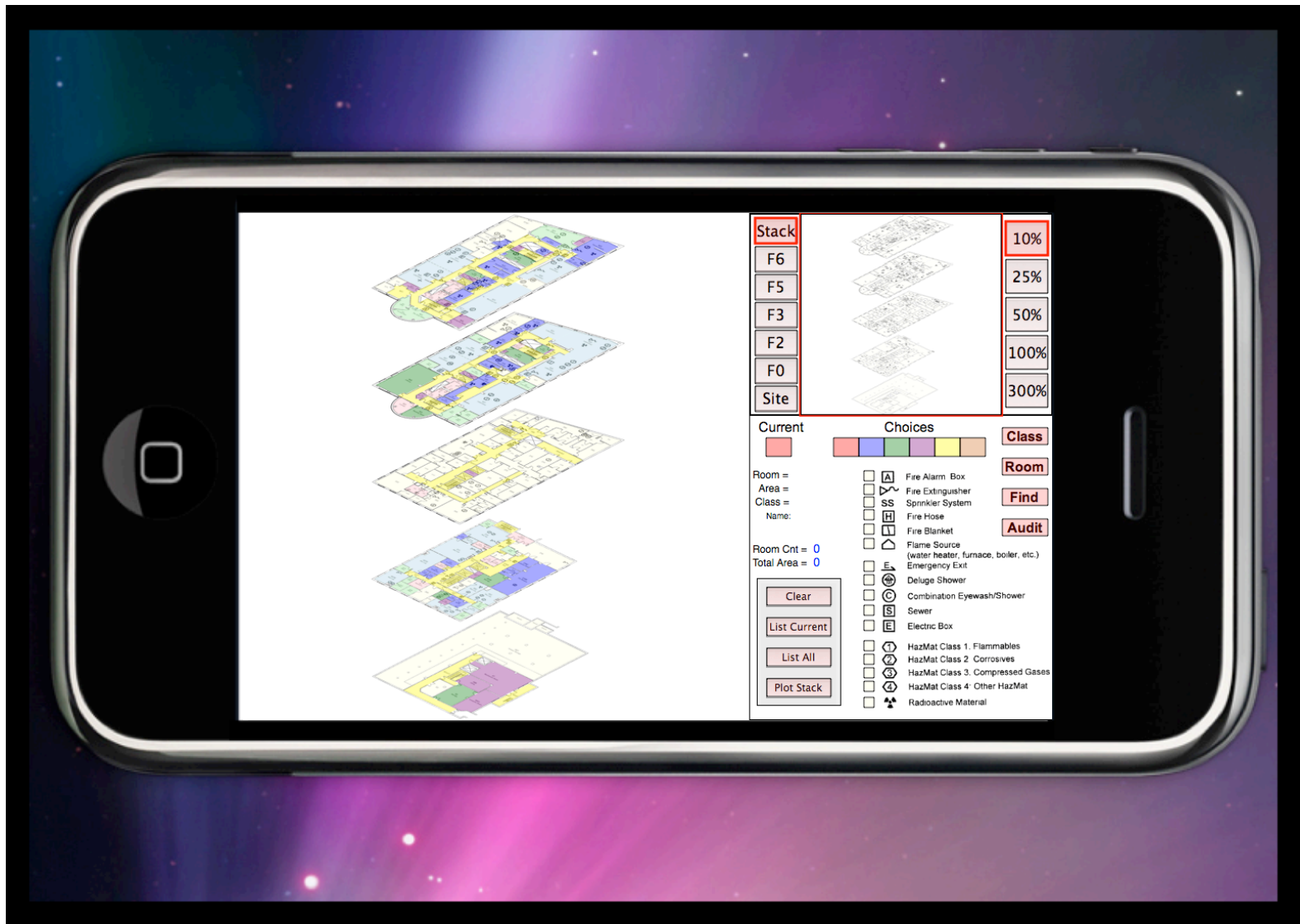
Simple Functionality

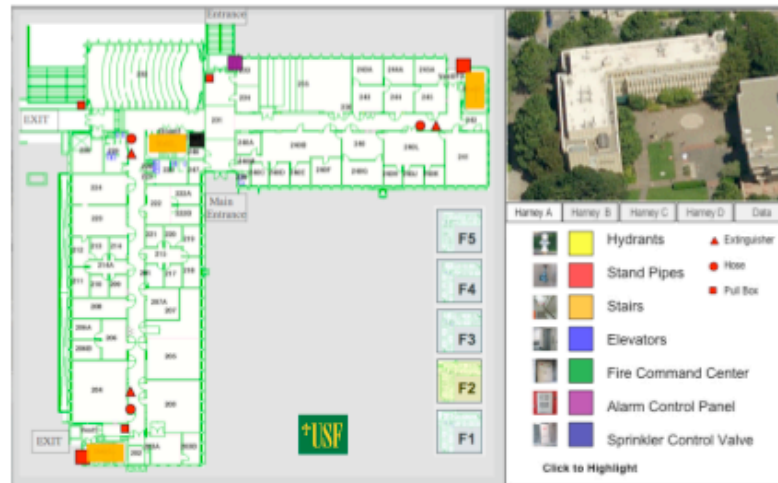
The screenshot shows a web browser window displaying a floor plan of 'SFGH - UCSF Bldg 3'. The main display area shows a detailed view of a section of the building with rooms like '644 Cold Room', '645 Computer Room', and '601 The Oval Office'. To the right is a control panel with several sections:

- Stack:** A vertical list of floor levels: F6, F5, F3, F2, F0, and Site. F6 is highlighted in red.
- Zoom:** A vertical stack of percentage buttons: 10%, 25% (highlighted in red), 50%, 100%, and 300%.
- Current:** A color-coded bar and input fields for 'Room =', 'Area =', 'Class =', and 'Name:'.
- Choices:** A list of facility features with checkboxes, including Fire Alarm Box, Fire Extinguisher, Sprinkler System, Fire Hose, Fire Blanket, Flame Source, Emergency Exit, Deluge Shower, Combination Eyewash/Shower, Sewer, Electric Box, and various HazMat classes (Flammables, Corrosives, Compressed Gases, Other HazMat, Radioactive Material).
- Buttons:** 'Class', 'Room', 'Find', 'Audit', 'Clear', 'List Current', 'List All', and 'Plot Stack'.

Annotations with arrows point to various parts of the interface:

- Main Display:** Points to the main floor plan view.
- View Selection:** Points to the 'Stack' of floor levels.
- Pan:** Points to the zoom percentage buttons.
- Zoom:** Points to the zoom percentage buttons.
- Find & Select:** Points to the 'Find' and 'Audit' buttons.
- Room Data Readout:** Points to the 'Current' section and its input fields.
- Export & Plot:** Points to the 'List Current', 'List All', and 'Plot Stack' buttons.
- Display Rooms with..:** Points to the 'Choices' list of facility features.





Open Floor Plan Display

Project Prospectus

Presented by

SFC MapLab Project

Golden Gate Safety Network

and

Building Service Performance Project

Ontolog Forum

February 2009

Progress Since April

Organization

- Forming an expanded informal consortium with Golden Gate Safety Network, Carnegie Mellon, NASA, plus additional developers and emergency response practitioners
- Seeking a sponsor for funding

Progress Since April

Ontology creation and standardization

- Creating a new OASIS Technical Committee
- Working with the EDXL and NIEM emergency management groups to provide a compatible open floor plan model
- Began formalizing and augmenting the current Open Floor Plan Display syntax into an ontology

Plans

- First major prototype will be OFPD for FireFighter Tracking (with CMU & NASA)
- Looking for the right opportunity to demonstrate OFPD/X for Energy Analysis
- We expect to have a stable ontology completed by summer 2010, for submission through OASIS and harmonized with NIEM

Indoor / Outdoor FireFighter Tracking

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Open Floor Plan Display for FireFighter Tracking


CMU is collaborating with the Golden Gate Safety Network to develop a format for displaying floor plan related building data for First Responders.

Major Benefits include:

- Interior Knowledge of a Complex and Dangerous Situation
- Ability to Plan the Best Route of Approach to Fire
- Quick Visibility of the Best Route to Exit
- Background for Real Time Tracking
- Powerful Tool For:
 - Training and Exercises
 - Damage Assessment
 - Search and Rescue



CMU Building 23 - "Milk Carton Model"



CMU B23 Floor 2 - Open Floor Plan Display

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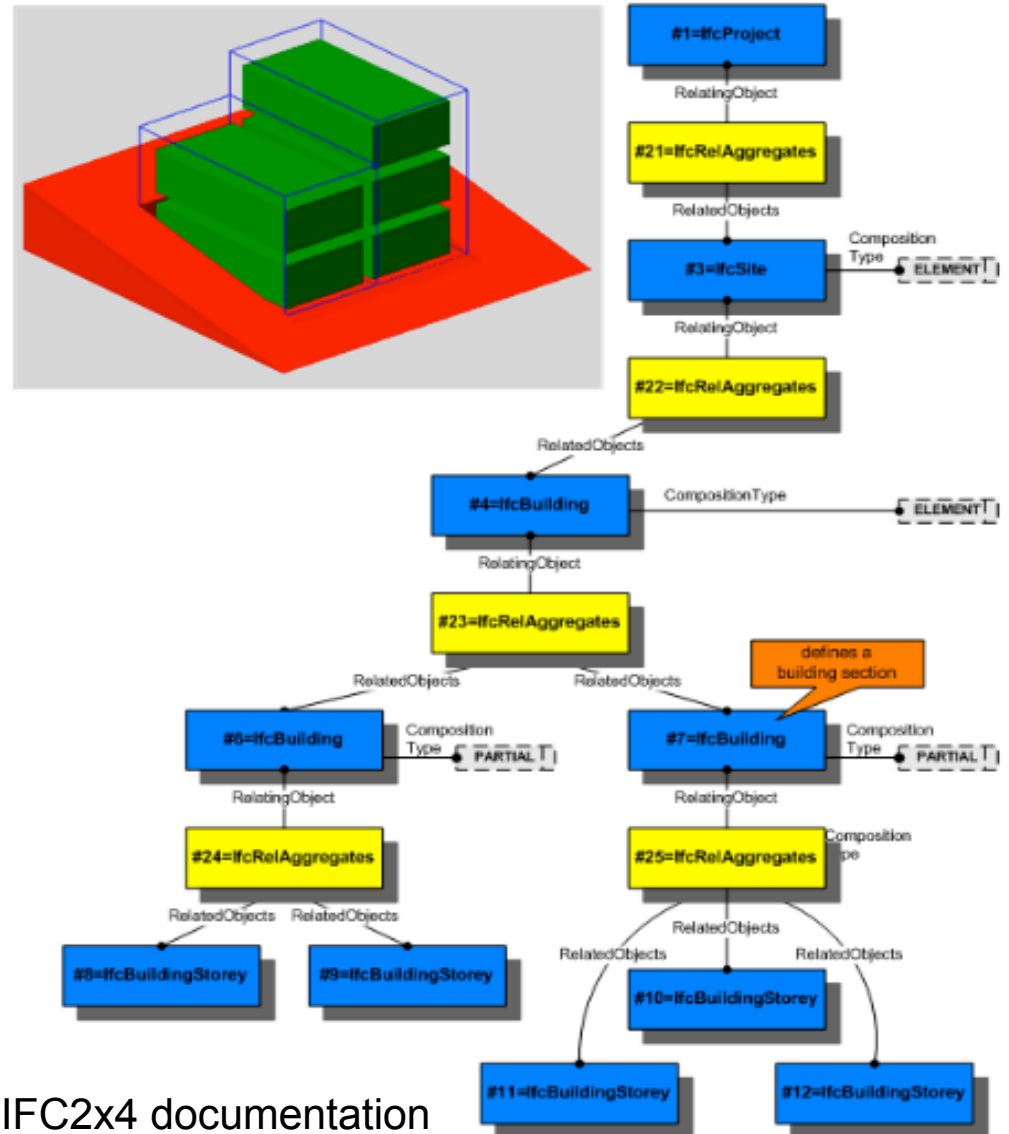
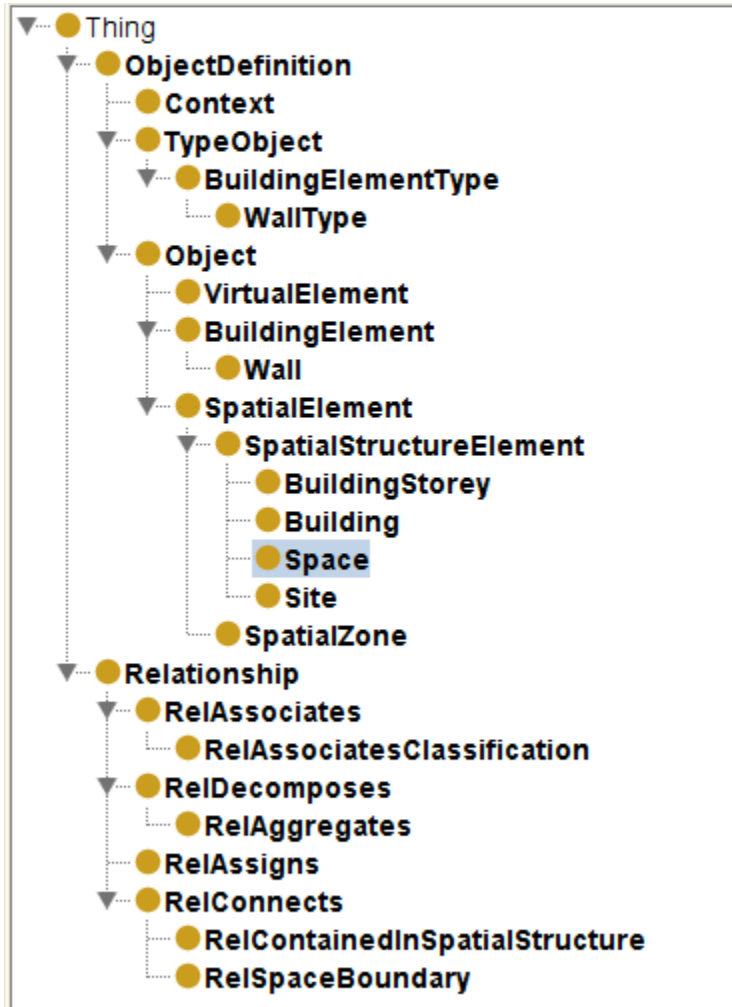
Example: Ontology Requirement (Spatial Structure)

A “space” in a facility is where an event occurs. Understanding and responding to an event requires knowledge of the space’s function, associated building elements, associated objects in or near the space, and relationship to other spaces within the facility with respect to the context of the event.

- Facility’s spatial structure elements
 - Identifiable
 - Classified by function and (optionally?) by form
 - Associated with building elements
 - Relationship to other spaces
 - ...

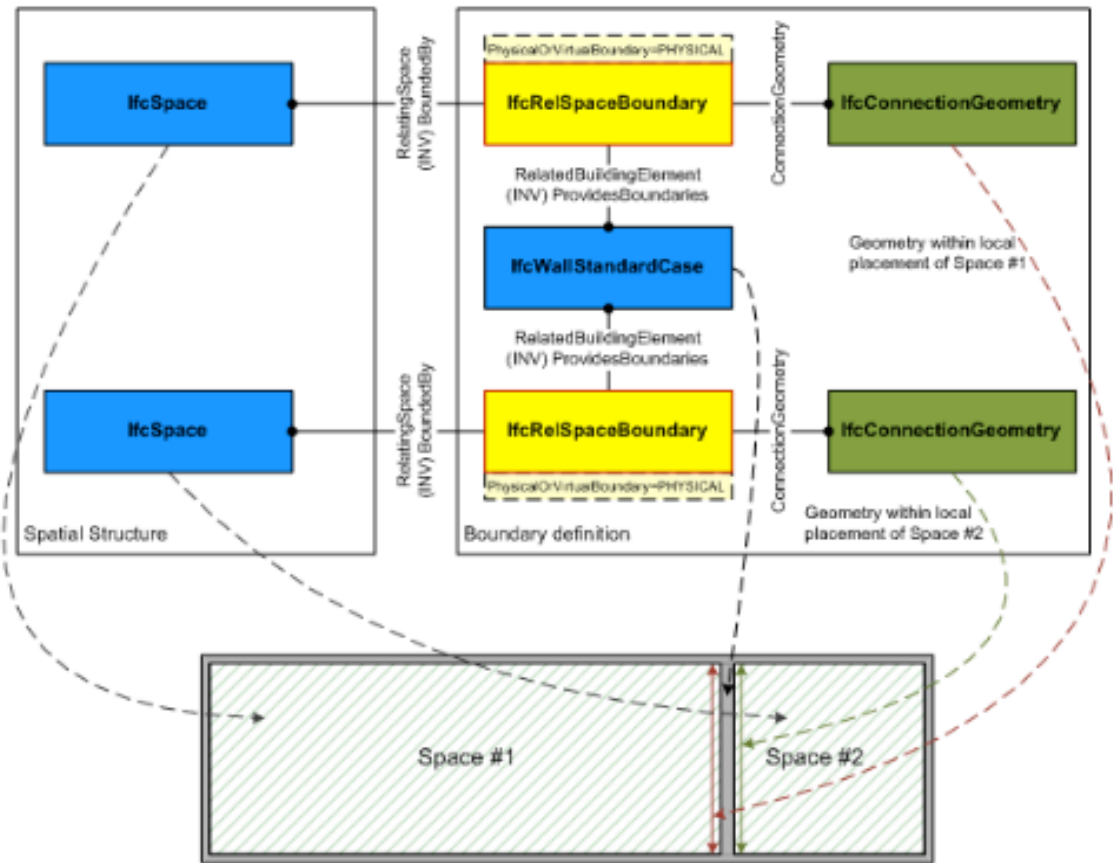
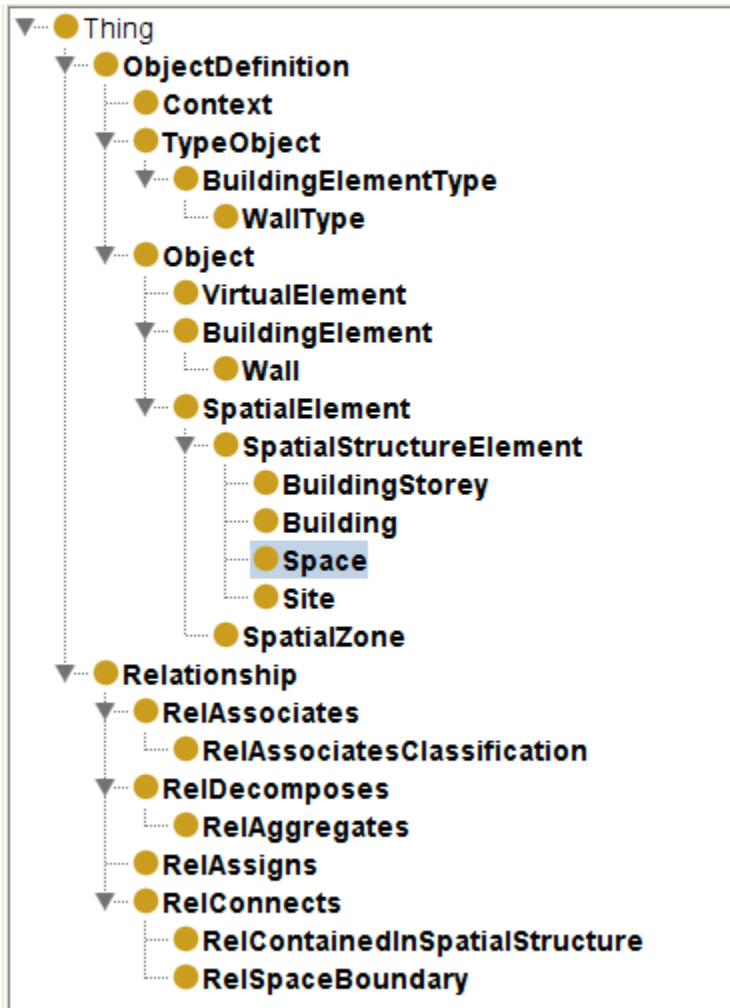
Spatial Decomposition

Spatial Structure Use Definition



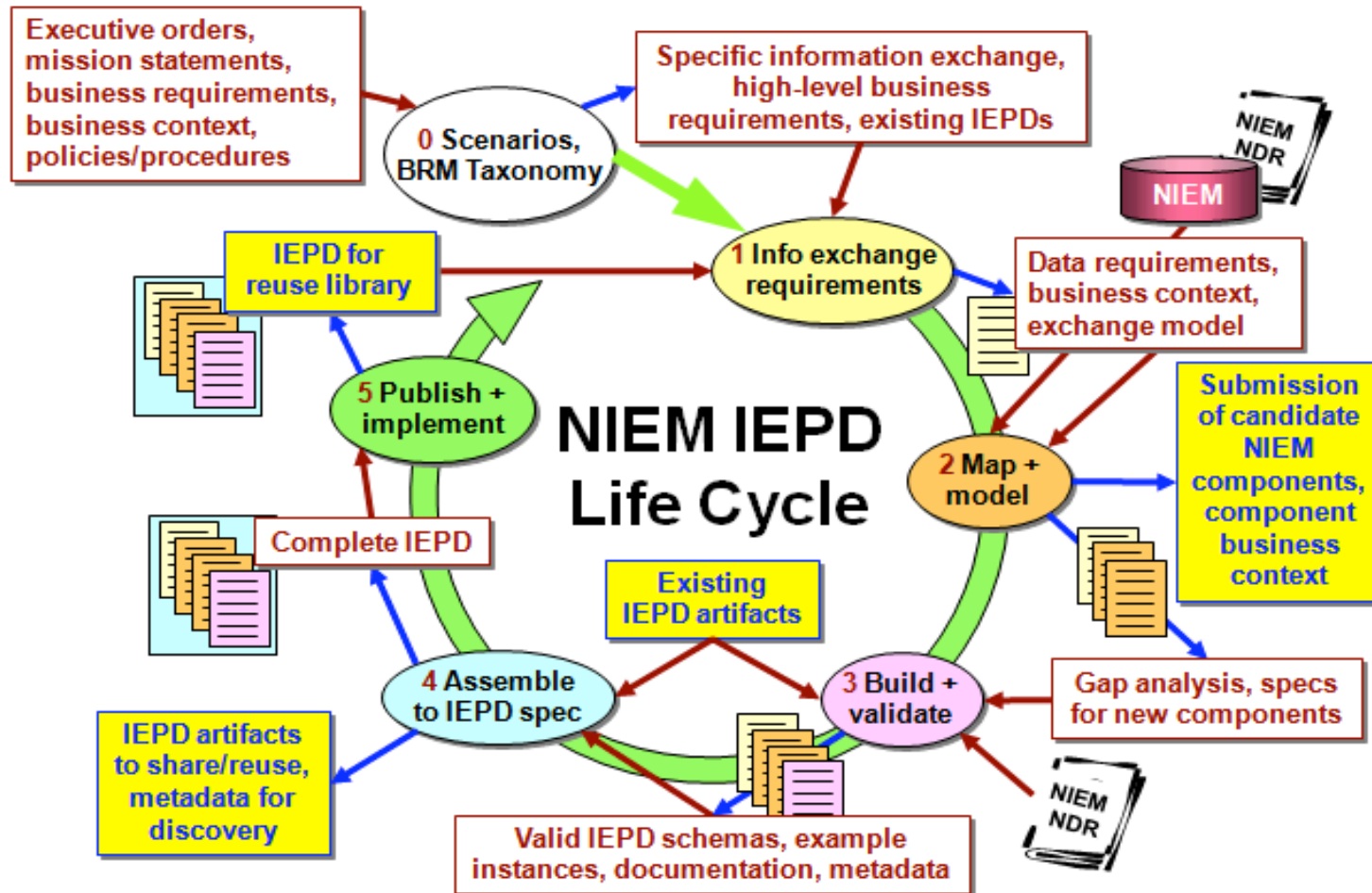
*Image from IFC2x4 documentation

Spatial Connection



*Image from IFC2x4 documentation

Information Exchange Package Documentation Life Cycle



* http://www.niem.gov/pdf/HLTA-1_1.4.pdf



