From: ibcomm@aol.com
  To: debmacp@gmail.com; bsp-forum@ontolog.cim3.net; bobsmithttl@gmail.com; alan.vinh@nist.gov; michellearaymond@gmail.com
  Cc: ibcomm@aol.com; jim_wollbrinck@sjwater.com
Subject: Floor Plan Display Format
  Date: Fri, 5 Dec 2008 10:29 am

Hi Folks,

I am working on a straw man example of a simple floor plan format that could form the basis to display emergency response information. I am not literate in all the standards and procedures being discussed by this group, and I will limit my involvement to the issue of creating the interactive display format. These ideas are from my own background work in this area several years ago, and can be improved upon by input from other folks with relevant experience. Please feel free to comment.

My perspective is quite pragmatic with regard to providing something useful in the very short term, especially for existing buildings, so that there is no dependence on design/construction methodologies. As BIMStorm is incorporated in the development process, future buildings will be able to provide appropriate Model-View-Definitions as a matter of course. But for now, I am most interested in how current buildings can present adequate floor plan displays to the Fire Service and others that will enhance emergency response.

The first big consideration is WHO will be responsible for providing the common format version of the floor plan for a particular building. As DiDi noted at the workshop, New York City now requires an electronic version of the floor plans to be submitted to the city per Local Law 26. Not knowing the details of this ordinance, I assume that the format could be one of several e.g. pdf, jpg, dxf/dwg, etc. As long as the plans are in digital format, it probably falls to the Fire Department to take the next step. Also the Alarm Monitoring company may play a role here.

The format needs to be lightweight and viewable in a web browser to facilitate integration with other standards based components. A simple API can allow the display to be driven by other system components, or directly through screen controls. Also, there should be no requirement to purchase proprietary software. The following is a simple bottom up set of layers to start the discussion.

1) **Architectural backgrounds** - showing rooms, halls, doors, windows, elevators, etc. This layer can be rasterised to provide a thin backdrop for the following "active" layers. It should be noted that this is directly similar to the Evacuation Diagrams that are currently required to be posted in the Elevator Lobby.

2) **Area Definitions** - Large areas such as occupancies down to smaller individual room areas. These areas should be specified by vector notation, which will permit interactive color coding or hiliting, as well as calculation of object locations that are "inside" a polygon. Most important is a consistent unambiguous nomenclature for Room IDs and optionally for Room Names.

3) **Standard Safety Elements** - such as those required by the Fire Service (Fire Control Room, standpipes, extinguishers, hoses, sprinkler & utility shutoffs, etc.). These elements are also discreet vector elements that can be programmatically "located", "hilited", and "statused".

4) **Room Contents** - based on the level of detail that the owner provides. Particular attention should be paid to any Hazardous Materials. Other contents could include occupant personnel names, phone numbers. computer IP#s, etc.

5) **Real Time Alerts and Alarms** - this layer would be where the incident messages would be depicted in some fashion, including eye witness reports. Item 3 above will need to include sensors and cameras as well, to be able

to tie the whole picture together at the time of the incident.

How this consistent format is created from the diversity of possible inputs provided by the building owners is not yet addressed. At this time I would ask that folks provide any general comments that apply to the above strategy.

I will be publishing a sample of this technique in the near future based on the Harney Science Center at the University of San Francisco. The format will be native SVG (no plugin) and may only run in Firefox initially. I would be happy to know if anyone else in our group has any experience in programming SVG that may be able to assist me in this effort.

Best regards,

David Coggeshall
San Francisco Communications
MapLab Project
79 Rossi Avenue, SF CA 94118
415 387-8760
415 602-2175 iPhone