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OPEN GEOSPATIAL CONSORTIUM



3D in the OGC

X3D-Earth Requirements Workshop
MOVES Institute, Naval Postgraduate School
 Raj Singh, PhD
 November 14, 2006

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What is the OGC?

- The Open Geospatial Consortium, Inc. (OGC) is a non-profit, international voluntary consensus standards organization that is leading the development of standards for geospatial and location based services.
 - The OGC facilitates a consensus process in which government, private industry, NGOs, and academia collaborate to create open and extensible software application programming interfaces for geospatial and other mainstream information technologies
- www.opengeospatial.org

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3D Initiatives

- GML/CityGML
- Web Terrain Service
- CAD-GIS-BIM
- Google/Sketchup integration

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Sponsors & Objectives

General Services Administration:

- Incorporate NBIMs Space Assessment capabilities in a web services architecture

National Geospatial Intelligence Agency

- Develop three dimensional visualization aspects of OGC Interoperability Program

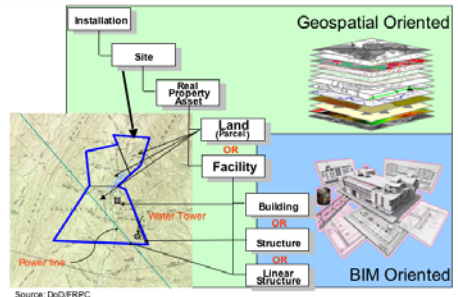
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Demo Scenario: Field Hospital at Newark Airport



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Seamless semantics and spatial information for CAD/GIS/BIM



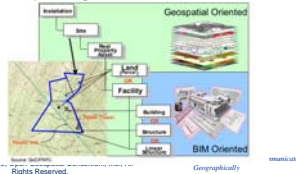
Source: DoD/FRPC

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BIM In Context for Project Development

AEC Projects will benefit by integrating BIM in geospatial context throughout project lifecycle:

- Initial ground condition from WMS/WCS will aid in initial site planning
- Existing and surrounding site buildings may be delivered from WFS as CityGML
- Detailed engineering connections and conflicts may be understood and modeled by integration of BIMs of neighboring sites



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BIM In Context: For Modeling Cities

Broad-scale assessment will be facilitated by integration of information aggregated from multiple BIMs:

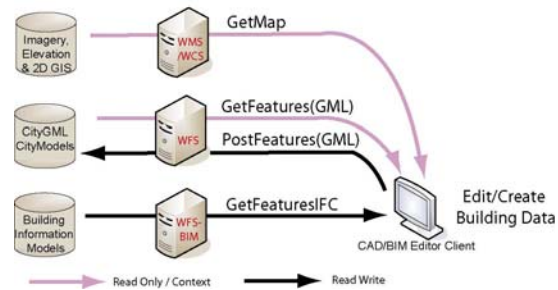
- Space Planning
- Build-Out Analysis
- Emergency Planning/Management
- Detailed, 4-D Virtual City Applications
- We Expect this aggregation of general information from BIM to be enabled through Web Feature Services and CityGML



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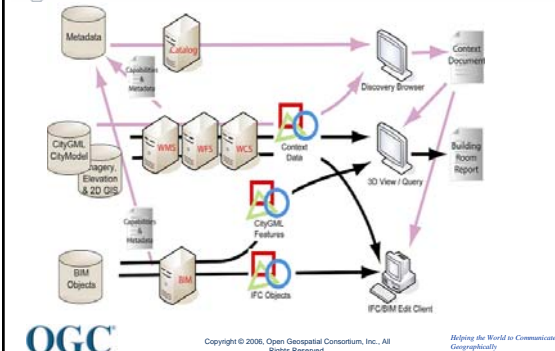
OWS-4 CAD-GIS-BIM Data Development Workflow (GML)



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Architecture Overview



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