



NBIM Interoperability Testing Team

NBIM Executive Committee
July 2006

George Percivall
NBIM Test Team Chair
OGC Chief Architect
percivall@opengeospatial.org



NBIM Interoperability Testing Team, July 06

- Near-term NBIM Interoperability Testing
 - Requirement: “product” by the end of the year: OWS-4
 - BIM/IFC testing in OGC Web Services (OWS-4) Testbed
- Building an NBIM Interoperability Test Plan
 - Broader, multi-year effort
 - Grow a testing infrastructure



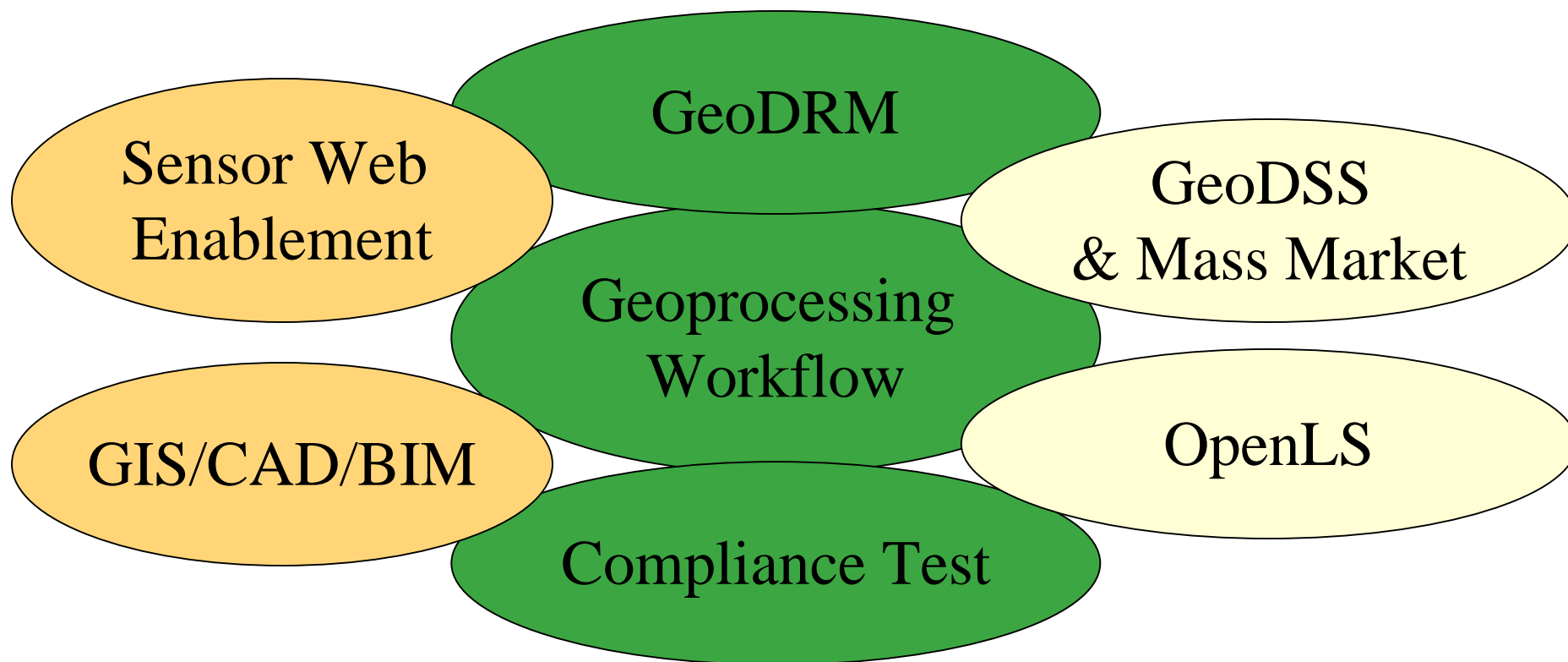
NBIM and OWS-4



OGC Web Services-4 Testbed

- Focus on rapid development and experimentation
- Focus on interwoven threads developed in parallel
- ~6 Month Time Frame
- Culminates in a working live demonstration (released on video)
- Knowledge and specifications are advanced through Interoperability Program Reports (IPR)

OWS-4 Threads

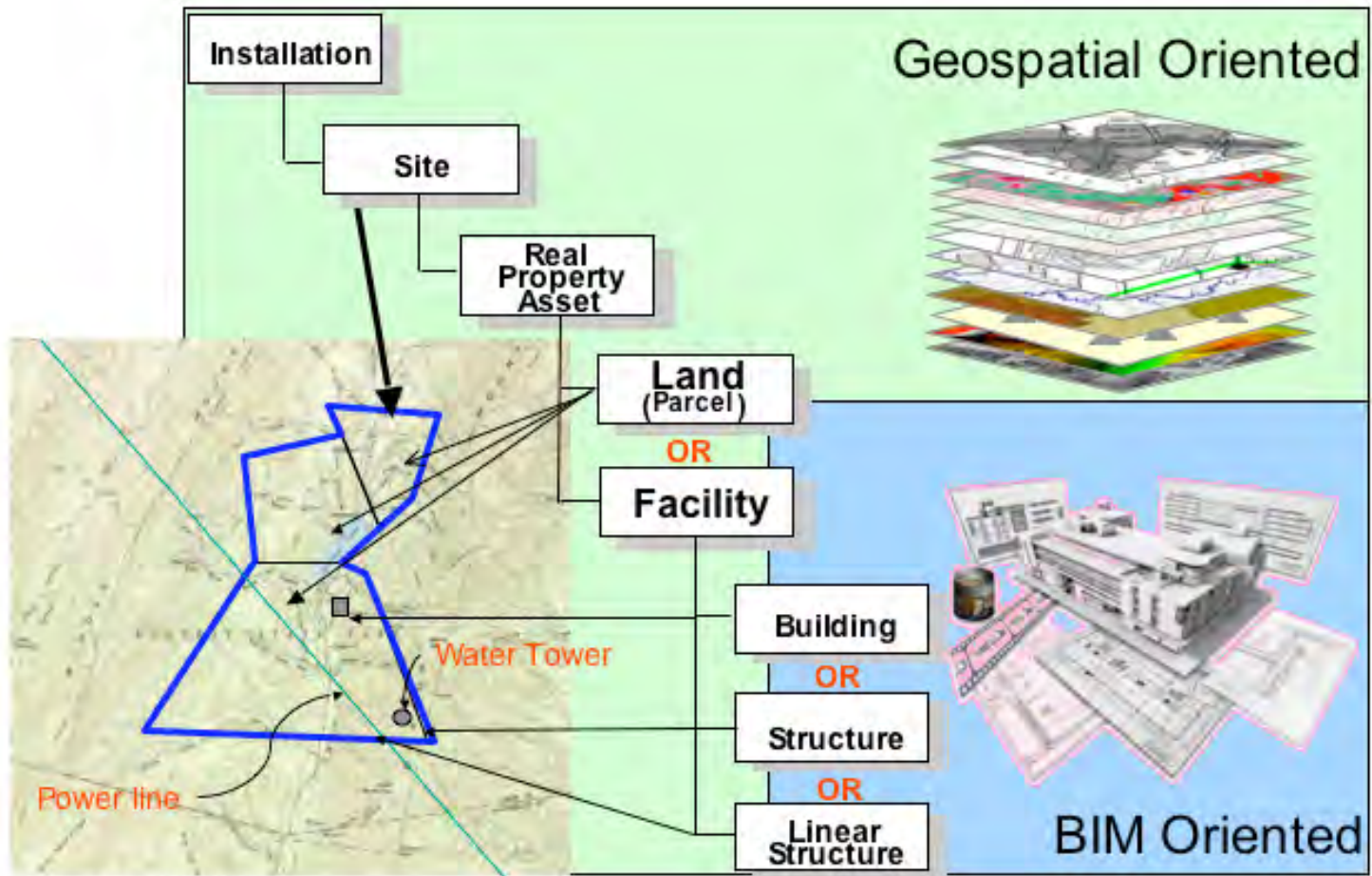


SOURCE

INFRASTRUCTURE

USERS

Seamless semantics and spatial information for CAD/GIS/BIM



OWS-4 CAD-GIS-BIM Participation



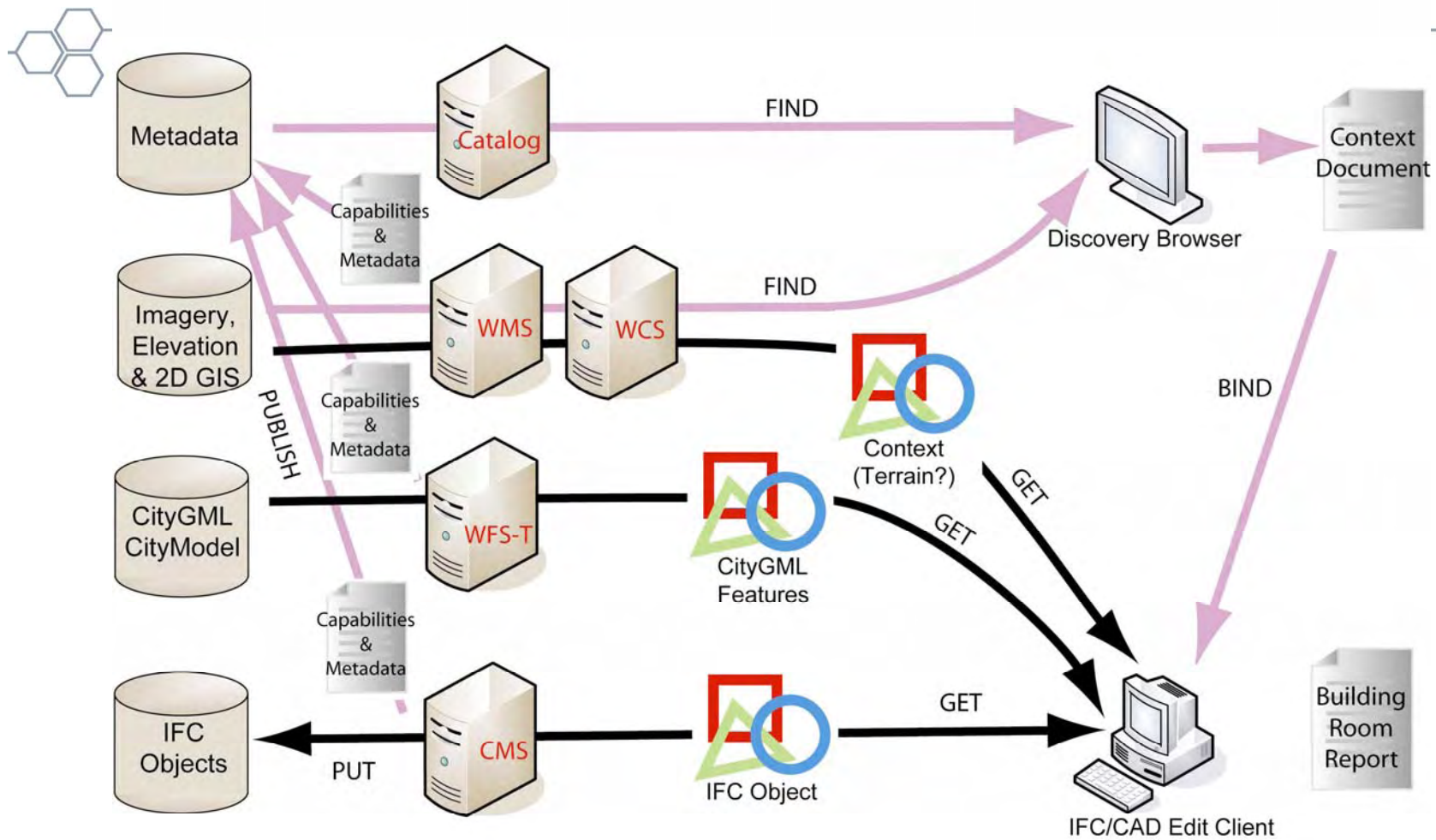
- Sponsors
 - GSA
 - NGA
- Thread Architect
 - Paul Cote, Harvard
- Participants at Kickoff
 - Autodesk
 - AEC Infosystems
 - AEC3
 - NIST
 - OGC WG4, Tim Case (Parsons Brinckerhoff)
 - Univ Bonn - CityGML
- New participants since Kickoff:
 - Snowflake
 - lat-lon
- Proposals anticipated:
 - Bentley -- (Alain Lapierre)
 - Onuma using Graphisoft
 - Hasso-Plattner-Institute
- Contacts made
 - ESRI
 - Intergraph
 - Google/Sketch-up



CAD/GIS/BIM thread in OWS-4 RFQ

- Information models and encodings
 - **IFC**: UML models for “things” occurring in the built environment
 - **CityGML**: GML3 Application Profile for virtual 3D City Models
- Service oriented architecture (SOA) for CAD/GIS/BIM
 - CAD/GIS Client access to
 - BIM views from a CAD Model Server (CMS)
 - GIS Features from a WFS.
 - Build on IAI and OGC SOA
- Use cases for demonstration
 - 3-D visualization of GIS and CAD data
 - Co-location of GIS features and CAD objects
 - CAD space assessment
 - Access to objects over the construction life-cycle (4-D)

OWS-4 CAD-GIS-BIM Wiring Diagram Minimal Architecture Alternative 0.1



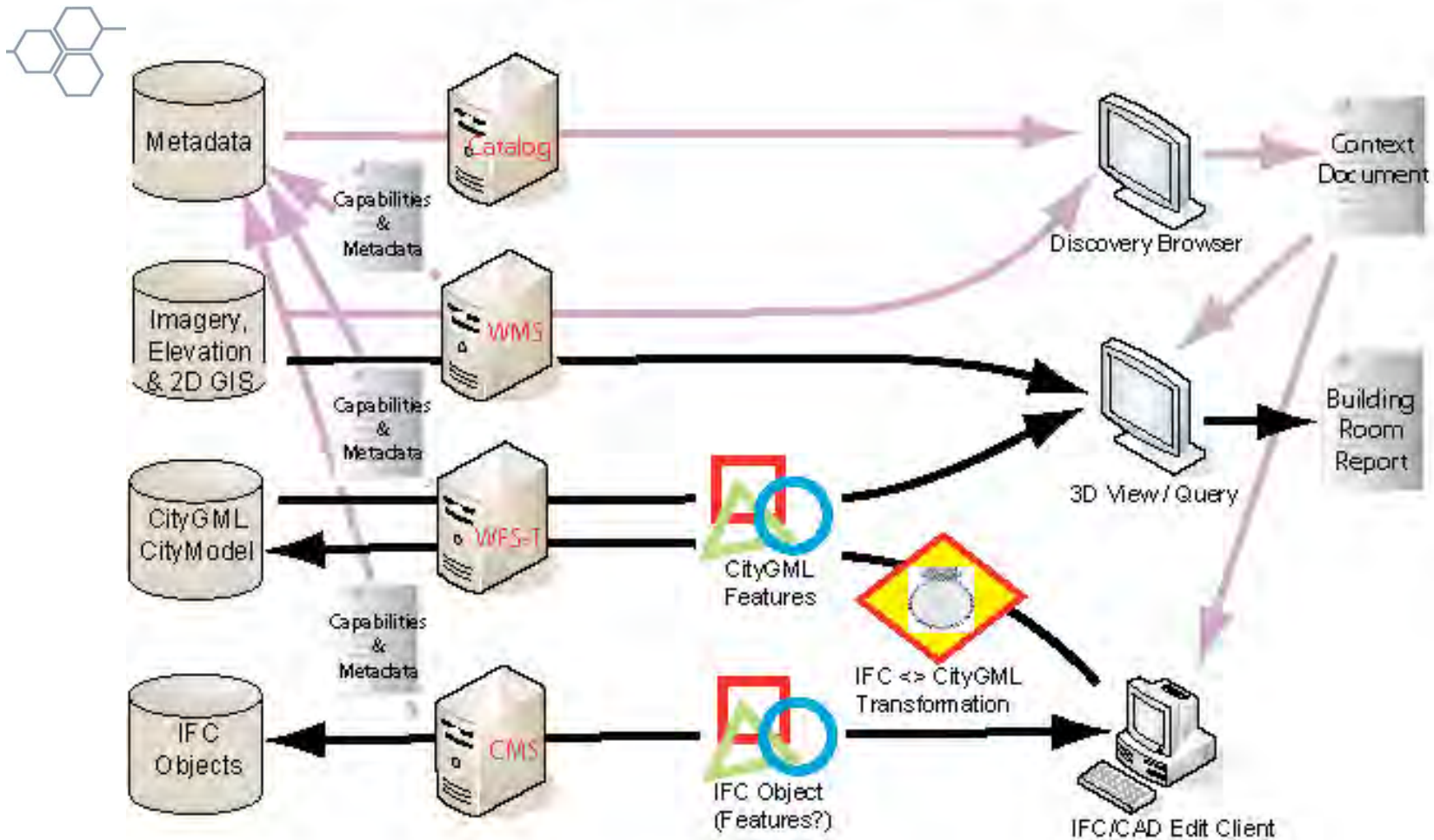
Component Development Phase (Testing August 15)



Technology Integration Phase (Complete October 15)



OWS-4 CAD-GIS-BIM Wiring Diagram CityGML Update Architecture Alternative 0.1



Component Development Phase (Testing August 15)



Technology Integration Phase (Complete October 15)

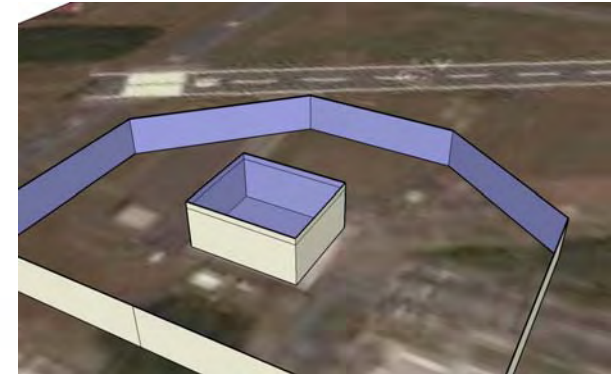
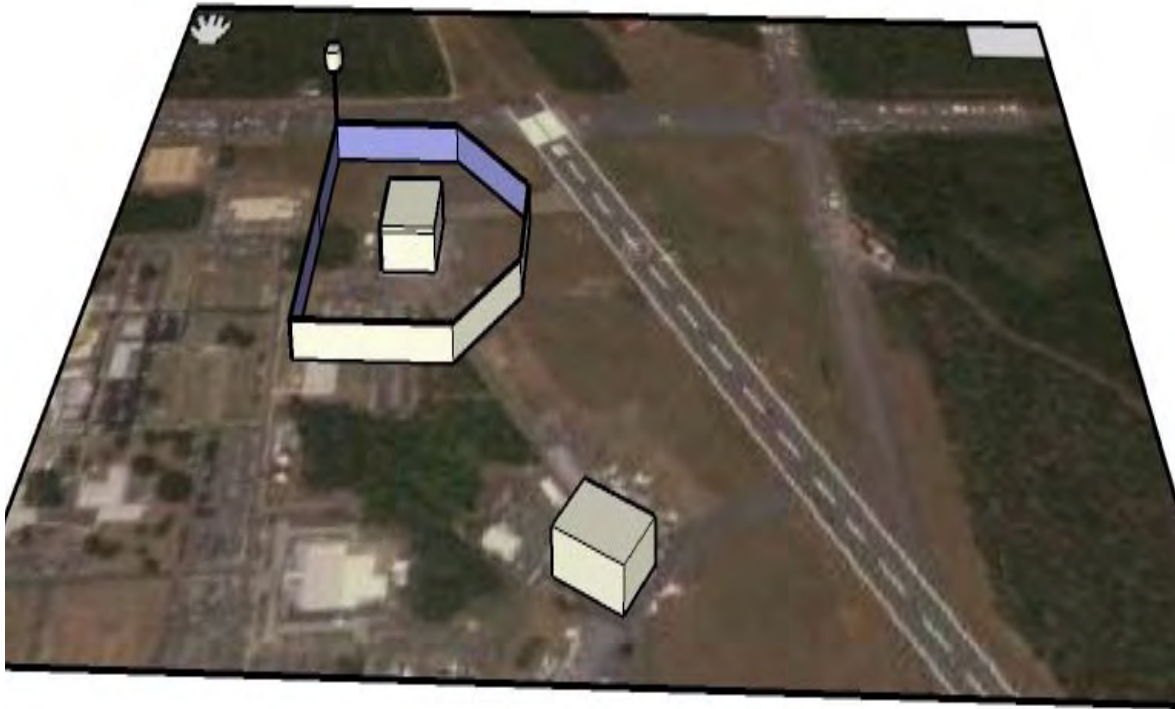
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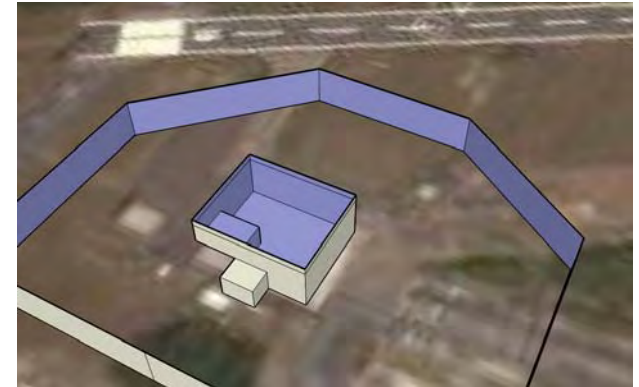
Demo Scenario: CAD-GIS-BIM Viewpoint



Find Hospital Candidate



Plan Alterations



Design Alterations

OWS-4 Schedule



- Requirement: “product” by the end of the year (Deke).
 - Product defined to be: testing complete; reports complete
- Rough milestones:
 - Mar Sponsor requirements
 - April RFQ released
 - May Participant Selection
 - June Kickoff meeting
 - July Design and Specification development
 - August Technical Interoperability Experiments (TIEs) begin
 - November Integration testing
 - December Demonstration
 - December Reports complete



NBIM Interoperability Test Plan Development



NBIM Interoperability Test Planning

- Testing is critical to the success of standards development efforts
 - Must have products implemented by multiple vendors
 - Demonstrate to potential users that the standard is sound
- Testing team tasks includes the following
 - Testing Process Guide - procedures for the testbed
 - Vendor Awareness - selection and seed funding for vendors
 - Identify Tests - specification refinement, demonstration scenario
 - Conduct Tests - client/server and demo integration testing
- Build on existing standards testing effort of NBIM participating organizations



Approaches to interoperability testing

- Multi-organization test planning; processes, policies, tools
 - FIATECH - Ric Jackson
 - Will provide FIATECH process
 - OSCRE - (Andy Fuhrman)
 - IAI - Christopher Groome, Jeff Wix
 - Participant in OWS-4
 - Need to discuss future BuildingSmart demo
 - COBIE - Bill Brodt
 - An operational demo of COBIE2006 is planned for Nov 2006.
 - NBIMS test and certification as a subsequent step following successful test/demonstration and early implementation of COBIE in mid- or late 2007.
 - OGC Interoperability Program (IP) policies and procedures
 - <http://www.opengeospatial.org/about/?page=ipp>
- Industry involvement to provide infrastructure and deployment

Current Test Team membership



- Percivall, George - OGC - Chair gpercivall@opengeospatial.org
- Reed, Kent - NIST - Co-chair kent.reed@nist.gov
- Akin, Omer - CMU oa04@andrew.cmu.edu
- Kimbrell, Bill - Woolpert bill.kimbrell@woolpert.com
- Marston, Hunter - AutoDesk hunter.marston@autodesk.com
- Ulrich, Tim - HOK tim.ulrich@hok.com
- Jackson, Ric (need to add) jackson@fiatech.org

Need to increase membership and begin regular activity