Bringing Building Services into BIM

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Perspectives

Infrastructure Analyst, UNC Facilities Services
- 20 years of facility operations

Chair, OASIS oBIX Technical Committee
Co-Chair, OASIS Technical Advisory Board

FIATECH Element 5 Co-Champion
“The Self Maintaining and Self Repairing Facility”

NIST Domain Expert Workgroup, Building to Grid

NIST Emergency Response Situation Awareness Workgroup

Emerging Markets and Venture Technical Analysis Consultant
Today, performance cannot be directly linked to service provided
New markets and new mandates make unresponsive buildings a liability
BIM specification of Building Services will improve delivery, enhance amenity, and reduce costs.
Today, building systems offer up name/value pairs rather than services.
Code compliance merely defines poor performance
Building systems are designed in the field and discovered by the owner.
Lacking design, we substitute capacity for performance
Building systems must embrace enterprise protocols and metrics.
Occupants have no real stake in control protocols
Schedule system for results, not system processes
Define business needs, not technical processes.
Service interfaces invite new modes of interaction
Zero net energy buildings will require new levels of integration.

- Energy Use
- Energy Purchase
- Energy Storage
- Energy Conversion
- Situation Awareness
- Energy Recycling
- Energy Generation
Leasing agents want the language to sell service performance

- Sustainability is starting to sell
- Healthy building indices balance effects of energy efficiency
- Provably productive workers can trump costs of office space
- Perpetual commissioning supports operations transparency (and trust)
Your building agent will be your personal day trader in new energy markets

- System agents defend mission
- Enterprise defines value
- Power Grid offers clearing market
- Building agents choreograph response
Informational Interoperability will provide tenant benefits and improve bottom line
Dissimilar systems can compete on value delivered
Only coordination that is simple and secure will scale
New markets will develop with new market rules
BIM will specify building systems by semantic services and performance.
Discussion

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