



Continental Automated
Buildings Association

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**North America's
Home & Building
Automation Association**

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CABA Member Ludo Bertsch Appointed to oBIX Technical Committee

April 2, 2013

The Continental Automated Buildings Association is pleased to announce that long-time CABA member Ludo Bertsch, P.Eng., President of Horizon Technologies Inc., has joined the oBIX technical committee as a CABA representative.

The purpose of oBIX (open Building Information Exchange) is to enable mechanical and electrical control systems in buildings to communicate with enterprise applications, and to provide a platform for developing new classes of applications that integrate control systems with other enterprise functions. Enterprise functions include processes such as human resources, finance, customer relationship management (CRM), and manufacturing.

Extending to all smart systems embedded in buildings, oBIX targets those that have traditionally been obscured by proprietary control standards, as well as non-control system sensing, including: heating, ventilation and air conditioning (HVAC), elevators, laboratory equipment, life/safety systems, access control, intruder detection, A/V event management, CCTV monitoring, environmental sensing, electrical panels, utility meters and virtually anything that measures or monitors the physical space in a facility.

CABA established the initial working group that eventually became oBIX in 2002. With the working group requiring the resources of a standard development body, a transition team was formed in late 2003 to investigate potential hosting organizations. The transition team evaluated many options for hosting and recommended the selection of the Organization for the Advancement of Structured Information Standards (OASIS), based on their development process, reputation and ability to support this effort. OASIS is a global, non-profit consortium that focuses on the development and adoption of e-business standards.

With Bertsch joining oBIX's technical committee, additional expertise will be added concerning advanced energy management and efficiency techniques.

"CABA is excited that one of its highly-valued members is involved in this oBIX initiative as an official representative," stated Ronald J. Zimmer, CABA President & CEO. "CABA monitors a range of standard and protocol groups and activities through its assorted councils and committees and historically, one of CABA's main goals has been to promote interoperability among all standards, protocols and technologies. It is a pleasure that CABA has once again officially renewed its involvement in the initiative, which it played a major role in founding."

Bertsch, P. Eng, has 30 years of experience in data communications, automation, controls, integration, energy and the environment. In the past, he was chair of the CABA Standards Committee and part of the Standards Council of Canada Task Force that developed Canada's first Smart Grid roadmap.

He is the chair of Canada's Advisory Committee for international IEC/ISO standards dealing with "Interconnection of Information Technology Equipment" (SC25), where the role of Smart Grid toward energy management has become an important focus.

His hands-on experience of implementing Smart Home/Smart Grid technology within Solar Colwood, a municipal-wide energy efficiency program sponsored by Natural Resources Canada, has generated interest as far away as the World Future Energy Summit in Abu Dhabi.

"It is an honor and a privilege to have the opportunity to serve on this committee," stated Bertsch. "By contributing to oBIX, I believe CABA continues to demonstrate its strong support for open standards and interoperability in both residential and commercial buildings, and perhaps between them as well."

About CABA

The Continental Automated Buildings Association (CABA) is a leading industry association that promotes advanced technologies in homes and buildings in North America. More information is available at <http://www.caba.org/>.

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Backgrounder

oBIX, short for open Building Information Exchange, is the continuation of an effort started by CABA in 2003 to standardize interactions with building-based systems. oBIX defines Web Services to interact with any building control system. Since the first version of the specification was completed in 2006, oBIX has been incorporated into middleware for building control systems and is even used as the sole interface on some systems.

Last winter, the oBIX Committee began meeting again. In part, the work is aiming to make it easier for oBIX systems to interact automatically. Several European researchers are bringing their work with oBIX into the Committee. The committee wants to make it easier to use newly fashionable approaches such as JSON to interact with oBIX servers as well as define how peer-to-peer oBIX can work on very small systems with limited bandwidth. The committee is also excited about defining new advanced enterprise services.

The core specification (1.x) requires each oBIX server to provide a lobby. Clients can ask the server what is in the lobby, and thereby discover how to interact with the system behind that server. Contracts are special purpose agreements that are added to the lobby. Clients can invoke contracts by accessing the elements listed in the lobby. Vendors and integrators can add functionality to an oBIX server by creating contracts to add to the lobby.

The committee's current plan is to define enterprise services by specifying new types of contracts to place in the lobby. oBIX servers will then state which types of contracts they support, which encodings, and which transports. As of March 2013, the committee anticipates the following sections:

Energy

oBIX Servers are likely to participate in collaborative energy ecosystems including those managed by Energy Interoperation (OpenADR 2.0) or as described by ASHRAE SPC 201. The committee plans to incorporate information models and semantics developed to support the US national Smart Grid efforts, including Green Button. Potential contracts include not only energy usage reporting, but projections and commitments as well. The committee anticipates leveraging the existing OASIS Energy Market Information Exchange (EMIX) Specific information exchange requirements as defined in NAESB REQ 21

Advanced Reporting and Aggregation (Historian)

The historian does not scale well in its current form. A request for, say, a one year history on several sensors is larger and more unwieldy than it need be. It may be necessary to support variations such as projections. The committee does not want to break compatibility.

Alarm Logic

This topic extends alarm contracts to include logic for alarms. If A happens followed within three minutes by B. If the cycle between occurrences of A is less than 5 minutes. This is in effect defining diagnostics with interactions between functions. If an application is communicating with 100 oBIX servers, a controller may want to apply that diagnostic to every AHU attached to each of them.

Building Information Models (BIM)

In buildings, control systems operate building systems. Building systems support the various spaces in a building, whether securing them, monitoring, them, or conditioning them. The relation between a building system and spaces in a building is described in a Building Information Model (BIM). oBIX BIM contracts will describe how an oBIX server will make BIM accessible, and how to apply BIM as a semantic framework for the control points.

Enterprise Scheduling

Enterprise Scheduling applies the semantics of WS-Calendar to schedule interactions with building systems. This includes a notion of service oriented schedules instead of the control oriented schedules as today. (Example: Request room at temperature by 8:30 rather than Request room to begin heating at 8:10). This is likely to use the same semantic frameworks as security, i.e., to specify a room rather than a thermostat. Enterprise scheduling is made possible in part by the BIM framework as described above.

Security Composition

oBIX 1.0 relies on a monolithic model, all or nothing, for access to points and settings. This access should be limitable by role and by organization. The committee will define a means to define policy frameworks for secure access to oBIX servers. This is likely to be an intersection of roles, i.e., integrator, operator, tenant, guest as applied to business function. In buildings, business functions are.

The committee will not define a mandatory set of roles, or a mandatory framework, but instead define a means to apply notions of space (say a particular tenant) and of role to access to an oBIX server. The committee anticipates a means to discover the roles available on a server, to map those roles into a discoverable space, i.e. BIM. This topic includes addressing federated security, and may include how to apply SAML, XACML, and similar specifications to oBIX servers.

Participation

CABA is again participating directly in the oBIX Technical Committee. CABA members are also invited to participate. To join the committee, a company must join OASIS (www.oasis-open.org) where after, its employees may join the oBIX Technical Committee. The oBIX Committee Chair, Toby Considine, invites anyone who wishes to join to contact him at Toby.Considine@gmail.com to find out more.