



INTERNATIONAL AIR-CONDITIONING • HEATING • REFRIGERATING EXPOSITION

AHR EXPO

2012, January 23-25
McCormick Place North & South
Chicago, IL

Co-sponsors:



AIRI

New Open Source Technologies that are Changing the Industry

1:30 pm Monday, January 23th
Speakers - various industry experts

Ken Sinclair Publisher/Owner

Moderator

www.AutomatedBuildings.com



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News

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About

Welcome to Chicago AHRExpo

This Unique venue/arena supplied by International Exhibition allows us take our online service/magazine off line and Face 2 Face with you

4 Free Sessions on How to Make Sustainability and Energy Visible

The New Visibility & Interactions in the Building Automation Industry

9:00 am Monday

New Open Source Technologies that are Changing the Industry

1:30 pm Monday

The Tools of Visibility and Interaction

9:30 am Tuesday, January 24th

The Visible Campus – Bringing Sustainable & Energy-Wise Designs to Focus

1:30 pm Tuesday, January 24th

the following industry experts will tell you
what they think "Open" means

John Petze. Former CEO of Tridium joins new software start-up, www.skyfoundry.com focused on analytics

Anno Scholten, C.E.M, C.D.S.M, is President of Connexx Energy a company that connects technology and people with energy

Anto Budiardjo is the President and CEO of Clasma Events Inc., a marketing and event planning company

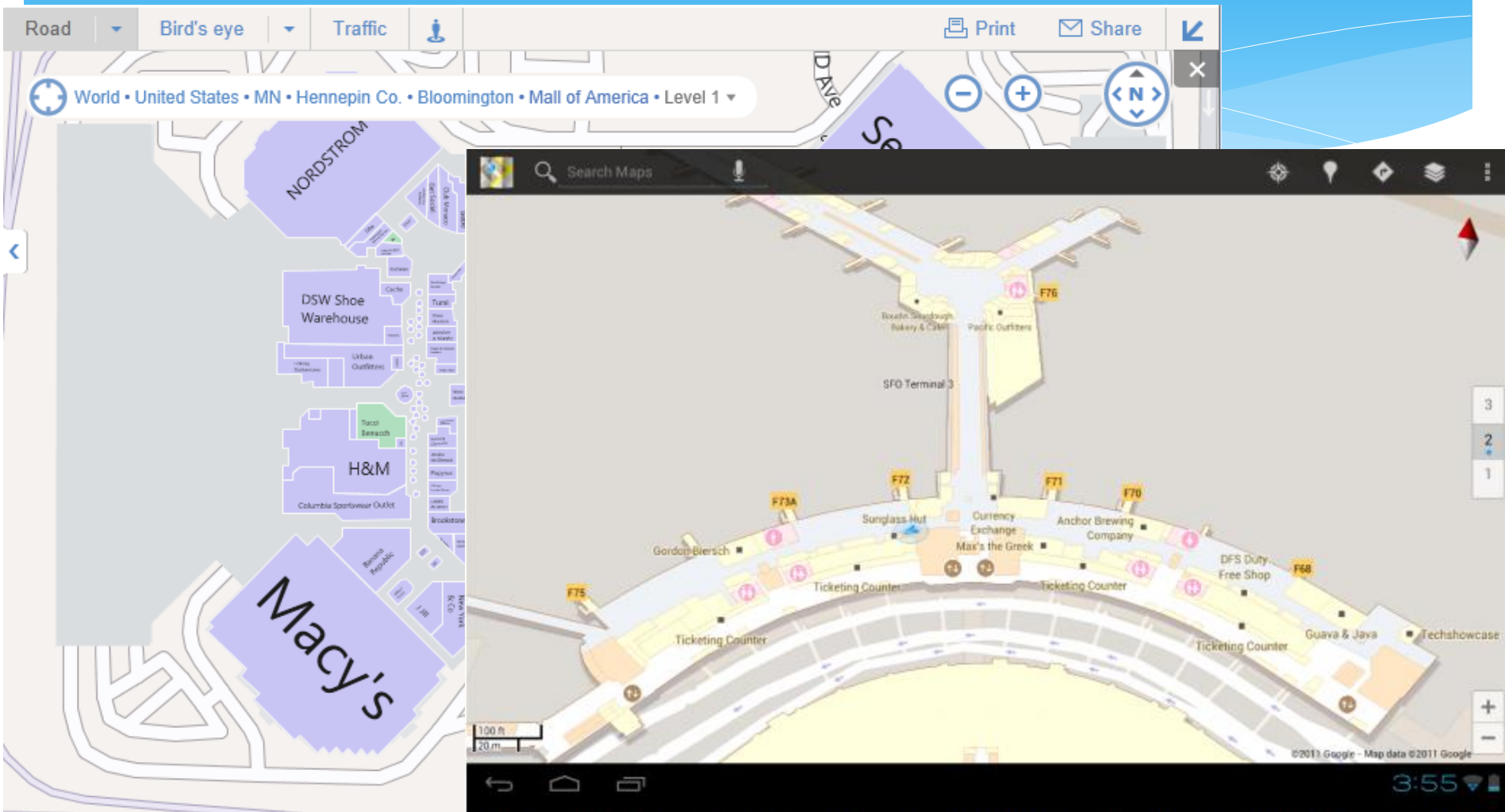
James M. Sinopoli, PE, LEED AP, RCDD Managing Principal of Smart Buildings + Contributing Editor

Buildings Becomes Mobile

Any Platform, Any Place, Any Time



Google and Bing take street level to our level with evolving standards



The new Maps lets airport patrons navigate sites like San Francisco International from the inside. *Photo courtesy of Google*

Make the Invisible Visible



To achieve this we must achieve
"Open" and discuss what that might mean.



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Facets of “Open”

- * Device Connectivity
 - * Communication protocols – BACnet, LonTalk, oBIX.
 - * Enables device connectivity – multi-vendor systems
- * Public interfaces – Application Programming Interfaces (APIs)
 - * Enables third parties to develop external applications that can access data from the system
- * Acquisition – Can I buy it from multiple sources
 - * Access to products for initial purchase and system expansion
 - * Enough supplier options to create a competitive situation

Open Communities

- * The ability for an independent ecosystem of developers to create complementary applications for users of a product platform
- * Apple App Store, the Android Market

The screenshot displays a grid of application cards from an app store. Each card includes an icon, the app name, a brief description, the update date, and the price. Some cards also feature a 'Game Center' logo and a star rating.

App Name	Description	Update Date	Price	Game Center
Traffic Light Changer - Make it Gr...	Utilities	Updated Mar 04, 2011	FREE	No
Free App Genie (Find Paid Apps F...	Reference	Updated Aug 23, 2011	FREE	No
Road Warrior Free: top 'car i	Games	Updated Dec 22, 2011	FREE	Yes
Flashlight.*	Utilities	Updated Dec 08, 2011	DOWNLOAD	No
Smelly Cat: the best puzzle slings...	Games	Updated Oct 20, 2011	FREE	Yes
iCatchall: 27+ Apps In One	Utilities	Updated Sep 30, 2009	\$0.99 BUY	No
Words With Cheats for Friends ~ ...	Entertainment	Updated Dec 16, 2011	\$0.99 BUY	No
iDestroy™ - wicked sick stress rell...	Games	Updated Dec 17, 2011	FREE	No
Atomic Fart FREE	Entertainment	Updated May 24, 2011	DOWNLOAD	No
Racing Penguin, Flying - by Top F...	Games	Updated Oct 08, 2011	\$0.99 BUY	Yes
Speed Bag Lite Game Apps-Touc...	Games	Updated Apr 04, 2011	FREE	No
MovieFX for Free	Photo & Video	Updated Sep 17, 2010	FREE	No
HealthTap Express	HEALTHTAP	★★★★★ (33)	INSTALL	No
RealCalc Scientific C...	QUARTIC SOFTWARE	★★★★★ (67,037)	INSTALL	No
Zombie Dash	ITALY GAMES	★★★★★ (3,143)	INSTALL	No
Little Empire	CAMEL GAMES	★★★★★ (1,539)	INSTALL	No
Wolf Toss	ZIPLINE GAMES	★★★★★ (185)	INSTALL	No
LYRIC LEGEND 2 MU...	TUNEWIKI	★★★★★ (95)	INSTALL	No
Grabatron	FUTURE GAMES OF LONDON	★★★★★ (38)	\$1.98 BUY	No
Neon Zone	HOUSE ON FIRE	★★★★★ (31)	\$0.99 BUY	No
Galaxy	MAGMA MOBILE	★★★★★ (1,558)	INSTALL	No
CNNMoney For Andr...	CNNMONEY	★★★★★ (76)	INSTALL	No
Amazing Grocery List	SAUCEDO	★★★★★ (6)	\$0.99 BUY	No
SPB Shell 3D	SPB SOFTWARE	★★★★★ (23,251)	\$14.95 BUY	No

Open Communities – Benefits

- * Creativity

- * Creates product extensions beyond the vision, capability and interests of a single manufacturer
- * Creates competition – advances the state of the art

- * The Long Tail

- * Addresses niche opportunities that might not meet financial hurdles of the platform creator

Supporting Open Communities

- * Extensible software platforms with open APIs – *more than just an API to get data*
- * Allow third party developers to create Apps, Tool, integrations, algorithms external AND **inside** the product
- * There may need to be certification – to protect the customers and the brand
- * The developers may need to buy a “kit” but it would have reasonable costs (in line with desktop technology (like MS))
- * Financial transactions may involve the platform supplier or not – benefits to both
- * No one arbitrarily “stops” development of Apps by third parties

Examples of Open Communities



- * Open source initiative to develop naming conventions and taxonomies for building equipment and operational data
- * Define standardized data models for sites, equipment, and points related to energy, HVAC, lighting, and other environmental systems.
- * >100 industry experts from around the world contributing to an open source standard

Project Haystack

[HOME](#) [DOCS](#) [TAGS](#) [FORUM](#) [DOWNLOADS](#)

What is Haystack?

Project Haystack is an open source initiative to develop naming conventions and taxonomies for building equipment and operational data. We define standardized data models for sites, equipment, and points related to energy, HVAC, lighting, and other environmental systems.

Learn More

- [Start with the Documentation](#)
- [View the Tag Docs](#)

Get Involved

We use the [forum](#) to gather feedback and collaborate. If you would like to participate, please [signup](#) and let us know how you would like to pitch-in!

Why Do We Need Haystack?

Macro trends in technology are making it increasingly cost effective to instrument and collect data about the operations and energy usage of buildings. We are now awash in data and the new problem is how to make sense of it. Today most operational data has poor semantic modeling and requires a manual, labor intensive process to "map" the data before any analytics can begin. Pragmatic use of naming conventions and taxonomies can make it more cost effective to perform analytics and derive value from our operational data.

Who Should Participate?

Project Haystack encompasses the entire value chain of building systems and related intelligent devices. Owners and consultants can specify that Haystack conventions are used in their building automation systems to ensure cost effective analytics and management of their buildings for years to come. System integrators and manufacturers who integrate Haystack support into their projects and products are positioned for the future of value added services.

Open Source

<http://project-haystack.org/>

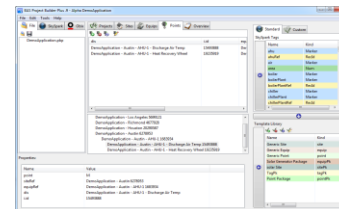
Examples of Open Communities

- * A growing community of third party developers extending our analytics platform with engineering tools, complimentary applications and service offerings
- * Helps the industry move forward to improve how buildings operate through the use of data analytics
- * Demonstrates the power of open development communities – *an important new facet of “open”*

The SkySpark Community Issue -

Highlighting complementary applications being delivered by SkyFoundry resellers and development partners to help you *“find what matters”*

In this very special issue of the Insider we focus on the dynamic SkySpark community and some of the special applications and tools that they are developing



Open Systems

Jim Sinopoli, PE, LEED AP, RCDD
Smart Buildings LLC

2012 Will Be About Open Source Programming Languages, and Standards For Naming Conventions, Building Systems and Integration.

- * “Bottoms up” grassroots campaign
- * Flexibility and choices as to how to setup and maintain their BMS.
- * The push for standardized naming conventions
- * Large organizations have entered the “standards” fray.
- * ISA has initiated the development of a standard titled ISA 111 Unified Automation for Buildings.
- * NIST - industry standards for automation and controls - interoperability standards between buildings and the smart grid.
- * Reflects the penetration of IT in building systems
- * Increased complexities in high performance buildings and the increased need for data and data management.

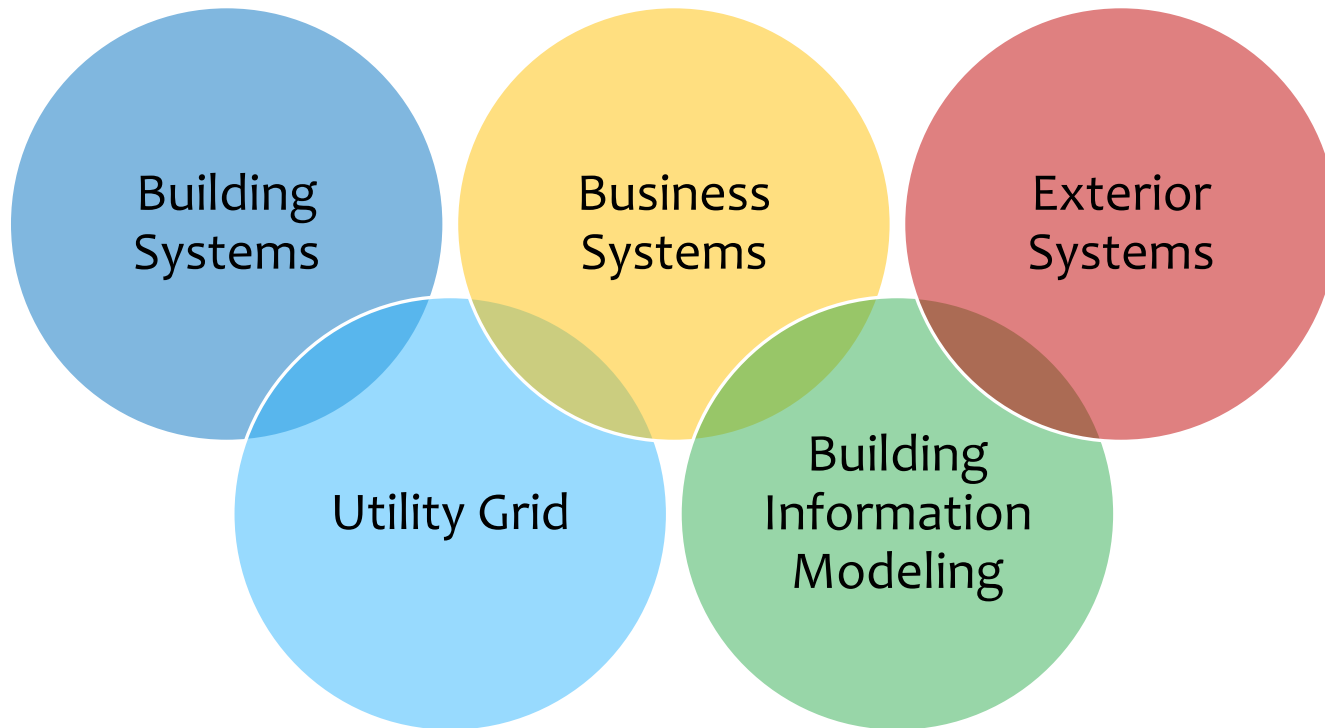


The Upcoming Evolution In Building Management Systems (BMS) Will Be Software Platforms Similar To The iPhone and Android

- * Open-source platforms
- * Third parties developing a plethora of applications
- * Base software platform
- * “Meta” database”
- * “Building Apps Store”
 - * fault detection
 - * energy management
 - * demand response
 - * alarm management



Data Flow



PROCESS

- * #1 - Identify The Level of Integration and SOO
- * #2 - Develop A Data Plan
- * #3 - Bring IT in Early in the Process
- * #4 - Standardize Naming Conventions
- * #5 – Use Analytics and Data Mining
- * #6 – Validate Data
- * #7 - Organize Document Management
- * #8 - Understand the Psychology and Purpose of Dashboards