SkyFoundry Insider

SkySpark Deployments Pass 4000 Sites and 225 Million Square Feet (Pg 1) Haystack Connect - A new industry event (Pg 1, 3) SkySpark 2.0 - The Next Generation is Here (Pg 2, 6) Support for Green Button Data is Here! (Pg 4) Custom Reporting - A Wide Range of Options (Pg 5) SkySpark - Analytics for a World of Smart Devices (Pg 6)

SkySpark® Deployments Pass 4000 Sites and 225 Million Square Feet

At the beginning of 2012 we announced that SkySpark[®] had achieved a major milestone being deployed in over 100 million square feet of building stock. As we enter 2013 we are excited to announce that SkySpark has passed the 225 million square foot mark with over 4000 sites now using SkySpark analytics.

The combination of SkySpark's advanced analytics technology, combined with the expertise and commitment of our worldwide network of partners, continues to deliver outstanding results, helping owners and operators of facilities identify operational issues, energy waste and opportunities for savings.

Analytics finds issues that can't easily be found manually. From broken or inaccurate sensors, to overridden equipment and incorrect control sequences, analytics shows us how our building systems are really operating, where corrections are needed, and where opportunities for savings exist. Analytics is the key to moving to true *"data-driven facility management"*.



SkyFoundry Helps Launch Major New Industry Event



SkySpark adds support for Green Button Energy Data



SkySpark 2.0 is here with a wealth of new features



SkySpark 2.0 is here! It includes a huge range of new features based on customer input and the experience gained in over 4000 sites of deployment.

Connect Directly to More Systems with New Connectors – Connect to BACnet, Modbus, Sedona and Haystack systems for real time data feeds.

Data Logging – Now SkySpark can collect data directly. It's great for systems that don't have local logging capability, or in systems where local logging hasn't been set up.

Write-Back Capability – SkySpark can now issue commands back to control systems based on the results of analytic rules.



Connector Framework Now Enables Third Party Connector

Development - In addition to the new connectors we are bundling into

SkySpark, 2.0 now provides a suite of APIs to allow third parties to build their own connectors. The new connector framework provides all the plumbing needed to create new connectors using a standard design model.

| Search | | | | | |
|--|--------------|--|---------|-----------------|--|
| SITE | | FLOOR | | EQUIP | |
| Carytown Gaithersburg Headquarters Short Pump | * * * | Floor-1 Floor-2 Outside Utility | * * * * | AHU-1 Lights | |
| | | | | ОК | |

SkySpark 2.0 implements **new navigation** tools that enable users to customize navigation trees and paths on a project-by-project basis. Now you can define almost any navigation hierarchy you want – Regions, Sites, Floors, Equipment, etc, and all SkySpark navigation menus automatically adapt.

And a new **filter tool** enables you to instantly search for items based on characters in their name:

| | RTU | |
|--------------------|-----|--|
| SEARCH RESULTS | | |
| Carytown RTU-1 | | |
| Gaithersburg RTU-1 | | |
| Gaithersburg RTU-2 | | |
| Gaithersburg RTUs | | |
| Short Pump RTU-1 | | |
| Short Pump RTU-2 | | |
| Short Pump RTUs | | |

Con't on Page 6



Smart Devices Smart Buildings Smart Business

SkyFoundry, in cooperation with a number of other leading technology companies, is helping to launch a major new conference event. The new conference – Haystack Connect – is designed to connect the companies, communities and people who are redefining smart and connected systems.

Haystack Connect is a new type of conference and trade show – one that is produced by the community, for the community – an open source conference if you will. While the building automation, energy efficiency, and M2M industries have a variety of events, many are under the control of a single manufacturer and others are huge events where the interests of systems integrators, technology vendors and customers can be lost in a sea of unrelated products. A number of us saw a need for an event that is not owned by any single supplier, but is "by the community and for the community". Haystack Connect is designed to directly serve the needs of the customers,

systems integrators, and technology vendors who are on the leading edge of applying smart devices and smart buildings technology.

The event supports the vision that a connected community of practitioners, vendors and forward thinking customers can move industry forward in ways that no single supplier can. With Haystack Connect these communities have an event of their own.

We believe it will fill an important gap in the market by providing a place where these communities can come together to network, share, create synergy and generate new business opportunities.

An information-packed program includes sessions on the very latest in: wireless, lighting, analytics, visualization, hardware, energy and Software as a Service. And, all



presentations will be delivered by focusing on real world projects.

Media Sponsors include: Automated Buildings, Engineered Systems, Mission Critical, Buildings Magazine, Control Trends & Smart Buildings

Call to Action: Be sure to register soon so that you do not miss this important new event. Space is limited to the first 250 attendees and 20 exhibitors for this inaugural event.

Website: www.haystackconnect.org

Green Button Energy Data SkySpark Now Includes the Ability to Quickly Import Green Button Data



Green Button is an industry-led effort that responds to a White House call-to-action to provide electricity customers with easy access to their energy usage data in a consumer-friendly and computer-friendly format via a "Green Button" on electric utilities' website. ¹

Green Button defines a standard, machine-readable format for energy use data, and SkySpark now includes a new "greenButton Extension" that provides a function to parse green button XML usage data into a standard SkySpark timestamp, cost, and usage grid.

Green Button is based on a common technical standard developed in collaboration with a publicprivate partnership supported by the Commerce Department's National Institute of Standards and Technology. Adoption of the data format standard by utilities allows software developers and other entrepreneurs to leverage a sufficiently large market to support the creation of innovative applications that can help consumers make the most of their energy usage information.¹

Visit the Green Button website for full details and to see if your utility company makes your energy usage data available in Green Button format: <u>http://www.greenbuttondata.org/</u>

SkySpark's new "**greenButtonReadUsage**" function enables SkySpark to parse a Green Button XML file and convert it into a grid of usage data. The results are returned as grid with following columns:

ts: DateTime of interval starting timestamp in UTC val: usage value in native Green Button "uom" (unit of measurement) cost: cost in USD

Green Button data can be associated with any appropriate data point (such as a meter) and is then fully available to the SkySpark **Energy App** for analysis and presentation, and to the Spark engine for automated analytics to detect peaks, and other patterns of interest.





1. Source: http://www.greenbuttondata.org/greenabout.html

Custom Reporting - A Wide Range of Options

Many people spend the majority of their time interacting with SkySpark's built in Apps, which have been designed to provide analytics results and operational information in a clear easy-touse format. No one tool meets all needs however, and applications sometimes call for customized reports and data presentations.



SkySpark provides a range of features to address this need and also supports integration with external reporting tools.

Make it A Favorite. Any SkySpark App view can be saved as a favorite. Just click to configure the report options you want and then save it for anyone to use with a single click.

| Save as Report | | | | | |
|----------------|----------------------------|--|--|--|--|
| Display Name: | Issues found week of Feb 1 | | | | |
| Group: | My Favorite Reports | | | | |
| Dates: | This Week 🗘 | | | | |
| | OK Cancel | | | | |

Quickly Filter for Just the Information You

Want. The Spark app allows you to quickly

create summaries of sparks activity for any site, equipment, or point. Just select the desired items using the picker tool. And once you have selected the information you want save it as a Favorite to get back to it

| Spark Targets | EQUIP | POINT | Search C |
|--|---|---|---|
| All Default Carytown > Galthersburg > Headquarters > Short Pump > | ElecMeter-Hvac ElecMeter-Lighting ElecMeter-Julg GasMeter-Main Main Lights Misc Parking Lights RTUs RTU-1 ERTU-2 | Cool-1 Cool-2 DischargeTemp Fan Heat-1 Heat-2 OutsideDamper ReturnTemp ZoneTemp ZoneTempSp | Galthersburg RTU-1 Outsid Remove Galthersburg RTU-1 ZoneT Remove |
| | | | |

easily or share it with co-workers (see below).

Custom Queries. SkySpark's Axon language lets more sophisticated users create analytics and data views that can then be saved as a Favorite enabling any user to access the report with a single click.

Automatic Reports. SkySpark can email you when a Spark is detected, send a daily digest of Sparks, or provide a daily summary of Favorites. Each appears in your email as a hyperlink. Just click to get the SkySpark view of your report. It's that easy.

Export data and Views. Any SkySpark view can be exported in a variety of formats (shown at right). Just click on the export tool

Integrating with external reporting tools. Even with all of the above capabilities there are times when external report generation tools are desired. SkySpark supports this need with a range of features. SkySpark's open API allows external applications to make queries directly into the system to pull data and analytic results into custom reports. The API is fully documented and supported and comes with every copy of SkySpark.

Our goal with SkySpark is to provide the very best built-in visualization tools, **but never limit your ability** to extend that capability with external applications.

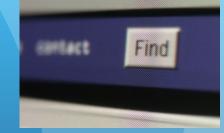


SkySpark - Analytics for a World of Smart Devices

The past decade has seen dramatic advances in automation systems and smart devices. From IP connected systems using a variety of standard protocols, to support for web services and xml data schemas, it is now possible to get the data produced by the wide range of systems and devices found in today's buildings and equipment systems.

Access to this data opens up new opportunities for the creation of value-added services to help businesses reduce energy consumption and cost and to identify opportunities to enhance operations through improved control, and replacement of capital equipment.

Access to the data is just the first step in that journey, however. The new challenge is how to manage and derive value from the exploding amount of data available from these smart and connected devices.



The new frontier is to efficiently manage and analyze data to find what matters.



New Builder App

An all new "Builder App" streamlines

the setup of SkySpark projects, providing a simplified end-to-end process for defining Sites, Equipment, Points – all the way through to connecting to data via

one of SkySpark's native connectors. The new Builder App provides a unified point-and-click environment to defines sites and equipment records, duplicate records, and select the connector and external data points that are providing the data.



| | | | Builder |
|---|---|--|--|
| Equip \$ New Find | Save Revert | Duplicate Add Tag Trash | |
| Search Carytown Caithersburg Caithersburg Caithersburg Caithersburg Caithersburg Caithersburg Caithers-Hua CasMeter-Main CasM | disMacro v Ss ahu v 1 elecMeterLoad v Ca equip v 1 equipRef v Ca hvac v 1 regionRef v Wa rooftop v 1 | U-1 iteRef SnavName ithersburg ElecMeter-Hvac ithersburg RTUs ashington DC | Choose ID Choose ID Choose ID Choose ID |
| RTUs | | moRtu | |
| Cool-1 Cool-2 DischargePressure DischargeTemp Fan Heat-1 Heat-2 OutsideDamper ReturnTemp ZoneTemp ZoneTemp ZoneTempsp | Target Message | | |

Builder is just one of the many enhancements in 2.0 – *Check it out today!*