

SkyFoundry Insider

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Helping Operators Understand Analytic Findings Quickly and Easily

The value of analytics is to inform operators of issues that are wasting money. The goal is to move to “*data-driven facility management*” where better data helps people make better decisions.

When it comes down to the core challenge it’s really about behavioral change – helping people see the need and benefit of making changes to how things are currently done to drive improved performance – for energy and operational cost savings.

No one is intentionally operating their buildings to make them perform poorly – they’re busy, they don’t know that things are operating improperly, they don’t know the financial implications, etc. So the challenge is to help busy operators quickly understand what is not working properly and show the financial impact of those issues.

Conveying analytic findings in a format that enables managers and operators quickly understand the issues **and** the actions needed to address them is the key. And that’s where SkySpark® excels and where we continue to invest. In this issue of the Insider we explore some of the newest tools to help managers understand how their buildings really operate.

In This Issue



New Tools in the Site Spark App



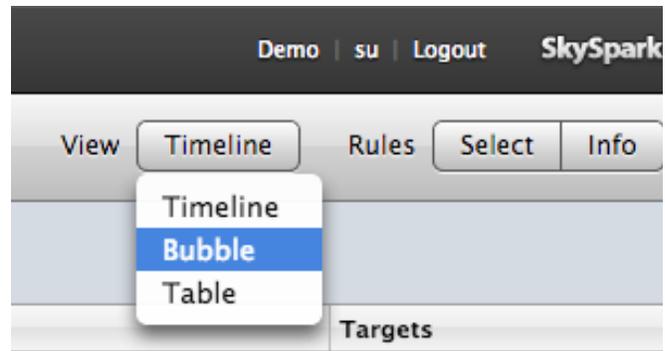
The New Schedule App



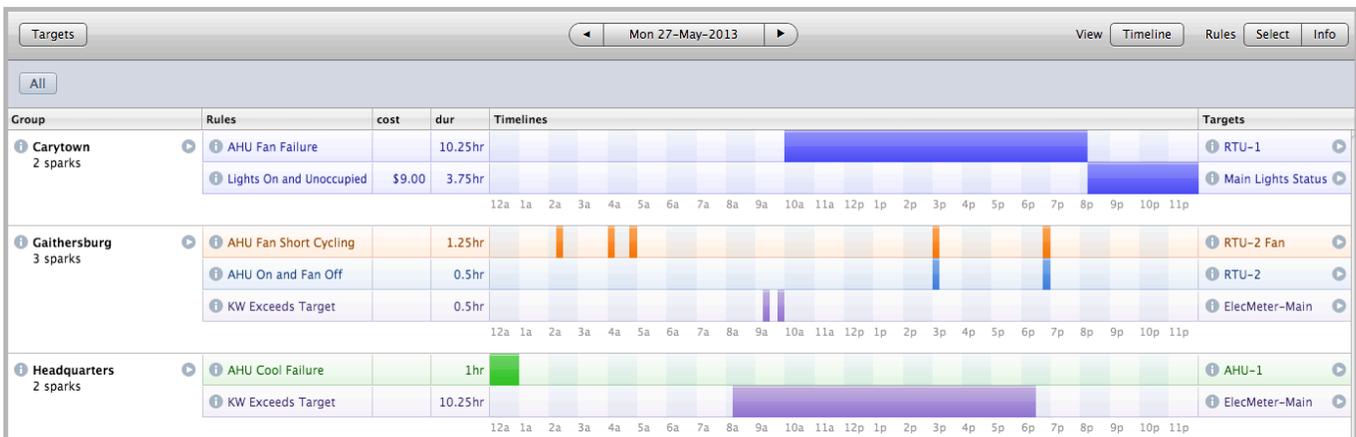
In the Cloud or On-premise - Your Option

New Tools Provide More Options to Visualize Analytic Results

SkyFoundry continues to advance SkySpark's visualization tools to help operators better understand how their buildings and equipment systems really operate and where there are opportunities for savings and improvements. With the latest release, the Site Spark App adds two new views – **Bubble Charts and Tabular views**, providing additional insight and reporting capabilities. Lets take a look at these important new tools by starting with a quick review of the “Timeline” view.



SkySpark® pioneered the use of “**timelines**” to show analytic results. This highly effective tool provides a detailed view showing exactly when and for how long issues occur as shown below:



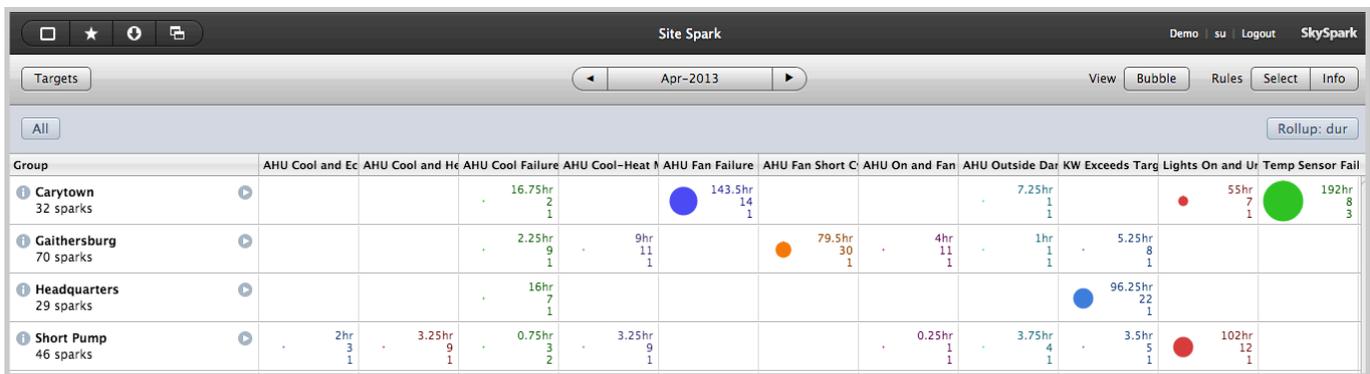
Timelines can be filtered by site, region, rule, date range – or almost any combination. This gives operators the ability to focus on the issues that matter to them based on their job responsibilities, area of interest, etc. Many times, however, we want to start our investigation at a higher level by assessing the magnitude of issues based on factors important to our individual needs.

Con't on Page 3

Assessing Analytic Findings With Bubble Charts

Easy to Understand Summaries Across Large Portfolios

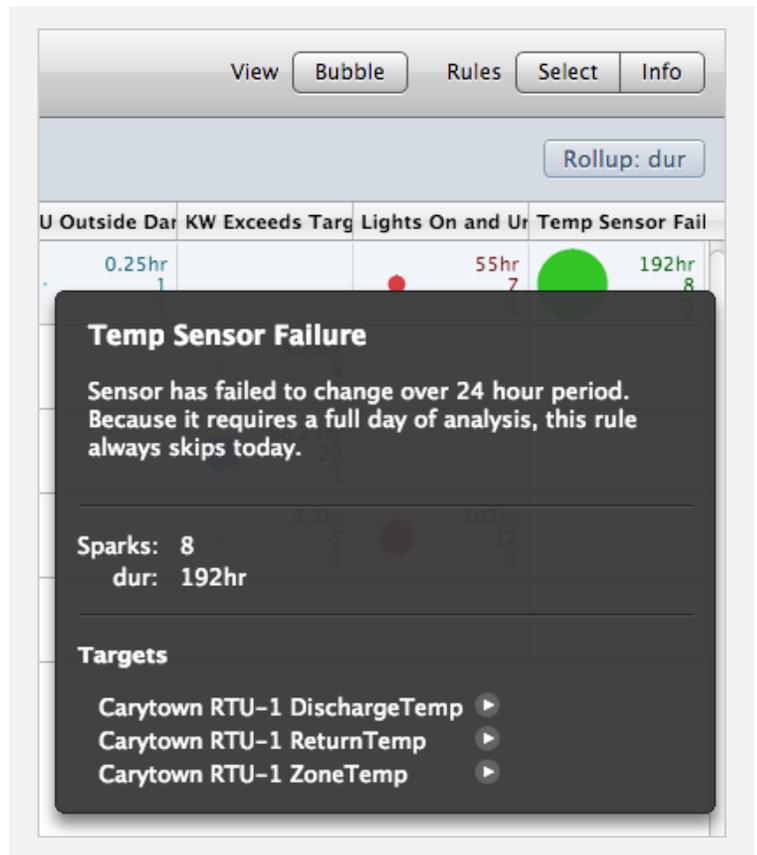
Factors used to assess analytic findings might include the total amount of time issues have occurred (**duration**), the number of occurrences (**counts**), the total **Cost** associated with an issue, and other attributes such as **Difficulty to Fix**, **Comfort Impact**, etc. SkySpark allows virtually any custom factor you desire to be added to analytic rules. The new “Bubble Chart” option then provides a great way to assess the magnitude of issues based on any of these factors across any period of time, and selection of sites. In the view below, we can see the relative magnitude of a group of issues based on total duration across the month of April:



The size of the bubble represents the magnitude of the issue. For more information, simply clicking on the bubble brings up the full details including: Help text, counts, duration (or user defined factor), and the targets that were found to have the issue. Arrows allow you to quickly navigate to the details for any target.

Assess Analytic Results Across Wide Time Ranges

A great feature of bubble charts is the ability to roll up analytic results across wide periods of time. So where timelines are limited to showing about a month of results at a time due to the high level of detail they provide, bubble charts can be used to look at months and even years of analytic results.



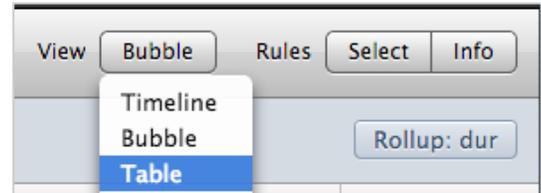
Assessing Analytic Findings With Tabular Views

Sort, filter and prepare data



Sometimes good old-fashioned tabular data is the best tool. SkySpark now provides the option to easily look at analytic results in a table format with a single click in the Site Spark App.

The tabular view presents columns for all attributes of Sparks from the rule reference to the equipment, site, all standard factors – duration, counts, and any user-defined factors such as Cost, Difficulty to Fix, Comfort Impact, etc. Once displayed you can sort by clicking in the top of any column.

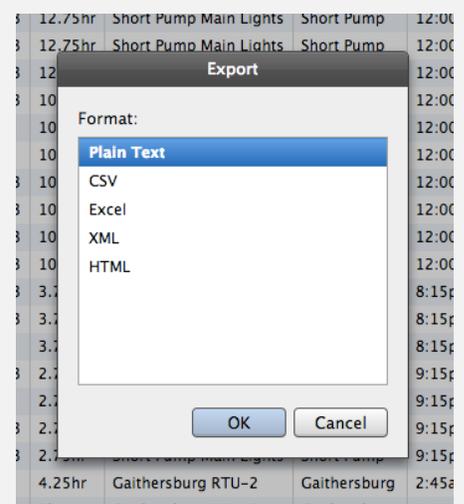


ruleRef	targetRef	date	dur	equipRef	siteRef	times	pointRef	cost
Lights On and Unoccupied	Carytown Main Lights Status	28-Apr-2013	13.75hr	Carytown Main Lights	Carytown	12:00a (10hr), 8:15p (3hr 45min)	Carytown Main Lights Status	\$33.00
Lights On and Unoccupied	Short Pump Main Lights Status	16-Apr-2013	12.75hr	Short Pump Main Lights	Short Pump	12:00a (10hr), 9:15p (2hr 45min)	Short Pump Main Lights Status	\$30.60
Lights On and Unoccupied	Short Pump Main Lights Status	15-Apr-2013	12.75hr	Short Pump Main Lights	Short Pump	12:00a (10hr), 9:15p (2hr 45min)	Short Pump Main Lights Status	\$30.60
Lights On and Unoccupied	Short Pump Main Lights Status	14-Apr-2013	12.75hr	Short Pump Main Lights	Short Pump	12:00a (10hr), 9:15p (2hr 45min)	Short Pump Main Lights Status	\$30.60
Lights On and Unoccupied	Short Pump Main Lights Status	13-Apr-2013	12.75hr	Short Pump Main Lights	Short Pump	12:00a (10hr), 9:15p (2hr 45min)	Short Pump Main Lights Status	\$30.60
Lights On and Unoccupied	Carytown Main Lights Status	29-Apr-2013	10hr	Carytown Main Lights	Carytown	12:00a (10hr)	Carytown Main Lights Status	\$24.00
Lights On and Unoccupied	Carytown Main Lights Status	4-Apr-2013	10hr	Carytown Main Lights	Carytown	12:00a (10hr)	Carytown Main Lights Status	\$24.00
Lights On and Unoccupied	Short Pump Main Lights Status	6-Apr-2013	10hr	Short Pump Main Lights	Short Pump	12:00a (10hr)	Short Pump Main Lights Status	\$24.00
Lights On and Unoccupied	Short Pump Main Lights Status	11-Apr-2013	10hr	Short Pump Main Lights	Short Pump	12:00a (10hr)	Short Pump Main Lights Status	\$24.00
Lights On and Unoccupied	Short Pump Main Lights Status	19-Apr-2013	10hr	Short Pump Main Lights	Short Pump	12:00a (10hr)	Short Pump Main Lights Status	\$24.00
Lights On and Unoccupied	Short Pump Main Lights Status	17-Apr-2013	10hr	Short Pump Main Lights	Short Pump	12:00a (10hr)	Short Pump Main Lights Status	\$24.00
Lights On and Unoccupied	Carytown Main Lights Status	21-Apr-2013	10hr	Carytown Main Lights	Carytown	12:00a (10hr)	Carytown Main Lights Status	\$24.00
Lights On and Unoccupied	Carytown Main Lights Status	20-Apr-2013	3.75hr	Carytown Main Lights	Carytown	8:15p (3hr 45min)	Carytown Main Lights Status	\$9.00
Lights On and Unoccupied	Carytown Main Lights Status	27-Apr-2013	3.75hr	Carytown Main Lights	Carytown	8:15p (3hr 45min)	Carytown Main Lights Status	\$9.00
Lights On and Unoccupied	Carytown Main Lights Status	3-Apr-2013	3.75hr	Carytown Main Lights	Carytown	8:15p (3hr 45min)	Carytown Main Lights Status	\$9.00
Lights On and Unoccupied	Short Pump Main Lights Status	12-Apr-2013	2.75hr	Short Pump Main Lights	Short Pump	9:15p (2hr 45min)	Short Pump Main Lights Status	\$6.60
Lights On and Unoccupied	Short Pump Main Lights Status	5-Apr-2013	2.75hr	Short Pump Main Lights	Short Pump	9:15p (2hr 45min)	Short Pump Main Lights Status	\$6.60
Lights On and Unoccupied	Short Pump Main Lights Status	18-Apr-2013	2.75hr	Short Pump Main Lights	Short Pump	9:15p (2hr 45min)	Short Pump Main Lights Status	\$6.60
Lights On and Unoccupied	Short Pump Main Lights Status	10-Apr-2013	2.75hr	Short Pump Main Lights	Short Pump	9:15p (2hr 45min)	Short Pump Main Lights Status	\$6.60

And once you have selected your desired data you can quickly export the tabular data in a variety of formats for use in other applications. Excel is often used

SkySpark's new visualization features build on the input we have received as SkySpark has been deployed to over 5000 buildings consisting of over 250 million square feet of space.

Its all about providing operators with the very best tools to ***"find what matters"***™.



In the Cloud or Installed On-premise SkySpark Gives You the Choice



There's a revolution happening in the software industry.

Applications hosted "in the cloud" enable organizations to utilize advanced software without having to install it locally and manage it locally. Cloud hosting can offer numerous benefits: easy expandability as systems grow, elimination of upfront capital costs, included 24/7 server and application management, etc. But, cloud hosting is not the right fit for all applications. Security concerns, or corporate policies may prevent companies from allowing their operational data from being moved outside their secure networks and hosted in the cloud. So while the "cloud" can be great for some people, it's not a solution for all.

With SkySpark its never "one size fits all", from the ability to create custom rules for individual project needs and equipment systems, to custom reports and integration with external applications of your choice via our open and fully documented API's, SkySpark gives you unrivaled flexibility to meet your unique operational needs.

SkySpark is unique in that it can be deployed in the cloud **OR installed locally** inside the perimeter of an organization's IT infrastructure. Want to take advantage of SkySpark as a cloud hosted application – just contact us and we can connect you to an authorized provider.

The New Schedule App



One of the key pieces of data used in many analytic rules is the status of occupancy. You would think this would be easy to get from a BAS, but in many cases an ongoing record of occupancy status is actually difficult to retrieve from a control system. They are often not available as logged or trended points. To help address that issue, SkySpark now includes a new Schedule App that allows you to define schedules in SkySpark that can then be used in analytic rules. With the Schedule App it's easy to define schedules and calendars for things like Holidays and vacation shutdowns.

The Schedule App provides a graphical user interface to make it easy to define schedules. Schedules can be for specific dates, weekdays, all days, etc.

Priority	Value	Dates	Start	End	Display
1	unoccupied	31-May-2013	2:00PM	6:00PM	Special Event
2	occupied	Mon,Tue,Wed,Thu,Fri	6:00AM	6:00PM	Weekday occupied
3	unoccupied	Sun,Mon,Tue,Wed,Thu,Fri,Sat	12:00AM	12:00AM	Unoccupied

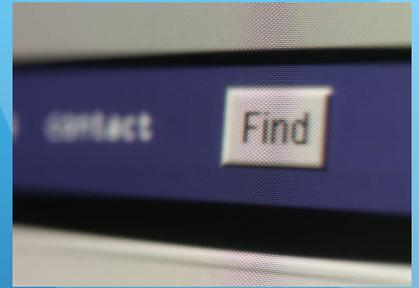
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SkySpark® - Analytics for a World of Smart Devices

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.*

The Schedule and Calendar App *(Con't from Page 5)*



In addition to Schedules, the Calendar Tab lets you define Calendars for Holidays and other events as shown here.

You can then link Schedules and Calendars, and use Schedules as part of analytic rules, and in reports.

With the Schedule App SkySpark continues to streamline the process of implementing real, operational analytics that show you how your facility REALLY operates.

Priority	Value	Dates	Display
1	Holiday	Last Mon in May	Memorial Day
2	Renovation	26-May-2013 .. 29-May-2013	Renovation Days
3	Holiday	4-Jul	July 4th

And **YES**, in case you're wondering, SkySpark schedules can issue control commands to systems via BACnet, oBix, Haystack, Sedona, and Modbus protocols. This capability is just one facet of SkySpark's ability to "write back" to control systems based on the results of analytic rules.