

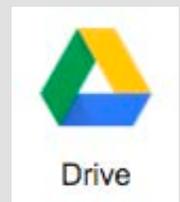
SkyFoundry Insider

Machine Learning, Integration with Google Drive and Twitter, New Case Studies and Awards, 1 Billion square feet, and Highlights from the SkyPosium Worldwide Community Event

All the Latest SkySpark and SkyFoundry News

It's been a busy few months since the September special issue, which focused on the new View Builder tools (you can find that issue here: <https://skyfoundry.com/file/263/SkyFoundry-Insider-Sept-2017---View-Builder---A-Special-Issue.pdf>) so the time is right for an update on SkySpark and the SkyFoundry community. There is a lot that's new!

Google Drive integration – Now generate reports directly in Google Docs



Now SkySpark can Tweet - Twitter integration



New Case Studies highlighting the use of SkySpark in applications from residential to industrial facilities

SkyFoundry recognized as a leader in IoT Innovation by Harbor Research



Machine Learning released for SkySpark

SkyPosium 2017 is a huge success bringing together the SkyFoundry community from around the world.



One BILLION Square Feet - SkySpark Deployments Worldwide Achieve New Milestone

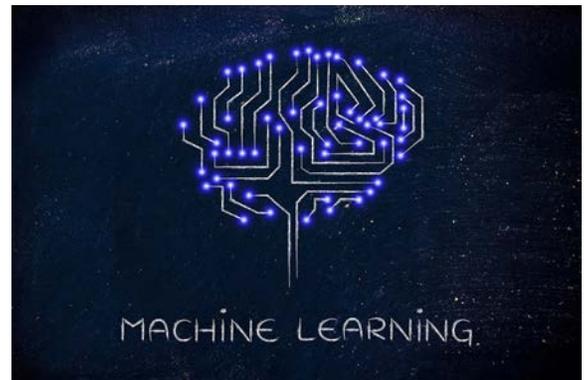


So lets dig into the stories !!

The Latest SkySpark Technology Updates

Machine Learning, Tweeting, and Google Docs

You are probably hearing about it everywhere – **Machine Learning** – software techniques that enable computers to learn from results and adjust their operation, classify information and make predictions. Its a natural extension to the capabilities of SkySpark’s automated analytics. In late 2017 we announced the release of a suite of Machine Learning Tools for SkySpark®. The new Machine Learning Tools provide support for supervised learning for prediction and forecasting through regression-based approaches, and classification using Support Vector Machine (SVM) techniques.



We worked with select customers for almost a year as they tested our new machine learning tools. Their feedback helped us optimize the tools to make application as easy as possible. The results have been excellent and we were excited to announce their availability to the entire market. These tools further extend the capabilities of SkySpark and the range of solutions our partners are delivering to customers around the globe.

One of the most well attended sessions at our SkyPosium event was the machine learning session where community members presented the work they have been doing to apply machine learning to real world projects needs.

Now SkySpark Can Tweet!

What better way to get notifications out to team members – SkySpark can now send tweets in response to events or analytic findings. It’s simple and effective for many applications and there is no cost to add the twitter extension to SkySpark.



Google Drive Integration

The new Google Drive Extension makes it easy to save files directly to your Google drive. With more and more people using Google Docs to share information among teams we wanted to make it easy for SkySpark to directly publish reports to your Google Doc repository. There is no cost for this new capability and we offer a training video to help you set it up.



Market Impact and Recognition



Perhaps the most noteworthy market related story of 2017 is that **SkySpark is now deployed to over 1 BILLION square feet** of facilities worldwide (yes Billion with a B, or 92 million square meters if you want to be "scientific" about it). Those projects encompass more than 13,000 facilities on 6 continents (yes that includes Antarctica).

The deployments cover a wide range of applications for energy management, equipment systems optimization, monitoring-based commissioning and fault detection in all types of facilities including federal and municipal government, healthcare, commercial and residential real estate, higher education and multi-site retail.

Reaching the 1 Billion square foot mark further validates the financial benefits of applying SkySpark analytics to building and equipment systems to reduce energy and operational costs. It also demonstrates the effectiveness of our worldwide SkyFoundry Partner Channel. That channel now consists of over 125 authorized systems integrators, specialty-engineering firms and OEMs that implement SkySpark for end users around the world. These companies provide customers with the greatest freedom of choice in the industry for deployment and ongoing consulting and support services.

Harbor Research Recognizes SkyFoundry as a Leading IoT Platform Innovator

In 2017 we introduced the term SkySpark Informatics to capture the concept that SkySpark is more than an analytics application, but provides encompasses many layers of functionality required to collect, manage, store, present and analyze device data. It is a comprehensive IoT data platform and we are honored to be recognized for that fact. Here's the quote from the study:

"IoT PLATFORM INNOVATORS - After reviewing and analyzing over 200 so-called IoT and related data and analytics platforms, we have found that there is a distinct minority of true platform innovators in the marketplace. Leading and innovative examples of players working on next generation platforms include Skyfoundry..."

The logo for Harbor Research, with "Harbor" in a dark red serif font and "Research" in a blue sans-serif font below it.

You can download the full Harbor Research report here:

http://harborresearch.com/platformfuture/?inf_contact_key=9f83563a1bf29403be53eb8c97c50f888d4bcd12f5b2c03056dedada332daf1e

Customer Success Stories

New Case Studies Highlight successes in applications of all types - Industrial, Residential, Entertainment,

The DoE Smart Energy Analytics Campaign, Year One Report

Through the Smart Energy Analytics Campaign, the U.S. Department of Energy's Better Buildings Alliance, with the Lawrence Berkeley National Laboratory (LBNL), and other key organizers, work with industry to encourage and track adoption of EMIS technology used with monitoring-based commissioning (MBCx) and other energy management processes in the commercial buildings sector. The year 1 report was recently issued and includes numerous mentions of SkySpark and projects that used SkySpark. You can access the Smart Energy Analytics Year 1 Summary Report here <https://skyfoundry.com/file/272/Smart-Energy-Analytics-Campaign-Year-1-Report.pdf>

Four of the five participants honored at DoE's Better Buildings Summit used SkySpark. You can find the DoE published Case Studies at the links below:

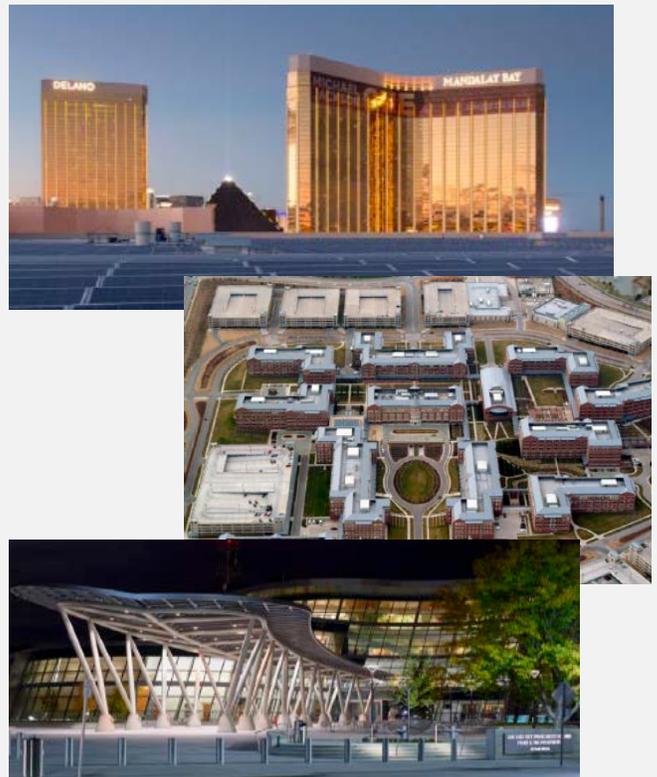
Energy Performance in a Single Site - Salt Lake City <https://skyfoundry.com/file/268/Case-Study-Salt-Lake-City-Public-Safety-Building.pdf>

Best Practice in the Use of EMIS - Sprint in partnership with CBRE | ESI <https://skyfoundry.com/file/269/Case-Study-Sprint-Headquarters.pdf>

Largest Portfolio Using EMIS - MGM Resorts International <https://skyfoundry.com/file/270/Case-Study-MGM-Resorts-International.pdf>

Innovation in the Use of EMIS - University of California, Davis <https://skyfoundry.com/file/271/Case-Study-University-of-California-Davis.pdf>

For full details on the Smart Energy Analytics program, award winners using SkySpark, and information on how to participate, visit the [Smart Energy Analytics Campaign web site here <https://smart-energy-analytics.org/>



Customer Success Stories

Con't from pg 4

How Caltech Transformed into an Integrated Facilities Management Organization - Higher Ed Facilities Forum™

In this recent article published by the Higher Ed Facilities Forum, Caltech discusses their transformation to data-driven decision-making within their facilities management organizations and SkySpark's role in their energy management successes.

You can access the full Caltech article here:

<http://info.higheredfacilitiesforum.com/blog/how-facilities-organizations-can-optimize-resources-improve-performance>



Case Studies Demonstrate SkySpark Success in Applications from Residential to Industrial Facilities

As a comprehensive, fully programmable analytics platform SkySpark is not limited to any single type of facility or equipment system. Two recent case studies demonstrate the use of SkySpark at each end of the facilities spectrum from residential to industrial.

In The Netherlands, **BAM Energy Systems**, one of the country's largest facilities management companies implemented SkySpark to provide advanced analytics for a major Net-Zero Home project. Under the project BAM guarantees energy usage, the energy bill and the comfort of the occupants. Today over 500 houses are part of the project. Find the Case Study here:

<https://skyfoundry.com/file/265/Case-Study-BAM-Stroomversnelling-Advanced-Analytics-in--Net-Zero-Homes.pdf>

And in SE Asia, **ETC Group** implemented SkySpark in a manufacturing facility where analytics were used to optimize the operation of a large compressed air system, including 8 compressors and a peak electric load of 2 MW.



The Results –

- Energy Saved: 2,000,000 kWh
- Cost Savings: \$284,000 USD
- Verified savings are 15% of total annual consumption

You can find the ETC Case Study here:

<https://skyfoundry.com/file/285/Case-Study-SkySpark-Analytics-in-Industrial-Applications.pdf>



SkyPosium

2017 | The Worldwide SkyFoundry
Community Event

SkyFoundry's first worldwide users conference was a great success (Nov 14-15 2017). With a program dedicated to community delivered presentations, attendees from around the world learned the latest state of the art in using SkySpark from the people and companies delivering advanced analytics to real world projects. Key sessions included:

View Builder Show and Tell Bake Off – In this session, community members showed the advanced, custom applications they are building with SkySpark's new **View Builder** tools. Prizes were awarded based on audience votes.

The Most Amazing Analytics Findings of All Time – SkyPosium's second competition with prizes awarded based on audience votes, presented truly amazing findings that resulted in huge savings for building owners. A few excerpts:



Are your heating valves actually closed? Hmmm. This one cost \$8K per year. (Greg Schlegel, BuildingFit)

166 Museum quality buildings in 46 countries - What could possibly to wrong! How do you monitor 166 religious buildings in 46 countries to maintain the quality of high-end millwork, mural paintings and visitor comfort at the same time managing energy costs? Each building has minimal facilities staff and qualified local engineering talent can be hard to find. This session presented absolutely amazing SkySpark findings across this unique portfolio. (Paul Quinn)

Modify Activation Set-Point of Plenum Heaters – Analysis through SkySpark identified that the plenum temperature could be maintained at a more efficient setpoint and still achieve all operating goals. (Syed Suhail, Sieben)

When the ASHRAE Journal calls you a "building whisperer" for the results achieved on a project, there has to be a story to tell. If the building in question is a technologically advanced, net-positive middle school there are a multitude of things that can make this story unique. This presentation covered findings involved in enabling this school to perform better than expected by the engineering design. (Keith Bishop, Hepta Systems)

Other sessions addressed the use of SkySpark in M&V applications, large-scale deployment of SkySpark Everywhere multi-node clusters, Machine Learning and Security, with a separate technical track for developers. All presentations are available for SkyFoundry customers and partners.

SkySpark® – Creating Value from Device Data

The past decade has seen dramatic advances in automation systems and smart devices. From IP connected systems 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.

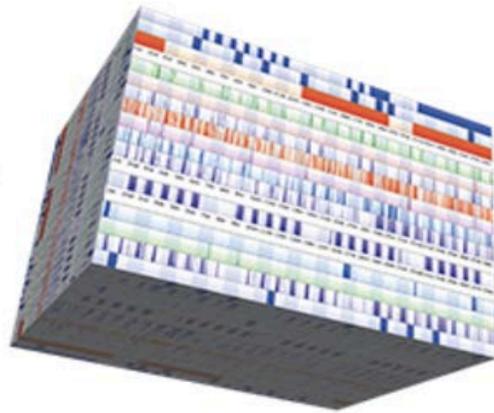
Access to this data opens up new opportunities for the creation of value-added services to reduce energy consumption and cost and to identify opportunities to enhance overall facility operations.

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. *SkySpark directly addresses this challenge.*

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

Your equipment has something to tell you.

SkySpark® speaks its language.



See SkyFoundry at these upcoming events in early 2018...

CxEnergy – Premier Conference & Exposition for Building Commissioning and Energy Management. April 23-26 Las Vegas <https://www.cxenergy.com/>

The Niagara Summit - <http://www.niagarasummit.com/events/niagara-summit-2018/event-summary-2e31e6eb07224d5c98e400780295a5f6.aspx>

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"Find What Matters"™