

Sensors: PerkinElmer's Signals™ Notebook Driving Digital Transformation using Scitara's SIP, Digital Lab Exchange, DLX™

Summary

Laboratory environmental conditions (temperature, humidity, air quality among others) clearly have an impact on the scientific results produced by lab equipment. Correlating lab results with the environmental conditions present at the time of the experiment can provide very useful information. Scientists can easily leverage Scitara's Digital Lab Exchange DLX™ platform to automate the data gathering process and incorporate readings from multiple sensors into a single Signals experiment. This use case illustrates how Scitara's DLX can be integrated with PerkinElmer's Signals research management platform to both simplify and enhance experimental procedures and data handling with a single button click.

Challenge

Gathering data from multiple sources and entering it manually into a Signals Notebook experiment could be time consuming and prone to error. For environmental data, this information often comes from sensors that may be located on a remote wall or even in the ceiling. The scientists would have to manually collect the temperature, humidity, and air particulate counts from each sensor (assuming they can get access), manually enter the data in the appropriate logbook, and then copy the data from the logbook into Signals Notebook.

Once the data is entered, a quality check may need to be performed to verify the data is accurate. If there was an error in the data, more time and energy must be spent tracking down and correcting the error, and if the lab is governed by a Quality Management System (QMS), the deviation would need to be documented, investigated, and resolved.



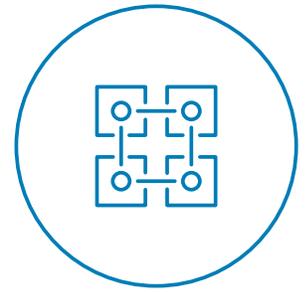
SignalsNotebook

**Simplify and enhance
experimental procedures
and data handling with a
single button click**

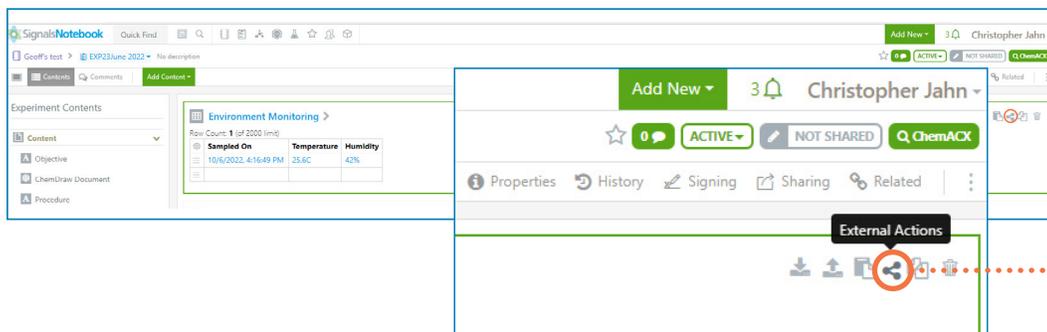
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Solution

Using Signals Notebook integrated with Scitara DLX, instead of a manual process, an external action may be easily configured within the Signals Platform to automatically capture the needed information, and to automatically place the result in the proper location in a Signals Notebook experiment. Multiple sensor readings may be gathered in a single action, or if preferred (or required), each reading may be triggered by its own external action. Once sampling is complete, DLX sends the results directly back to the appropriate location within Signals. It is also possible to create a time-based orchestration that gathers environmental monitoring (EM) data on a regularly scheduled basis and puts the data in a centralized location that may be referenced by a Signals Notebook user.

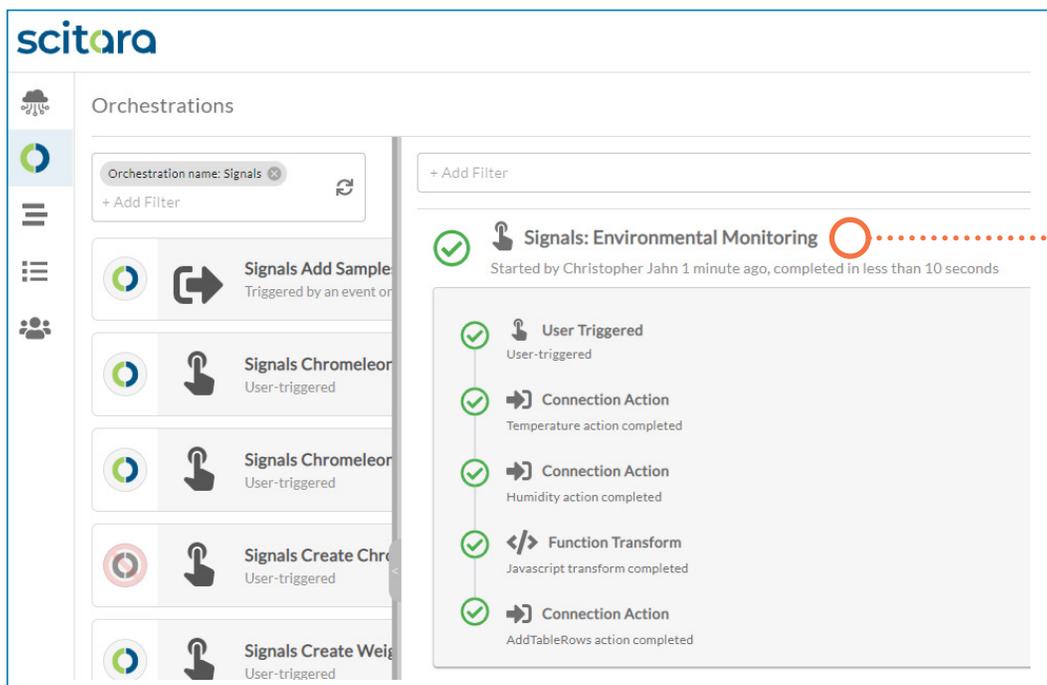


Push a button, get a link and get your results – No human interaction required.



Request

Request a temperature and humidity reading...



Orchestrate

Triggers a Scitara DLX Orchestration as a background process (hidden from user)...

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Signals Notebook Quick Find

Geoff's test > EXP23June 2022 No description

Contents Comments Add Content

Experiment Contents

Content

- Objective
- ChemDraw Document
- Procedure

Environment Monitoring >

Row Count: 2 (of 2000 limit)

Sampled On	Temperature	Humidity
10/6/2022, 4:16:49 PM	25.6C	42%
10/6/2022, 4:20:35 PM	25.6C	42%

Updates Signals Notebook

Benefits

With the integration of DLX and Signals Notebook, the manual process of collecting and entering data is eliminated; the likelihood of error is greatly reduced, and significant time is saved with increased productivity as a natural by-product.

- No manual human interaction needed, just click a button
- No data transcription or data entry needed
- Automated data gathering increases data reliability and saves time at multiple levels
- Data collection from multiple instruments may be incorporated into a single action if desired

