*"With accurate historic usage, we can generate robust chemical forecasts. RFgen is helping us accomplish our inventory management goals."*

JASON KINTZ | PROJECT MANAGER

# ON Semiconductor

*Leading manufacturer of semiconductor wafers improves safety validation controls and inventory management capabilities with RFgen.*

### At a glance...

**Industry**
Semiconductor Manufacturing

**Application**
Inventory Management
PO Processing
Custom Applications
Off-Network Mobility
High Availability

**Environment**
Oracle E-Business
Suite Release 12.1.3

ON Semiconductor designs and manufactures electronic solutions used in products throughout the consumer electronics, automotive, telecommunications, and aerospace/defense industries. ON Semiconductor maintains many manufacturing facilities, including one in Gresham, Oregon where the company is piloting an initiative to improve inventory management and control. The Gresham plant manufactures semiconductor wafers for use in a variety of electronics.

### The Challenge

Semiconductors can't be produced without chemicals, and the use of chemicals requires safety precautions and compliance. "In order to make wafers, we expose them to different chemicals to create different characteristics," explained Steve Glover, of the Computer Integrated Manufacturing (CIM) Support team. "Chemicals are highly controlled. You don't want to install the wrong chemistry to the wrong line. We're also concerned with shelf life, because expired chemicals may cause defects."

The ON Semiconductor chemicals team manages about 100 products. They had controls in place to prevent the usage of the wrong chemical, but they desired even more control. "We wanted to be able to scan a product and have the handheld device provide a visual and audible indicator to confirm a valid chemical install at a specific location. This reduces the chance of defects in the finished products."

Although they already used a barcode scanning system for chemical validation, that solution didn't integrate with Oracle E-Business Suite and couldn't automatically update the ERP about inventory receipts and transfers.

"If you're installing a chemical, you're using it. We needed the ability to interface with Oracle at the point of use and also maintain transaction history. The end result is real-time data tracking and accurate usage rates that help us determine how much we need of a product on site," Glover said.

### The Solution

The chemicals team decided to search for a mobile data collection solution that could add more control over validation and also interface with Oracle for inventory control. Real-time usage data would be an important first step toward achieving the company's inventory control project goals.

They researched solutions to find a company that could supply both validation and certified integration to Oracle. Due to physical site constraints, ON Semiconductor needed a validation solution that could work in either connected or offline modes.

"We went through many different companies," recalled Derrick Allman, Procurement Specialist. "We had a very specific set of wants and needs. Only RFgen could meet them. Everybody else wanted to start from scratch. We even ran into vendors who didn't know what Oracle was! RFgen stood out against everyone else."

**RFgen**

RFgen Mobile Foundations for Oracle E-Business Suite is a suite of pre-written, pre-tested Oracle-validated data collection solutions that enable companies to benefit from real-time barcode data. Requiring zero foot print on the Oracle server, RFgen delivers real-time, bi-directional data exchange between barcode scanners and Oracle. It's designed to help businesses drive operational efficiencies, reduce errors, and eliminate manual data entry.

## The Result

Working closely with the ON Semiconductor project team, developers at RFgen customized the chemical validation process. When technicians perform an install of a chemical, they validate both the item and the location through scanning. RFgen uses multiple layers of filters to ensure the chemical passes validation before it will be allowed to be issued out of Oracle. RFgen validates that:

- The technician is at a valid location.
- The chemical is a valid entry in their Oracle system.
- The chemical installation to the line is authorized.
- The chemical is not expired.

ON Semiconductor uses RFgen in three modes:

- *Online* provides real-time synchronization with Oracle via RFgen.
- *High Availability* is used during periods when the Oracle server is unavailable, including maintenance performed every other weekend and anytime patches or enhancements are being applied. In this mode, transactions are held on the RFgen server until the ERP system is available again.
- *Offline* stores data on the handheld device when a technician is out of network range.

During normal use, a technician performs transactions (receipts, issues, validations) from multiple locations on site. If network connectivity drops off or Oracle becomes unavailable, the system seamlessly switches modes to allow the end user to perform their task. All the interactions are handled by RFgen silently in the background; from the technicians' perspective, it feels as if they were always connected.

RFgen simplifies native Oracle transactions by enabling ON Semiconductor to reorder fields and screens to more closely match existing business processes. Barcode scanning with bi-directional data exchange speeds up receiving and inventory transactions while reducing manual data entry.

"From a user perspective, it's dramatically quicker to perform a transaction in RFgen than natively in Oracle. Receiving an item in Oracle requires more entry into multiple screens," described Michael Demetras, who managed user testing of RFgen at ON Semiconductor. "With RFgen, we've developed a form that's a huge time saver and the software populates appropriate fields, so you don't have to re-key information."

Using RFgen with Oracle E-Business Suite, ON Semiconductor was able to:

- Save time by capturing real-time information about inventory usage in Oracle.
- Use barcode scanners and validation functionality to ensure the safety and efficacy of each chemical prior to its use in manufacturing.
- Gain better visibility into inventory levels for production and inventory ordering.
- Reduce manual data entry through automation and a simpler interface.

RFgen is contributing to better inventory control at ON Semiconductor. Prior to RFgen, the team didn't use Oracle for inventory management, and instead inventoried offline manually using

spreadsheets and daily counts. With accurate, real-time usage information in Oracle, it is now possible to create new reports, display a current snapshot, and trend data.

"Now we have a direct link through RFgen to Oracle. When we scan something and issue it, it's removed out of on-hand inventory. We have triggers set up in Oracle to monitor current inventory levels and provide feedback on when we need to replenish our supply," said Demetras.

Project manager Jason Kintz explained why RFgen will also help the company improve its chemical reordering process to maintain optimal inventory levels, avoid waste and take advantage of savings opportunities.

"The long term plan is to take this real-time data and use it to automate and drive our ordering process. With accurate historic usage, we can generate robust chemical forecasts. RFgen is helping us accomplish our inventory management goals."

**About RFgen Software**

RFgen Software helps organizations reduce supply chain implementation costs and increase accuracy and efficiency with the industry's most reliable and flexible mobile data collection software and supply chain automation solutions.

Enabling you to increase productivity by providing your mobile workforce with real-time and on-demand access to enterprise data, RFgen's mobile data collection solutions easily connect Windows, Android and Apple iOS mobile devices like barcode scanners, tablets, handheld computers, voice recognition devices and more to your back office ERP systems and databases, including Oracle's JD Edwards, Oracle E-Business Suite, SAP, SAP Business One, Deltek Costpoint and more.

In business since 1983, RFgen is known in the manufacturing and distribution industries for its solid, high-quality products and high customer satisfaction ratings among its more than 2,800 customers. With a global reach and local touch, RFgen and its network of more than 140 certified solution partners can support your organization no matter where your operations are located around the world.