



Indio Water Authority and Sedaru®

Power Sharing – How Indio has Integrated the Neptune® R900® Data into its Water Distribution Network

Indio, California's Indio Water Authority (IWA) has used the Neptune R900® System to save water, reduce costs, and cut meter reading times. Now, working with IDModeling, Inc., a premier enterprise partner in the Neptune Connected Utility Partnership Program™, IWA is leveraging shared, analyzed data across utility applications to communicate more than just meter reads across departments. With IDModeling's flagship software, Sedaru® – in tandem with proven Neptune R900 RF technology – Indio Water Authority is realizing breakthrough functionality for monitoring, analysis, automation, and field mobility.

Since implementing IDM's Sedaru software in December 2011, Indio Water Authority has been able to take data from different data sources – including SCADA, GIS, backflow, and inspection – and coordinate it with communications and personnel in real time across its different departments to support water conservation initiatives and improve operational efficiencies.

Authority personnel have been utilizing Sedaru both as a web application and as a mobile app to gauge water distribution network performance. At a glance, they can see instantly on Esri®-based GIS map overlays which valves are being exercised or which pipelines need rehabilitation. According to Kevin Koshko, Sedaru Product Director at IDModeling, IWA has used the software to “see the big picture, tying into SCADA to find anomalies such as pumps that frequently cycle or tank levels that drop when they shouldn't.”

CONSUMPTION JUNCTION – NEPTUNE'S AMR DATA IS INTEGRATED INTO SEDARU

After first integrating work management and SCADA systems through Sedaru, IWA brought in automatic meter reading (AMR) data from its Neptune R900 System. Since that time, the Authority has gone beyond increased meter reading



CUSTOMER

Indio Water Authority, Indio, California

SERVICE TERRITORY

Indio Water Authority serves approximately 21,300 accounts in the Coachella Valley of California.

SOLUTION BENEFITS

Gauge water distribution network performance in a glance to find anomalies

Answer high water bill questions with intermittent/continuous leak data

Aid conservation by identifying excessive water consumption



efficiencies to proactively share with all its departments detailed water consumption data for individual accounts. This includes providing management with integrated R900 consumption and SCADA data for analytics in Neptune’s host software, N_SIGHT® – such as the comparison of water produced with water billed, to focus on leakage and reduce non-revenue water.

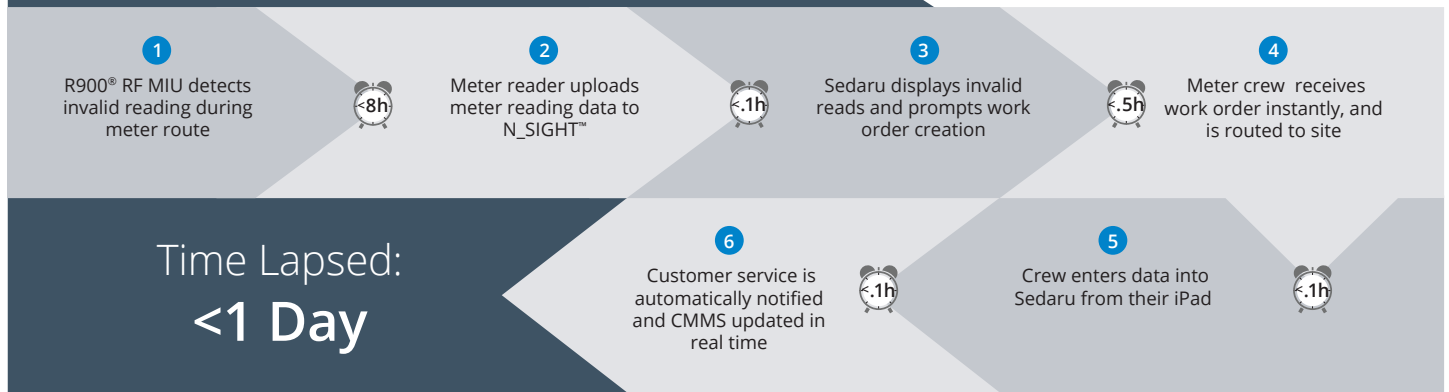
Interfacing with N_SIGHT has also enabled the utility to extract and share quantified leak information – identifying past and current intermittent and continuous leak events – and display it on a map for customer service, dispatchers, and/or other personnel to take action. Calls from customers regarding high water bills have never been easier to answer. Simply by logging into Sedaru and looking up an address, IWA can see on its device screen a notification such as, “intermittent leak for the last 35 days,” pinpointing a potential problem before a truck roll is needed. [To learn the steps IWA saves as a result, see the graphs in this article.]

Analysis of consumption through N_SIGHT and Sedaru has also enabled IWA to identify over-usage of water, a critical issue in a desert community concerned with

conservation. In the past couple of years, Indio has instituted budget-tiered rates for customers, which gives IWA a clearer idea of who is using the water and where the water is being used. A sudden flourishing of plants or lawn in the desert can be conspicuous, particularly for an account that supposedly can’t afford the water necessary to make it happen. Now the Authority can immediately take consumption information from Neptune and chart it as a graph. If there’s a curious discrepancy between usage and budget tier, then the Authority can red-flag the account to investigate further, and even perform a water audit.

With real-time AMR information shared across departments, IWA has been able to respond more proactively, as with reverse flow condition alerts. It can also more quickly see a problem at a meter for a specific account, instead of having to look month to month for gradual increases or decreases in consumption. This capability will only increase as the Authority continues to implement Neptune’s E-CODER®)R900i™ units (completion of the roughly 21,000 installations is expected in 2016) and, likely, R900® Gateway fixed

Invalid Reading/No Reading Task with Sedaru



network data collectors. Even during this phase, Sedaru is helping to track the progress of the changeout as well as identify and prioritize meters that need to be replaced. In the event of invalid meter readings, broken antennas, or registers not communicating, Sedaru automatically relays these as alerts on screen. With just a click, the operator can create a work order which immediately goes out to the appropriate field crews to take prompt action on a potential water loss event. [To learn the steps IWA saves as a result, see the graphs in this article.]

GAINING NEW LEVERAGE OF METERING DATA

The Authority is currently deploying yet another new Sedaru feature, a hydraulic simulation app. “In a very simple way, it will allow them to predict the impacts of events such as main breaks or surges in demand down the line,” said Koshko. “And the operator doesn’t have to know GIS or modeling technology at all to use it.” He added that Indio has a unique hydraulic footprint: “With its desert climate and ‘flat’ terrain where booster pumps ‘fight’ each other, it has its own challenges that can be met through Sedaru.”

Another new innovation that Indio Water Authority will soon use to leverage Neptune’s AMR data is real-time

modeling, which will take the consumption information from the E-CODER)R900i units and provide a true snapshot of events as they occur.

Koshko said the next major steps that IWA will take will involve the “complete integration of customer service into all work flows through Sedaru,” including the turning on or off of water services at residences. As for Neptune’s part of this integration, he added, “I envision IWA creating models in Sedaru based on consumption trends identified from R900 data – this will help to make predictions based on customer history.”

With possible future adoption of intelligent data and analytics, customers could play an even bigger role in helping Indio conserve water and reduce energy costs. A customer web portal will enable customers to monitor their own consumption; the integration of system-wide data from Sedaru could show them what a change in consumption could mean if similar changes were made by the entire community.



#winyourday
neptunetg.com

Neptune Technology Group
1600 Alabama Highway 229
Tallahassee, AL 36078
800-633-8754 f 334-283-7293