AVEVA™ Mobile Operator for power & utilities

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AVEVA Asset Performance Management – the complete picture
AVEVA Mobile Operator

25+ Years of Mobility Experience

1995
SafeTrac Controls founded on RFID tag technology

1998
Name change to SAT Corp & IntelaTrac 1.0

1998
SAT Corp signs ExxonMobil as 1st customer

2001
IntelaTrac version 3.2 released & SAT Corp Acquired by Invensys/

2008
IntelaTrac version 4.0 release

2010
IntelaTrac version 4.0 released & SAT Corp Acquired by Invensys

2014
IntelaTrac version 5.0 released & Invensys acquired by Schneider

2018
IntelaTrac brand name changed to "Mobile Operator Rounds" release of version 5.1 SP2

2018
AVEVA merged w/ Schneider Electric Software

2018
AVEVA merged w/ Schneider Electric

2021
Mobile Operator Rounds released

2021
AVEVA Mobile Operator with the release of version 6.0 in March 2021
What about the stranded assets and non-instrumented equipment?
The power of digital workflow and mobility

- Eliminate wasted work
- Improve information usefulness
- Provide Intelligent work processes
- Deploy rapid decision making

Capture, historize, and view stranded asset data

Contextualized understanding & situational awareness

Work process optimization

Continuous improvement / best practice evolution
Proven business outcomes

<table>
<thead>
<tr>
<th>Stranded data</th>
<th>Workforce performance</th>
<th>Downtime avoidance</th>
<th>Compliance</th>
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<td>Improve decision making by using disconnected data and the tribal knowledge of your front line workers.</td>
<td>Better operator efficiency through the consistent execution of best practices, situational awareness and data visibility</td>
<td>Decrease in unplanned downtime through identifying, controlling and/or eliminating potential failures.</td>
<td>Improved compliance records and reporting through replicable, established processes and automated reporting</td>
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Common challenge

Accessing stranded asset data: Lack of visibility and information on stranded assets effectively leads to a break in the digital thread that connects people, processes and assets. This can lead to an inefficient workforce, unscheduled downtime, and a lack of compliance.

Solution:

- Provide organizations an enterprise-wide ready mobile field workforce solution that is COTS
- Make it easy for “SuperUsers” to configure rounds/routes/tours
- Distribute this work in a schedule or ‘ad-hoc’ on-demand/and work in an offline mode
- Provide field workers an easy-to-use tool to collect data in a consistent way
- Provide actionable messaging for abnormal situations met in the field, at the point of incident
- Provide the ability to capture images and/or videos as a record to the abnormal situation
- Provide an easy way to view this information in reports and dashboards
- Validate work is performed
- Connect to the AVEVA™ PI System™

Benefit:

- Secure, standardize, globalize with regional settings support (language, time zone, cultural settings)
- So that best practices of field work processes are deployed
- Support shift schedules or ad-hoc work
- To reduce the primary failure problem, remove secondary and potential process upsets, derates, or additional maintenance
- A picture is worth a thousand words, so more context with image capture
- Paint a complete picture, now including field information
- To support safety and compliance records
- To send field data to the AVEVA PI System™
Software suite

**Procedure Builder**—Easy to use, highly flexible, configuration environment

**Schedule Manager**—advanced scheduling & workload balancing

**Auditor Plus**—work process and procedure review and approval

**Mobile Operator Reports**—configurable, exportable, emailable reports

**Power BI**—Dashboards for field collected data

**Mobile Operator App**—field work execution
Overview of the AVEVA Mobile Operator workflow

Build & configure work

Schedule work

Perform work

Review work
Functional capabilities

- Connected field worker duties / proactive monitoring
- Field worker training on best practices
- Pause and resume work
- Offline / ad-hoc capable for stranded assets
- Mobile work order requests / notifications
- Schedule work
- View trends
- Capture images / videos
- Attach documents
- Send data to the AVEVA PI System
- Decisions and conditions, not only linear or static
- Focused advice and actions based on abnormal situations
- EH&S / compliance records and reports
- OS agnostic
- Barcode/ QR/ NFC tags
- Bluetooth peripherals

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AVEVA Mobile Operator - PI Update Service

- This service sends values to the AVEVA PI System after a round has been completed and synced.
- This data can be collected by manually entering values, read with a temp gun, vibe probe, or other BT peripherals, and by scanning an NFC, QR, or barcode.
- The data is then securely stored in the mobile database until transferred.
- The Update Service will then check the AVEVA PI System for new PI Tag data and send those values and time stamps to their PI Tags.
How it's configured and used in a procedure

- Using Procedure Builder, a task can be built to collect the data type and value.

- Assets can be created (or connected to your asset hierarchy) in AMO and used in a round to store and display historical values for that task against that asset.
How it's configured and used in a procedure

- Once the task is configured, a PI Integration can be dragged over from the toolbox and nested under the task. This is where the PI Tag is entered and type of timestamp is selected.

- Using Schedule Manager, the round can be scheduled so that the assigned user will see it on the day and shift it needs to be completed.

- Once completed and transferred back to the database, the service will send the new values over to AVEVA PI System, viewable in AVEVA™ PI Vision™.
AVEVA Mobile Operator supports

- **Work processes / initiatives:**
  - Connected (field) worker
  - Operator-driven reliability (ODR)
  - Reliability-centered maintenance (RCM)
  - Operator routine duties (ORD)
  - Proactive monitoring
  - Digital transformation
  - Rounds, routes, procedures, tours, walk-downs, etc.

- **Integrations:**
  - CMMS / EAM
  - Historians
  - Turnaround applications
  - Document management
  - Laboratory / LIMS
  - Shift handover/reports
  - GPS
AVEVA Mobile Operator supports

ENVIRONMENTAL INSPECTIONS

• Carseal checklists
• Water outfall inspection
• Tank in service inspection
• NESHAP above ground piping inspection
• Recovered oil tank inspection
• Oily water sewer / QQQ drain inspections
• Stack opacity checks
• Weekly visual LDAR (VOC)
• Method #9 visual emission evaluation
• Chemical truck loading inspections

FIRE & SAFETY INSPECTIONS

• Building audit
• Fire extinguishers & blankets
• Lock-out / tag-out
• Fresh air control systems
• Hydrants, monitors, PIVs, hose reels, foam totes
• Self-contained breathing apparatus (SCBA)
• Eyewash stations & safety showers
• Ring buoys, lifeboats, life preservers
• Fireman locker gear inventory
• Fire & gas detectors
• OSHA self-inspection checks
Current Applications

The member utility institutionalized the auxiliary operator rounds by writing the program steps for conducting these rounds in the Wonderware IntelaTrac software and storing those program steps on a server. The auxiliary operator selects the particular set of rounds they are scheduled to conduct and downloads the steps for conducting those rounds into their handheld computer. Typical rounds that this utility programmed into the software include cyclone inspections, hydrogen dryer inspections, sump pump inspections, and upper air handler inspections, among others. The steps for conducting any particular set of rounds are presented in an order that optimizes the movement of the operator through the rounds. Each step provides guidance on what the operator should observe and what information should be recorded. These observations may include equipment status (operating, standby, shutdown) valve positions (open, closed, throttled), switch positions (on, off, auto), temperatures, pressures, lubrication levels, and so on. Data that are outside normal ranges will trigger an alert and provide follow-up actions. For example, a low oil level reading might trigger instructions such as the following:

1. Obtain a specific type and grade of oil.
2. Add oil to the reservoir.
3. Document the condition in the note section for the following shift.
4. Document the condition in a work order for maintenance to investigate.
AVEVA Helps Bermuda Utility Provide Consistent Power and Deploy Upgrades Self-sufficiently

Goals
- Provide reliable electric power to the entire island chain
- Deploy new capabilities and integrate new equipment self-sufficiently
- Attain ISO 14001:2004 certification

Challenges
- Bermuda’s remote location in the Atlantic Ocean means that in-person support is not quick to arrive and sometimes not possible
- Island development will require increased power generation in the future
- BELCO was attempting to be the first organization in the territory to achieve ISO 14001:2004 certification

AVEVA Solution
- System Platform
- InTouch® HMI
- Historian
- IntelaTrac Mobile Operator Rounds®

Results
- With the help of the AVEVA software, BELCO’s generating plant and transmissions and distribution system provide consistent electricity to the 65,500 residents and 465,000 tourists who visit Bermuda each year
- BELCO achieved the prestigious ISO 14001:2004 certification for environmental management, in part because of the data collection and reporting capabilities of the AVEVA Historian and AVEVA IntelaTrac Mobile Operator Rounds
- The utility is expanding its integrated resources plan for the future based on the foundation of the AVEVA software and other AVEVA products
“Give your field workers a better upgrade to a pencil than the pen"
Mark Marantica

Presales Consultant

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Questions?
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State your name and company.

Please remember to...
Navigate to this session in the mobile app to complete the survey.

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AVEVA is a world leader in industrial software, providing engineering and operational solutions across multiple industries, including oil and gas, chemical, pharmaceutical, power and utilities, marine, renewables, and food and beverage. Our agnostic and open architecture helps organizations design, build, operate, maintain and optimize the complete lifecycle of complex industrial assets, from production plants and offshore platforms to manufactured consumer goods.

Over 20,000 enterprises in over 100 countries rely on AVEVA to help them deliver life’s essentials: safe and reliable energy, food, medicines, infrastructure and more. By connecting people with trusted information and AI-enriched insights, AVEVA enables teams to engineer efficiently and optimize operations, driving growth and sustainability.

Named as one of the world’s most innovative companies, AVEVA supports customers with open solutions and the expertise of more than 6,400 employees, 5,000 partners and 5,700 certified developers. The company is headquartered in Cambridge, UK.

Learn more at www.aveva.com