

A System Inventory Solution for Virgin Islands Water and Power Authority

VIWAPA's GIS Situation

Virgin Islands Water and Power Authority (VIWAPA) produces and distributes electricity and potable water for 54,000 customers on the islands of St. Croix, St. John, and St. Thomas. VIWAPA desired a functional geographic information system (GIS) and work order process to manage its electric assets efficiently. This required accurate collection of asset data and using system information to populate a new GIS system. The project also called for linking the GIS data to the Customer Information System (CIS) and other operations support systems, and implementation of a Map Viewer system.

The Collaborative Solution

Working in conjunction with R.W. Beck, a Science Applications International Corporation (SAIC) company, whose team offered engineering expertise and knowledge of the VIWAPA system, a unique solution based on the collection of accurate inventory data that would be linked to VIWAPA's existing and proposed asset-tracking systems was developed. Osmose Video Data Capture™ was selected as the approach for collecting accurate inventory data.



Osmose Video Data Capture™ (VDC)

Osmose VDC technology replaces conventional data entry into a mobile device with high-resolution digital video, audio commentary, and integrated global positioning system. It provides a highly accurate data deliverable for GIS while giving users the ability to make "virtual field visits" 24/7 from any desktop via *Osmose Online*. This innovative approach to collecting, delivering, and viewing system inventory data not only yields enhanced accuracy, it can also significantly reduce project-related expenses and the number of trips to the field.

Data Collection

Osmose field crews were dispatched to record video and audio commentary of each asset. To ensure the accuracy and completeness of the data collected, the Osmose VDC approach included four different quality control checkpoints: a field review, a data extraction review to ensure data was accurately extracted and processed, a data validation review to ensure critical network and data model requirements were met, and finally, a formal data quality control review to ensure all delivered data met or exceeded the accuracy requirements set forth by VIWAPA.

Data Delivery

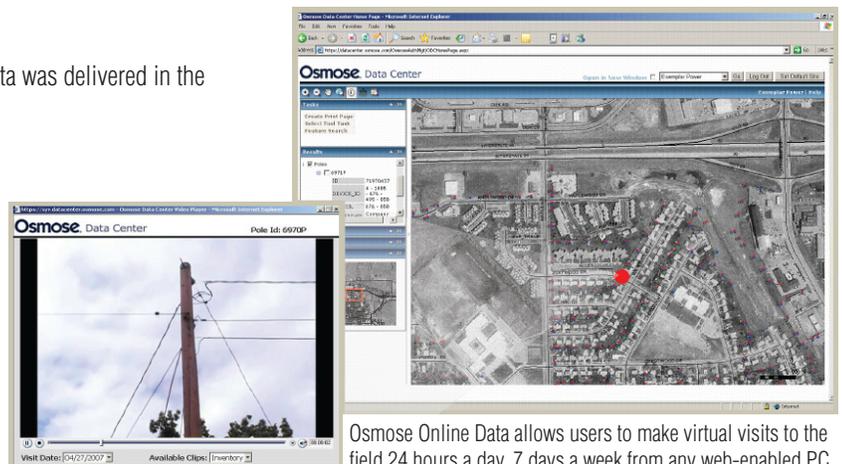
After several rigorous quality checks by Osmose and R.W. Beck, the data was delivered in the following formats:

- Electronically in two separate formats - a MultiSpeak® XML file and a Microsoft Access® database
- Via **Osmose Online Data™**, a web-based mapping solution accessible through a standard web browser that allowed VIWAPA to view a video of each asset visited during the inventory project.

The End Result

Collection and delivery of accurate system inventory data afforded VIWAPA the opportunity to:

- Improve disaster recovery practices
- Develop a detailed electric system engineering model, including secondary electric plant features to support targeted loss reduction strategies
- Track the "as-built" condition of the distribution plant based on work order posting to the new GIS system
- Facilitate business process efficiency with the implementation of a Map Viewer
- Provide the foundation for an Outage Management System (OMS) and field force automation



Osmose Online Data allows users to make virtual visits to the field 24 hours a day, 7 days a week from any web-enabled PC.

For information on system inventory projects, please contact Glen Andrew at 205.613.7269 or David Bonk at 407.304.6850.