



Loudoun Water Ashburn, VA



Loudoun Water
Service Area Map



Operator Overview Screen at Loudoun Water

About Loudoun Water

Established in 1959, Loudoun Water, also known as Loudoun County Sanitation Authority, provides dependable, high-quality drinking water and wastewater reclamation services to the unincorporated areas of Loudoun County, Virginia. Loudoun Water controls and monitors its water distribution and wastewater treatment systems using HMI/SCADA applications. With these graphically rich, Web-enabled programs, Loudoun Water can view everything from flow animations and representations of pipes and valves to dashboards and control panels.

ICONICS Software Deployed

For several years, the utility's HMI/SCADA system has been based primarily on GENESIS32™ by ICONICS, a

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Andy Krapf
Supervisor of Instrumentation and Controls
Loudoun Water

Microsoft Gold Certified Partner that develops industrial automation and manufacturing-intelligence software. Loudoun Water installed its HMI/SCADA software in an environment with 15 client computers running the Windows XP operating system connected to servers running the Windows Server 2003 operating system. Microsoft SQL Server 2005 data management software supports the HMI/SCADA applications by supplying them with information gathered in real time from the utility's industrial environment. Although the Windows XP-based client computers served the utility's needs and were straightforward for the IT department to manage, Loudoun Water continually seeks ways to improve its industrial processes. It determined that high-performance 64-bit computers and applications - including a feature-rich, easier-to-use, 64-bit version of its ICONICS software, GENESIS64™ - would increase efficiency, and that the utility would need a newer operating system to support the upgrade.

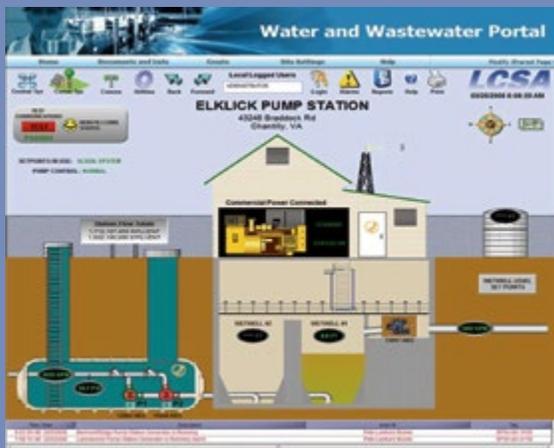
Project Summary

In February 2008, Loudoun Water began deploying the Windows Vista Ultimate client operating system and upgrading its HMI/SCADA software to include the GENESIS64 suite.

By upgrading to Windows Vista, Loudoun Water can run versions of its mission-critical industrial applications that fully support the newer operating system's advanced 64-bit architecture and richer graphical environment. As a result, these third-party applications are more flexible and easier to use, and they can be customized much faster.

cation also increases the IT security of Loudoun Water by integrating with User Account Control to help reduce the risk of accidental or unauthorized system changes.

Additionally, Windows Vista comes with Microsoft .NET Framework version 3.0, which includes, among other technologies, Windows Presentation Foundation. Users at Loudoun Water are particularly impressed with the GENESIS64 user interface elements and 3-D graphics, which are now built on Windows Presentation Foundation.



Alarm Monitoring Screen for Elklick Pump Station at Loudoun Water



3D Model Visualization

Benefits of the System

The utility's HMI/SCADA applications running on Windows Vista include sophisticated features that would be more difficult to implement in a Windows XP-based environment. For example, the GENESIS64 suite uses Windows Vista Sidebar Gadgets as gauges, alarms, sliders, and other controls that utility employees can access more easily. The suite also uses enhanced Windows Error Reporting to gather information that can help identify and resolve program errors.

GENESIS64 exposes metadata and integrates with Windows Vista search technologies to help employees quickly locate information that the suite generates. The appli-

Conclusion

The new versions of the utility's third-party applications take full advantage of the high performance 64-bit architecture of Windows Vista. As a result, tasks related to customizing the applications to match the industrial environment take less time. These tasks include 3-D modeling, laying out visual representations of pipes and flow systems, and so on.

Compared to previous versions, the upgraded software is easier to learn and use, runs faster, and can be faster to customize. With the higher performance of Windows Vista, which is fully supported by ICONICS software, Loudoun Water anticipates a reduction in customization time by 30 to 40 percent, compared with Windows XP.