

# Intelligent Device Management

**Abstract:** Intelligent Device Management (IDM) solutions lower the cost of maintenance and improve the performance of networked systems and devices. Service organizations and systems integrators can benefit from an IDM program, leveraging standards and device management solutions that this article introduces.

## Introduction to Intelligent Device Management (IDM)

Intelligent Device Management (IDM) has become an ever-increasing necessity as more systems and devices are connected to the network. It was only fifteen years ago that computers and other devices functioned as stand-alone islands. At first, connecting computers via a network provided a way to share, store, and distribute information. But as the Internet grew and approached ubiquity, devices such as kiosks, automated teller machines, vending machines, and even traffic light controllers became easily networked. These devices embed sophisticated computers that not only provide the required information, but can also monitor their own activity, tracking both performance and procedural usage. All this valuable information can and should be accounted and published to various subscribers, including service organizations, accounting groups, and operations. For example, a utility provider could apply a customer rate plan based on the tracking of power consumption versus time of day.

Today, "intelligent device management" is a formal market segment as recognized by the Gartner Group. Other related acronyms and terms, all under the umbrella of "pervasive computing," include Element Management, Remote Systems Management, Device Relationship Management (DRM), and M2M (machine-to-machine command-and-control). Typical of all solutions in this category are remote monitoring, diagnostics, and analytic capability, as well as automation of both management and service of network-connected devices.

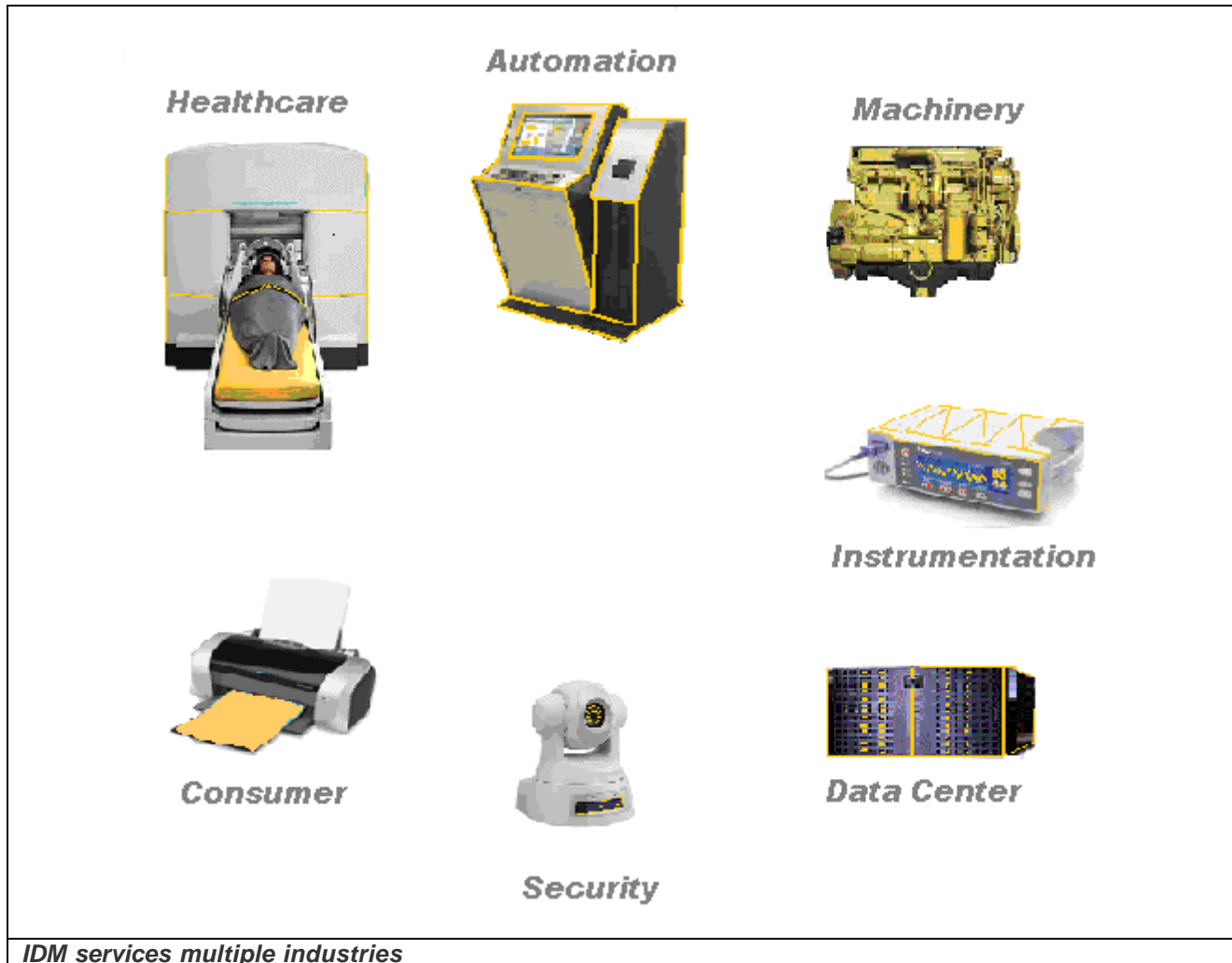
Among the many promises of IDM, the most apparent is the improved capability of device manufacturers and service providers to respond to customers and boost workflow efficiency. IDM offers the ability to improve field service automation (FSA) globally and helps enhance both short and long term return on investment (ROI). Unlike element management, which typically does not extend much beyond provisioning of devices and *reactive* alarm aspects within an IT or data center context, proper implementation of IDM enables *proactive* service management across the public internet, without compromising security.

IDM implementation programs vary in scope, often starting with a unified remote terminal management system—such as a centralized control center—and later enabling many common remote access applications—such as SSH, Telnet, UltraVNC, or a custom application. The more basic implementations facilitate a lower cost of entry to more robust IDM applications.

IDM solutions lower the cost of maintenance and improve the performance of networked systems and devices. A solution, such as, Enterprise software coupled with embedded integration enables proactive and predictive behaviors to be monitored and serviced. This approach leverages and extends a service operation's ability to deliver services by adding a new level of command and

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control to distributed systems. It also enables OEM manufacturers to remotely monitor, manage, and service intelligent devices—minimizing the total cost of ownership (TCO) and maximizing customer satisfaction.










The proliferation of networked device infrastructures and an enlarged reliance upon them has brought with it an increasing need to automate monitoring, diagnosis, and service of devices. Because of its remote system access capability, IDM helps you recognize an ROI on monitoring consumable replenishment of devices and their components, and can offer additional savings by reducing the frequency and cost of customer service visits. Remote access can also improve operational efficiency by enabling centralized skilled resources to direct more junior resources in the field, and by allowing all resources to be more effective when mobile.

A sound implementation of IDM will allow equipment providers and their customers to be the first to know when replenishment or service is required. Additional benefits can be obtained using an enterprise data store to statistically build predictive behavior models based on collected device data history. These models can then be leveraged for optimizing business planning and service management.

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IDM implementations are scalable—from individual devices, to groups of devices, to very complex systems, and from corporate level to enterprise level. One key ROI enabler is remote system access. Simple in implementation, remote access saves money on service visits. Leveraging real-time access to devices located across the entire globe can derive the next level of ROI by incorporating value added business intelligence—from device-centric to enterprise point of view.

## Benefits Summary

-  Leverage remote access capability
-  Monitor, manage and service devices more cost effectively
-  Build better products based on accurate current data, rather than relying on "filtered" field data
-  Deliver proactive service: Be the first to know of customer equipment problems
-  Manage part inventory more effectively
-  Automate escalation via e-mail, CRM integration, pagers, and other media.
-  Benefit from a dashboard view of performance

IDM optimizes equipment availability, provides insight on product performance, delivers timely information on product utilization to customers, and anticipates product breakdown or maintenance needs.

## Promises and Reality

IDM planning facilitates reduction in TCO for devices by streamlining their control, upgrade, and data retrieval—all without compromising security. IDM helps leverage enterprise management by providing a dashboard view of performance. It also leverages existing infrastructure at the device and enterprise levels to provide users and business systems with real-time device information. System level software processes can monitor device conditions and operational data of remote devices. A central enterprise control center can receive device information on a continuous or regularly scheduled basis.

Properly implemented, IDM turns reactive businesses into proactive businesses, providing new sources of revenue as well as increased operational efficiency at lower costs—all with an ROI that can often be recognized within months of implementation.

### **About the Author**

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