

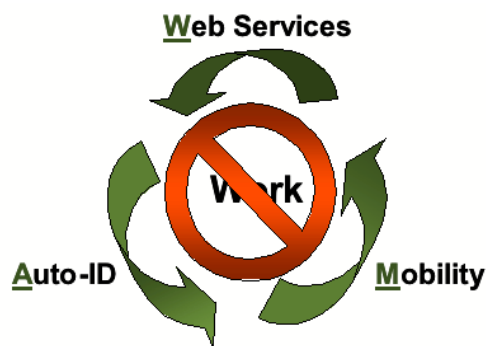
Implement *WAM* to Obliterate Work!

Walt DuLaney

Two decades ago process guru Mike Hammer first voiced the mantra “Don’t automate, obliterate!” Hammer’s *Reengineering* message drove step-change in organizational performance by analyzing the value of existing activities and eliminating those that dragged down organizational performance.

However, there are a multitude of necessary activities that reengineering can’t eliminate—and those necessary tasks still consume enormous amounts of time and money! Manufacturing and distribution organizations still receive materials, move them to storage or to processing stations, and ship them out to customers – and transactions still need to be recorded in computer systems to recognize that activities have been performed. Service companies suffer the same cost burden – when services are provided, transactions get recorded.

Today the evolution of Web Services, Auto-ID, and Mobility Technologies (i.e. WIFI, Bluetooth, and 3G) make it economically feasible to build and deploy systems that could only be imagined a decade ago. *WAM* (Web Services, Auto-ID, and Mobility) based systems can transform and even obliterate work tasks that couldn’t be “reengineered” away. Is task obliteration important? Of



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Of course, in fact it’s essential. In our increasingly competitive global economic system, every minute and dollar count. Obliterating work tasks compresses cycle times, lowers costs, and drastically reduces mistakes that compromise quality.

Our firm works with companies that are trying to reduce their costs of supplying goods to the federal government. There are a multitude of “special procedures” that must be satisfied to get paid by the government. If suppliers make mistakes complying with these procedures, the time and effort to correct shipping or billing errors is excessive. Consequently, companies constantly document, inspect, and then recheck everything: physical shipments, product labeling, shipping labels, shipping papers, and billing paperwork. The costs that are candidates for obliteration can be \$50 per transaction.

Though government paperwork is somewhat extreme, the same work issues occur with commercial sales. One customer found that every one of its shipments gets inspected five times to achieve a goal of 99+++% shipment accuracy. These inspection costs, and

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the associated “wait” time, add up. The customer now believes *WAM* will enable them to eliminate 15 minutes of inspection time per shipment.

Business and information technology (IT) professionals know these time and labor costs exist. In the past, the IT and infrastructure expenditures required to obliterate the labor were too high to build an acceptable business case. This is no longer true. By creatively implementing *WAM* technologies, IT and infrastructure expenditures drop so that an attractive ROI can be generated. Moreover, obliterating human effort reduces cycle time and the potential for error – important intangible business benefits.

Using Web Services we can attack system integration costs including the up-front investment to resolve system incompatibilities and the high ongoing costs of maintaining information pipes between multiple systems. WSDL (web services definition language) provides a portable, adaptable approach to accomplish this. Once interfaces are designed, data exchange can be inexpensively addressed using a REST (representational state transfer) architecture. REST can be configured to reliably support demanding response time requirements with a loosely coupled architecture that keeps ongoing support costs low. Finally, when combined with SFTP (secure shell file transfer protocol), this architecture can support rich, inter-organizational communication. Our company uses this architecture to economically retrieve information from central ERP servers, deploy it to drive auto-id devices on shop floor, and then securely notify trading partners that shipments are on their way.

Many companies just think of Auto-ID as linear barcode product labels that retailers demand. Few have considered the value of using Auto-ID to avoid any workflow interruptions associated with getting or sending information. Think about the cost savings of instantaneously providing a worker, or even a machine, with the exact information needed so the next task can occur without breaking the flow of the work. For example, Data Matrix 200 two-dimensional barcode can store enough information on a very small label to document the entire manufacturing history of a part (i.e. when, where, and who manufactured and tested it). RFID readers can sense the presence or absence of an RFID-tagged parts kit within an assembly cell. Readers can trigger alarms and notifications so that missing parts get restocked quickly and don't disrupt the assembly flow. Similar applications are economical in service industries. Instead of a manufacturing history, the Data Matrix barcode could store an encrypted patient medication schedule. RFID readers could monitor changes in IV bags. Today, the robustness and cost of Auto-ID technologies have reached a point where tasks that disrupt the flow of work can be transformed or obliterated economically.

Mobility technologies connect the point of need with network based Web Services and Auto-ID services. Costs, range, security and throughput requirements determine which data transmission channel (Bluetooth, WIFI, 3G, etc) is best. For most sophisticated applications, more than one mobile technology must be implemented in the overall system. However, each technology has matured sufficiently to assure that designers have options to deliver mission critical functionality to the point of need with acceptable

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economics. For example, WIFI communication to a shop floor has become far more economical than pulling Ethernet cable.

This article is a call to action. It's now technologically possible and economically feasible to achieve new step-level improvements in process performance and cost reduction. Does your company have the appetite to take on these new challenges? If not, start looking over your shoulder, because it won't be long before you begin facing competitors that do.

Walt DuLaney is the CEO of Adaptive RFID. Adaptive RFID provides middleware and workflow-based Auto-ID applications to drive down the cost of internal and cross-business operating processes.