Web Services Applications
For RFID

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IT Evolution


Vietnam War – Introduction of Front Office Automation & Standalone PC’s. Mini-Computers & CRT Terminals; 300 Baud Xfer

Gulf War I – Introduction of Networked PC’s & the Internet and Work Group Automation. Client-Server; 56K Xfer

Gulf War II – Proliferation of the Internet, Automate the Individual w/Wireless Devices and Real-Time Information. Web Services; 1-3 Mbytes Broadband Xfer.
Key Elements of a Web Services

RFID Solution

Internet/Intranet Accessible Servers
- Hosted Solutions – Secure Triple Firewalled
- Integrated Solution for Legacy Systems; XML I/F
- Multiple Auto ID Technologies Supported: Bar-Code inc. UID (Data Matrix), RFID
- RFID DataWarehouse™ Event Tracker

Thin Client Appliances
- Workstations
- PDA
- Cell Phones
Basic Web Services Components
Web Services: How It Works

1. Client queries registry to locate service.
2. Registry refers client to WSDL document.
4. WSDL provides data to interact with Web service.
5. Client sends SOAP-message request.
XML – Extensible Markup Language

- Cross Platform, Text-Based Standard for Representing Data
- Key Technology for Development of Web Services
- DoD Heavily Involved in XML
- Moving from Expensive EDI Transactions to Internet Based XML Equivalents
- Common Intersystem Communication
- RFID Peripherals use XML
DoD RFID Labels.com™
Web Services Architecture/Workflow

1) Order Shipping Documents On-line
   - User Devices
     - HTML; WML
   - Mobile Computers
   - Networked Work Stations
   - Stand-Alone Computer

2) Shipping Documents Printed & Shipped
eDD250 & ASN via WAWF
   - RAID Array
   - RFID Label Printer
   - RFIDSentinel™ Print Server
   - RFIDSentinel™ Database Server
   - RFIDSentinel™ Application Server
   - RFIDSentinel™ Perimeter Firewall
   - RFIDSentinel™ Application Firewalls

3) Apply MSL & DD 250
   Ship to DDSP or DDJC
   - Mobile Computers
   - Networked Work Stations
   - Stand-Alone Computer

4) Shipment Received & Scanned
   DDSP or DDJC
   - Dock Door RFID Reader (DDSP, DDJC)
   - GEX
   - TAV/ITV

5) WAWF ACK
   - UID Repository
   - WAWF

Business Integration
HTTP; HTTPS; XML; Web Services

Web Services
HTML; Static Content
User Device Rendering

interactiveSentinel™
Proprietary Middleware
User Experience, JSP
Java JVM; Business Logic

JDBC
Database Connectivity
Platform Database
Application Databases
EvidenceSentinel™
PharmaSentinel™
PartsSentinel™
1:n Instances of Each
Unstructured Data Repository

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