Experiences Applying OAG
An End User Perspective

Kurt Kanaskie
kkanaskie@lucent.com
CIO Strategy, Planning and Architecture
Our Vision

- Plug and Play Component based Architecture
- Standard XML interfaces
  - XML supports migration from legacy to standard
  - Non-negotiated, used out-of-the-box without collaboration
  - Single industry standard (OAGIRNebXML)
- Used internally and externally
  - Anticipates future business relationships (acquisitions, outsourcing, ASP)
Current Projects

- **Service Provider**
  - Extended Enterprise
    - Purchasing (in production, next phase started)
    - Invoice (implementing, reviewing for reuse)
  - ECommerce
    - Pricing (custom – Catalog?)
    - Credit Card (custom)
    - Product Data (struggling with content – Catalog/BOM/Item?)
- **Micro-Electronics**
  - Shipping Status (BOD development and pilot in progress, joint effort with DHL)
  - Item, MES, Routing, WIP (getting started)
Extended Enterprise – Purchasing

- Integrating external customer ordering
  - Eliminates duplicate order data entry
- Extended infrastructure to partner
  - Uses Web and Java Servlets
- Replacing existing EDI
  - Converts EDI directly to OAG
- One production site live Oct 1999
- Over 2 dozen more by 2Q2000
  - Processes will vary
Extended Enterprise – Purchasing Scenario

Customer

XML Message Processing

EDI 850 PO
EDI 850 ACK

Purchasing System

ProcessPO

AcknowledgePO

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Web Front End

ProcessPO

AcknowledgePO

XML Message Broker

EDI 850 PO

Order Entry Processing

Order Management System

Pricing

Java calls

Custom XML

Order

Real EDI 850 ACK
Extended Enterprise – BOD Applicability

**ProcessPO**

```xml
<!ELEMENT LUCENT.PROCESS_PO_003.POORDERHDR.USERAREA (LUCENT.SHIPVIACODE, (%DATETIME.NEEDDELV;), PARTIALSHIP?) >

<!ELEMENT LUCENT.PROCESS_PO_003.POORDERLIN.USERAREA (LUCENT.SHIPVIACODE?, CONTRACTS?, (%OPERAMT.EXTENDED.T;)) >
```

**AcknowledgePO**

```xml
<!ELEMENT LUCENT.ACKNOWLEDGE_PO_003.ACKHEADER.USERAREA (LUCENT.ERROR+) >

<!ELEMENT LUCENT.ERROR (DESCRIPTION, REASONCODE)>```

Distribution of used fields:

- Custom Userarea
- OAG Userarea
- OAG

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Extended Enterprise - Invoice

- Lucent is Supplier
- Loads Invoice data for issuance to customer via existing interface
- Eliminates custom legacy interface
- Initial mapping completed
- Being reviewed for reuse by another organization
Extended Enterprise – Invoice Scenario

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Order Management

LoadPLInvoice

Invoicing

ConfirmBOD

Customer
Receiving

Legacy
Recent
Current Projects

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Micro-Electronics – Shipping Status

- Instead of EDI
- Joint development with DHL
  - Lucent provided requirements
  - DHL developing BODs and proof of concept
- Preliminary BODs developed
  - Get ShipStatus, Show ShipStatus
Micro-Electronics – Shipping Scenario

Shipper (Lucent) – Shipping System

Carrier (DHL) – Tracking System

GetShipStatus

ShowShipStatus
MicroElectronics - MES

- Just getting started
- Request for 4th custom MES interface prompted standard solution
- Batch type file exchange
- Need to do business differently (i.e. rent FABs)
- Initial focus is Item and BOM
  - Good alignment
- Subsequent integration for Routing, WIP, Resource allocation
  - 1 million WIP transactions per day
Plug and Play Interoperability Standards Architecture

- Vertical Content
- Message Framework
  - Message Access API
  - Message Bus API
- Network Protocol
- Business Information Model (OAG)
- Message Format (OAG)
- Message Syntax (XML)
- Security, Naming
- Process, Rules
- Message Management Services
- Trading Partner Profile
- Horizontal Content
- Message Structure Standards
- Messaging Infrastructure Standards (BUS)

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