



IBM Software Group

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Pioneering New Horizons – Solutions that Evolve

From Legacy to Leading Edge in the Distributed Environment

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WebSphere. software



ON DEMAND BUSINESS

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Objectives

- Introduce Hagemeyer North America
- Describe Our legacy technical environment
- Describe Our new EDI infrastructure
- Explain Design points
- List Processes currently in production
- Questions?





Hagemeyer North America, Inc. (HNA), A wholly owned subsidiary of Hagemeyer N.V., is a wholesale distributor focusing on business-to-business markets in electrical, safety, and industrial products and services throughout North America. HNA's 3000+ associates serve more than 100,000 customers from approximately 500 locations.

Our legacy environment

- Hagemeyer acquisitions in the U.S.
 - Cameron & Barkley Co. (CamBar) - ~55% of HNA sales
 - **OS/390 – in-house ERP – DI2.1 translator**
 - **20%-40% of business transactions EDI**
 - Vallen Safety Supply – ~35 % of HNA sales
 - **AS/400 – in-house ERP – Harbinger TLE translator**
 - **20%-30% of business transactions EDI**
 - Tri-state Electrical Supply – ~10% of HNA sales
 - **AIX – package ERP – minimal EDI**

Our new EDI Infrastructure

- WebSphere MQ
 - Message Transport
- WDI
 - Message Transformation
- WebSphere Business Integration Message Broker
 - Message Routing
- WebSphere Application Server
 - Web based communications
- WebSphere Partner Gateway
 - Trading Community Management



WebSphere MQ

- WebSphere MQ is being used for internal integration between our legacy applications
- Installed on most platforms
 - OS/390 – MQSeries V2.1
 - AS/400 – WMQ V5.3
 - Windows – WMQ V6.0
 - AIX – Java Client
- Easy to use
- Assured Delivery



WebSphere Data Interchange

- We've been using DI since 1992
- Good performance
- Support for older EDI standards
 - TRADACOMS, ODETTE, UCS, X.12 V2R0
- Support for new XML standards
 - OAGIS, Commerce One xCBL, Rosettanet
- MQSeries integration
- Any to Any mapping



WebSphere Business Integration Message Broker

- Started with MQSI V2
- Currently running WBI-MB 5.0
- Flexible MQ message routing
- Simple data transformation
- Database integration
- Limited to single message UOW coordination



WebSphere Application Server

- Currently running WAS 5.0
- Mostly a communications facility
- Custom Java code
 - HTTP/HTTPS
 - MQ integration
 - Workflow
- Plan to replace with WPG

WebSphere Partner Gateway

- Currently implementing WPG 6.0
- Trading Community Management
- Document Archival
- Logging
- Process choreography
- Communications
 - EDIINT (AS1/AS2/AS3)
 - Rosettanet
 - VAN
 - HTTP/HTTPs
 - FTP
 - SMTP



Why we chose Windows

- Uncertainty about future ERP platform
 - S/390, AS/400, Unix? Some combination?
 - Everything now has a Windows client
- Need to extend the life of our S/390
 - Delayed implementation of replacement system
 - Projected business growth
- Lack of AIX expertise and experience
- Performance seems adequate
- Breadth of tools available
- Earlier release of new code
- Low entry cost



Design Points

- Message based integration service bus
- Normalize all documents
 - Created Hagemeyer Business Messages (HBMs)
 - XML
 - Loosely based on ANSI X.12
- WMQ for message transport
- WBI Message Broker for message routing
- WDI for data transformation
- WPG for:
 - Message Archiving
 - Event Logging
 - Process Choreography
 - Communications Protocol support



Design Points (continued)

- **Functionality**
 - Must support existing business requirements
 - Must be able to support new business requirements
- **Flexibility**
 - Must be able to easily accommodate changes in the operating environment
- **Performance**
 - Must be able to handle the load
 - Response time requirements are getting shorter
- **Platform independence**
 - See Flexibility and Performance

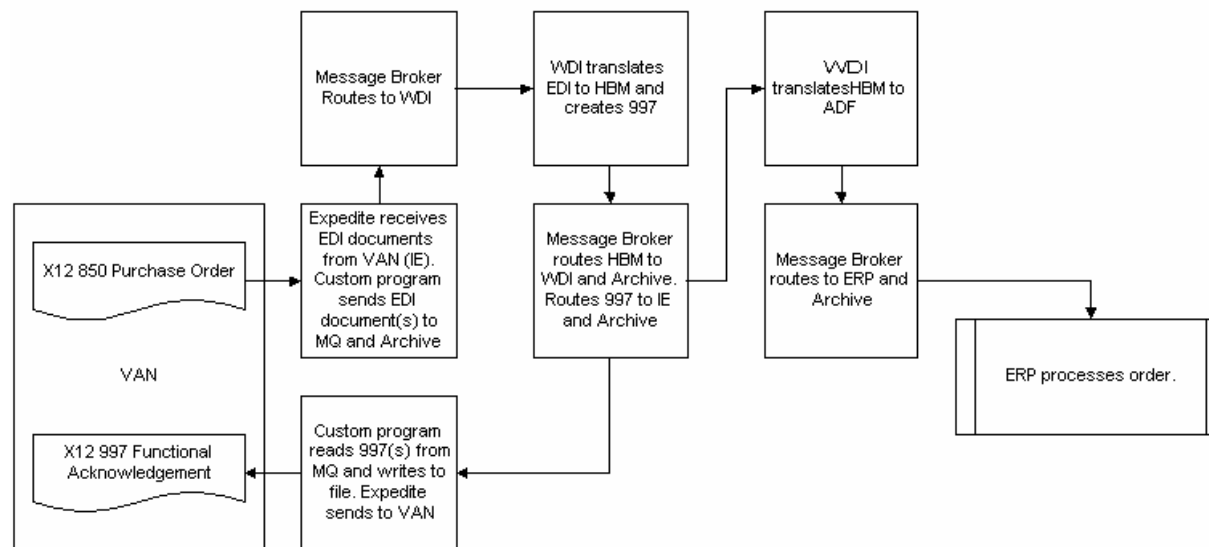


Processes Currently In Production

- MQ enabled legacy application interfaces
 - All inbound EDI transactions
 - Some outbound EDI transactions
 - New query transactions
- WDI maps for data transformation
 - Trading partner format (EDI, XML, CSV, etc.) translated to/from HBM XML format
 - Application Interfaces (mostly ADF) translated to/from HBM

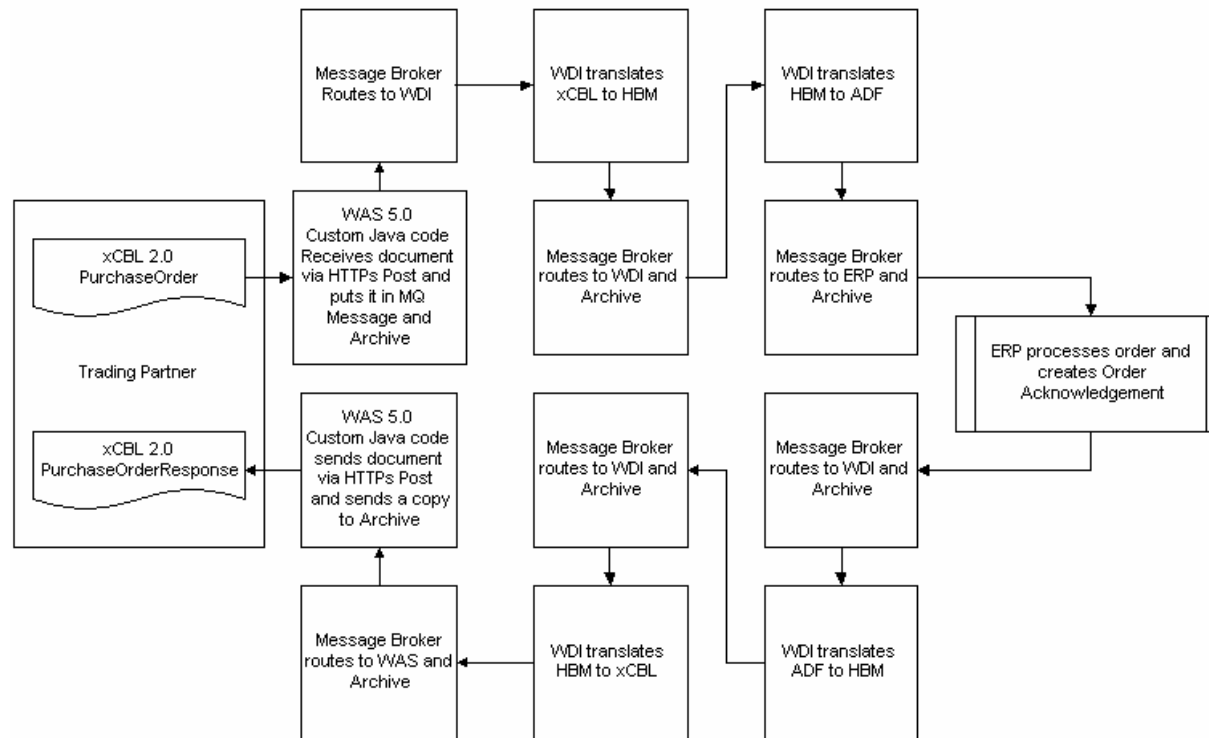
Processes Currently In Production (Continued)

Inbound X12 Purchase Order and 997



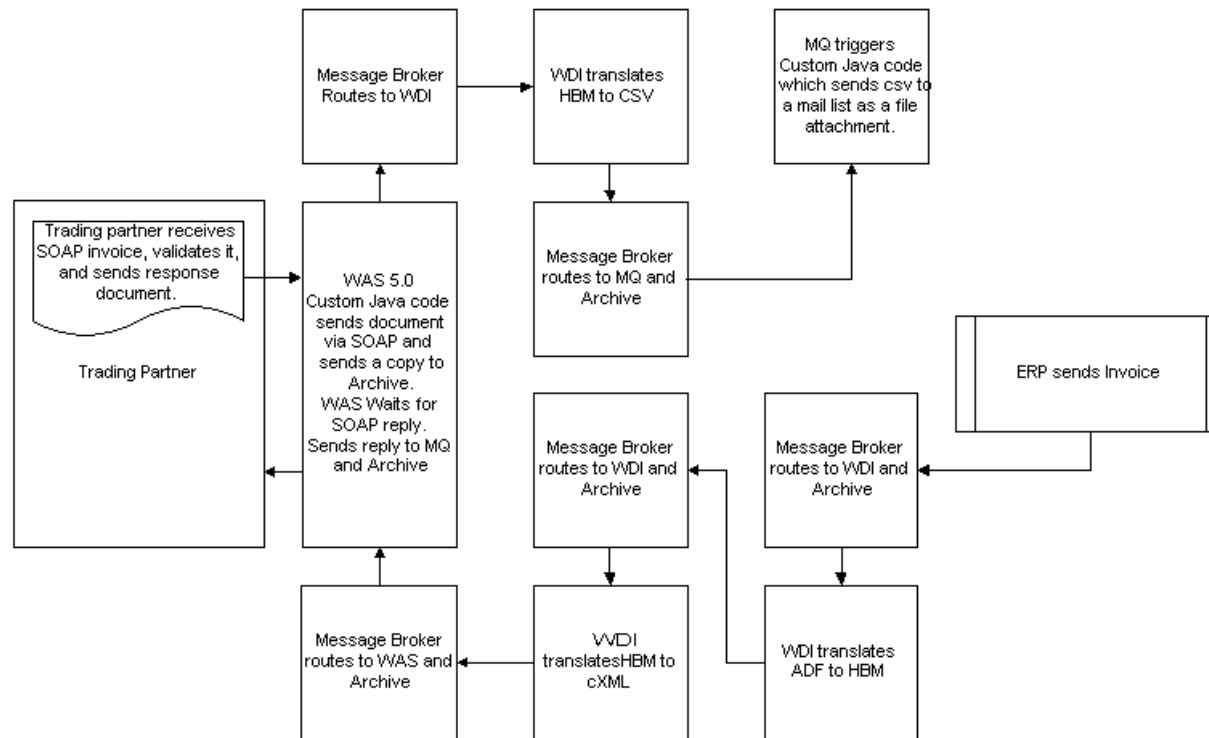
Processes Currently In Production (Continued)

Asynchronous Inbound Purchase Order and Response



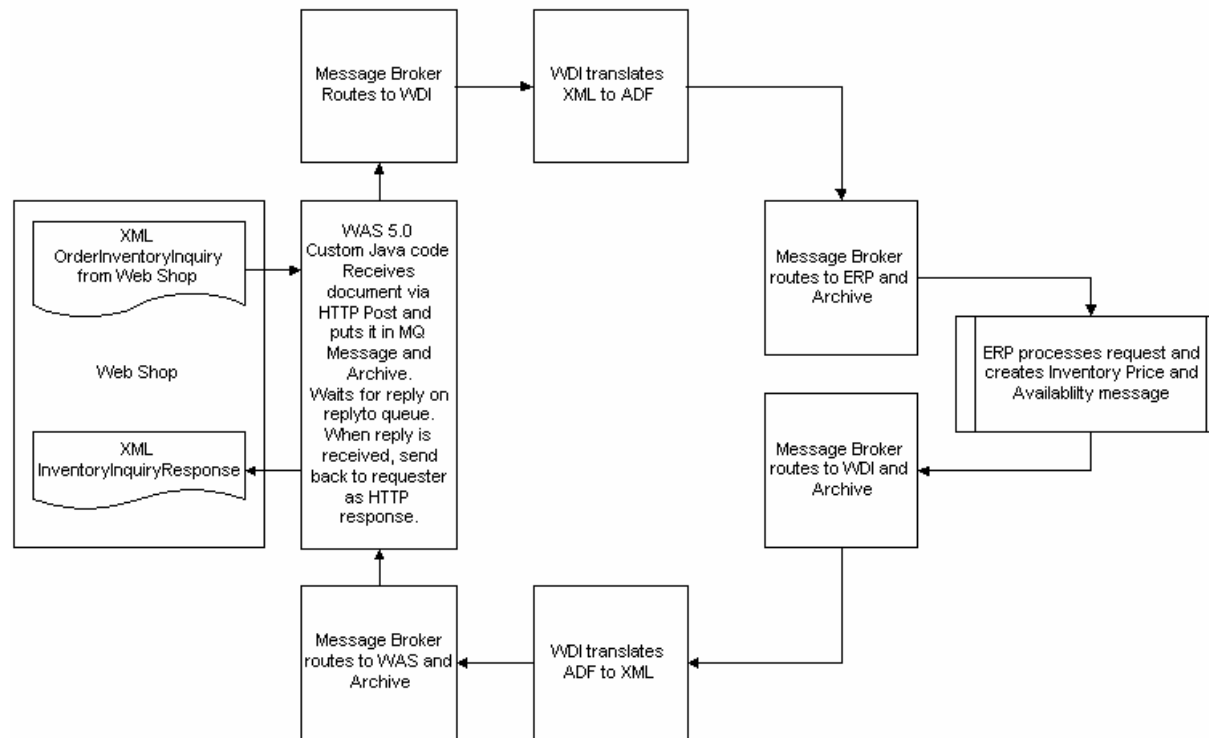
Processes Currently In Production (Continued)

Synchronous Outbound Invoice and Response



Processes Currently In Production (Continued)

Synchronous Inbound Inventory Inquiry and Response



Summary

- Work in progress...
- The rules keep changing
- The future is still uncertain
- The architecture is flexible enough to handle change
- Performance is better than expected



Acronyms

- ADF - Application Data Format
- ANSI - American National Standards Institute
- AS (1/2/3) - Applicability Statement (1/2/3)
- CSV - Comma Separated Values
- DI - IBM DataInterchange
- EDI - Electronic Data Interchange
- EDIINT - Electronic Data Interchange Internet Integration
- ERP - Enterprise Resource Planning
- FTP - File Transfer Protocol
- HBM - Hagemeyer Business Message
- HNA - Hagemeyer North America, Inc.
- HTTP - Hypertext Transfer Protocol
- HTTPS - HTTP secure
- IBM - International Business Machines
- IE - Information Exchange VAN (Formerly IBM, now GXS)
- MQ - Message Queuing (IBM WMQ)
- OAGIS - Open Applications Group Integration Specification
- SMTP - Simple Message Transfer Protocol
- SOAP - Simple Object Access Protocol
- UOW - Unit of Work
- VAN - Value Added Network
- WAS - IBM WebSphere Application Server
- WBI-MB - IBM WebSphere Business Integration Message Broker (Formerly WMQ I)
- WBIC - IBM WebSphere Business Integration Connect
- WDI - IBM WebSphere Data Interchange
- WMQ - IBM WebSphere Message Queuing (Formerly MQSeries)
- WMQI - IBM WebSphere MQ Integrator
- WPG - IBM WebSphere Partner Gateway (Formerly WBIC)
- xCBL - XML Common Business Language (Commerce One)
- XML - eXtensible Markup Language

