"The Rebirth of EDI"
Semantic Integration

Brian Bolam Founder & President - OmPrompt Inc.
Established 2004

Objective – Next Generation Electronic Message Exchange

Supply Chain Logistics Industry is the initial focus

Radically Different pricing model – Transaction Pricing

Live Operations with Lead Customer – June 2005

Venture Capital Backed – 3i & Benchmark

2,000+ users as at May 2006
OmPrompt facilitates rapid creation of total electronic trading communities regardless of technological capability.
**An Enduring Problem ...**

**Complexity**
- Disparate: - formats, protocols, send/receive devices & ERP systems

**Waste**
- 80 Bn empty Kms driven each year on Europe’s roads
  - 450,000 trucking companies with fewer than 5 trucks
  - Trucks earn revenue for <25% of total available hours

**The Missing Link ?**
- An Omni-Protocol (Any to Any) Messaging Platform feeding real time
  SC data to ERP systems to facilitate proactive SC management

- **OmPrompt solves the SC Industry’s most ubiquitous problem – lack of systems interoperability.**
Electronic Trading is critical, but stalled

- Information interchange is the bedrock of business
- Businesses need to interchange information electronically
- SMEs need to be electronically enabled to release supply chain value

We provide a simple, flexible and pervasive route to electronic trading

- SME’s are re-enfranchised.
Complete Service, Delivered on Neutral Platform

OmPrompt Hosted Service
Fail Over – Data Backup
- 24/7/365 – Off-site
Disaster Recovery
- SLAs
OmPrompt changes the rules of the game!

- Technology: Automated Message Mapping
- Process: Accelerated Trading Partnerships
- Service: A complete, robust, hosted platform

Before

Traditional Mapping
total elapsed time
90 days

Complex Mapping
20 days

Simple Mapping
5 days

OmPrompt AMP Map

Complex Mapping
4 days

Simple Mapping
1 day

Today

June 2005 (Launch)

Knowledge gain

Productivity gain 95%

Productivity gain > 80%

< 1 day

- We change the rules of the game.
Our customers like our service, recommend us to others whom we are closing & are growing with us.
How do we accelerate the creation of Message Maps?

- Utilise Artificial Intelligence techniques supported by ONTOLOGIES to analyse and understand the content of unknown forms of message.
- Automatically deduce potential mappings
- Automatically Generate and Deploy Executables
Ontologies

Primary Components:

- Concepts
- Relationships
Relationships

- Consignee
- Gross Weight
- Shipper Address
- City
- Marks & Numbers
- Country of Origin
- Postcode
- Port of Loading
- Port of Discharge

© OmPrompt Ltd 2006. All Rights Reserved
Cardinality Relationships

- Provide Structure to Concepts
- Can be visualised as a Tree View

Parent

Child

Sibling

Child

Grandchild
• Related to Syntax & Structure of external Messages
• In general automatically generated by Profiler
• Contains Semantic Entities
• Contains “Natural” structure
• Represents an internal Neutral Form
The Semantic Ontology is a representation of knowledge.

It contains all concepts within supply chain messaging, and their relationships and attributes.

The Semantic Ontology is constructed using domain knowledge of supply chain messaging.

For example, there is a concept of location but not just one location; there could be an origin location, or destination location; or port location etc.

This knowledge resides in the Semantic ontology.

It is a living network, and is continuously updated and maintained.

We can view the semantic ontology as a network.
Profiler Analyses a set of Sample Messages:
Profiler Analyses a set of Sample Messages:
Profiler Analyses a set of Sample Messages:

- Known format/existing syntax ontology? (yes/no)
Profiler Analyses a set of Sample Messages:

- Known format/existing syntax ontology? (yes/no)
- Known EDI standard? (yes/no)
Profiler Analyses a set of Sample Messages:

- Known format/existing syntax ontology? (yes/no)
- Known EDI standard? (yes/no)
- Fixed or Variable length?
Profiler Analyses a set of Sample Messages:

- Known format/existing syntax ontology? (yes/no)
- Known EDI standard? (yes/no)
- Fixed or Variable length?
- Recognisable Delimiters?
Profiler Analyses a set of Sample Messages:

- Known format/existing syntax ontology? (yes/no)
- Known EDI standard? (yes/no)
- Fixed or Variable length?
- Recognisable Delimiters?
- Recognisable Segments?
Profiler Analyses a set of Sample Messages:

- Known format/existing syntax ontology? (yes/no)
- Known EDI standard? (yes/no)
- Fixed or Variable length?
- Recognisable Delimiters?
- Recognisable Segments?
- Recognisable Start and End of Message?
Profiler then:

- Creates a “Schema” – the Syntax Ontology
And Profiler then:

- Displays Analysis results
- Allows intervention by OmPrompt Analyst
Profiler then deduces Mappings by Recognition:
Profiler then deduces Mappings by Recognition:

- Recognition of “like” mappings made previously
Profiler then deduces Mappings by Recognition:

- Recognition of “like” mappings made previously
- Matching field Characteristics (Data Type/Length)
Profiler then deduces Mappings by Recognition:

- Recognition of “like” mappings made previously
- Matching field Characteristics (Data Type/Length)
- Data Value Recognition
Profiler then deduces Mappings by Recognition:

- Recognition of “like” mappings made previously
- Matching field Characteristics (Data Type/Length)
- Data Value Recognition
- Data Value Recognition IN CONTEXT
Profiler then deduces Mappings by Recognition:

- Recognition of “like” mappings made previously
- Matching field Characteristics (Data Type/Length)
- Data Value Recognition
- Data Value Recognition IN CONTEXT

Mappings provide the Semantic Connection
• Displays Mappings ranked by Probability

• Allows OmPrompt Analyst to Accept or Reject
OmPrompt Analyst creates a Graphical Process Flow

Partial Automated Generation
From this we Generate, Compile and Deploy executable code
**Intelligence Layer**

- Libraries
- Profiler
- Ontologies
- Registration
- Control

**Transaction Layer**

- Adaptor
- Service
- Process
- Operation
- Adaptor

**Intersystems Ensemble engine**

**Offline Layer**

- Input Data
- Data Value
- Status/Audit
- Billing
"The Rebirth of EDI"
Semantic Integration

Brian Bolam Founder & President - OmPrompt Inc.