



“The Rebirth of EDI” Semantic Integration

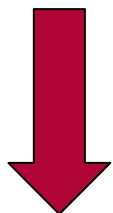
Brian Bolam Founder & President - OmPrompt Inc.



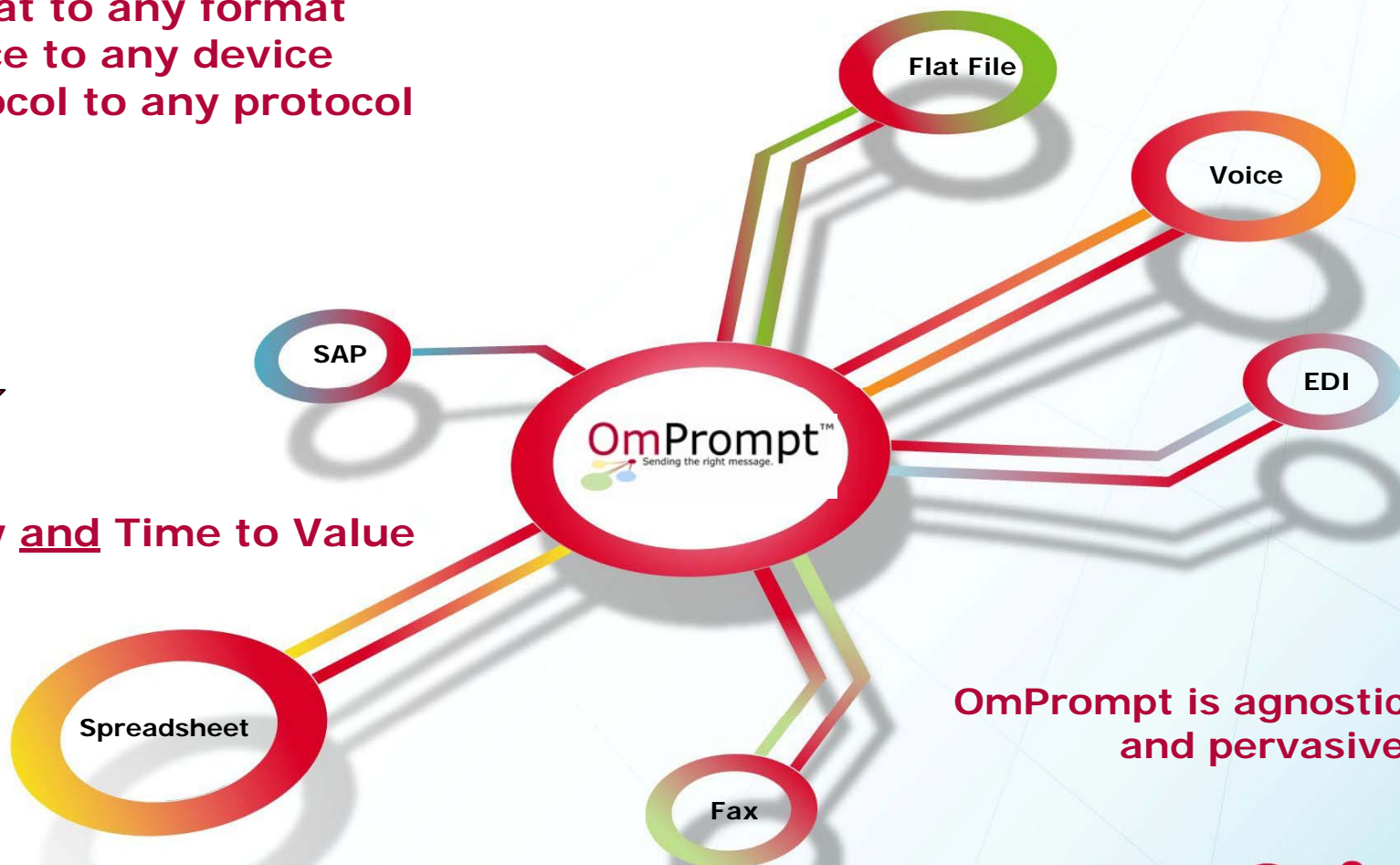
- Established 2004
- Objective –Next Generation Electronic Message Exchange
- Supply Chain Logistics Industry is the initial focus
- Radically Different pricing model – Transaction Pricing
- Live Operations with Lead Customer – June 2005
- Venture Capital Backed – 3i & Benchmark
- 2,000+ users as at May 2006



Any format to any format
Any device to any device
Any protocol to any protocol



Flexibility and Time to Value



OmPrompt is agnostic
and pervasive

- OmPrompt facilitates rapid creation of total electronic trading communities regardless of technological capability.



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

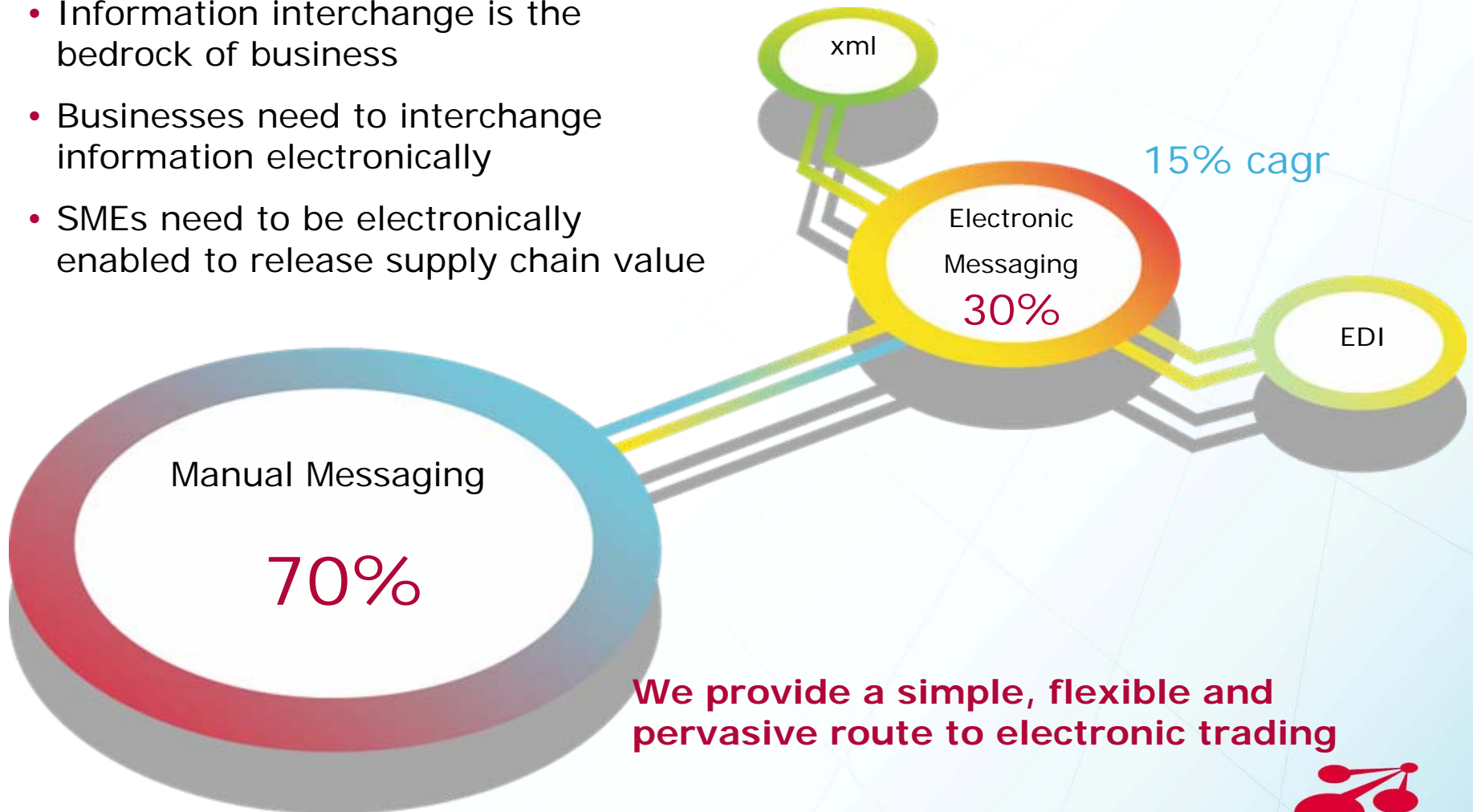
The Missing Link ?

- 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.



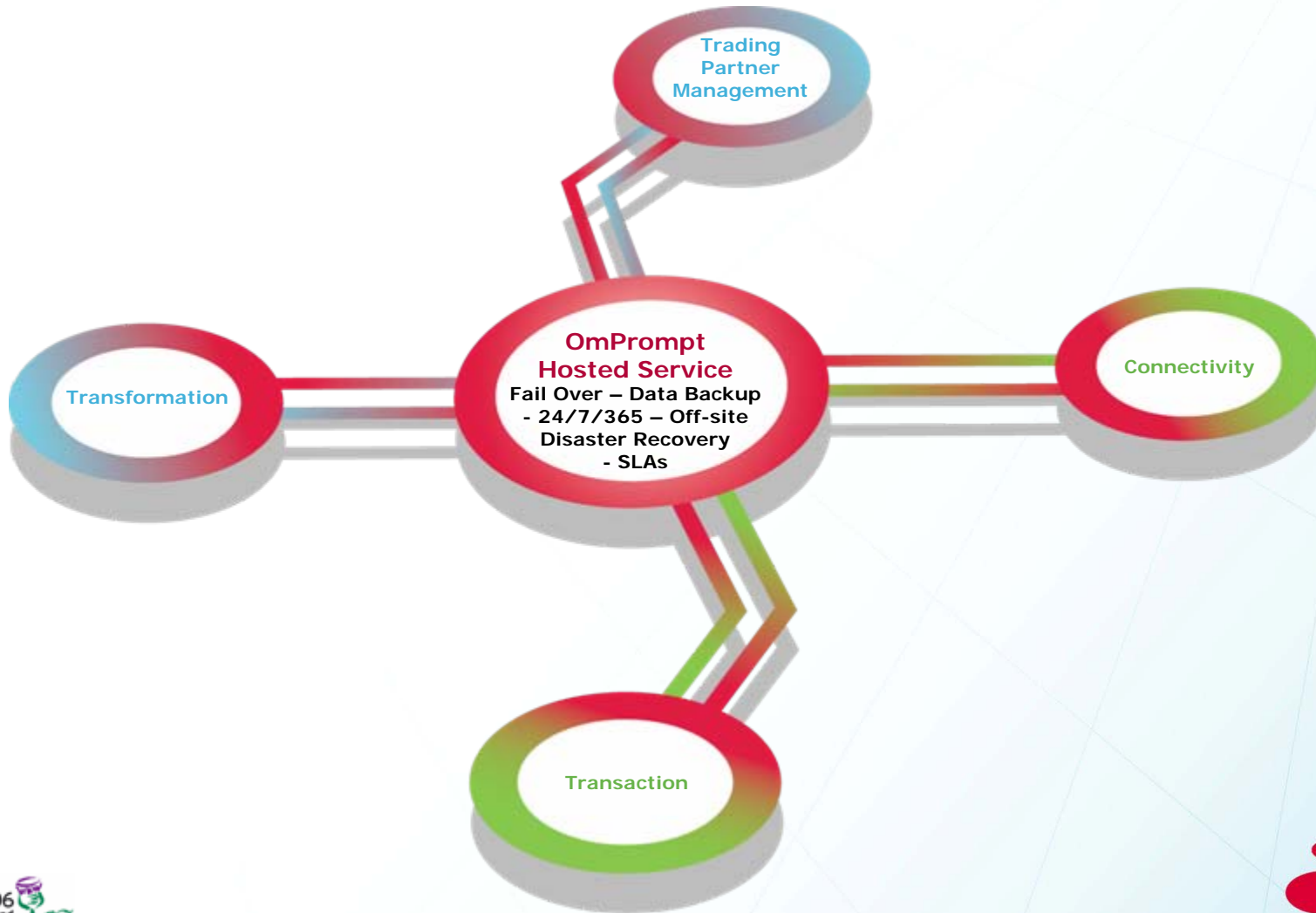
- Information interchange is the bedrock of business
- Businesses need to interchange information electronically
- SMEs need to be electronically enabled to release supply chain value



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

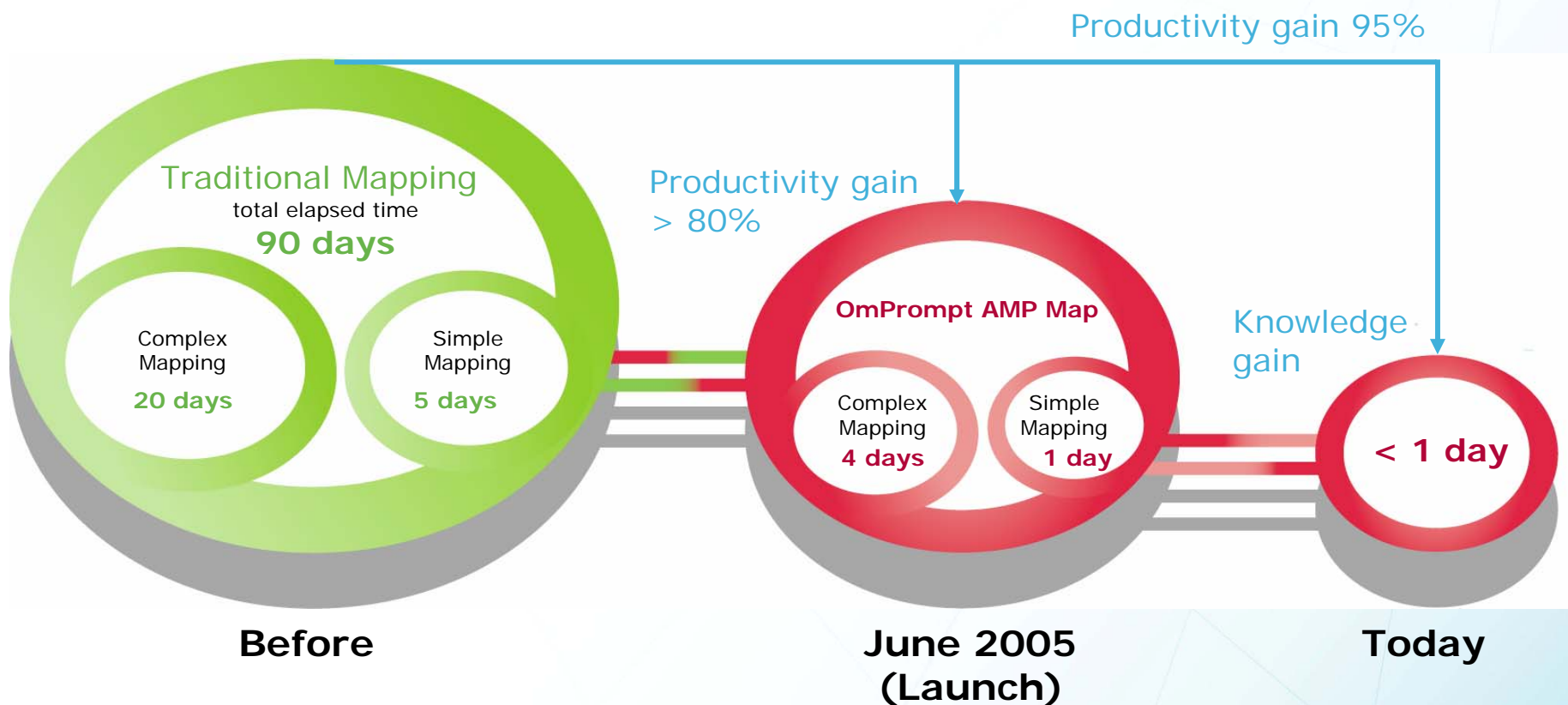
- SME's are re-enfranchised.





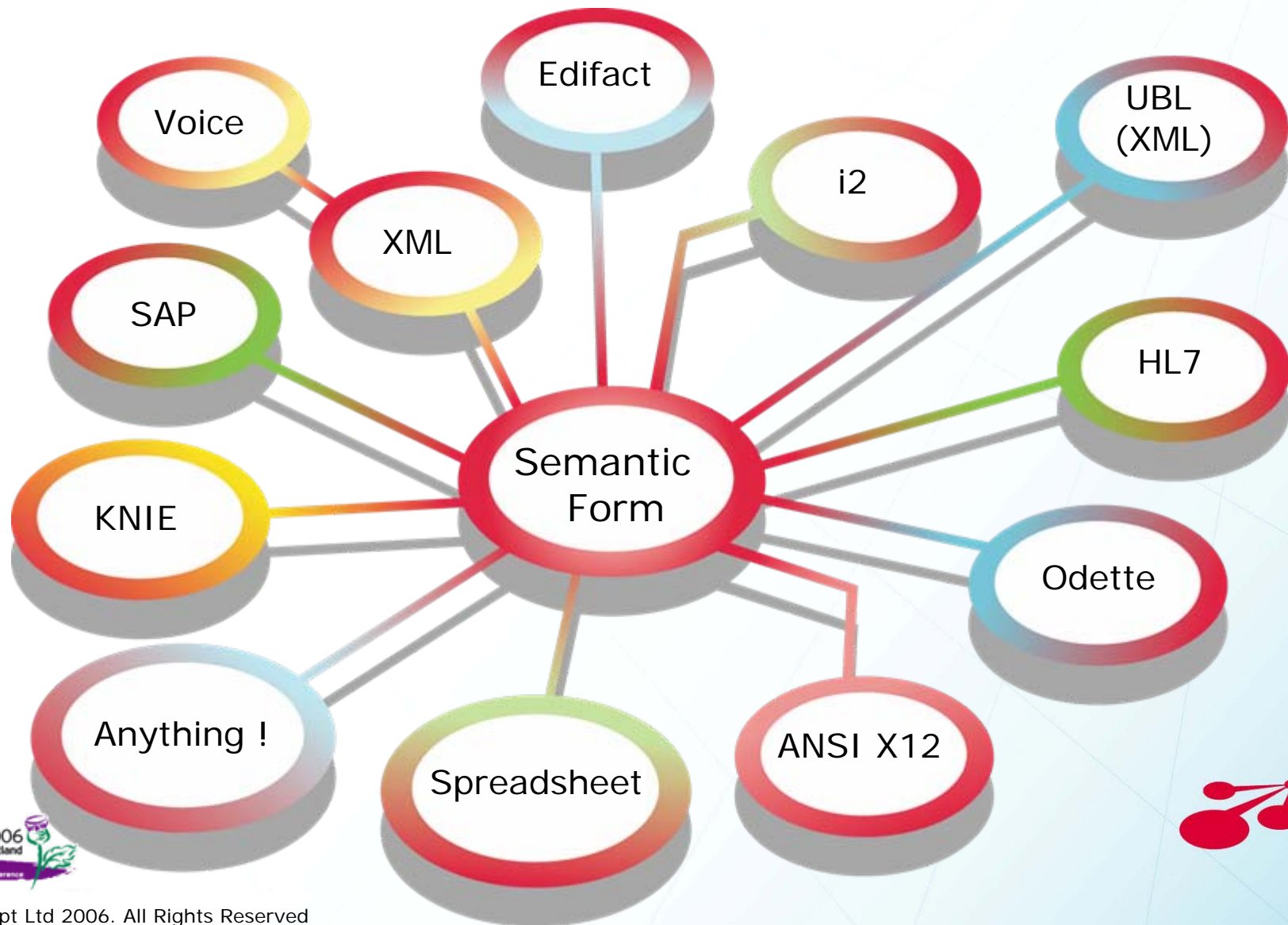
- Technology
- Process
- Service

Automated Message Mapping
Accelerated Trading Partnerships
A complete, robust, hosted platform



- We change the rules of the game.





Users



Investors



Partners



- 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

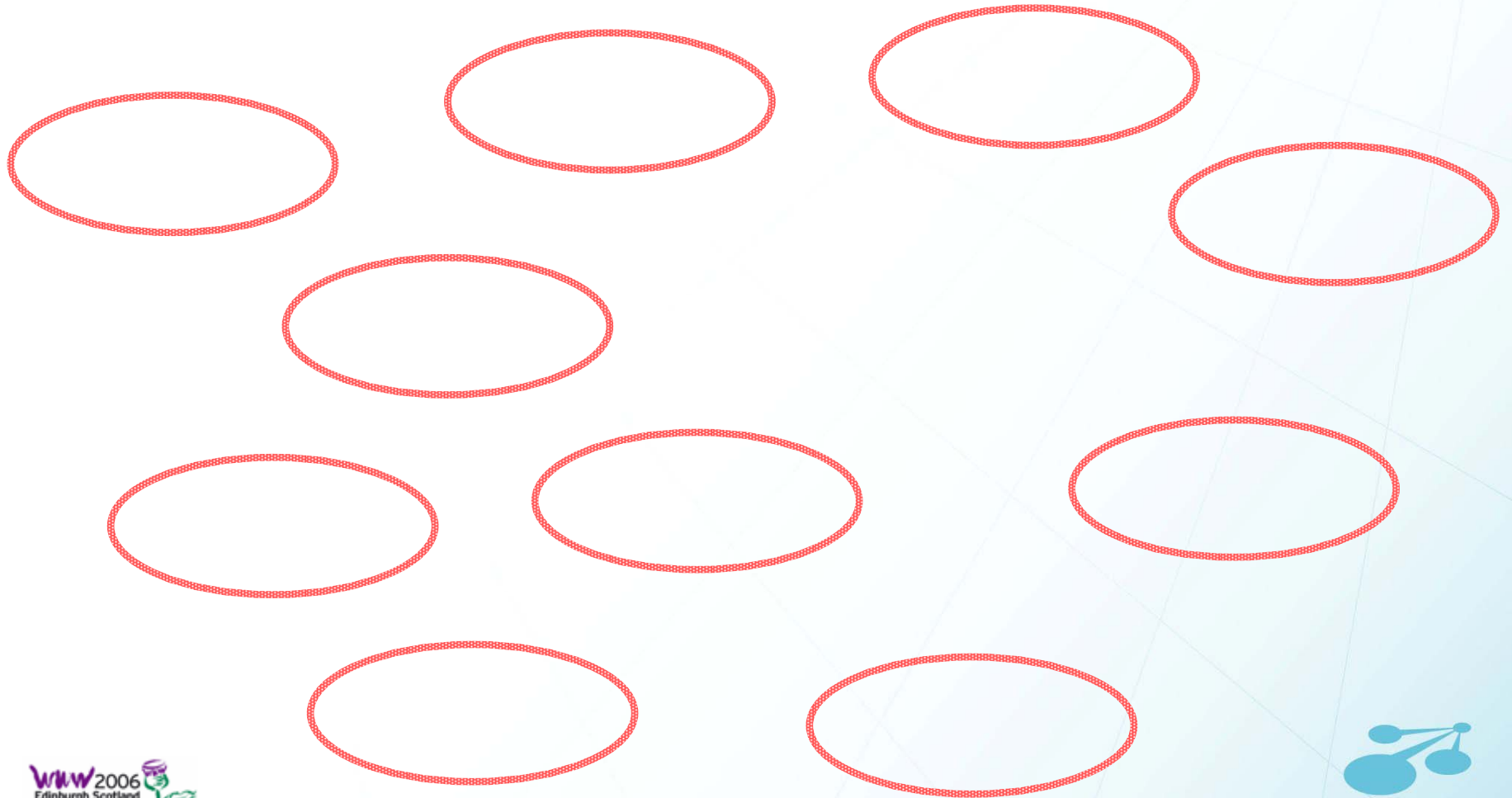


Ontologies

Primary Components :

- Concepts
- Relationships





Consignee

Gross Weight

Marks & Numbers

Postcode

Shipper Address

Port of Loading

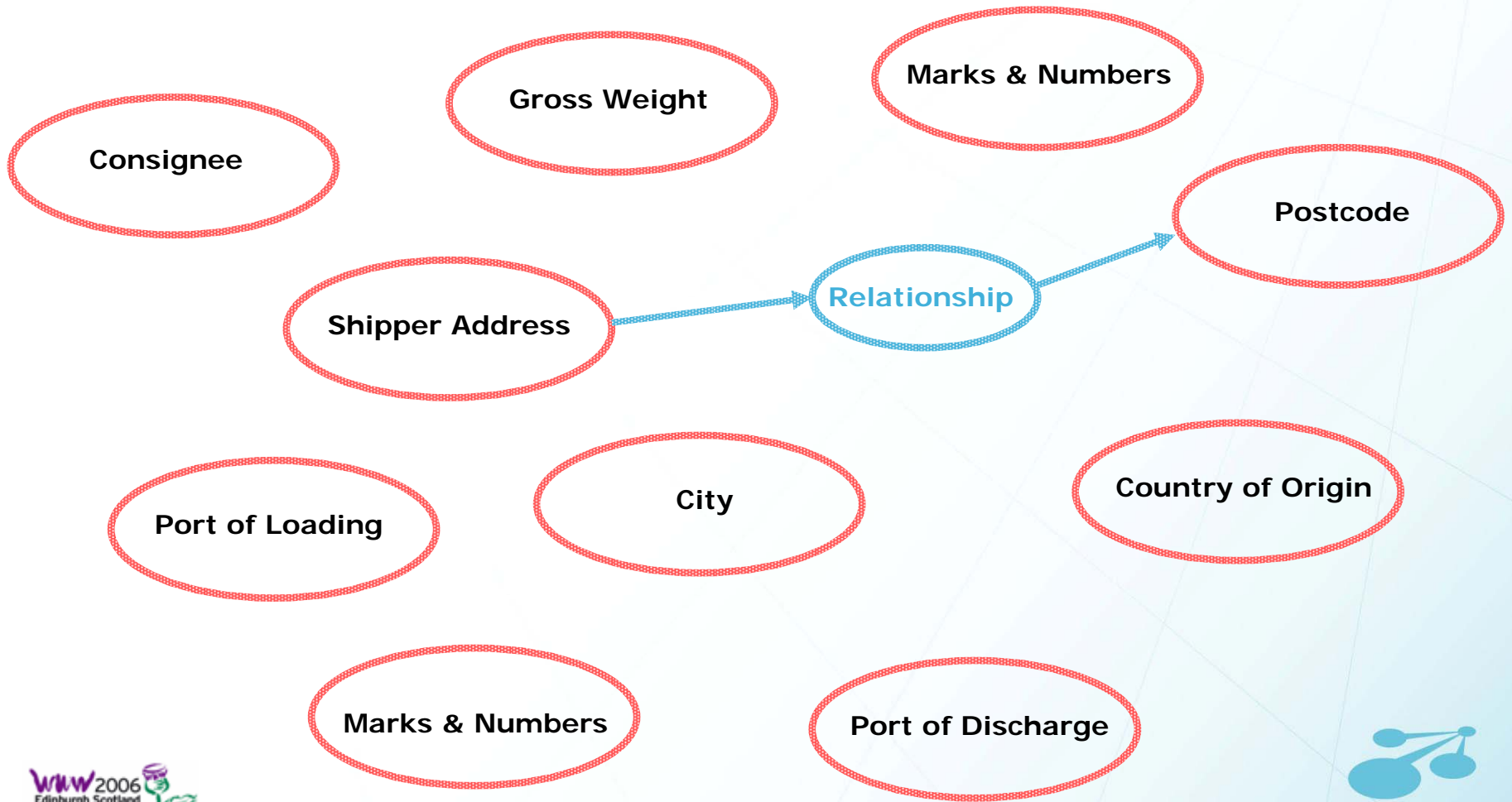
City

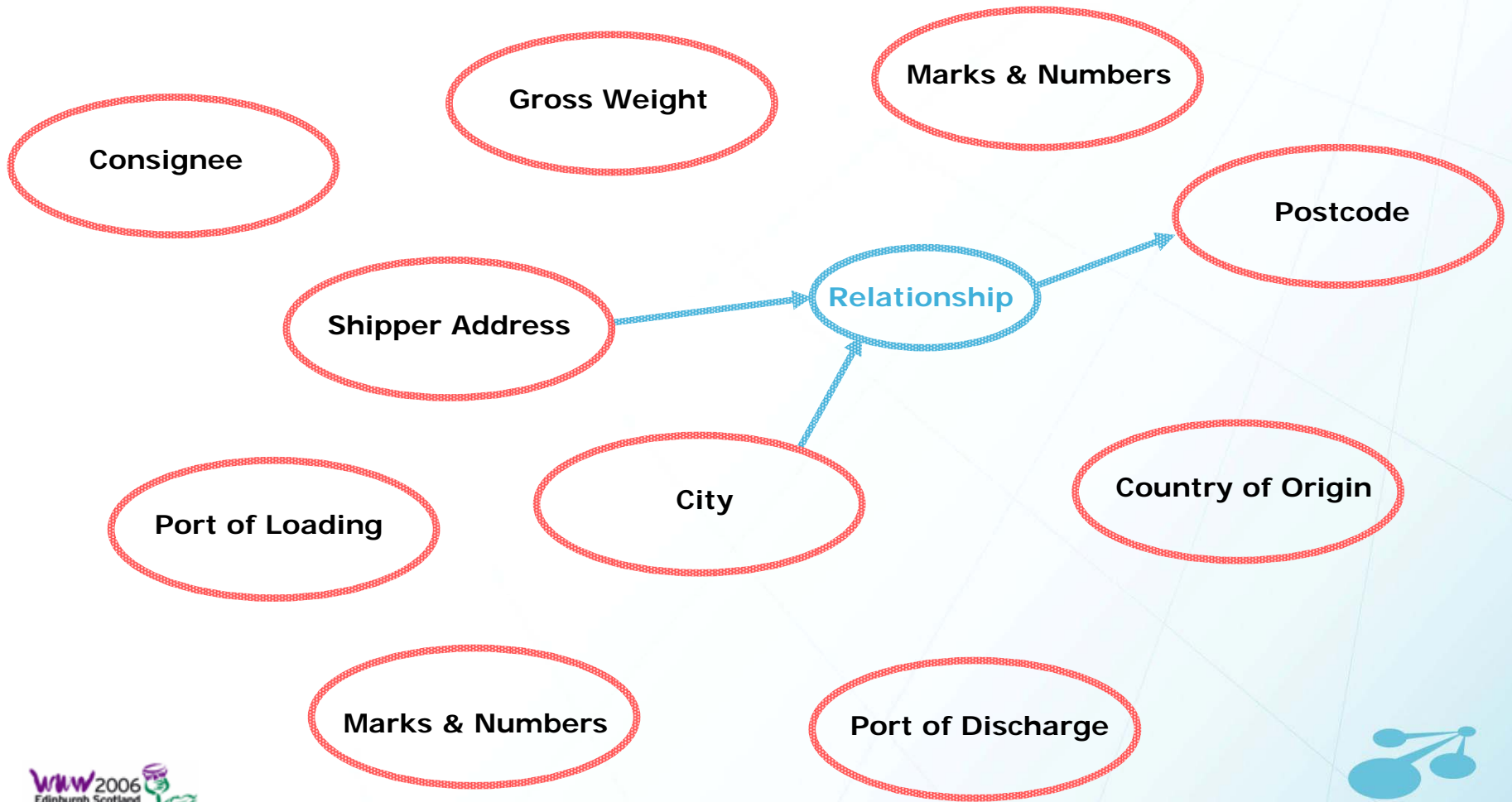
Country of Origin

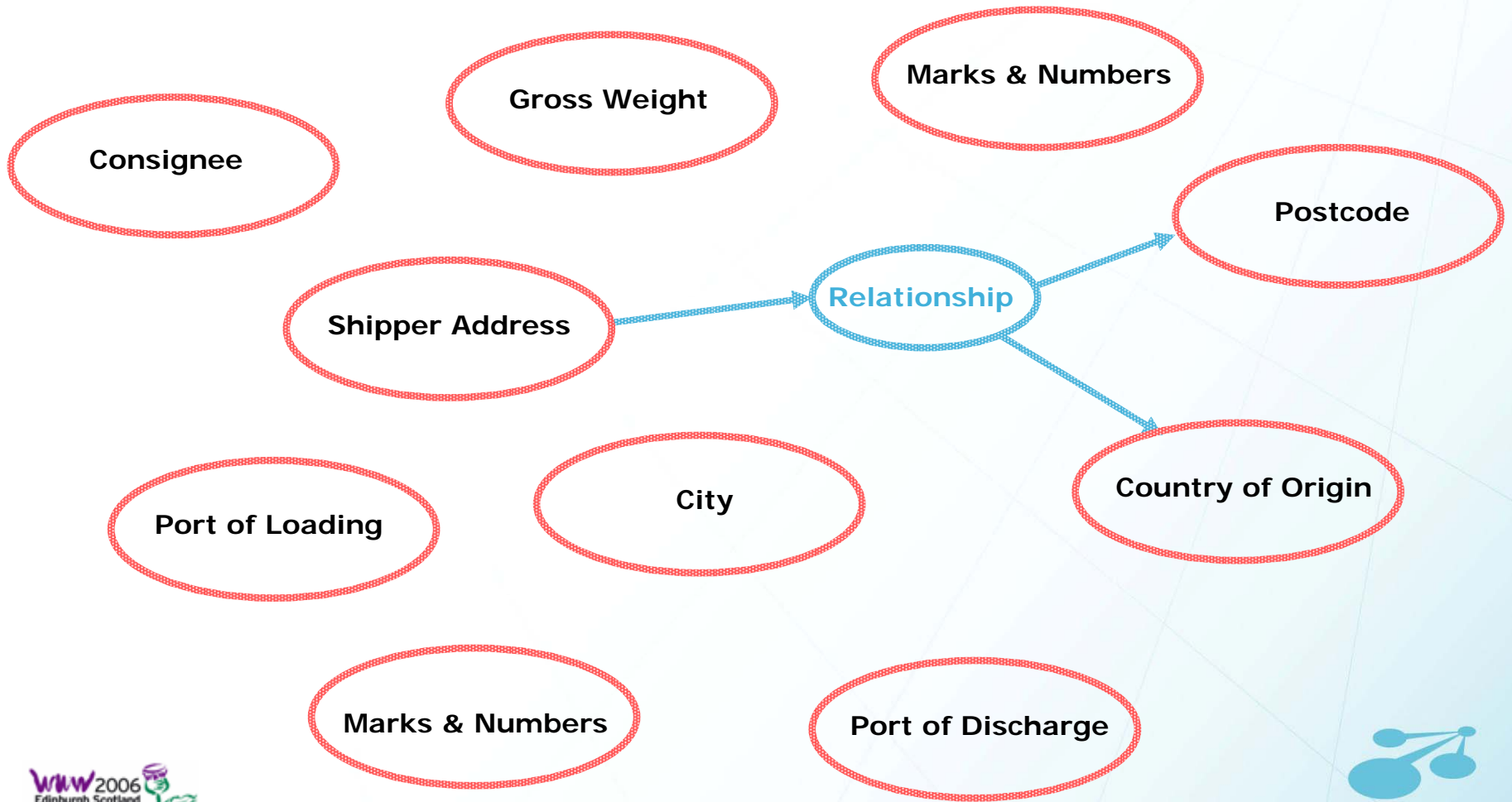
Marks & Numbers

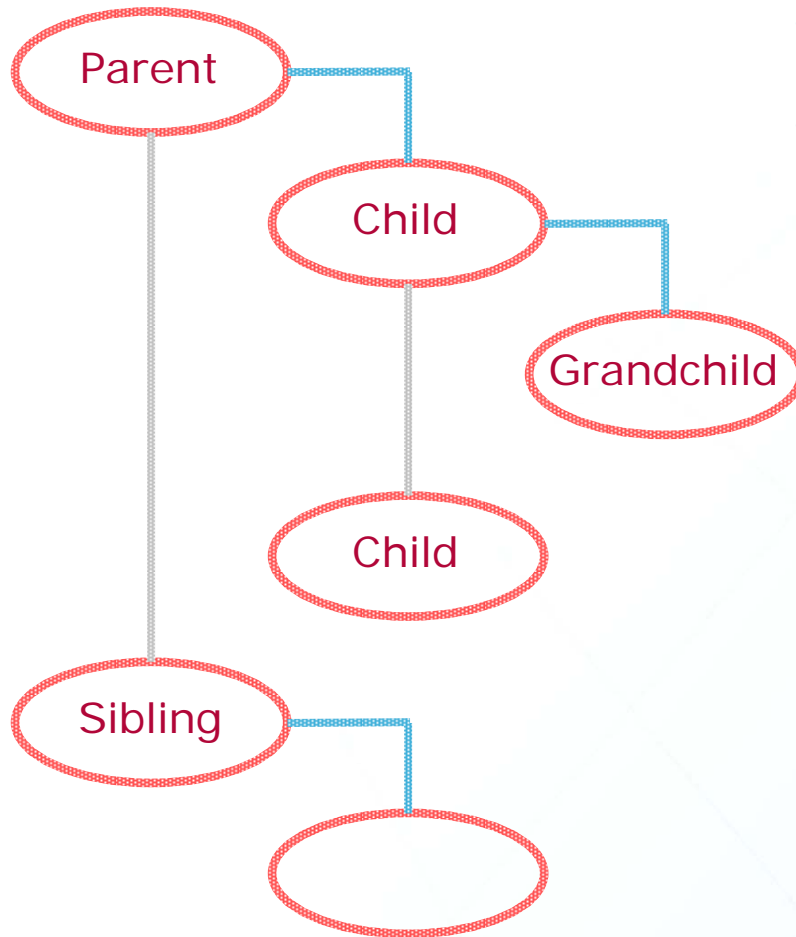
Port of Discharge





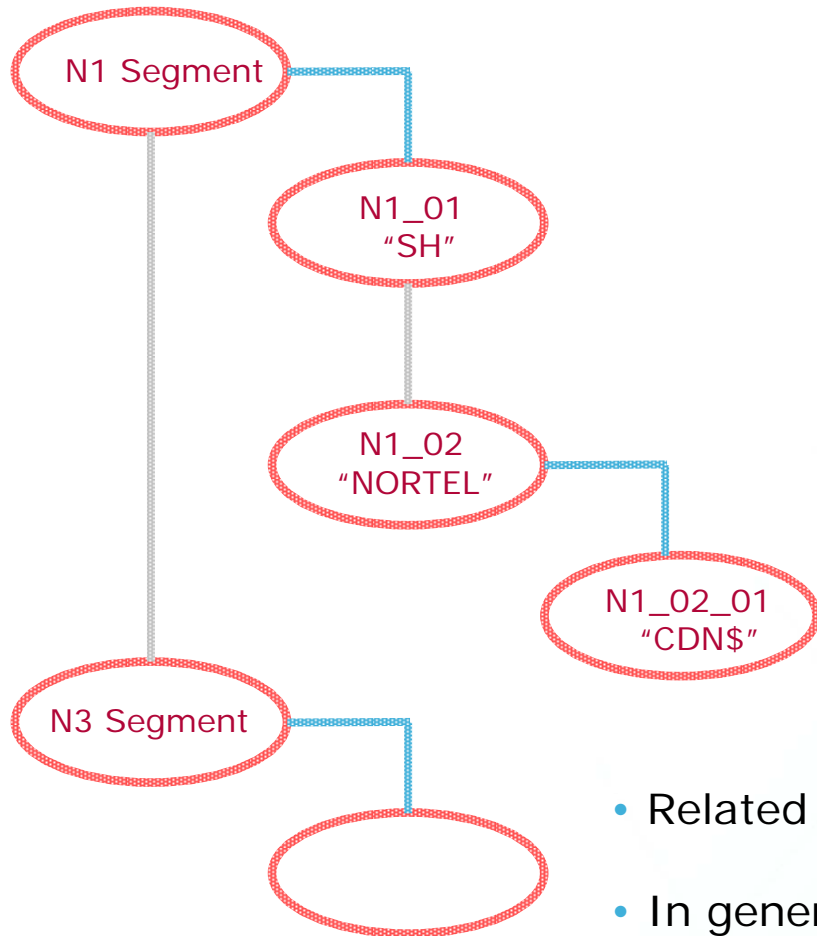






- Provide Structure to Concepts
- Can be visualised as a Tree View





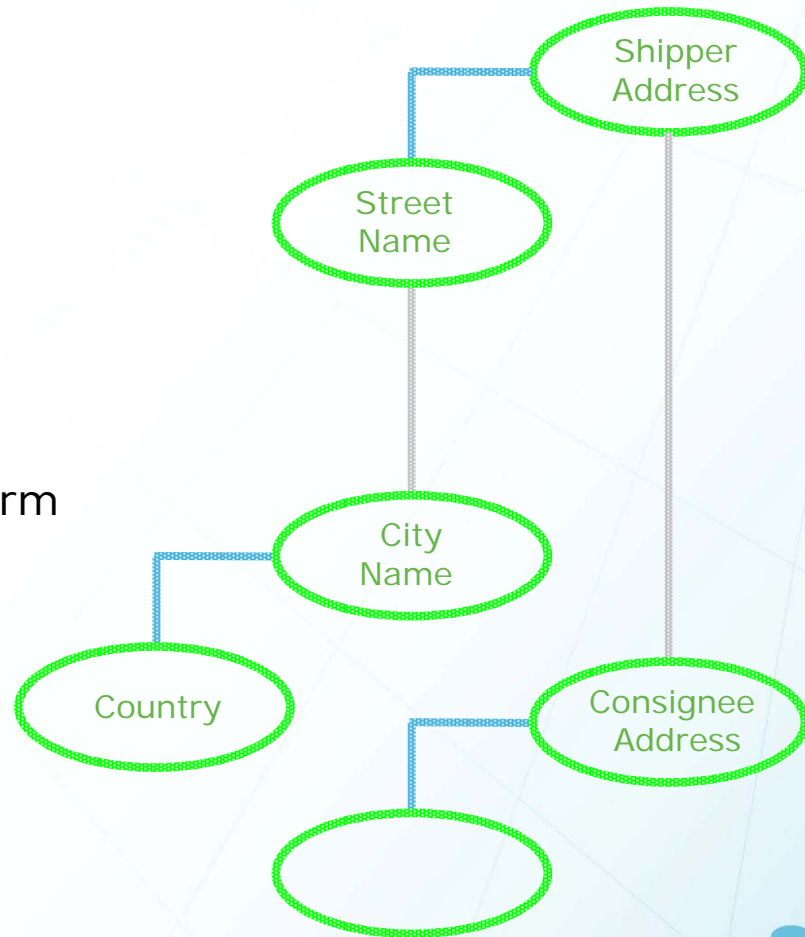
```

A214-BNAF.txt - Notepad
File Edit Format View Help
IIISA*00*                *00*                *01*05
GS*QM*058020496*KNLL*20031020*1204516
ST*214*000376043
B10*235295970**BNAF
L11*502075685*11
L11*235295970*AW
L11*AC684421*AF
L11*37927702*MB
L11*END*CUR
N1*SH*NORTEL'CDN$
N3*2305*ROE*HALPERN
N4*ST-LAURENT*PQ*H4S1N9*CA*KL*YMX
N1*CN*NORTEL NETWORKS
N3*DOUGH ROAD NEWTOWNABBEY
N4*BELFAST BT36 6XA*EG**GB*DE*BFS
N1*BT*NORTEL NETWORKS
.....
  
```

- 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.

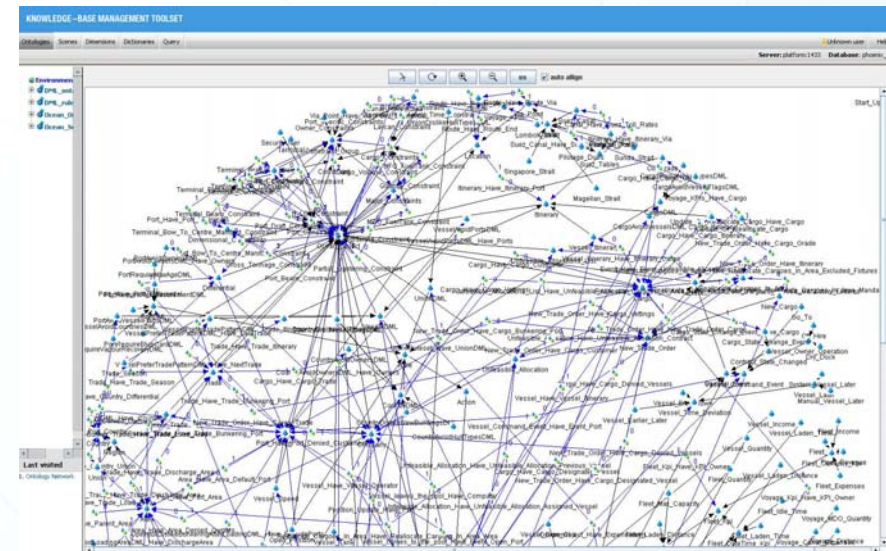
The Semantic Ontology is constructed using domain knowledge of supply chain messaging.

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



KNOWLEDGE-BASE MANAGEMENT TOOLSET

Ontologies Scenes Dimensions Dictionaries Query

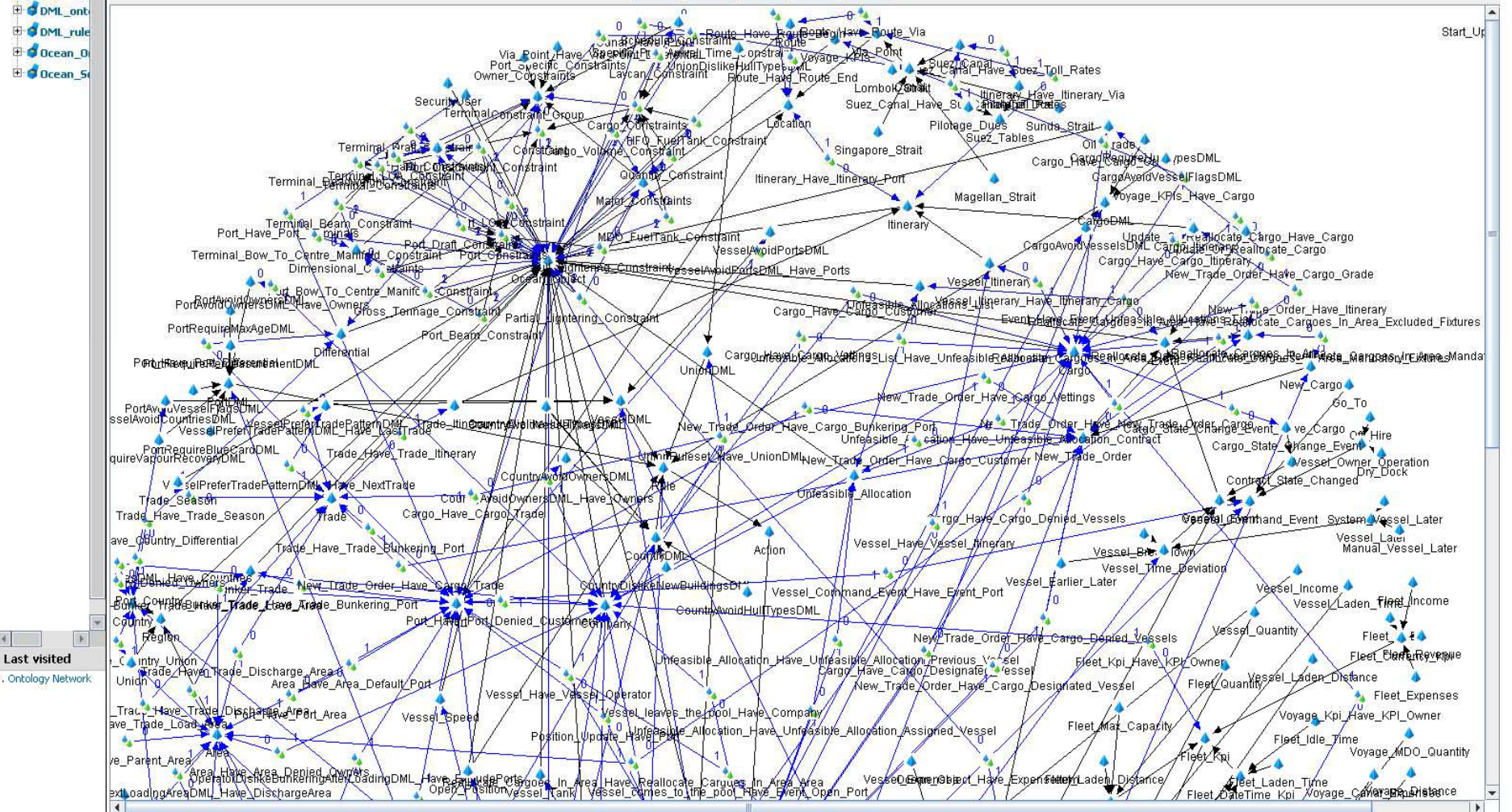
Unknown user Help

Server: platform:1433 Database: phoenix_ext

- Environment
- DML_ont
- DML_rule
- Ocean_O
- Ocean_S

ex auto align

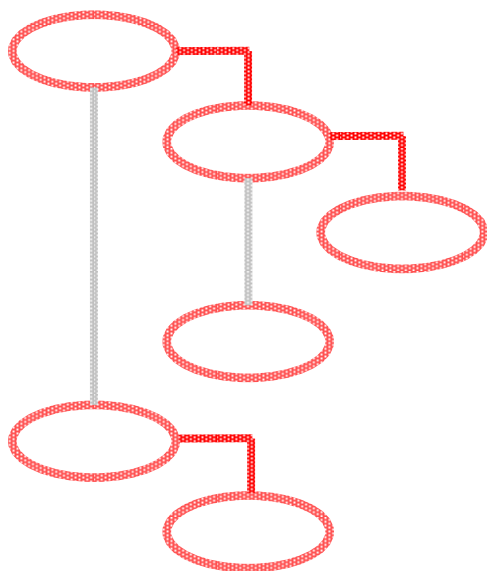
Start-Up



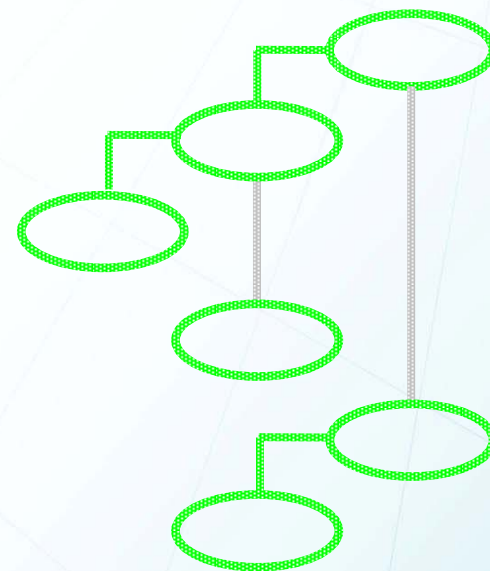
Last visited

1. Ontology Network

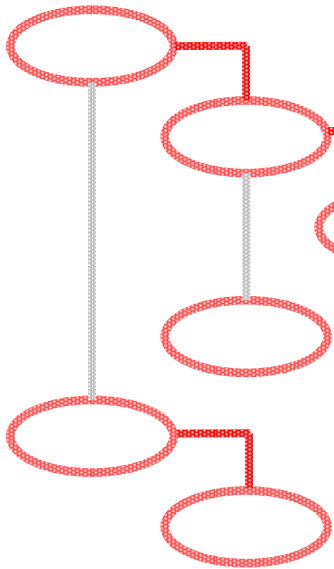
Syntax Ontology



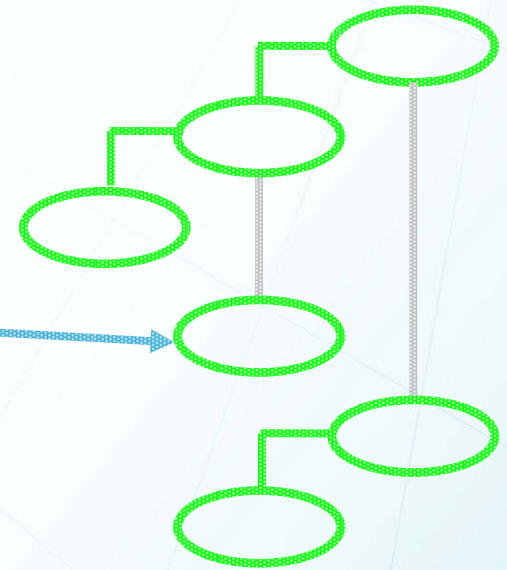
Semantic Ontology



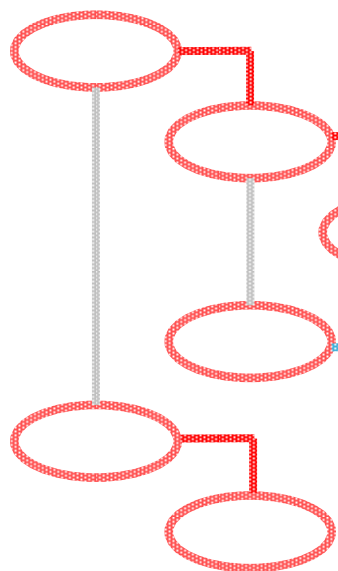
Syntax Ontology



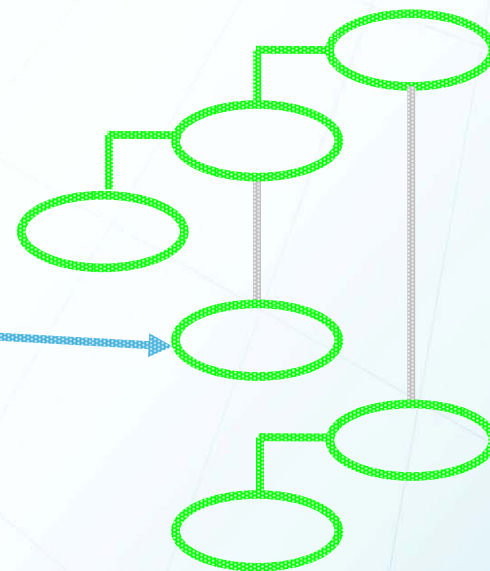
Semantic Ontology



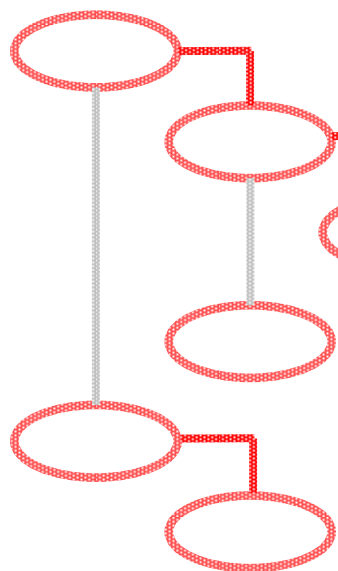
Syntax Ontology



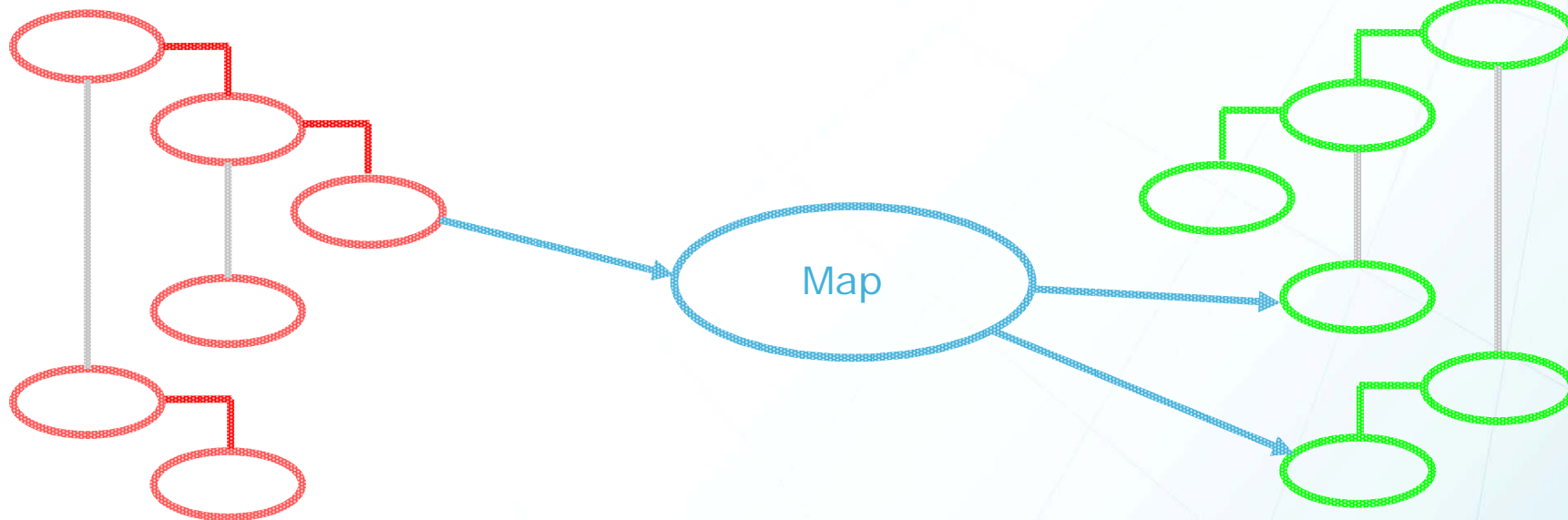
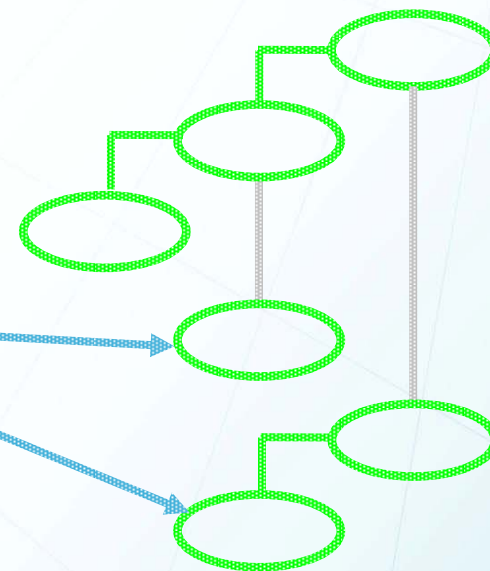
Semantic Ontology



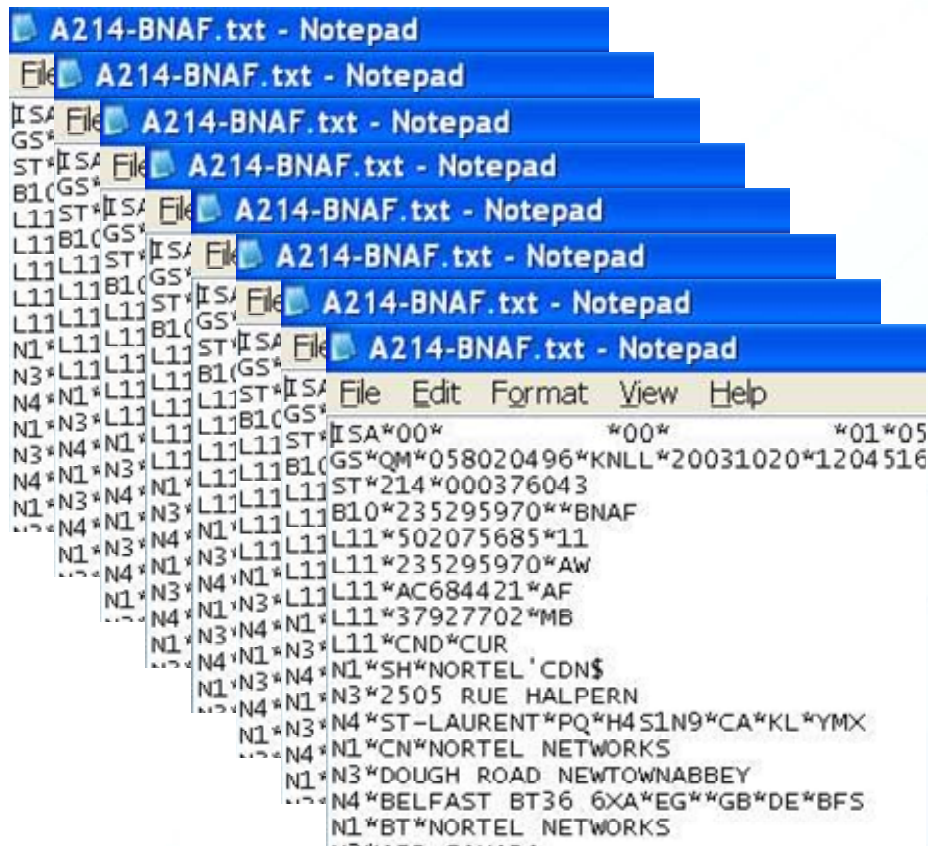
Syntax Ontology



Semantic Ontology



Profiler Analyses a set of Sample Messages :



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- Known format/existing syntax ontology? (yes/no)



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- 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 :

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- Recognisable Delimiters?



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- Recognisable Delimiters?
- Recognisable Segments?



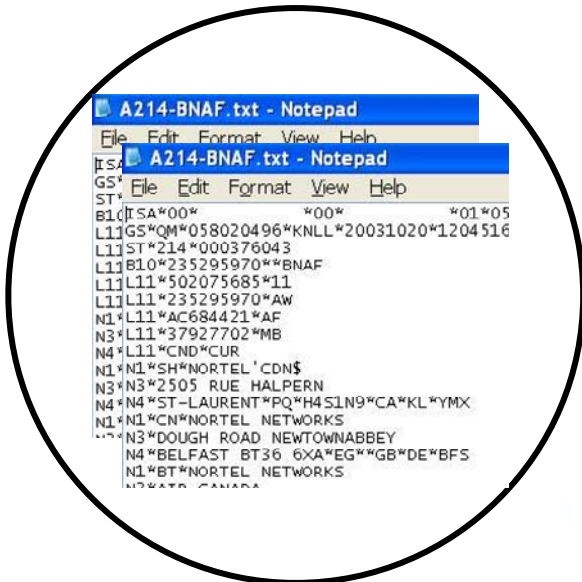
Profiler Analyses a set of Sample Messages :

- 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?



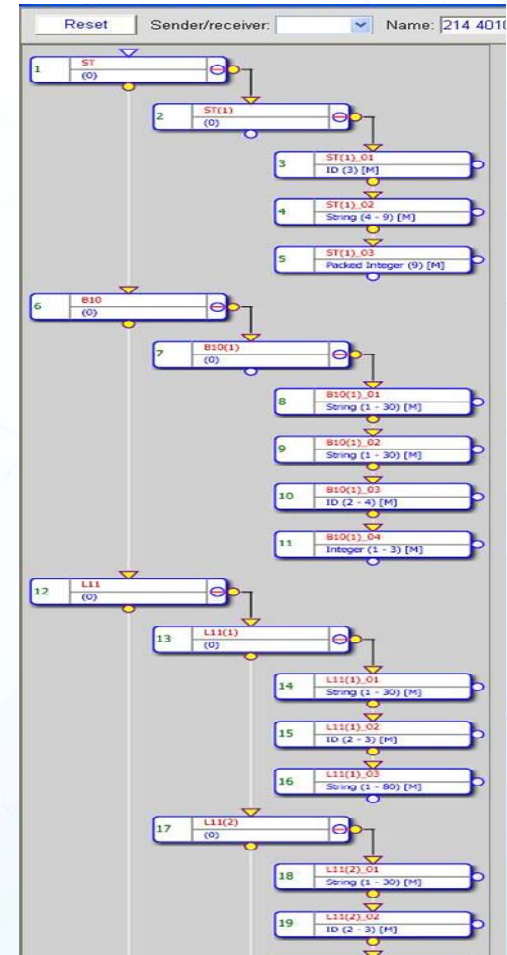
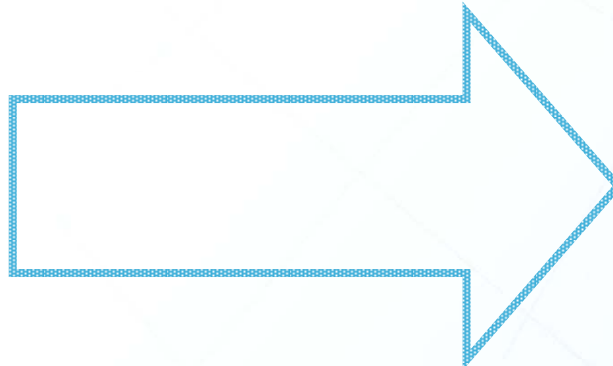
Profiler then :

- Creates a "Schema" – the Syntax Ontology



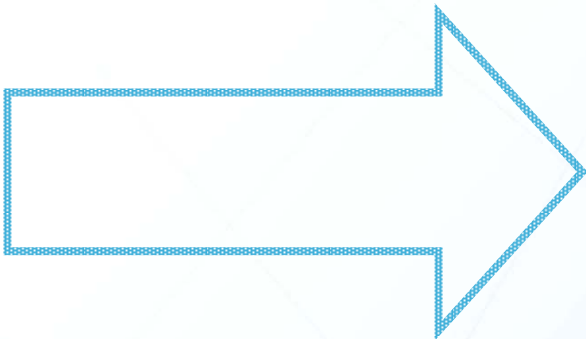
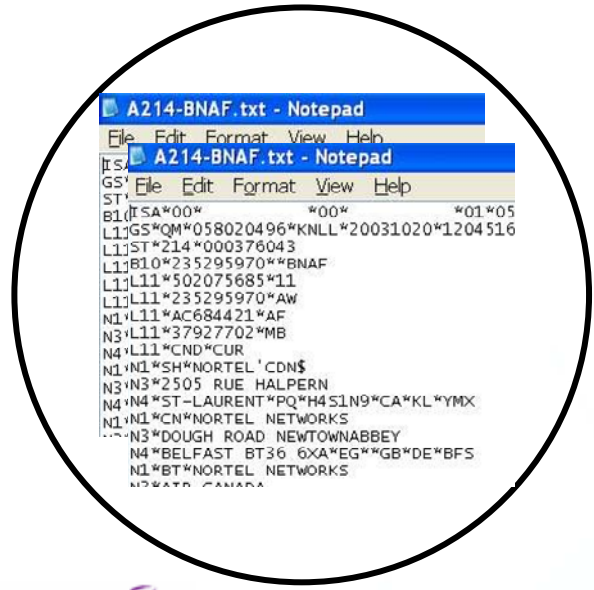
```

A214-BNAF.txt - Notepad
File Edit Format View Help
A214-BNAF.txt - Notepad
File Edit Format View Help
B1(ISA*00* *00* *01*05
L1)GS*QM*058020496*KNLL*20031020*1204516
L1)ST*214*000376043
L1)B10*235295970**BNAF
L1)L11*502075685*11
L1)L11*235295970*AW
N1*L11*AC684421*AF
N3*L11*37927702*MB
N4*L11*CNDCUR
N1*N1*SH*NORTEL'CDN$
N3*N3*2505 RUE HALPERN
N4*N4*ST-LAURENT*PQ*H451N9*CA*KL*YMX
N1*N1*CN*NORTEL NETWORKS
N3*N3*DOUGH ROAD NEWTOWNABBEY
N4*N4*BELFAST BT36 6XA*EG**GB*DE*BFS
N1*N1*BT*NORTEL NETWORKS
N3*N3*ATLANTA CANADA
    
```



And Profiler then :

- Displays Analysis results
- Allows intervention by OmPrompt Analyst



Pattern Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
404	139	126	111	106	93	95	56	54	54	41	21	20	16	13	
ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
B10	B10	B10	B10	B10	B10	B10	B10	B10	B10	B10	B10	B10	B10	B10	B10
L11	L11	L11	L11	L11	L11	L11	L11	L11	L11	L11	L11	L11	L11	L11	L11
L11 (2)	L11	L11	L11	L11	L11	L11	L11	L11	L11	L11	L11	L11	L11	L11	L11
L11 (3)	L11	L11	L11	L11	L11	L11	L11	L11	L11	L11	L11	L11	L11	L11	L11
L11 (4)	L11	L11	L11	L11	L11	L11	L11	L11	L11	L11	L11	L11	L11	L11	L11
L11 (5)	L11	L11	L11	L11	L11	L11	L11	L11	L11	L11	L11	L11	L11	L11	L11
K1	K1	K1	K1	K1	K1	K1	K1	K1	K1	K1	K1	K1	K1	K1	K1
N1	N1	N1	N1	N1	N1	N1	N1	N1	N1	N1	N1	N1	N1	N1	N1
N2	N2	N2	N2	N2	N2	N2	N2	N2	N2	N2	N2	N2	N2	N2	N2
N4	N4	N4	N4	N4	N4	N4	N4	N4	N4	N4	N4	N4	N4	N4	N4
N1 (2)	N1	N1	N1	N1	N1	N1	N1	N1	N1	N1	N1	N1	N1	N1	N1
N3 (2)	N3	N3	N3	N3	N3	N3	N3	N3	N3	N3	N3	N3	N3	N3	N3
N4 (2)	N4	N4	N4	N4	N4	N4	N4	N4	N4	N4	N4	N4	N4	N4	N4
N1 (3)	N1	N1	N1	N1	N1	N1	N1	N1	N1	N1	N1	N1	N1	N1	N1
N3 (3)	N3	N3	N3	N3	N3	N3	N3	N3	N3	N3	N3	N3	N3	N3	N3
N4 (3)	N4	N4	N4	N4	N4	N4	N4	N4	N4	N4	N4	N4	N4	N4	N4
N1 (4)	N1	N1	N1	N1	N1	N1	N1	N1	N1	N1	N1	N1	N1	N1	N1
M33	M33	M33	M33	M33	M33	M33	M33	M33	M33	M33	M33	M33	M33	M33	M33
LX	LX	LX	LX	LX	LX	LX	LX	LX	LX	LX	LX	LX	LX	LX	LX
AT7	AT7	AT7	AT7	AT7	AT7	AT7	AT7	AT7	AT7	AT7	AT7	AT7	AT7	AT7	AT7
MS1	MS1	MS1	MS1	MS1	MS1	MS1	MS1	MS1	MS1	MS1	MS1	MS1	MS1	MS1	MS1
AT7 (2)	AT7	AT7	AT7	AT7	AT7	AT7	AT7	AT7	AT7	AT7	AT7	AT7	AT7	AT7	AT7
MS1 (2)	MS1	MS1	MS1	MS1	MS1	MS1	MS1	MS1	MS1	MS1	MS1	MS1	MS1	MS1	MS1
AT7 (3)	AT7	AT7	AT7	AT7	AT7	AT7	AT7	AT7	AT7	AT7	AT7	AT7	AT7	AT7	AT7
MS1 (3)	MS1	MS1	MS1	MS1	MS1	MS1	MS1	MS1	MS1	MS1	MS1	MS1	MS1	MS1	MS1
AT7 (4)	AT7	AT7	AT7	AT7	AT7	AT7	AT7	AT7	AT7	AT7	AT7	AT7	AT7	AT7	AT7
MS1 (4)	MS1	MS1	MS1	MS1	MS1	MS1	MS1	MS1	MS1	MS1	MS1	MS1	MS1	MS1	MS1
AT8	AT8	AT8	AT8	AT8	AT8	AT8	AT8	AT8	AT8	AT8	AT8	AT8	AT8	AT8	AT8
AT8 (2)	AT8	AT8	AT8	AT8	AT8	AT8	AT8	AT8	AT8	AT8	AT8	AT8	AT8	AT8	AT8
CD3	CD3	CD3	CD3	CD3	CD3	CD3	CD3	CD3	CD3	CD3	CD3	CD3	CD3	CD3	CD3
PRF	PRF	PRF	PRF	PRF	PRF	PRF	PRF	PRF	PRF	PRF	PRF	PRF	PRF	PRF	PRF
PRF (2)	PRF	PRF	PRF	PRF	PRF	PRF	PRF	PRF	PRF	PRF	PRF	PRF	PRF	PRF	PRF
SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE



Profiler then deduces Mappings by Recognition:



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- Recognition of “like” mappings made previously



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



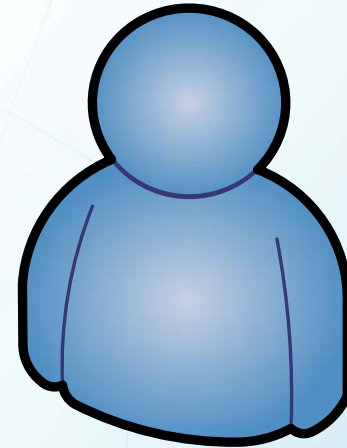
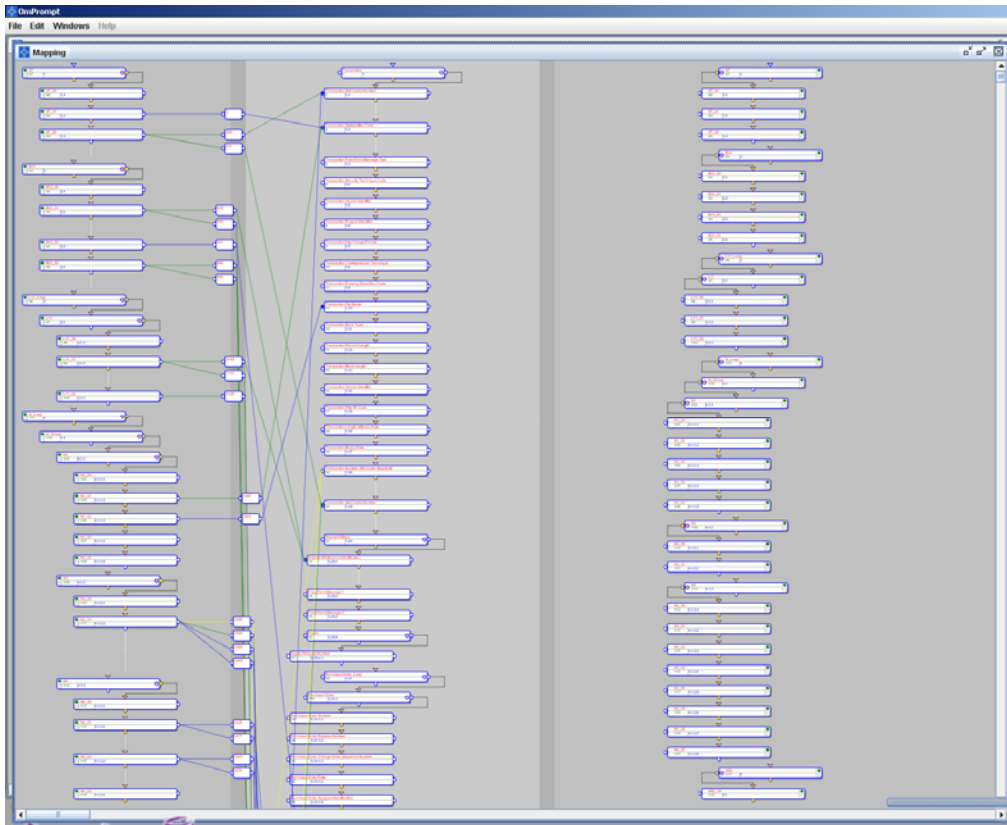
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- Recognition of “like” mappings made previously
- Matching field Characteristics (Data Type/Length)
- Data Value Recognition
- Data Value Recognition IN CONTEXT

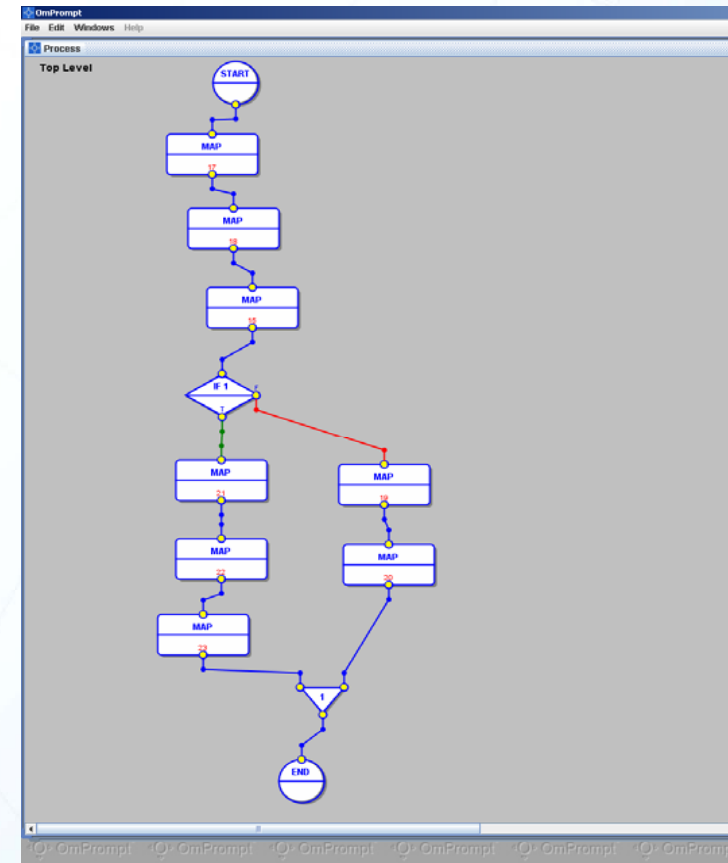
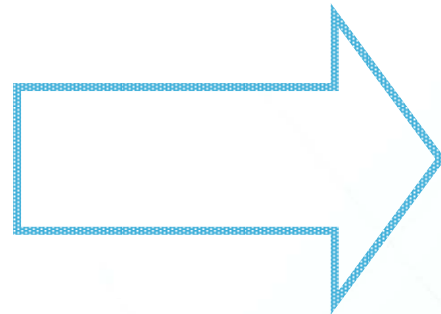
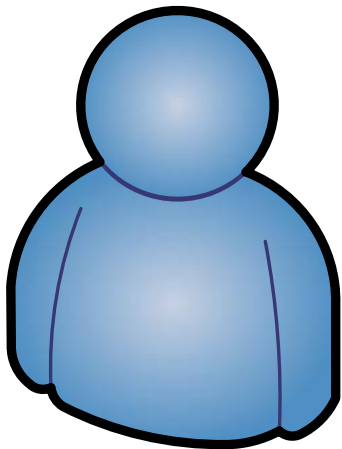
Mappings provide the Semantic Connection



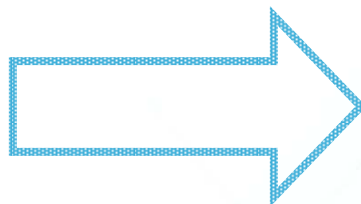
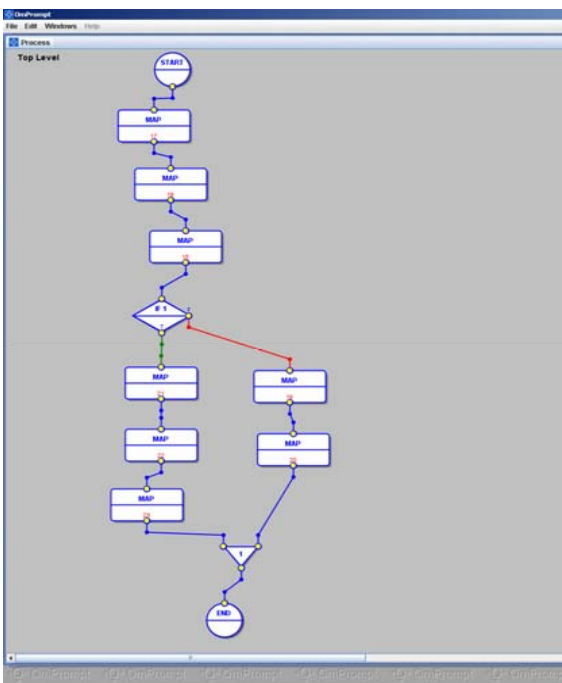
- Displays Mappings ranked by Probability
- Allows Omprompt Analyst to Accept or Reject



- OmPrompt Analyst creates a Graphical Process Flow
- Partial Automated Generation



From this we Generate, Compile and Deploy executable code



```
Property SyntaxData As String [ Multidimensional ] :  
    @Method InCode143() [ Private ]  
    {  
        set ..SeeCnt112*..SeeCnt112+1  
        Quit  
    }  
    @Method InLoop140(LoopCounter As Integer) As Integer [ Private ]  
    {  
        set ac=SS5OK  
        set ..BynCnt70=LoopCounter  
        #!Box: Omp.EV0.MapBox, id: 142  
        Map195724  
        set ac*..InMap195724()  
        If ac*SS5OK Quit ac  
        #!Box: Omp.EV0.CodeBox, id: 143  
        Code143  
        Do ..InCode143()  
        GoTo End  
    End  
    Quit SS5OK  
    }  
    @Method InMap165808() As Integer [ Private ]  
    {  
        #!Get the data in local variables:  
        #!SDM_02  
        set Data=#Get(..SyntaxData(1,3))  
        #!Store the data:  
        #!Transaction Free-Form Message Text  
        set ..SemanticData.Data(1,4)=Data  
        Quit SS5OK  
    }  
    @Method InMap195724() As Integer [ Private ]  
    {  
        #!Get the data in local variables:  
        #!FTX_02
```

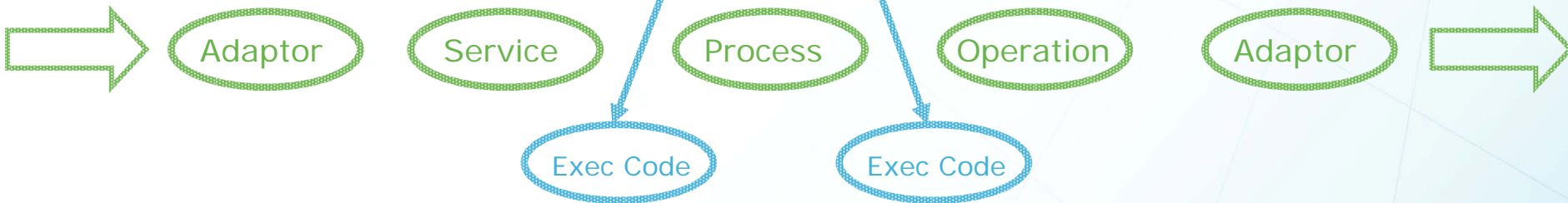


Intelligence Layer

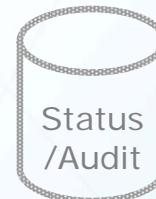
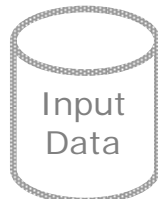


Transaction Layer

Intersystems Ensemble engine



Offline Layer





**“The Rebirth of EDI”
Semantic Integration**

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