ELEKTRONISCHE ANBINDUNG VON BINNENHÄFEN UND
-SCHIFFEN AN SEEHÄFEN

ELECTRONIC INTERCONNECTION OF SEAPORTS, INLAND
TERMINALS AND BARGES

von / by
Ernie SCHEERLINCK
Electronic Interconnection of Seaports, Inland Terminals and Barges

NAVILOG 2002
University of Hannover
26/03/2002

Milestones

- EDI for Antwerp Maritime Industry
  - Creation of a network
  - EDI focused applications
  - Message design
- EDI for correspondents of Antwerp Maritime Industry
- Interconnects between networks
- “Single point of entry”
- Internet Service Provider (ISP)
- Subcontractor for BCS and ZEDIS
- EDI for non Maritime industries
- Embracing the new technologies
  - WEB - EDI
  - …
Statistics

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
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<tbody>
<tr>
<td>EDI messages exchanged</td>
<td>692,000</td>
<td>832,000</td>
<td>1,225,000</td>
<td>1,695,000</td>
<td>2,119,000</td>
<td>2,750,000</td>
<td>3,680,000</td>
<td>5,173,100</td>
<td>6,472,973</td>
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<tr>
<td>Companies connected</td>
<td>0</td>
<td>100</td>
<td>200</td>
<td>300</td>
<td>400</td>
<td>500</td>
<td>600</td>
<td>700</td>
<td>800</td>
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</tbody>
</table>

Seagha Products

- **System level**
  - Seagha Bridge
    - EDIFACT translator
    - Front-End processor
  - Seagha Connect
    - Open communication protocol
  - Seagha Explorer
    - Management module

- **End-users level**
  - Sadbel (Customs declaration)
  - WBS (Berthing requests)
  - DGN (Dangerous Cargo Declaration)
  - Expag (Forwarder-Agent)
Seagha Services

- Seagha Clearing
  - Mailbox system / X400- X25 - ISDN – OFTP-TCPIP
- Interconnects
  - VAN’s (Value Added Network) / Ports / CCS (Cargo Community System)
- Telex/Fax gateway
- ISP (Internet Service Provider)
  - Issue of IP addresses (BGP4 level provider)
- Single point of Entry
- E-Business
- EDI consulting
- Mapping

Problem of an Inland Terminal

- Communication to :
  - Shipping Lines
  - Agents
  - Forwarders
  - Customs
  - Deep Sea Terminals
    - Some inland Terminals are also Barge operators.
  - Barge Operators
  - Truckers…
- Same environment as a deep sea terminal with the same solutions
- Messages exchanged
  - Container Messages
  - Customs declarations
**Problem of the Barge** *(operator)*

- Movement of the ship on the inland waterways
  - Pre-announcement at bridges, locks ..
- Proper documentation on the cargo
  - Operational info
  - Customs info
- Planning for operations on deep sea terminals
  - Experiments in R’dam
- Commercial part of a barge transport
Teil A: Betrieb und Management von Seehäfen und Binnenhäfen

Section A: Operation and Management of Seaports and Inland Terminals

THE EXPORT INFORMATION CHAIN

1. IFTMIN (Instruction)
   IFTMCS (Contract Status)
   INVRT (Inventory Report)
   ORDERS (Purchase Order)

2. IFTMIN (Instruction)
   DESADV (Dispatch Advice)
   IFTMBF (Booking)
   IFTMBRC (Booking Confirmation)
   Loading Permit
   Bill of Lading
   Loading Permit / Bill of Lading
   Acknowledgement of Shipment Message
   Answer on Bill of Lading Message

3. Link to Belgian Customs: SADBEL

4. IFTTOI (Transport Order / Instruction)
   APERMS (Application Error & Acknow.)
   IFTTCS (Contract Status)

5. IFTDGN (Dangerous Goods Notification)

6. IFTMCS (Manifest)

7. Request for Shift of Berth
   Request for Priority
   Pilot Instructions
   Journey History

8. COPARN & Container Announcement Instructions
   CODECO & Container Movement Report
   COPRAR & Container Loading Instructions
   COARRI & Container Loading Report
   DESTIM & Damage Estimate

9. BAPLIE (Bayplan)

10. IFTMIN (Conventional Order)
    IFCSUM (Conventional Order Reporting)

11. CUSDEC (Intrastat)

THE IMPORT INFORMATION CHAIN

1. Pre Announcement
   Request for Berth
   Request for Shift of Berth
   Request for Priority
   Pilot Instructions
   Journey History

2. Manifest: IFTMCS

3. BAPLIE (Bayplan)

4. Customs SADBEL declaration
   CUSCAR (Customs Cargo Report)
   CUSREP (Customs Conveyance Report)

5. IFTMAN (Arrival notice)

6. IFTDGN (Dangerous Goods Notification)

7. Container Discharging Instructions &
   COPRAR
   Container Discharging Report & COARRI
   Container Release Instructions & COREIN

8. IFTMIN (Conventional Order)
   IFCSUM (Conventional Order Reporting)

GENERIC
   General Rejection
   General Cancellation
   Free text
Inventory of EDI environments

- Types of Players
  - High degree of ICT
  - Medium sized ICT infrastructure
  - Entry level ICT

- Types of Data
  - Automatically processable “Data” (EDI)
  - Hybride “Data” man/machine (WEB-EDI)
  - Negotiable and transferable “Documents”
    - Systems based on “trusted third parties” and “keys” and “certificates”

Virtual Port Community

**SENDER**
- High technology penetration
- Medium sized technology
- Entry level technology

**RECEIVER**
- High technology penetration
- Medium sized technology
- Entry level technology

**Mapping**
- Web database (management tool)
- Mobile Communication
- Web Applications
- Forms
- E-MAIL
Seagha mapping

Internal Format  MAPPING  OUTPUT

EDI partner dependent

CONVERSION

EDIFACT  E-mail  XML  HTML  ANSIX12  FAX

Welcome
Seagha, electronic commerce service provider for transport, your direct link to communication.

Single Point of Entry
Seagha as a single point of entry means easy access to worldwide electronic communication.

Guided Tour
News & Events
Vacancies

Online Web Applications
**Pre Announcement of Cargo for Inland Transport**

- Communication link between principal, inland transport and destination.
  - EDI integration
  - WEB
  - Or combined
- Link with mobile communication systems
  - WAP-SMS-GPS-PDA
- Link with invoicing and payment systems
  - EDI integration
  - WEB
  - Or combined
- Link with content of professional organisations

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**P@C-IT (The transportportal??)**

- Inland Transport
- Agent
- Ship owner
- Forwarder
- Consignee
- Shipper
- Depots
- Warehouses
- Port/Hinterland
- Waterway Management Systems
- Customs
- Other third parties
- Transport destination
- P@C-IT
### Section A: Operation and Management of Seaports and Inland Terminals

#### Inverse Containers - Microsoft Internet Explorer

<table>
<thead>
<tr>
<th>Container Nº</th>
<th>90810500544</th>
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<tbody>
<tr>
<td>Location</td>
<td>JBC</td>
</tr>
<tr>
<td>Reference</td>
<td>0083 042 61O 0.35</td>
</tr>
<tr>
<td>Date</td>
<td>27-05-2000</td>
</tr>
<tr>
<td>Time</td>
<td>08:00</td>
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</tbody>
</table>

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<td>Time</td>
<td>08:00</td>
</tr>
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</table>
### Section A: Operation and Management of Seaports and Inland Terminals

#### Inhouse Instruction - Alg. Info

<table>
<thead>
<tr>
<th>Instruction Reference</th>
<th>Creation Date</th>
<th>Shipping Line</th>
<th>Vessel Name</th>
<th>Port of Discharge</th>
<th>Voyage Number</th>
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<tbody>
<tr>
<td>012.630.035</td>
<td>15/06/2011 00:59</td>
<td>Sealand</td>
<td>MS ALIGATOR PRICE</td>
<td>PILZEN</td>
<td>CL19.12</td>
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</table>

#### General Information

**Loading with hermetically sealed PPM to be loaded in rail container.**

---

<table>
<thead>
<tr>
<th>Party From</th>
<th>Party To</th>
<th>Contact</th>
<th>Number of Containers</th>
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<tbody>
<tr>
<td>Agent2</td>
<td>Agent2</td>
<td>Agent2</td>
<td>1</td>
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#### Instructions

<table>
<thead>
<tr>
<th>Pick up Location</th>
<th>Delivery Location</th>
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<tbody>
<tr>
<td>DPZ Haven 300 Zomergre 24</td>
<td>PILZEN</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Date/Time</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>15/05/2011 00:00</td>
<td>012.630.035</td>
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<table>
<thead>
<tr>
<th>Number</th>
<th>Off-Carriage</th>
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<tbody>
<tr>
<td>1</td>
<td>1005494</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Gross Weight</th>
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<tbody>
<tr>
<td>2540 kg</td>
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<table>
<thead>
<tr>
<th>Cargo Handling Location Date/Time</th>
<th>Reference</th>
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<tbody>
<tr>
<td>15/05/2011 00:00</td>
<td>NEDL 1005494</td>
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#### Big Cargo

<table>
<thead>
<tr>
<th>No</th>
<th>Technical Name</th>
<th>UN/DG Number</th>
<th>Hazard Class</th>
<th>Flash Point</th>
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<tbody>
<tr>
<td>1</td>
<td>CHLORODIFLUOROETHANE</td>
<td>2517</td>
<td>2.1</td>
<td>5</td>
</tr>
</tbody>
</table>
AgentParty2
Agenterstraat 5
Fax: 09.55.6955
Contact: Agent Two

Shipping Line: Sealand (SEA)  
Ocean Carrier: 

Vessel: MS ALIGATOR PRIDE  
To: ???  
Voyage Number: C1912  
Call Sign:  
Lloyd’s Number: 

Agreed Costs: 
Additional Costs:

Container #1 / 1  
Number: NRIU 1005494

Size/Type: 20" X 27" - Tank cont. for dangerous gases, pressure 10,5 bar

Pick up at:  
IFBZ  
Haven 380  
Zomerweg 24  
BEL 2030 Antwerpen  
reference: 012 610 035  
date/time: 19/05/2001 08:00

Redelivery at:  
IFBC  
Cirkeldijk  
NDL: Rotterdam  
reference: ANTL29911  
date/time: 19/05/2001 00:00

Off Dimensions: Front: 0 cm  
Back: 0 cm  
Left: 0 cm  
Right: 0 cm  
Height: 0 cm

Temperature Setting:  
Gross Weight: 15490 kg

Goods

Description  
ADR  
IMDG  
UNDG  
Flash Point

2.2  
2.1  
2517  
5.0 CEL

General Info

VOOR LOSSING MOET EEN HERMETISCHE POMP MEEGEBRACHT WORDEN INKL. EXPLOSIEVRUIE KAST

- 36 -
The extended enterprise???

Bring together partners with a specific competence to deliver bundled solutions to the customers

- Wireless Single point of Entry
- ASP solution for SME offering order entry, invoicing and accounting.

- Interface with other third parties
  - Waterway management systems
  - E-Market systems

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Any questions?