

**Grimaldi Group's experience with Shipdex™
What it hopes to achieve, who covered the costs**

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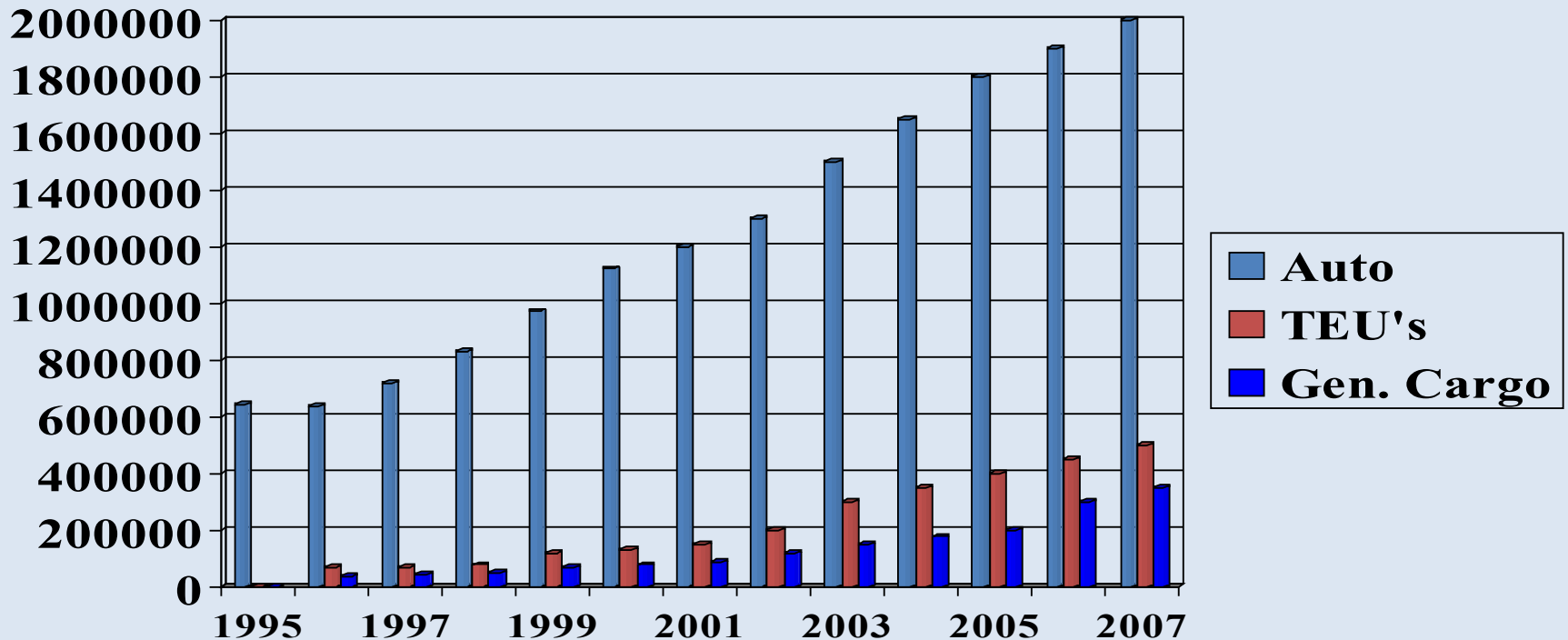
The Grimaldi Group

The GRIMALDI GROUP was created in 1946 and today is one of the leader companies in the market of RO-RO, car carrier. The Group has one of the largest fleet in the world of RO-RO / multipurpose and car carrier ships and on all routes served is also very active for transport of container and palletised general cargo. The Group is also specialised in project cargo transport. The expansion of Grimaldi Naples out of Mediterranean market started in 1969, with the first regular car carrier line between Italy and United Kingdom. This service, born for the transport of FIAT cars assigned to the English market, has shortly gained the confidence of the major world car manufacturers that decided to use the Grimaldi Group as car carrier for products assigned to the Mediterranean market built in UK and North Europe and vice versa.



The Grimaldi Group

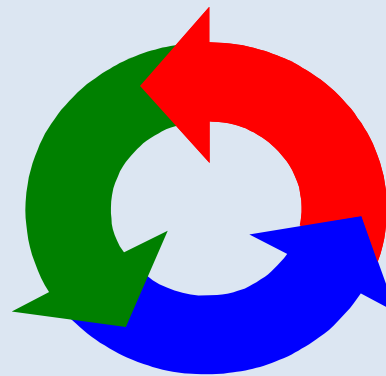
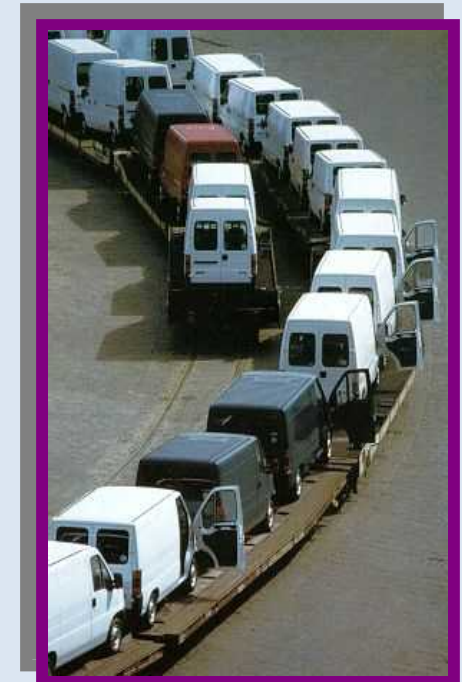
The Group transports today more than one million eight hundred thousands car per year with 90 owned and chartered vessels.





The Grimaldi Group

Today the Group own a large network of integrated logistic services in Italy, Spain, Portugal, Denmark and Ireland.






The Grimaldi Group

The Grimaldi Group has recently made an action of horizontal integration made by acquisition or creation of new Companies going in the sense of development of new routes and expansion in new markets. In fact have been acquired to the Group ACL (Atlantic Container Line), a company trading between North America and North Europe, Finnlines a company trading in the Baltic and between Baltic and North Europe, created Malta Motorways Of the Sea trading into the mediterranean and a significant participation in Minoan Lines has been





What is Shipdex™ ?

 **Shipdex™** is the bundle of international business rules (protocol) developed to standardize the development and the exchange of technical and logistic data within the shipping community. The scope of this standard protocol is to rationalize the proliferation of technical information, currently supplied in various formats. The Shipdex™ protocol is born from the co-operation of two Ship Owner company **Grimaldi Group Naples** and **Intership Navigation Co Ltd**.





Why Shipdex™ ?

Up to now, ship owners have dealt with the headache of a table full of paper. Just as an example a new delivered ship come with at least one and half ton of paper that includes Manuals, Drawings, Electrical Diagrams, Specifications, Maintenance Instructions and so on. The photo (below) shows the manuals which can come with a brand new, \$30m ship just delivered at begin of 2008 .



It's very difficult to accept that, in the century of EDI and Communications, shipping industry is still dealing with this huge amount of paper difficult to manage, store and consult both on board and ashore.



Why Shipdex™ ?

Today's scenario is characterized by a lot of requirements both from authorities and customers that for compliance require fast answers, rapid consultation and immediate availability of information.

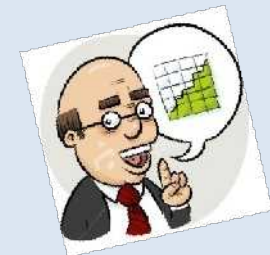
In addition the transfer of shipbuilding capability and economical convenience to the Far East a lot of equipment are built under licence in the same area but very often all the necessary documentation is very poor and in some cases not properly applicable to the type and version of equipment installed.

So easy and immediate availability of source information from the original designer will help ship owner to comply with this requirements.



Today's scenario

- Strict requirements by authorities and legislation (ISM, TMSA, Marpol, ISPS,...)
- Operational and Quality requirements from customers
- Environmental requirements
- Absolute need for top efficient operations (profitability)
- Use of ERP (Enterprise Resource Planning) systems to manage the fleet

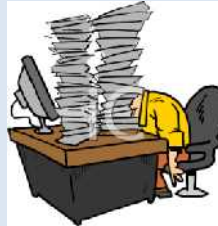


Where does it lead?



Today's scenario

Huge amount of data to register and manage
To satisfy authority and market requirements



This practically means from the point of view of ship owner company in respect of computerised maintenance, purchasing, Quality management systems the following ...



Ship owner's point of view

Qualitative

- Hundreds of Manuals, Specifications and Drawings to catalog and store
- Poor quality of data and even wrong data as input in ERP systems
- Waste of space allocated to shelf for paper
- In the office as far as on board more paper than people
- Very difficult reference findings in supporting emergency situation



Ship owner's point of view

Quantitative

- 80-100 different makers for one vessel
- 700-900 different components per vessel
- up 1.000 different parts in one component
- up to 33.000 different general stores
- 2-4 month of manual data inputting for each new vessel
- From \$ 30,000.00 up to \$ 50,000.00 for a Class approved PMS database
- About \$ 20,000.00 per year to maintain a paper Technical Library

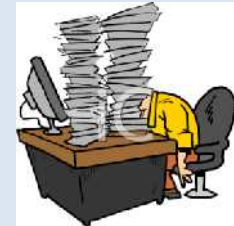


From “Frustration” to “The idea”

- Grimaldi and Intership – ship-owners which control close to 200 vessels got frustrated from this situation
- Necessity of electronic management of this information was evident
- Necessity for a Standard was there



We decided to help ourselves!



- Let’s speak with our Key Suppliers to jointly develop a standard to make everybody’s life easier!



Which Standard?

What are the maritime authorities saying?

- *Solas Chapt. 12 only mentions* - ships have to be equipped with certain manuals
- *IMO - GBS (goal based standards) project* - better and standardized manuals
- *MSC.1/Circ.1253 - Shipboard technical operating and maintenance manuals* [IMO GBO MSC 1 Circ 1253 26-10-2007](#)
- *IMO - ISM requirements for Preventive Maintenance Program and for Technical Library on board and ashore*

But no standard is defined to make Documentation neither for content and organization neither for format or business rules to be used in case of electronic documentation



Which Standard?

Why not go like in the aerospace industry?

Shipping is slowly adopting aerospace-like standards and rules (e.g. IMO English vocabulary, GMDSS, a VDR, AIS and VTS areas)

Why an aviation standard for technical data shall not be tailored and reused in shipping?

So why not built a Data and Documentation dedicated maritime business rules for EDI based on Aircraft Industry S1000D without re-inventing the wheel?



Which Standard?

Let's Shipdex™



Shipdex™ FUNDAMENTALS

- **To achieve a win-win situation for everybody**
- **To develop an open standard for all**
- **A standard to be expandable in the future**
- **Shipdex™ Initial scope**
 - Equipment list
 - Maintenance procedures
 - Parts catalogue
- **To adhere to already existing industry standards**



Shipdex™ DEVELOPMENT

In order to develop Shipdex™ protocol and full fill the relevant objectives, once collected the adhesion to the initiative of their key supplier (Alfa Laval, MacGregor Group, MAN Diesel A/S, Yanmar Company Ltd.) and contracted their major IT solution supplier SPECTEC , Grimaldi Group and Intership Navigation set up a Working Group Chaired by Grimaldi Group to write the specification for the protocol based on a tailoring of S1000D to the maritime industry in accordance to the aim of initial scope. All the participating Companies are the founder members of Shipdex™ protocol.



Shipdex™ DEVELOPMENT

The Team

SHIPDEX™ working group - Complete supply chain covered

- **Ship owners**

- Grimaldi Group Naples
- Intership Navigation Co. Ltd

- **IT expertise, Software vendor**

- SpecTec Group Holdings Ltd – long time IT solutions supplier to Intership Navigation and Grimaldi Group

- **Manufacturers**

- Alfa Laval
- MacGREGOR Group
- MAN Diesel A/S
- Yanmar Company Ltd



The Shipdex™ Protocol

The Shipdex™ Protocol is a bundle of rules necessary to obtain the following:

- Exchange of data related to the information currently supplied in the form of Technical Manuals, drawings, specifications;
- Data exchange in a neutral and standardized format, platform and software independent;
- Elementary Maintenance, Operations and Spare Parts information written in an electronic format ready to be utilised in different computerized systems



Shipdex™ DEVELOPMENT Timing

After 12 months of joint work, homework effort from the various participants and seven meetings held in 4 different countries finally on February 2008 the Shipdex™ protocol was presented to the maritime industry at Digital Ship Cyprus in its first version.

At same time also a web site has been activated and a non profit company to manage the association to Shipdex™ community and diffusion, proliferation, maintenance of the protocol has been set up.

In addition a Working Group for the Maintenance of the protocol has been created.



Shipdex™ DEVELOPMENT Organization

- Shipdex™ is a registered Copyright in the name of Grimaldi Compagnia di Navigazione S.p.a and Intership Navigation Company Ltd.;
- Shipdex™ organization is set up by an agreement between the founder members and governed by a Shipdex™ Protocol Steering Committee composed by all founder members and actually chaired by Intership Navigation Company Ltd.;
- Together with SPSC there is also Shipdex™ Protocol Maintenance Group chaired by Grimaldi and Technically managed by SPECTEC in charge of upgrading of protocol specification, analysis of associated members requests, diffusion of the protocol and maintaining relationship with other Technical Data and Documentation Standards associations (ASD, AIA, ATA, IATA, ISO, etc.)



Shipdex™ DEVELOPMENT Costs

- All the costs connected with the Shipdex™ Protocol development, registration, consultancy, IT development, web site development, advertising, are up to now in the range of € 60,000.00 and have been sustained completely by Grimaldi Compagnia di Navigazione S.p.a and Intership Navigation Company Ltd.;
- All the founder members have contributed to the works for the development of the protocol on a free of charge and voluntary basis;
- All the future and recurring costs are supposed to be covered by Shipdex™ Protocol registration and maintenance fees that will be collected and managed by the Shipdex™ non profit organization.



Expected benefits – Ship Owners

- Receive well structured quality data
 - Avoid retyping of manufacturers data – easy deployment of PMS for new vessels
 - Same format and structure for all technical data supplied by different manufacturers
 - Possibility to check/validate data sets - data accuracy
 - Correct and up-to-date maintenance procedures Suppliers are NOT responsible for onsite implementation/deployment!
 - Order right spare parts in right time
- Finally a standard available for new building contracts



Expected benefits – Suppliers

Manufacturers

- Data reusability
- Better service to the customer
- Improved data in RFQ/PO from customers
- Product Support Increased sales
- Use of same standard of Navy Programs



Software companies

- Deliver industry standard solutions
- Competitiveness
- Increased sales





Grimaldi Group Expectations

- Diffusion of Shipdex™ as maritime EDI standard
- Availability of Data in Shipdex™ format for PMS
- Real Electronic Manuals and Tech Library availability
- Use of Shipdex™ also for e-commerce
- Possibility to use the same elementary info in electronic format to feed PMS, Quality, Technical Library and Training Computerized Systems
- Shipdex™ as maritime industry standard solution
- Shipdex™ as competitiveness factor



In short words Easier Life!



Shipdex™ - The future

- Possibility to share the “equipment installation information” (ship configuration, e.g. IMO/SFI/PN/SN)
- Possibility to exchange field data to improve the service (various readings as reported during maintenance)
- Possibility to supply Shipdex™ Service Letter/Service Bulletin to ship-owners on the basis of received “equipment installation information”
- Possibility to automatically process technical changes received as Shipdex™ Service Letter/Service Bulletin from manufacturers



SHIPDEX™ COMMUNITY

- **SHIPDEX™ is a non profit organization**
- **SHIPDEX™ protocol is open to all**
- Introduction to SHIPDEX™ business rules free to download from www.shipdex.com
- Full access to SHIPDEX™ specification upon registration at www.shipdex.com
- Registration is subject to registration and annual subscription fee (to cover maintenance and enhancement of the protocol)