S - CBB PROJECT : FINAL REPORT
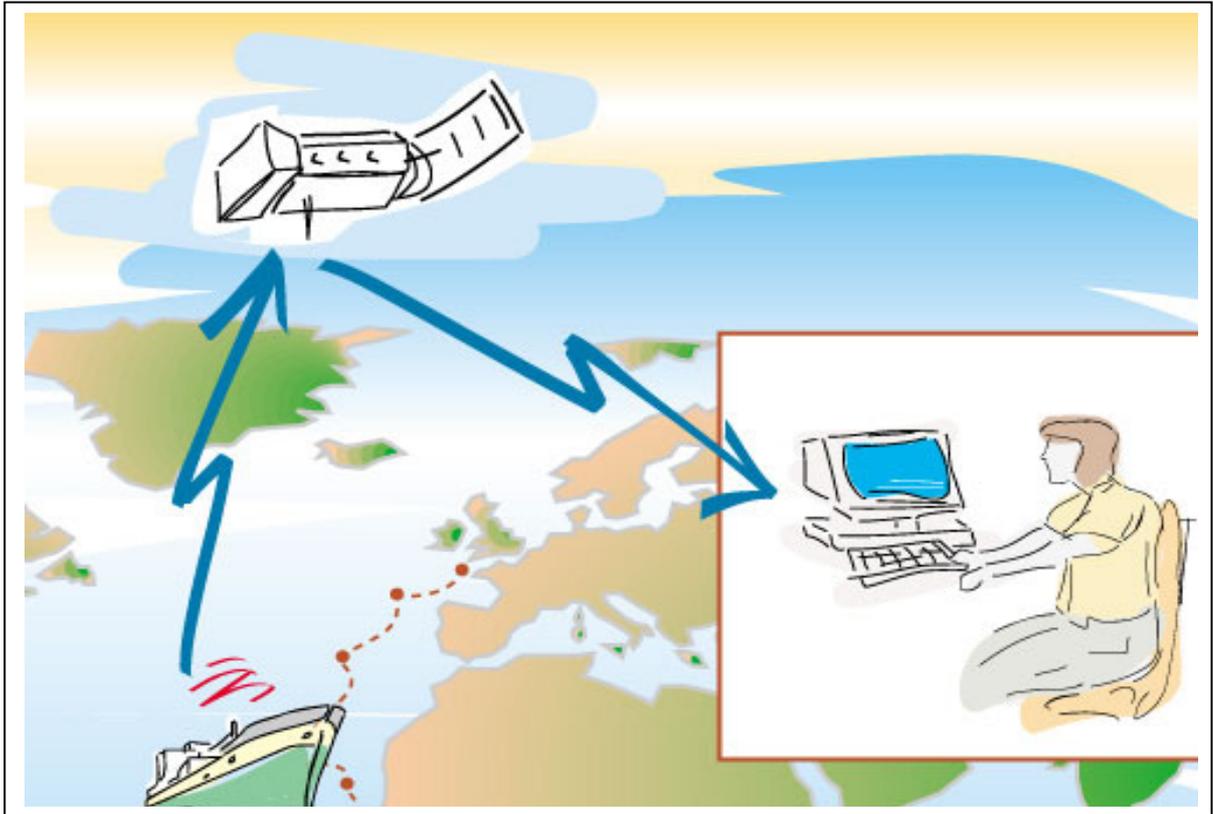
INTRODUCTION

The S-CBB project's consortium is composed of 6 partners who work closely during nine in order to achieve the main objectives and strategic aspects of the project:

1.   To specify wide user needs for such a system
2.   To secure the information transmitted and authorize human intervention in the chain
3.   To Define legislative frame for such a system
4.   To propose how this system could set the basis for maritime TIR system.

The S-CBB aims to increase efficiency in maritime transport by developing technological and procedural solutions based on telematics:

Delivery of a
"proof of
arrival"

Sat com

Secure Radio
link

S-CBB
authorized
Agent

S-CBB
Gateway
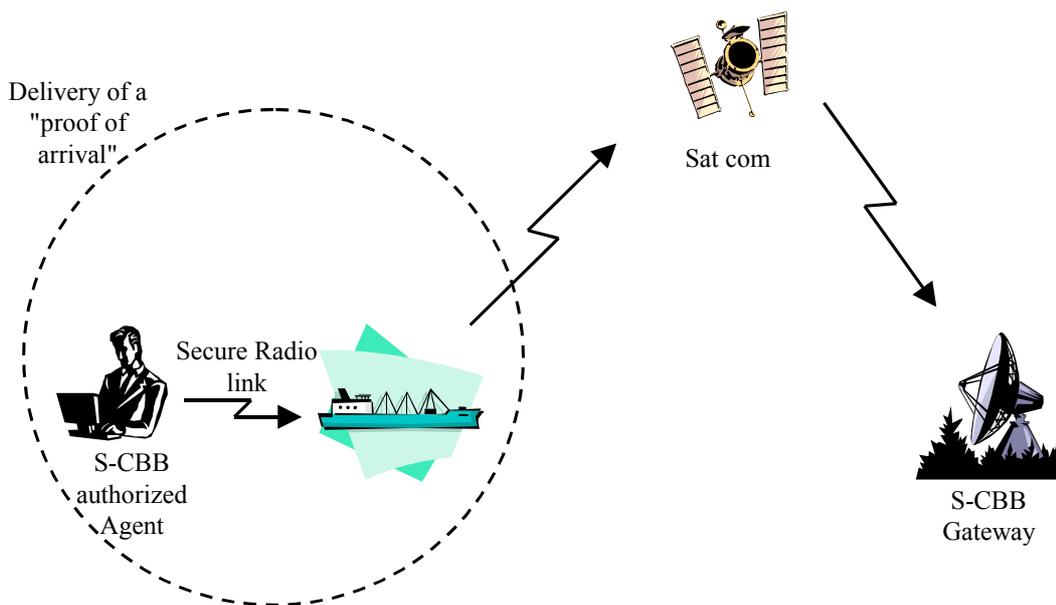
WORK UNDERTAKEN DURING THE PROJECT.

The project started with the User Requirement Analysis where the users explained where they would like automatized procedures. Interviews among shippers, carriers and authorities have been conducted. This work has been done in order to find clues affording optimization of the customs procedures aspects not only in the funded exportation but in SSS in general.

In the technical side, the monitoring of the cargo will be done trough a satellite transmitter that will be installed on board a ship. The critical part of the job consisted to define the information to be transmitted in addition to the ship's position, date and time. The technical team developed the functional architecture of what an SCBB application should be. This analysis showed in which case a human intervention is needed for confirming good delivery besides the automatic information of the transmitter. For allowing this human intervention the technical team had to allow a secure identification mean: we proposed the biometric technology and the electronic signature. Then the technical task mainly consisted in defining interfaces, especially the type of information to be entered for transmission via a radio communication link and reception by the platform for distribution to the main stakeholders. While developing the system architecture, constraints were discussed with the Users to best fit the needs.

In parallel with these works the legislatives partners looked at the regulations that apply in maritime transport. The legislatives partners looked carefully at theses initiatives and the results of the work are a set of legislation that could be the frame for a SCBB system. The study faced a new and important point to consider while

working with the users: Customs and necessary documents needed for goods transportation even within the EU. The case of the T 5 and T2L documents were studied. Finally the work deepen in the defining a TIM (Transport International Maritime) for SSS based on the TIR system For that a clear approach of the laws that regulate the TIR system have been analyzed.

The main achievements and innovation of S-CBB will consist in replacing and improving existing processes in maritime transport with an efficient, reliable and open-access monitoring tool that provides real-time information to all involved parties.
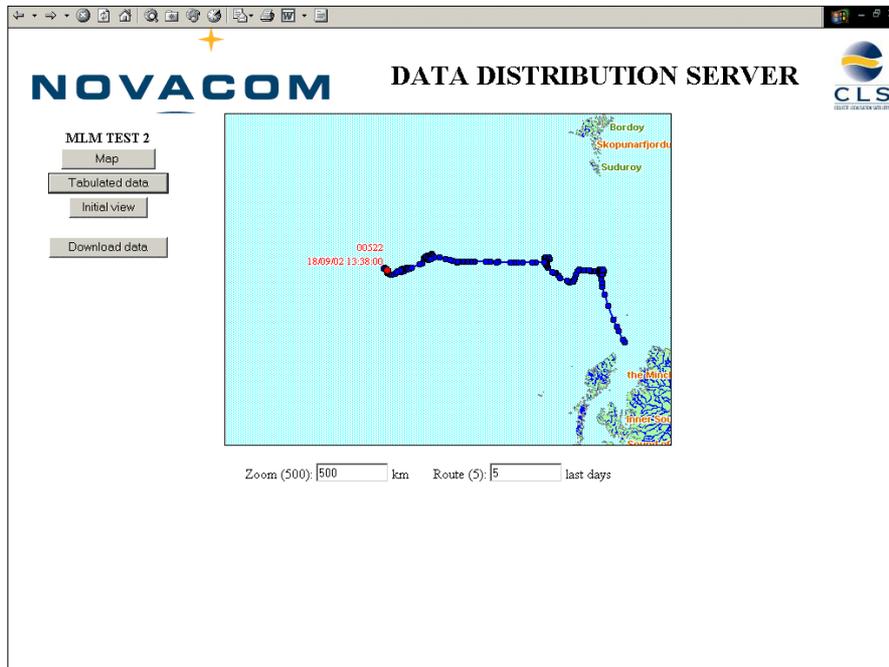
PROJECT RESULTS

All projects results are the deliverable available for internal use of the Commission and the Consortium. However, here is a summery of the project results.

The development of the S-CBB is a very good example of the technical possibilities that can be developed and that can meet the objectives of commercial operators as well as those of the European authorities. Both are interested in saving time and gaining money by reducing and simplifying procedures.
The system developed firstly tracks and traces a vessel, wherever it sails: this does not only provide the exact route followed by the vessel but allows also compares its speed with the normal average and thus detects any situation that would not be normal, e.g. unloading of goods at sea etc..

The advantage of the S-CBB is that the data transmitted to the EU authorities is certified thanks to a digital identification and signature of an authorised person. The fact that only authorised persons, well known to the EU authorities, can transmit data should secure the authenticity of the data transmitted. If this authorised person is a representative of a supervisory agency he/she cannot afford to transmit incorrect data as this would mean an immediate cessation of all activities of this supervisory agency all over the European Union (according to the amendment to regulation 800/99).

Transport of goods by road has provided us with a clear example of unification and the five pillars of the TIR system are the key to be applied to a new and modern system for carriage of goods by sea. Unification of control systems in maritime transport will provide improved security, punctuality, efficiency and trust. We have the technology, we know what technology does, now we need to connect and legislate all of this in order to make European trade more operable. Legal provisions are not clear enough when referring to actors involved in the security of goods in transit. They need to progress in their activities in accordance with the innovations in technology, treaties, politics, etc

This would allow the adoption of all the measures described for the T.I.R. system, based on the assumption that the goods controlled by the country of departure are not manipulated or handled before final destination.

In conclusion, an electronic system of documentation will be of common use in the future if all the operators of the shipping industry may be persuaded that it is more secure and undoubtedly more simple and cheaper than the current system based on paper and manual controls.

TECHNICAL SIDE: SYSTEM ARCHITECTURE

The proposed concept is based on a tracking and tracing system that provides near-real time information on the goods, the shipment and the cargo to all involved parties: shippers, shipowners, customs authorities. The concept is applied to make administrative and customs processes less burdensome by simplifying procedures in a reliable manner, and therefore help to enhance the efficiency of maritime transport within the European Union.

To provide the proposed service, the system must comprise five elements in sequence, which are :
1. A **reliable transmitter** to localize ships and supply information about transport of the goods.
2. An **identification and certification software** to confirm goods delivery.
3. A **processing centre** (or **remote data operator centre**), to process data to be send.
4. A **platform (SCBB server)** to distributes and exchange data to end-users.
5. A **Security management entity to covers all security aspects of the system**. The proposed solution is based on modern satellite, Internet and biometric technologies integrated into a data acquisition chain operating automatically and reliably in near-real time.

The SCBB concept is based on the ARGOS telecommunication system but the transmission service provider could be chosen among the different systems existing. However, the final technical solution (transmitter, communication center, data processing software) will vary with the telecommunication provider. This could be for instance a very good application for the GALILEO system, as beacon will have to have both positioning and data collection system.
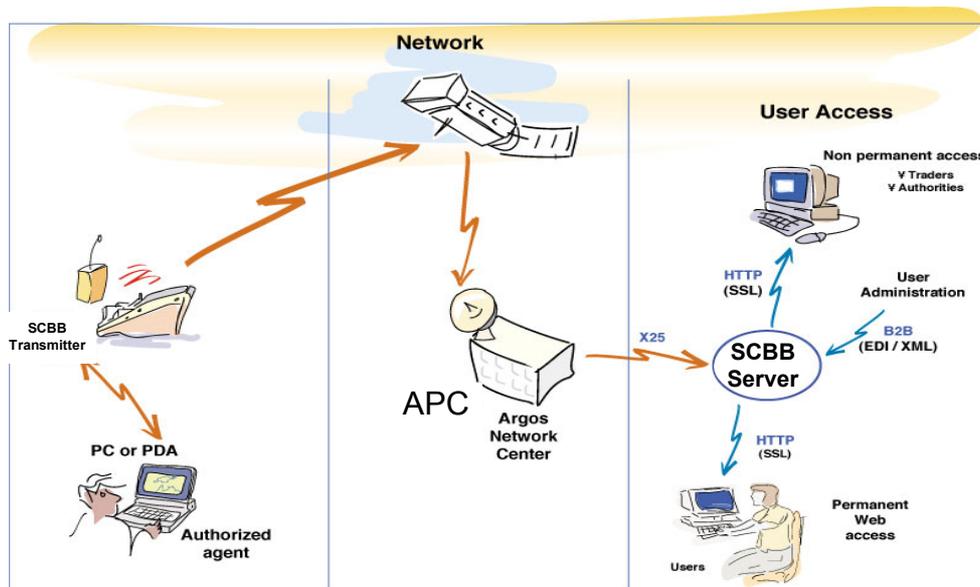
CONCLUSIONS AND RECOMMENDATIONS

OBSTACLES

This new technique has however to overcome some obstacles.

The first one is the acceptance of the device by the captain of the ship. Being the only master on board and used to taking all decisions, the captain could be reticent in his acceptance to be traced and tracked and so loosing a part of his "independence".

The second obstacle is the long and difficult process to change EU-regulations.

The third obstacle pertains to the national character of the customs and payment agencies: even if they act within common frame provisions, their implementation differs very often from one administration to the other, here too due to "old" national procedures.

RECOMMENDATIONS

1. Although the S-CBB research project only represents a small part of the research budget, the EU did invest time and money to support the S-CBB. Therefore, next to the dissemination actions of the S-CBB contractors, it would be advisable that DG Tren informs the other DG's concerned – DG Agriculture, DG Customs and Olaf – of the results of this research and grant the system an official recognition.

2. The S-CBB system should be made compulsory for all movements of goods within the EU and for exports of goods to third countries when the payment of EU refunds is involved. This would result in an increased safety of the vessels. It would also be of great interest to the insurance companies as they would be in a position to monitor the cargoes and to know whenever something abnormal occurred at sea. Finally, the system would be more acceptable to the captain and to the crew due to the fact that it would be complying with legislation and not targeting some vessels.

3. The legal foundation of a potential S-CBB system is based on international initiatives and recommendations from organisations such as IMO, EC, ITU, WTO, etc. In fact, they are able to accept suggestions of new projects that will benefit the EU, for example in the areas of security, economics and the environment. The S–CBB system shouldn't be thought of as a voluntary initiative and the actors need to know what the benefits are to them.

CONCLUSION

It can be assumed that uniformity in the content of the forms required for ship arrival and departure should facilitate the documentary procedures for port calls and be beneficial to the development of EU shipping and, in particular, promotion of short sea shipping.

The administrative process in door-to-door transportation is the object of a recent EU Directive 2002/6 of 18th February 2002 in order to facilitate the documentary procedures for ship arrival and departure in ports of Member States.

Security is one of the main EU concerns at present time, and after 11th of September on the top of Commission and Member States agendas.