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Teleinsula. Creating an European Island Service Network

Miguel Montesdeoca, Insula, Paris

Context and background

Last years have seen the emergence of the "Information Society", where the key element is the information, and more of our daily activities are dependent on access to information. Broadening this access to all European Islands in not only the final objective of Teleinsula project and the European Island Service Network, but also an essential social and political challenge. We begin to witness the evolution of the "Information Society" into the "Knowledge Based Society", and it is obvious that access to information alone is not the answer. What European islands need are the tools and skills, which will enable them to turn that information into knowledge.

Telematic applications and services will enable communities in the islands to overcome isolation and to compete in the global economy. But advanced services and applications need advanced infrastructures and high bandwidth.

The telecommunications services industry has traditionally been an industry lacking in competition dominated by a state-run monopoly. One of the arguments for a state-run monopoly of the communications industry has been that it is a public service that requires a large infrastructure. Important changes have taken place in the course of 1997 and 1998 in order to implement deregulation. The new situation has many advantages, but it also has some underlying risks with regard to the role that the Regions are going to play in Europe. In 1997, The European Commission published a Communiqué for the Council, the Economic and Social Committee, the European Parliament and the Committee of the Regions about "Cohesion and the Information Society". They warned of the risk that unequal development of the Regions represented to cohesion. They were talking about an unequal development in the areas of telecommunications that could lead to a classification of Regions into rich and poor from the point of view of information. In fact, this classification already exists and that it is a question of trying not to increase the divide. Their communiqué highlighted the fact that ICT (Information and Communication Technology) is an essential factor in overcoming the isolation of regions that are not located on the traditional development axes. Only with an adequate information and communications infrastructure, will these regions be able to fully integrate and participate in the society of the future.

The parameters used for measuring the starting point of European regions are based on nation-wide data, which makes it difficult to identify inequalities and obviously, if they are not identified, they can not be corrected.

Another striking aspect was the low percentage of investment from the European Regional Development Fund that is devoted to the telecommunications industry. But, what was even more significant was the low percentage assigned for promoting demand. There is evidently a danger of leaving access to advanced services completely in the hands of market forces (a danger that increases as the decision making and contracting level fragments). This way, the less attractive regional markets fall irremediably behind or come under the power of a supply model that is identical to that of more highly developed regions, without taking into account their peculiarities. This is vitally important in islands.

Teleinsula at present

Taking into account the general needs of the islands an embryonic EISN (European Islands Services Network) was created. This network is the result of the adoption of common protocols and its objective is to become an international service network for islands.

Teleinsula project established a certain level of empirical knowledge of fundamental parameters and indicators: accessibility (ISDN cover, installation time for a line, cover, quality, etc.), pricing (tariffs). The project also gave us information on subscription indicators (subscription to data transmission services, use of fixed and mobile telephone facilities, Internet connections and range of suppliers, etc.).

Teleinsula activities have demonstrated that it is possible to implant low-cost high performance advanced services that do not necessarily involve large investment in infrastructure. This way, promotion of demand and the incorporation of new social and commercial sectors into the information and communications market will not have to be dependent on enormous prior investment in infrastructure. Furthermore, prior promotion of demand and a broad user base will generate information concerning future needs and establish useful parameters for planners and strategists, helping to avoid costly and unsuitable investment.

The lack of adequate telecommunications infrastructure, with appropriate accessibility and availability parameters, is one of the barriers detected during the preparation of the Teleinsula project. Without doubt, one of the most important challenges is to harness the existing resources as fully as possible. However, the more advanced the applications and services, the fewer possibilities exist that they can be implemented due to the lack of adequate infrastructure.

Thanks to the Teleinsula project, in each of the island communities involved qualified human resources already exist, that are capable of co-operating in the sustainable development of the islands and have experience in the implementation of telematics solutions and in pan-european projects.

A set of products and services resulting directly from the activities undertaken during the Teleinsula project, have been implemented, demonstrated and validated and have a clear exploitation potential. These are as follows.

- Aeolian Virtual Hospital
- Tele-cardiograph, tele-consultation and tele-assistance.
- Multimedia CD-ROM
- Tourism database and kiosk network
- Schools' network (School-Net)
- Virtual campus
- European Island Service Network

At present, the EISN is a general denomination that serves to identify clearly and uniquely for clients and potential users the range of services and applications offered. Insula, a non-profit making body, manages this denomination, and also offers a small group of additional services through its web site, which helps disseminate and give publicity to the services and applications marketed. Insula also guarantees that these services and applications contribute to the sustainable development of islands and facilitates the creation of synergies. The Web site is an important tool but it is not the objective of the EISN, which should be geared towards becoming a platform of telematics services for European islands. Were we not to extend the activities beyond the conclusion of the Teleinsula project, we would waste all the experience, knowledge, human and material resources now available thanks to the project.

In this regard, Insula has stepped up contacts with current project partners and new ones with a view to submitting a proposal as part of the 1999 IST Work Programme.

It is important to underline that the viability of this initiative, its definitive consolidation and operation based on its own business structure will depend on a number of factors, among them:

- The possibility to improve and extend the products and services offered at present.
- The possibility to offer an adequate telecommunications infrastructure for the organisation of transnational activities and provision of advanced services.
- The extension of the availability of new services and applications to enable an integrated and comprehensive digital platform of telematics services for European islands to be created.
- The participation of more islands and archipelagos in the implementation and validation of existing services and applications and any new ones added in future.

Looking to the future

European islands' competitiveness, its jobs, its quality of life and the sustainability of growth, depend on they being at the leading edge of the information society technologies.

The completion of Teleinsula Project can be seen as the first step towards a more ambitious objective, because the step from research and development to full commercial product is a big one, often requiring additional investment and expertise, while, at the same time, aspects like legislation, marketing and distribution all need to be addressed. As the examples presented in this document, networking is a key factor in overcoming these barriers. In a new project, the partners will use a knowledge-based approach to information society technologies, to provide a global telematic platform and a unified service environment. The gathering and dissemination of concrete experience gained through Teleinsula project will help other islands determine their own telematic and networking needs and expected benefits. It should also facilitate the transition from pilot experiences to full blown applications. Based on the experience gained from Teleinsula project, the EISN will also help to communicate islands' organisational, regulatory and financial requirements to service providers and regulators.

Common effort. Share to compete.

Many initiatives are to be developed in the European islands over the next few years, in the fields of health, education, training, tourism, the promotion of local and traditional products, etc.

The problems arising out of these isolated initiatives are, among others:

- The duplicity of efforts. Many of these initiatives have common objectives and involve the development of applications or the implementation of similar telematic services.
- Greater cost. Use is not made of other available resources and infrastructures for these projects, most of which are implemented from scratch.
- Restricted application of results, in spite of the fact that many of the systems and services can be designed for application to various sectors or to satisfy the needs of larger groups.
- Lack of local resources, an obstacle to more ambitious objectives. Many European islands lack the know-how necessary for the proper and complete implementation of certain projects, with a guarantee of their success.

- Results which cannot be applied to other European regions. The lack of a global, pan-European vision can limit the geographical areas to which such results can be applied.

As an integrated platform for the application of telematic services to the islands, EISN will allow for the following:

- The sharing of resources, by improving the quality and availability of such resources. It is clear that certain common elements (hardware, software, expert advice, etc) can be shared, and result in greater quality at lower cost. For example, expensive service equipment for data base systems and Internet services can be used in the tourist sector in several European islands, which will allow for more efforts and resources to be applied to the added value of user services and interfaces.

- The production of a global supply. Broad, structured, indexed information systems are more attractive, more powerful and more effective than those that present segmented, locally-oriented information. For example, a data base with information about the products of the European islands is more attractive and effective than one which only offers information about one given island. As well, in the former, it is possible to share and effectively focus promotion, marketing and diffusion efforts.

- The creation of a critical mass of users that would make the services and activities associated with the project viable, once that project is completed.

- The development of common, effective policies aimed at the creation of a demand for telematic systems and services in the European islands.

- The creation of a global market, the European islands, that is attractive to those who provide systems, services and infrastructures.

- The sharing and transfer of knowledge among the European islands while the activities entailed in every project are being carried out, and after their completion.

- Innovation. The more technologically developed regions are innovating at such a pace that only common effort can allow our islands to develop and keep up with the solutions, methods and models of innovation that would satisfy present and future needs.

An integrated platform.

The final result will be an integrated platform of telematic services for European islands that will enable governments, public agencies and business associations of island regions to implement advanced applications and services, share models that meet their needs and expectations, accredit the quality of services and applications and promote the development, demand and use of efficient telematic systems and services. The platform will consist of a set of shared resources and services that will be implemented to meet the main needs and expectations of the island communities of Europe. The system and its associated methods must be flexible enough to reflect and take on board the peculiarities of each island region and to be able to respond appropriately to a wide and dynamic range of social, economic, technological and industrial environments.

The overall objective is a highly scalable information market and telematic platform, where information, goods and services can be purchased, sold, exchanged and offered freely so as to improve the economy well being and quality of life of people in the European Islands. The project also intends that the people and business of the European islands should access to modern information and learning systems to educate, inform and empower them to participate in the Information Society and enjoy an improving socio-cultural context, within a process of shared community development.

The platform will consist of a system of servers, data base management systems, electronic commerce facility and a satellite communications network offering a range of advanced telematic services. The

satellite communications system will make the platform an open, pan-European network for the islands.

The following services will be implemented:

Tele-centres network; access to information and tele-work.
They will be created in each island as a "dynamic networked organisation" within the European Island Telematic Service Network

Tourism; share to compete.
The main objective is to specify, develop and implement the Virtual Tourism Office that will provide Internet based services to tourism enterprises and related organisations of the European Islands together with tourists. A global server and database will be design and implemented.

Innovation and Tradition; local and traditional products.
Main objective is the creation of a virtual interface permitting traditional and innovative products from European Islands to be placed on international markets, using electronic commerce, databases and Internet.

Digital Archive.
The Digital Archive will allow navigation in a database, structured with a common search interface. It will be possible to access information through the Internet or through autonomous systems that will be constantly updated through archive transfers and which can be found at bookshops, libraries, museums, hotels, etc. The ultimate objective is a multimedia system that has and offers information among others on:

- The art, culture and cultural heritage of the European islands.
- Renewable energies for islands, a must for progress.
- The islands landscape and nature environment.

Distance learning.
A flexible system of distance learning will be implemented which will allow for the provision of modular courses that can be adapted to different island environments, for didactic material as well as for content and language. This system will be available to local and education authorities, as well as institutions, associations and businesses within the European islands, as a support for the teaching of distance learning courses via the most advanced multimedia systems.

Education; to learn sharing the knowledge.
A platform and a virtual network will be implemented to allow students and teachers to share and collaborate to learn across Europe. One of the objectives is to bring multicultural learning environments into the schools located in the islands. The Schools Network will support teachers and pupils in participating in the world of Internet-based computer communications and in using Internet's information resources to improve learning and teaching. A forum will be introduced for the exchange of information and experiences and a ELECTRONIC BULLETIN, which will be produced with the collaboration of all the schools of the islands that are part of the network.

Telemedicine; tele-assistance and Virtual Hospitals.
A model of Virtual Hospital and its functional specification will be defined. A consultancy service for tele-medicine will be implemented, the aim of which is not to offer direct health services or help in the diagnosis of illnesses, but to facilitate the creation of Virtual Hospitals in the European islands, based on the previous knowledge and experience on a standardised basis.
A tele-assistance service will be implemented using specific videoconference and file transfer systems.

Virtual Community.
Using telematic tools such as digital signature and authentication to take decisions, and using existing kiosk networks to let the local administrations provide information and services to local citizens.

A Few Words About The Author:

Miguel Montesdeoca (Tenerife, Canary Islands, Spain, 01/10/61)

Telecommunication engineer (University of Madrid, 1986).

ALCATEL (Development engineer, 1986)
HRM,RACAL (Project Manager, . 1989)

Training courses to ALCATEL CIT, Utility Companies, and Administrations.

Owner of MMCICOM Telecomunicaciones S.L., a consulting company that has been technological partner in many international projects such as THSI (Telematic Health Services for Islands, SPRITE-S2, DGIII).

Participated in International Conferences and forums such as Salamanca Conference and Island Solar Summit,

Since 1997, collaborates actively with Insula, mainly in the Teleinsula project.

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Contact Details:

Miguel Montesdeoca Hernandez.

Headquarters:
INSULA
C/O UNESCO HOUSE
1, Rue Miollis
75015 Paris. France.
Tel: +33 1 45684056 Fax: +33 1 45685804
E-mail: insula@mail.club-internet.fr
http://www.insula.org
http://www.teleinsula.org

Own office:
C/ Joaquin Turina 3
38208 La Laguna. Tenerife. Spain.
Tel: +34 922256614 Fax: +34922256754
E-mail: mmcicom@mmcicom.com