

THE DIGITAL ENTERPRISE IN THE INFORMATION
AND COMMUNICATION SOCIETY

Conference for the inauguration of the Summer Course of the Basque Country's University (UPV/EHU) in San Sebastián/Donostia, organised by the Federation of the Basque and Navarra Savings Bank.

Date: 4th of September 2000

Time: 09:30

City: San Sebastián/Donostia

<http://www.fcavn.es>

SUMMARY OF THE CONFERENCE OF THE AMBASSADOR, JOSÉ LUIS PARDOS, PhD.

The new **digit@l** e-nterprise is a result of the needs provoked in consumption by the invasion of Telecommunications, which do not seem to have any limits to growth as the Industrial Society.

Now-a-days the EU is very much below the level of use of these NT's specially in comparison with the USA. Even though, the northern countries, specially the ones in the EU, Sweden, Finland and Denmark, are extremely active in the creation and production of NT's for trade and education.

Therefore, it is necessary to define the new ways of management of the **digit@l** e-nterprise: The humanisation of technology and the promotion of e-nterprises which can meet with speed, flexibility and creativity the social demands, without forgetting the access Right to the Net of seniors, disabled and drop outs.

Copenhagen, 00.07.27

General Index

- I. *The Internet and prospects towards the year 2.025*
- II. *Limits to the Industrial Society's growth.*
- III. *The limitless Growth of the Digital Society.*
- IV. *The penetration level of the IS in the EU.*
- V. *But what is the situation in Spain?*
- VI. *Tenative ways of management of **digit@l-e-nterprises***
- VII. *A few "case-studies"*

I. *The Internet and prospects towards the year 2025*

The fact is that now a days there is more gossip “going on” on the Net, than real contents.

In 1998 I pointed out the possibilities of the Internet at the III Summit USA – Spain, which was inaugurated by Vice President Rato and Vice President Al-Gore¹ together with Madame Albright and Minister Matutes, and my forecast did not seem to have changed much. My personal feelings are that we are just beginning the up-ward curve of a mobile Internet, which day-by-day is becoming easier to use, more accessible to private homes² and with a certain emphasis on global commerce. But the Internet is not a New Economy, at the most is a new way of making business and a new way of trading³, what is a lot to say!

To tell the truth is that, we have not yet reached a “critical mass” in the use of the Network that could produce a change in the Bases of the economy, but for the moment the Network is starting to prove that the enterprises only based on coal and bricks⁴, would not survive the coming commercial avalanche. Because what the new Commerce **is asking for** is information for the client, personalised and “customised for customers” in the most various human activities, but that also should be able to give fast, creative, flexible and possible⁵ answers.

¹ See the first prospects for the growth of the Internet which I referred to, about 200 million of users for the year 2001 and which we might exceed in the future. But in the Internet now a days, there is more economic speculation than contents, and therefore the growth of this new Communications mean and even more, its applied technologies which ISOC <http://www.isoc.org> says, though it is developing very fast, allow us to predict that the “time” of the Internet **has not yet arrived**. Cf. the figures I stated in Washington D.C. in 1998 on Regional development for the Internet, which will be shown on my transparencies at the Conference.

² See the FT on the 4th of April page 14, the article by Richard Waters and Peter Thal Larsen about “A high-speed World” and the DSL technologies (Digital Subscriber Lines) which are expected to be working towards the year 2004-5.

³ See the interview with Vinton Cerf, in the Spanish newspaper El País, 28th of may, page 12/ Business.

⁴ See Ibidem page 12.

⁵ See Harvard Business Review, published by Deusto “High Efficiency Groups” by Jean Lipkman-Blumen and Harold J. Leavit.

Maybe for this reason the Internet in the year 2.025 will be an EDUCATIONAL instrument for an innovating and anticipating⁶ training about global reality, in which we are not only immerse in, but we are also inter-dependent⁷.

Education at all levels but specially **for the coming generations** which are today in Primary Schools and that will be around 30 years old in the year 2.025, and those which will join them and who will be 15 years old in 2.050. They will be one of the main⁸ pillars to achieve a more correct, productive use of the Network to meet everyday's needs. This is just the result that the actual state-of-the-art and prospects for the Information Society first, and the Communication Society after⁹, will take us to the evident corollary of a wider access to Information by automatic means, and, I repeat, everyday easier and cheaper to use.

But there is a fact that is more worrying for all the members and élites of the Network and this is the enormous **Societal**¹⁰ impact that the Net is provoking in many economic-commercial¹¹, cultural and political¹² sectors.

As a matter of fact, a Task Force and a SWG (Special Working Group) has already been created at the Siége of ISOC, the ISTF (Internet Societal Task Force) that presided by Vinton Cerf could make arise/rotate on the Network an **inter-activity-on-line** service which could cause serious impacts on the value scale of the users and in their most personal motivations.

⁶ See the interesting book of the Club of Rome "No limits to learning", written in the 70's by the Moroccan, Madhi El Mandjara, the Rumanian Mircea Malitza and the North American of the University of Harvard, James Botking. There is an excellent translation into Spanish from Santillana's publishing house "Aprender: horizontes sin límites", Madrid 1979.

⁷ In his magnificent graphic, Alexander King explains his theory about the "Dependency Areas" which can be summarised by saying that Economic-Development-Employment-Education-Alimentation-Heath Care-Water-availability-Environment-Materials-Energy-Population-Housing-Urbanistic-conditions, are all inter-dependent one of another. See "The State of the Planet" Pergamon International Press, Oxford, 1980 page 62.

⁸ As it is easy to detect on the serious commitment adopted by the University and the Banking sector by creating the <http://universia.net> and which has been announced with a lot of hype by the President of the BSCH on the TVE news bulletin on July 9th, Sunday.

⁹ See the text of the "Declaration of Tarragona" about 'Civic Networks'. At <http://www.cnglobal2000.org>

¹⁰ The 22nd of April 1999 the Board of Trustees of the Internet Society had a meeting in Paris about "Strategies for the year 2000" and we decided to create the ISTF (Internet Societal Task Force) <http://www.istf.isoc.org> which is starting to deal with this innovating issue, giving priority to the accessibility for seniors, disabled and isolated groups of society to the Network.

¹¹ See the famous publishing inventions of IBM, e-commerce and the later e-economy.

¹² See my conference for the Closing of the "Universitat per a Majors" of the University Jaume I of Castelló, on <http://www.Docuweb.ca/~pardos> where there are wide references to the Societal impacts of the Internet already now a days.

II. Limits to the Industrial Society's growth¹³

I believe that in a UPV/EHU Course sponsored by the Federation of Basque and Navarra Saving Banks the reference to a working hypothesis must be done, as they are today accomplished facts, which we must face. And I am only referring to studies taking place at the beginning of the 70's.

The own title, reveals an already old issue presented to national and international Societies, since the call for attention of the CoR (Club of Rome) in 1972 in regard with the "limits to growth" and which the following petrol crisis, that most of the European countries went through around 1973, as a result of the changes provoked by the War in Yonkipur, were already confirmed predictions¹⁴.

At that moment it was announced, for first time, to the industrial Society, that its growth will not be unlimited and that the progressive damage of our ENVIRONMENT as a result of the industrial production, would have to be taken in consideration (people at that time did not even think of the digital society), and it is necessary, continued the CoR, to maintain a better balance between the planetary ecosystems¹⁵.

It was considered by - many industrial sectors - as a catastrophic report, though it was never it's intention but it was and by far, an alarmist report of the state of the Planet, as Alexander King¹⁶ revealed in 1979.

¹³ See "The Limits to growth", The first report to the Club of Rome written by Denis Meadows in 1972, New York. See as well, "Mankind at the Turning Point. The Second Report to the Cub of Rome", Mesarovic and E. Pestel, 1974 and the RIO ("Reshaping the International Order"), Dutton & Co. Inc. New York, 1976.

¹⁴ The changeable Petrol market and the lack of possible strategic aims in the OPEC, confirmed in the meeting of June, are prove of the increment of the generalised predictions of the CoR in 1972.

¹⁵ From the time when the three First Reports of the CoR were published until today, the damage of the environment is evident in this year 2000 with a serial of different and worrying atmospheric phenomena. It is only necessary to remember the damages and deaths in Poland, Denmark, Austria, Switzerland, France and Spain, just to mention Europe and some of the countries to be affected in 1999.

¹⁶ See Alexander King, op. cit. "The State of the Planet".

III. The limitless Growth of the Digital Society

On the contrary, the Information Society or the digital Industry and the IT world do not seem to have the same constraints for their growth. First of all, as digital customers we eliminate the paper, as we read and write on the screen..., how many Hectares of Forest are we saving per minute? How much wood? How much energy for its transportation... the most contaminating of the three T's ?¹⁷

But the Communication Society is starting a period in which there are more factors that are making it grow, in a substantially different way, than the Industrial Society¹⁸. The proportion could be the following: the Industrial Society grows in physical volume and it produces such an amount of *wastes*, whose management is one of the most important problems for the growth of the enterprise. In the Digital Society the opposite is happening, the work is done at the Numeric-space and the waste is destroyed with a “Del” and sometimes with a simple virus ☺

The “digital garbage” of old and out of phase Computers as well as keyboards, screens and useless servers cannot be compared to the wastes of the Industrial Society.

The new Economy, the *e-Economy*, and the *e-Commerce*¹⁹ will not produce at all the same level of contamination, and should not either divide the population sectors in different territories, as the communication originated by this new Society will not only generate waste but it will rather generate ... **assistance** to protect and sustain the degradation of the ENVIRONMENT and the conflicts brought about by the big mass movements, which are expected to happen around that time²⁰, around 2.025²¹.

¹⁷ See my Conference at the Rovira i Virgili University of Tarragona (10th of may), about “Internet Education for the main issues on International Politics towards the year 2050”. The three most contaminating T's of the Earth Planet are Transport, Tourism and Territory (management and damage).

¹⁸ See what I wrote in my Book “Los residuos radioactivos”, Tecnos, Madrid, 1984 and as a result of it we are in the presence of the dangerous challenges of closing Chernobil, Ignalina in Lithuania and a long list of nuclear power-station which in the best case are making ...

¹⁹ A very good friend of mine and pioneer of the Network in Spain, Jordi Adell, has take part in the Courses at the “Universidad del Mar” in Cieza, Murcia, giving a Lesson about “ New Technologies for Education and training: virtual collaborating environments” with a T-Shirt, in which is written *e-pidemy* of *e-stupidity*, and there is a part of true in it... don't you think so too, my dear reader?

²⁰ See my Conference “ Internet Education for the main issues of International Politics “ at the University “Rovira i Virgili” May 10th, 2000., pp.4.

²¹ Impact on travel of the new prototypes of the Air Bus/A3XX-300 which will be flying towards the year 2005.

In any case, as the “*e-Europe, An Information Society For All*”²² Report says, we have come to the conclusion that “the application of the digital technologies is becoming the **most important factor** for growth and employment”. We believe that a “new economy”, I repeat, a new way of making business or trade, let us call it *e-conomy*, or e-nergy²³ is, with no doubt, merging and that is mainly been originated by the Internet.

As an initial conclusion, it does not seem that the new Digital Society will raise any objections, nor from the environmental point of view neither regarding the increase of its progressive growth to an almost unthinkable²⁴ extreme, and this is because it offers *higher benefits*, and in a few years, *lower risks*.

IV. The penetration level of the IS in the EU

To summarise Prodi’s Report diagram I will try to group several countries together pointing out the difference between the members of the European Union, following an Internet criteria of Home penetration and Mobility of its GSM networks, and soon the UMTS, plus the important references that appear in a comparative study of the Supplement of the FT “Connectis” showing the USA and the EU. most important countries.

The Very-special group in the EU is **the Baltic corridor Helsinki-Stockholm**, in which the penetration of the Internet is above 70%, what as the correspondent of the Herald Tribune²⁵ said “is not happening in Palo Alto”, which is also a **very** important affirmation.

1. The leading group is formed by the Northern Countries, that includes the two Scandinavian and specially Sweden²⁶, which is ahead in the introduction of the Internet with more than 65% of

²² See “Progress report for the Special European Council on Employment, Economic reform and Social Cohesion” Lisbon 23rd-24th of April 2000 which is a part of the European Initiative presented by President Prodi on December 1999
<http://europa.eu.int/comm/information_society/europe/index_en.htm>

²³ As Joaquín Sabina says in his CD “19 días y 500 noches”, “Como te digo una ‘co’ te digo la ‘o’.

²⁴ See the references I make in my Prologue to the Book “University Education, Community Life and Disabilities” which can be seen on-line at <http://www.um.es/undis/prologo.html> in which a wide description of the advances in the future IT world is presented.

²⁵ See page 13, from the edition in Monday 17th of April. TribTech.

²⁶ Sweden has announced to all the private homes the connection by cable and ISDN line for the year 2002 and now a days 100% of its enterprises are connected to each other by Intranets.

the market, as contrasted with 60% in Denmark²⁷ and more than 60% for Finland, world leader in the mobility with GSM, with almost 67%.

2. A second group, formed by the United Kingdom, the Netherlands and Luxembourg, where the level of market penetration fully reaches, in some cases, a 30% of penetration.
3. Belgium, the RFG, Austria, would be in a third group of market penetration, with around 20%.
4. France, Ireland, Spain, Portugal and Greece would be the countries with a *minor penetration* in the NN.TT²⁸ between 16% and 6% of home penetration.

But the European average, taking in consideration the important development of the North of Europe, would be around a 15% of homes connected to the Internet from the 25% of the population that has access to the Internet. This in comparison with the USA would be 2 or 3 times above the European²⁹ average.

V. But what is the situation in Spain ?

The situation of the NN.TT. in Spain, after the decisions taken at the extraordinary Minister Council of the EU in Lisbon last 23 – 24 of March, have had a positive impact regarding the most important problem for access to the Internet in this country, the Flat Rate.

Its application to all the national territory, starting on next November, can make some things change, but please allow me to transcribe, though a little adapted for today's occasion, some paragraphs of my Speech at the Symposium "The Information Society for Everyone", organised by the Presidency of the Spanish Government, and with the

²⁷ Close to 60% and showing a clear growth in trade, information and the digital accessories industry. In the northern part of Europe, some statistics of 14th July, from PLS – Rambell, give more than 60% of access to the Internet to Denmark.

²⁸ I would like to comment the case of France as I believe that an explanation to the actual situation could be the "Minitel", a French version of a previous step to the Internet and the strong centralisation typical of Paris.

²⁹ See President Prodi's Report page 23.

participation of the Ministers Piqué, Arias Salgado and Rajoy and President Aznar³⁰, by Video Conference, from Washington DC.

At a short term, that is to say from today to the year 2002, it is necessary to be able to count on:

- *Quick installation of cable infrastructures* in all the Autonomic Communities of the Spanish State.
- *Generalised grant of a reasonable access to the Net* for all citizens. (The Flat Rate can even be cheaper, see Retevision and ono.es impact)
- Give priority to the *financing* “campaigns” for information and use of the Network at Primary and Secondary Schools, but specially among young unemployed, seniors, disabled and drops out.

At a medium term, around the year 2005 the following ideas should be prevailing:

- A digital community of “Civic Networks” concentration around their own areas and their own servers, which will be on-line-without-restrictions to creativity, free of compromises and unnecessary regulations³¹.
- At that time it would be positive to start getting use to the freedom of speech and the right to be listen to.
- The citizen will already posses a technology as easy as deep, which will allow him to communicate with other people with no limits, at any time, from any where and in any language.

At a long term (2010)

³⁰ The transcription of my intervention in the above mentioned Symposium <http://www.simposio.es> is updated in this Conference, but the guidelines and almost the whole text is the same as shown on <http://www.Docuweb.ca/~pardos> as well as my Adress to the Spanish Senate, the 17th of November 1998.

³¹ See the excellent example given by Unnet and Nokia which have officially opposed the “searching” intentions of ISP’s from the British Parliament who has proposed, specially in relation to the control of coded information, which should be handled to them, previously “clean”. The issue was settled down very easily, Unnet which is an ISP in 18 countries, will move his servers from the UK to another place and ... period ! See Financial Times, 12th July 2000, p. 12.

The citizen of the first decade in the coming Century, should be able to establish **values** which today are only “detectable” at Civic Networks, such as tolerant optimism, global visions and local commitments, as a result of an innovating and anticipating training.

However, it is necessary to favour from today on, a *new dimension in the management* of the Networks, which could be contained in the following hypotheses:

- Give priority to the “bottom up” digital movements, together with the private Sector and the Public Administration initiatives.
- Give a bigger support to the new kind of digital associations of Civic Networks, to give specific services in Education, Health, Food, Environment, as well as Administrative and municipal assistance³², etc but with special emphasis to the **free access** to the Network for seniors, disabled, drop out, through chatting groups, news groups, list groups ... or other similar systems.
- Establish a firm connection between all these ‘Citizen Networks’ and the University, specially with its education and R+D Departments, as well as with the Autonomous-Regional and Financing Institutions, Saving Banks and other Banking institutions.

IV. Tentative ways of management of the new [digit@l-e-nterprise](#)

Though it is very bold for me to make such a statement, I am strictly going to base it on two Books which are two of my favourite ones “Small is beautiful” by E.F. Schumacher and the one from my Master, Mario Bunge, “Science and Development”. These books are almost contemporary, the one by Schumacher is from 78 and the one who received our Premio Príncipe de Asturias, for ‘Communications’ Mario Bunge, from 1980³³.

³² With the outcome of almost a 50% users of the Internet at that time, or even more, it was more important to see last week’s news about the creation of a Common Portal for all Public Administrations, whose contents must be decided by September. See <http://www.elpais.es/sociedad> of the 12th of July. But I do refer to Portals giving services-on-the-Net, more than simple and fixed Portals.

³³ See E.F. Schumacher, “Small is beautiful: une société à la mesure de l’home” Contretemps/Le Seuil, 1978 and Mario Bunge, “Science and Development”, XXth Century, Buenos Aires, 1980.

Both books have something in common, to lay the foundations of that new management, in which technology is humanised “Une technologie à visage humain”³⁴, and in which the systemic world of Prof. Mario Bunge³⁵, create an almost parallel increase of the three development’s sub-systems, the political, the cultural and the economic.

Therefore, the management of those new **digit@l-e-nterprises** should:

1. Admit the *existence of operative systems* for **digit@l** e-nterprises at an international range as the recent <http://www.universia.net>, regional as the <http://www.fcavn.es> or local as [Ciez@net](http://www.ciez.net) .
2. Support, *electronic commercial activities* which are on the way to increase widely among the PYMES, because the Big enterprises have already taken the ‘first class’ of the train. This is what we call the arrival to a “critical mass” so an important self support can be given to new **digit@l** businessmen. (Green Houses for new e-nterprises)
3. By sectors the **digit@l** enterprises should learn how to meet the demands that Society most keenly need and which are guided by the strong demands on the ENVIRONMENT and the BASIC HUMAN NEEDS³⁶ such as:
 - Enterprises for water treatment,
 - For alternative energies,
 - For wastes management,
 - For health care,
 - For food,
 - For education on Communication Technologies,
 - For leisure,
 - Providing ‘on time’ and ‘on-line’ information specialised in matters related to a particular sector of life, like from Diplomacy to Housing construction.
4. But **we must be realistic** and we need to count on the trained and motivated human resources. Or have we not made, all this progress, in an almost autodidact way in this country and in many

³⁴ Op.cit. pages 153-166.

³⁵ See “A World of Systems” (Boston, Reidel, 1977)

³⁶ See J.L. Pardos “Crecimiento y Desarrollo en la Década de los 80”, Tecnos, Madrid, 1983, pp. 216-217, where there is a self explanatory graphic of the “Basic Needs” for humanity.

areas of the Internet, until today? The human resources must be in harmony with the Budgets of what the new R+D+I (Research, Development and In-formation) should be.

5. And we must also remember that to **be a digit@l businessmen** involves to know the meaning of the values which are very well defined in the Magazine WIRED³⁷ about the digit@l citizen that could be:

- An optimism provoked by innovation.
- With a civic and critical mentality.
- Tolerant, specially in regard with the 3 Rs (Races, Religions and Regions)
- And committed to the change that is taking place on the Network.

6. We must **be modern**, in the sense of leaving behind the productivity diagrams of the Industrial Society, except for the number and quality of products.

7. And **they must be participating enterprises**, inviting to the creation, more than waiting to decisions and policies for planing, so the 'image' of the new *e*-business-man must be that of a person who is:

- Imaginative
- Globalist
- Ready to improvise
- Intuitive
- Able to work at a short time and on a long range
- Suitable to be working on a team
- Who will be hired, more for his emotional intelligence, than for his CV.
- Who will not be, any longer, a member of the company but who will become a Trustee³⁸

8. All in a **moderated way** due to the tran-S-itional and tran-S-national process that the whole Society is going through.

³⁷ Edition from December 1997, "The digital citizen", pp. 58-82.

³⁸ See "Profile of the new executive" in 'Tiempo de hoy', 08/05/00.

9. But there is an **essential clause**, and this one is that the services of the new **digit@al** enterprise should be given through light and smooth management systems.
10. Finally, some complementary ideas of this new management of **digit@l** enterprise are the HEG (High Efficiency Groups), very well studied by Jean Lipman-Blumen³⁹ which describe what a new kind of **digit@al** businessman have to be, facing the need of:
 - Give fast solutions to demands,
 - Being flexible in the answers, and
 - Conducting himself with most adaptability in the whole process, being ready to do-and-un-do all what it is necessary, at least in this tran-S-itional and tran-S-national period we are going through.

VI. Some ‘case-studies’ for financing and development.

1. <http://www.abarca.org> (A general conceptual group, opened to personal, private or public, participation and able to search any item need it, when the project will be finished).
2. <http://www.diplomaticnet.com> (An innovative Network for professional of diplomacy, international civil servants, researches on international relations, policy makers, students and businessmen interested in foreign policy items and its supporting concepts).

³⁹ “Connective leadership”, Oxford University Press, 1996.