

Towards The e-Society

Presented by

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Good morning, Ladies and Gentlemen.

Let me first of all thank Future Horizons for inviting me here and giving me the opportunity of exchanging ideas with colleagues and friends in our business.

As anyone of you knows very well, this is the standard introductory formula any speaker will use to open his remarks. And I don't know a better one for my address today.

But I do hope that these simple words can really communicate my delight for being with you today and for the location my good friend Malcolm has chosen for this turn-of-the-century Future Horizon meeting.

As you can well imagine, as a Sicilian living in Switzerland, I feel sometimes a little bit homesick, and a city in southern Italy, with a beautiful sea and with a volcano in the background sounds very much like home to me. Thanks again Malcolm, also for the choice of Naples.

Well, ladies and gentlemen, let's move together towards the e-Society, and, to begin with, my definition of it.

In my views, it is a revolution in the way people interact with each other and in the way we conduct business. This revolution has been triggered by two phenomena: first, the digitalization of any form of multimedia information -- be it voice, video, data or any other form of signal which can now be easily compressed and elaborated -- and second the capability offered by the web of reaching in real-time any location in the world from any other location on the globe.

The e-Society is therefore the result of our new ability to compress almost infinitely both time and space. Today, this allows the transmission of practically unlimited amounts of data, in real time, anywhere in the world.

And this, as I said, implies revolutionary changes in the way people interact and companies interact, with several brokerage levels being eliminated from the process; with cycle times being reduced to a fraction of what they used to be; and with levels of personalization and customization being reached which were unthinkable of, even in our wildest dreams, few years ago.

With this definition in mind, then, the engine behind our continuous progress towards the e-Society can be defined as the continuously increasing availability of those digital data and our continuously improving ability to have an easy access to them, whether from fixed stations or from mobile appliances. I mean, therefore, an improving mix of wideband networking, mobile communications and multimedia capability.

And, of course, beyond network infrastructures like cables or optical fibers, the most important enabling factor for this is the availability of leading edge microelectronic components.

Once again, semiconductor manufacturers play their role as the main actors in industrial progress. But this time the impact on social life is bigger than ever, and billions of people on the planet will be affected. We predicted it, we saw it coming, here it is now: this is the main stream of a new industrial revolution.

Let me add here that we, at ST, are right at the heart of the e-Society.

When we clearly spotted the trend, more than a decade ago, we built our strategy on it, selecting the application areas with the fastest and most solid growth. And while the pervasiveness of electronics moved its focal point from the productivity of industrial infrastructures and offices to the productivity and comfort of individuals, we addressed as a corporate priority the emerging markets related to the mobility and connectivity of increasingly larger layers of the world's population. At the same time we carefully managed our technology portfolio to match the needs of those leading customers of ours which were aiming at serving those markets.

While keeping intact our traditional broad range supplier configuration, we strategically focused our efforts on five application areas:

- Digital consumer
- Wireless communications and networking
- Computer peripherals, from disk drives to printers and digital imaging
- Automotive electronics, all aspects of it, including a strong effort in car multimedia, and
- Smart Cards, a small sector still, but with a huge potential, among others, in enabling secure transactions.

All of them, and particularly the first three, are among the pillars on which the e-Society is built. And their weight in our application portfolio has already grown to very substantial levels. According to our statistics, while only 20% of the world market can be directly attributed to those areas of connectivity and mobility which characterize the e-revolution, already in the first quarter of the year the sales of ST products in those areas accounted for 52% of our total, bringing us close to a 10% world market share for those products.

And if we take into account the compound annual growth rate for both the areas of mobility and connectivity, which foresees a 30% annual growth in wireless subscribers and a 35% growth in the number of digital households, we see that ST is surfing on the right wave. In our evaluation, by the year 2004, 1.5 billion mobile subscribers and 230 million connected homes throughout the world should activate a food chain with \$1000 to 1200 billion worth of services, \$400 billion in equipment cost and \$125 billion worth

of semiconductor devices. This would mean a doubling in the percentage of e-society related products, from 20% of 1999 to 40% of the total.

As I said, today we believe we are close to 10% in market share for those products, and you can very well imagine we will do all our best to continue along the same line, which proves to yield excellent results for our company. We chose to be at the very center of the e-Society movement, and this strategic positioning brought us to an unprecedented success in the history of our company. Not only we grew to the seventh position in the first half 2000 world rankings, but our financial performance along all phases of the most recent semiconductor cycle was significantly better than the average of our top competition.

But today ST is not really my subject. I only wish to underline, in this European forum, that the success of ST, although it was achieved on the worldwide market by one of the most international teams in the industry, has deep and strong European roots.

As all wise businessmen should do, I try not to be too complacent. But let me say, without being immodest, that if I can be proud of one achievement in my business life, that one is having been able to prove that Europe was not out of the high-tech race. I've been preaching it, I've been repeating it in all possible circumstances, even when the battle seemed to be lost for any unbiased observer, but best of all, together with all the colleagues at ST and with our friends at the other European semiconductor companies, we proved it was true.

And, of course, European semiconductor makers are not the only one success story in European high-tech industry.

I will not spend much time on this subject because the names of companies like Nokia, Ericsson, Alcatel, Thomson Multimedia, Philips or Bosch are known all over the world as leaders in their sectors. I often hear complaints about the delay Europe has accumulated in the use of personal computers, and they are undeniably correct, even if I believe that some of that delay is due to the slower pace at which Europe can restructure its economic environment versus America, since we adhere more strictly to a model of social solidarity and employee rights.

It is also true that we were late starters in the Internet and new related technologies -- although the World Wide Web was conceived and developed at CERN, the European Organization for Nuclear Research -- but the speed with which we are catching up is fascinating. And again, the driving role Europe has been able to gain in sectors like wireless communications and digital consumer vouchers for its vitality and ability to overcome initial difficulties.

I think here we have an advantage we can exploit.

In today's high-tech industry, of the three classic factors of any business -- that is financial resources, equipment and materials, and human resources -- the first two offer

little or no possibility of differentiation. Financial resources are today available with little practical limitations, at least for the purpose of our reasoning. Equipment and materials are produced by a wide number of easily accessible suppliers and the possibility of conquering a significant advantage through them is rather limited. The only area which can offer a strong competitive edge remains that of “knowledge” -- be it either technology or other know-how -- and this basically translates into people. And today, not only the industry is experiencing a period of scarce availability of human resources, but even some observers are imagining a future slow down in growth because of insufficient availability of skilled and trained people.

Well, while I know that today, on average, the demand for engineers and information technology experts largely exceeds their availability also in Europe, I am convinced that, in the long term, the superior European infrastructure in terms of general schooling system, universities and research institutes will offer us a strong competitive advantage. Furthermore, I do believe that east-European countries, like Poland, the Czech Republic, Hungary or Rumania offer employment opportunities that are far from being sufficiently exploited, with an added advantage of belonging to the same pan-European cultural environment.

Not to mention, of course, regions like southern Italy, where the success of ST in Catania should be an example to follow in the high-tech field. In Catania, since more than a decade now, we have built a bridge that ideally links the company with the local university, creating levels of unprecedented effectiveness in the cooperation between industry and the academic world. This cooperation has led, on one side, to world-class research activity being carried out on microelectronics related subject and, on the other hand, to the availability of new generations of engineers and other technical graduates already orientated towards the needs of our industry.

Contrary to Silicon Valley, Catania's Etna Valley, with its more than 50.000 students at the local university - 1.300 of which are at the electronics engineering faculty - offers privileged access to that most important resource: brains, highly skilled, highly educated brains. In reality, sheer availability of brains is not the only advantage that Catania can offer. Existing laws reduce the cost of labor by a significant percentage through tax-exemption, without penalizing employees. Today an engineer, at equal level of know-how and productivity, in Catania costs us at least 30% less than in Milan, 50% less than in most other European countries and one third of the cost we experience in our Silicon Valley locations. And, on top of that, the levels of identification with the company and of stability in the job are far better than in most areas of the world.

For us then, southern Italy is a true opportunity for development. I gave the example of Catania, because today it's probably the most important industrial high-tech location in the area. But the Etna Valley phenomenon could be quite easily reproduced in other areas of southern Italy, in Naples for example, or in Palermo, Bari, Lecce, Reggio Calabria and Cagliari. It requires time, it requires redirecting students from law schools or arts faculties to engineering schools, but it can be done. And, to conclude on this point, let me add that jobs created by the development of the e-Society do not need heavy

infrastructures. The new industrial revolution, then, allows, at least in principle, to avoid the heavy social disruption we experienced in the past, when the needs of rapid post-war industrialization forced the migration of millions of people away from their regional roots, their traditions and their families.

Do I have an optimistic vision of Europe's future? Yes certainly. But please, don't take me wrong. I don't want to give you the impression that here in Europe we are living in the best of all possible worlds.

In order to play a major role within the e-Society, Europe's managerial, administrative and bureaucratic structures must change. They must adapt to the need for infinitely short reaction times and to the new situation where national or even regional borders are cancelled by the strong winds of globalization. Most of all, flexibility must become the number one characteristic of a region where on the contrary, for historical reasons, rigidity had been brought to its extremes.

The challenge which Europe has been facing in past recent years, and which has been renewed and accelerated by the new events we are discussing today, is that of reconciling the needs of the e-Society with the fundamentals of welfare.

The basic question is how to become e-Europe without destroying our social solidarity structure, which certainly needs adaptations and improvements, but has made Europe, on average, a better place to live in. The alternatives we are facing today go beyond the traditional debate between supporters and opponents of welfare state.

The danger I see is that, with the acceleration of technological development, new barriers created by what has been defined as the Digital Divide may exclude and emarginate larger parts of the world population. The difference between those who have and those who have not high quality access to information and know-how is becoming even more important for achieving personal success than that between those who have or have not material resources at their disposal. If we do nothing about it, today's elites will emerge and reach even higher peaks of wealth and power, while the widening of the digital divide will inevitably create new areas of poverty.

In my opinion, we must avoid letting people fall through the Net.

Fortunately, the European Community, under the impulse of the President of the Commission, Mr. Romano Prodi, has launched a broad initiative aiming at accelerating the transformation of Europe into a e-Society. This initiative, inevitably called eEurope, involves companies like ours in providing ideas and counseling, and puts a strong accent on closing the Digital Divide. Already in the first words of his presentation of the eEurope initiative, Erkki Liikanen, Europe's commissioner for Information Society mentions social cohesion as one of the great opportunities to be seized for Europe, together with growth, competition and employment. And the three stated objectives for eEurope are:

- Bringing every citizen, home, school, business and administration on-line
- Creating a digitally literate and entrepreneurial Europe
- Ensuring a socially inclusive Information Society

In conclusion, I believe that Europe is technologically ready. I also believe that social and administrative changes are happening that will bring more speed in the European system and a better transnational approach, while today's most traditional welfare concepts are evolving towards a better efficiency and flexibility. At the same time I am sure that Europe will be once again capable to innovate in the area of social organization, by associating all citizens to the e-Society, and avoiding the dangerous pitfall of the Digital Divide. Europe, which in the early twentieth century originated the most profound social advancement, with the creation of the "welfare" concept, should again show the way now by avoiding the social tragedy of the creation of new poverty linked to a great technological conquest.

In this turn of the century, we are living in an exciting, unforgettable period of rapid evolution and social change. Unforgettable, I hope, will also be your stay in Naples, a city which remained in the heart of many important personalities, including Johann Wolfgang Goethe, the great German poet and novelist. And if one day you will feel sad, think of what he wrote about his father, who could never be totally unhappy during his life because his mind would always go back to Naples.

Thank you.