

INTELEVENT 92
Global Alliances in Telecommunications:
Partnership for Progress
Luncheon Address

by
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It is once more a pleasure to be with you in internationally famous, picturesque Cannes, home of the Cannes film festival and now for the third time, home of the annual Intelevent conference.

I look forward each year to renewing friendships at Intelevent and re-vitalizing international communications interests. In another time, such diplomacy was commonly referred to as "international intercourse." But at my age, I'll just settle for some good conversation. Seriously however, we all learn from international developments in our different continents. The informal vigorous interexchange of ideas at Intelevent by international experts represents a vital contribution to worldwide understanding and progress. This is particularly true now that the international global village evolves from a theory to a reality.

Although this is not a political forum, it is difficult to speak before any communications audience two weeks before election without some mention of the upcoming November 3rd historic event.

First, I have been asked how the election outcome would personally affect me -- No effect as to term of service. I was confirmed for a 5-year term in June 1991 which expires June 30, 1996. God and my wife willing, I plan to serve my full term. As you may or may not know, there are five FCC Commissioners appointed by the President and confirmed by the Senate to "serve the public interest, convenience and necessity." Only three can be appointed from one political party. This is to provide political, social and philosophical balance to the Commission. The Commission is an independent agency subject to Congressional oversight and the five year term helps to assure that independence. The deciding factor in the important Commission decisions is principally determined by what decision best serves the overall public interest not by partisan politics. As I once said some time ago, the public interest may be difficult to define, but you know it when you see it. Walter Lippman, noted author and philosopher once defined public interest as "What people would do if they thought clearly, decided rationally, and acted disinterestedly."

I shouldn't and won't hazard any guess as to the outcome of the election. I can offer a brief sideline observation on process with a variation of a famous Roman slogan. A new slogan for the winner could well be "Veni, Video, Vici" -- I came, I appeared on TV, I conquered. TV provides candidates an opportunity to speak directly to the people without being filtered through a sometimes biased media. Television has become a dominant -- if not the dominant -- force in the United States and in democracies throughout the world that are dedicated to freedom of the press and free speech. Its impact is felt even in societies not accustomed to freedom of expression. Few can forget the images beamed around the world of demonstrators defying government brutality in Tianamen Square -- or of triumphant throngs dismantling the Berlin Wall. Ultimately, the cathode ray tube is mightier than the sword. Finally, by bringing images from diverse cultures to living rooms around the globe, television is destined to be a dominant force for international understanding and world peace.

Regardless of the election results I assume America's governing principle for international trade exchange will remain a practical equal rights for exports and imports in an open marketplace. For example, in telephone communications, I believe in reciprocity: market access for non-U.S. based carriers should be commensurate with that granted U.S. based carriers abroad. Also, regulation of non-U.S. based carriers in the United States should be the same as the most regulated U.S. based carriers. It is certain that a growing emphasis in any free trade agreement will be to assure jobs for American workers. This is particularly important in this era of widespread American unemployment. The FCC addressed this problem in our most recent meeting on October 9.

However, comprehensive treatment of international trade is a separate, complex subject involving the negotiations of the President's cabinet and officials of another agency. We at the FCC recommend, hopefully provide expert advice and implement the outcome. We are often provided broad latitude in the implementation.

This morning's topic of discussion, "Regulatory Barriers or Encouragement," suggests the dilemma facing many of us who attempt to regulate telecommunication industries. We are charged, on the one hand, with acting as surrogates for competition where no or insufficient competition exists. A problem develops when domestic competition hasn't fully evolved but international competition is healthy and growing. Upon reflection, today's topic underscores the false dichotomy often presented to regulators. In one sense, all regulation is a barrier to some industry, just as regulation can encourage others. Put another way, one industry's barrier is another industry's encouragement. The difficult task of regulation is to

find the right mix of benefits and burdens that best furthers the public interest.

Of course, the age-old problem of regulators everywhere is that the public interest is in the eye of the beholder. Regulated industries often come to look upon their regulators as protectors whose proper role is to shield them from competitors. This plea for protection is never couched in anti-competitive terms. Instead, it is pitched as the need for "a level playing field" or protection against "ruinous competition" resulting in "stranded investment" and, ultimately, protection against higher prices and lower-quality service for consumers.

The fact is, transitions from monopoly services to competitive services are always disruptive to some extent. Old ways of doing things tend to be the most comfortable for both regulators and the consumers they are sworn to protect. But, as we have found in the past ten years, change is inevitable and, most often, desirable. We must continue to adapt to new technologies and new realities and to require our industries to do likewise.

A more recent problem confronting regulators is the fact that our actions increasingly have global ramifications. The barriers and encouragements fostered by regulation do not respect national boundaries. This brings to mind the slogan made popular by the environmental movement -- "think globally, act locally." As an official of the United States government, my jurisdiction only permits me to "act locally." But given the realities of today's international information markets, I really have no choice but to "think globally."

American entrepreneurs have already begun this trend. Ted Turner's CNN now claims a total worldwide audience of 114 million households in 141 countries, thus making CNN the primary promulgator of the communications global village.

With these thoughts in mind, I would like to focus my comments on just three areas: High Definition Television (HDTV) or Advanced Television; Mobile Communications -- cellular and PCS; and some thoughts on Global Information Markets. Each of these areas is significant not just in the United States, but globally as well.

HIGH DEFINITION TELEVISION

High Definition Television -- HDTV -- promises to transform the broadcasting industry, as well as boost the consumer electronics industry, in the United States. However, in doing so, it may be difficult to sort out the regulatory barriers from the encouragements. Technological transitions usually are difficult, and can be wrenching, even under the best of circumstances. Needless to say, with the advent of multichannel

competition combined with a slow economy, the past few years have not been the best of time for television broadcasters. At the same time, the promise of HDTV may be an opportunity that broadcasters cannot afford to pass up. This leaves the FCC with the task of sorting out difficult issues involving spectrum allocations, technical standards and other regulatory issues affecting the transition to HDTV.

To assist the Commission, an Industry Advisory Committee was established bringing together technical and legal experts from broadcasting, cable, and satellite industries, as well as, recognized experts from universities, research labs and government. This Advisory Committee recognized many challenges such as: Is there sufficient suitable spectrum for all existing broadcasters to transmit in both NTSC and HDTV? How do we implement the challenge of compressing HDTV into 6 MHz or less? What technical standards need to be developed? How will the testing of HDTV systems occur? This Advisory Committee turned these challenges into opportunities. One significant opportunity is that of government and industry working together toward a common goal -- developing HDTV standards. The challenges of HDTV are being met and the opportunities for U.S. and foreign industries working together and separately to build the proverbial better mousetrap is paying off with breakthroughs in digital HDTV.

The Commission recognized the significant contributions to HDTV provided by the Europeans and Japanese. However, these efforts focused on analog technology. Early in the HDTV process, the Commission made at least two significant decisions changing the course of HDTV. First, while Europe and Japan were focusing on satellite delivered HDTV, the FCC determined that HDTV in the U.S. would be developed for terrestrial broadcasting in addition to other video distribution technologies such as cable and satellite. Second, and more significantly, the Commission determined to de-emphasize analog HDTV in favor of digital HDTV. As a recent article in the Wall Street Journal (July 20, 1992 page A1) noted that U.S. companies now lead the way in HDTV technology because of the FCC's process, through which competing companies have shown an unusual willingness to share technology. It is possible that T.V. stations could broadcast digital high-definition signals to home HDTV sets in 1996.

Currently, the Advisory Committee is testing five digital HDTV systems at the Advanced Television Test Center. The Committee will review results of these tests and recommend standards for digital HDTV available for use by terrestrial broadcasters in the Spring of 1993.

We are now in the process of assigning an additional 6 MHz of spectrum to existing terrestrial broadcasters for the provision of digital HDTV. Last month, the Commission determined benchmarks for licensing and provision of HDTV service to the public. Licensees will have three years to apply for an HDTV allotment, and an additional three years to construct facilities. According to this schedule, by 1999 all terrestrial broadcasters could be providing HDTV signals to the public. We must keep in mind, however, that the pace of the consumer public conversion to HDTV will be determined by public affordability and public demand for the improved service.

I am impressed with HDTV industry's rising to the challenge to develop digital HDTV. By meeting the challenge for digital video distribution technology, the industries involved have the opportunity to become world leaders in spectrum efficient, high resolution, technology-adaptable video and audio transmission and reception technology. But with opportunity comes risk -- and this is where the regulatory encouragements and burdens tend to blur at the edges. Certainly the Commission has encouraged the development of this technology, and this has been accomplished only because of the fabulous cooperation between the public and private sectors, and even between competitors. But this encouragement also carries a burden. To ensure a transition, broadcasters have been given a timetable to convert to HDTV. They are being directed to make substantial investments and change their operations in anticipation of the types of services that will be possible, and in the expectation of consumer demand and acceptance. Perhaps the greater risk lies in not moving forward and in being left behind. But it is the Commission's responsibility to carefully monitor this process and to ensure that the needs of the public are met without undue disruption of the industry. It is a question of balance. Again, I am reminded that the final judge of all technological advances is the consumer.

MOBILE COMMUNICATION: CELLULAR & PERSONAL COMMUNICATION NETWORKS

I firmly believe that mobile communications in the 1990s is what fiber optics was to the 1980s. There is a tremendous effort world-wide to develop new and innovative mobile telecommunication services. Examples include geostationary mobile satellite services, low-earth satellite services, wide area terrestrial systems, cellular and now micro-cellular mobile systems. Mobile communications can accommodate the needs of consumers flying 30,000 feet in the air, riding on subways below the earth's surface and those on the high seas and in-land waterways. The challenge is the ability to communicate with anyone, anywhere, and at any time. No longer will consumers be tethered to wireline telephone systems. Communication will be in the form of voice, data and even video.

The opportunities appear limitless. For example, individuals needing medical attention in rural areas may have the best available expert opinion and assistance via mobile communication technologies as medical attendants on the scene are able to communicate with the medical centers all over the world. Patient data can be relayed to the medical centers in time measured by fractions of a second. Radio location services can facilitate terrestrial travel, aid in the location of packages and assist in the transport of hazardous waste products.

The potential benefits of this new world of mobile communication are vividly demonstrated by the growth of cellular telephony. Initially, the cellular phone was a car phone -- big, bulky and expensive. The challenge faced by the industry was to get it out of the car so that consumers could have a phone regardless of where they were. Cellular phones had to be made portable, rather than "luggable." Meeting that challenge, the industry developed the 7 ounce "fit-it-in-your-pocket" phone. The industry has faced other challenges such as rebuilding New York City from 18 cell sites to well over 100 to accommodate the lower power of pocket phones.

Now, in the third stage, the cellular industry is introducing digital service while still providing backbone analog service on the same network so as not to disenfranchise the 9 million consumers who have analog equipment. Other challenges close to being met are a seamless "find-me-anywhere" cellular network and data transmission over cellular. As the only current member of the FCC who voted on the cellular rules ten years ago, I can assure you we had no idea it would move so far so fast and provide the opportunities to change the lives of American consumers and improve commerce as drastically as it has.

Perhaps the most dramatic demonstration of the capability of cellular communication came during the tragic natural disasters hitting Florida, Louisiana and Hawaii. Wireline telephone systems were downed, but communications in many areas hardest hit by hurricanes Andrew and Iniki were restored within hours thanks to cellular telephone operations. Cellular was a real lifesaver with its ability to rapidly erect portable cellular towers and promptly establish telephone services. We in America appreciate that it was cellular that withstood the storm's fury, established emergency communications and supported rescue operations.

Here is another telling example. Besides leveling Homestead, Florida, Hurricane Andrew passed over the Turkey Point Nuclear Power Plant in South Florida. Knowing the importance of communications to the safe operation of that plant, its designers and operator installed six redundant communications systems, including buried fiber. When Andrew hit, five of the systems went down. The only exception: cellular.

On the island of Kuauui, where it might take a year to restore wireline service in the wake of Hurricane Iniki, the only reliable means of communication today is cellular.

Just one more astounding fact. An estimated 500-thousand cellular phone calls now are being made every month in the United States to 9-1-1 emergency networks.

Now, the Commission is exploring the next generation of mobile technology and services -- personal communication networks and services. Currently, the Commission has authorized 200 experiments with personal communication services. Typically micro-cellular in design, these systems are providing a variety of ways to interconnect with the switched telephone network. Just this month the Commission recognized the significant contributions made by those experimenting with PCS by awarding tentative Pioneer Preferences to three applicants. One tentative winner is using cable TV physical plant interconnecting with micro-cells to deliver voice service to a local exchange carrier's central office.

PCS, like cellular has its challenges. Perhaps first and foremost is finding a spectrum home. In February of this year the World Administrative Radio Conference held in Spain allocated spectrum for future public land mobile telecommunication services. In the U.S., the Commission has undertaken efforts to allocate 240 MHz of spectrum in the 1.8-2.2 GHz band for future technologies. A subset of approximately 110 MHz is under consideration for PCS. The challenge, however, is that this spectrum is currently allocated to other telecommunication services such as fixed microwave used by public safety services and the utilities. To meet this challenge, technology is under development that would allow for the sharing of spectrum with incumbent users.

Also, the Commission is currently studying spectrum allocation and licensing proposals. Under consideration are options of allocating 20-40 MHz of spectrum to PCS licensees. The actual number of licensees per service are part of the current study.

Although lagging behind our European friends in the deployment of PCS, the U.S. has purposely taken a cautious approach. By taking this approach, the Commission hopes to avoid the risk of wasting spectrum by assigning it to something that may appear to be a great idea, but which turns out to be useful only as a one-way, outbound, limited service area technology.

Learning from the U.S. experience and the experience of other nations in developing HDTV, experiments are being conducted using digital technology. The Commission's role in PCS is to provide for orderly access to spectrum, assuring a competitive marketplace and to foster the development of digital PCS that provides new and innovative services to consumers.

Some at the Commission believe we should not dictate a technology or what services should be provided. But we should make spectrum available to as many qualified candidates as possible and provide a common regulatory framework among competitors. Then we should stand back and marvel at our wisdom as competitors develop services beyond our expectations.

There's a lucite sign on my desk given me by Ted Turner ten years ago that reads "Lead, follow or get out of the way." The appropriate role for the FCC in personal communications services may well be to lead the way to spectrum and then, get out of the way. But as our friends in Europe have learned with PCS, and as we are learning with HDTV, the ultimate judge is the consumer.

Before leaving the topic of mobile communications, developments in the area of mobile satellite service deserves recognition. Tremendous investments in money and time have been made to develop the technology and to address the regulatory barriers. Again, the importance of mobile satellite service was underscored by the 1992 World Administrative Radio Conference's allocation of spectrum for low-earth satellites. International efforts by Inmarsat's Project 21, Motorola's Iridium and others offer the potential of literally communicating to and from any person on the face of the planet. Currently, in the U.S. the Commission opened a proceeding implementing the World Administrative Radio Conference's allocation to low-earth satellite service.

One final comment regarding mobile communications. This month the Commission initiated a proceeding to split private land mobile channels in the 72 MHz - 512 MHz bands. This effort is designed to create an additional 2,000 - 3,000 channels. As importantly, the narrower channel scheme proposed in the Commission's proceeding suggests the need for narrow band technology.

This conference could spend days on the issue of mobile communications. As the examples I have mentioned illustrate, there is no lack of regulatory encouragement. But there are challenges as well. I note with great interest that this afternoon's panel addresses mobile and personal communications in the 1990s. This panel of experts are in the best position to answer any detailed questions you may have.

GLOBAL MARKETS

Overall, regulators can no longer afford the once-parochial approach to the telecommunications industries we're charged with overseeing. We must view our responsibilities in a global context and we must attempt to perform our diminishing role with great care to ensure that we are not continuing to resolve yesterday's problems. While each of us retains our national interests, we must take care to advance those interests both in competition with and in partnership with our counterparts around the world.

I optimistically view the current state of events in which state-owned monopolies worldwide are crumbling and competition is beginning to flourish. It matters little whether you or I approve this turn of events. Historically, advance developments have dragged regulators, along with their government, into the new era of telecommunications and the wonders this new era promises to us all.

There is one area in the global market that needs to be addressed -- the protection of copyright/intellectual property rights. In testimony before the U.S. Senate, Eric Smith, Executive Director and General Counsel of the International Intellectual Property Alliance, reported that U.S. copyright industries lose \$12 to \$15 billion annually to piracy outside the U.S. By violating copyright, harm is done to legitimate U.S. and international competitiveness. Although progress is being made to improve copyright laws worldwide, a significant problem with inadequate enforcement still exists in many countries. We must work hard to guarantee legitimate program rights to inventors, artists, writers of all nationalities and prosecute unscrupulous pirates. This rights guarantee is essential to assure high program quality at reasonable prices and available to all legitimate consumers.

Cable -- Limitations of time and space prevent my including the contentious Cable Bill provisions in my written presentation. I'll be glad to present my views on cable upon request.

In conclusion, this is a challenging time to be involved in communications and face the exciting oncoming developments for the 21st century. This is a period of revolutionary growth and technological advancements in all fields of communications. And the best is still to come in shared international communications, increased globalization and worldwide understanding.

The most important challenge facing the American FCC, and I believe all democracies worldwide, is to assure that government policies do not erode one of democracies most valuable assets: universal free television service available to all the public.

Television, the most pervasive and influential of all media is essential for a well informed, better understanding world citizenry.

At my age, an active tennis playing senior citizen (I have been observing my 59th birthday for 19 years at the FCC) all I want is what most of you want -- a decent effective government in a socially progressive information-rich nation with liberty and justice for all.

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