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Convergence Of New Communications Technologies
And Broadcasting : Implications For The Development Of Television

By

Ross E Petzing
Good afternoon.

I’m delighted to participate in today’s panel discussion on the convergence of new communications technologies and broadcasting and what this process means for the development of television and radio.

It’s a subject that certainly is topical, because in the past several years, technological advances in communications have proceeded at an ever rapid pace. And there’s no sign that things will slow down. In fact, in the field of electronics— which is the determining force in all communications technologies— progress, especially in recent years, has been remarkable and definitely is accelerating.

Technological advances have been made on several fronts simultaneously. We’re talking about broadcasting today, so let’s think for a moment of changes in equipment that have occurred. The gear has become smaller and performs better.

For example, thirty years ago, color television cameras were almost the size and weight of a desk, required fairly intense studio lighting and produced pictures that were not terribly sharp, compared to black-and-white cameras.

Videotape recorders were so large they virtually required a room of their own. Their tape transports used videotapes more than five centimeters wide and were connected to two or three equipment racks, each about two meters tall. The racks were full of vacuum tubes, and the whole thing consumed hundreds, if not thousands of, watts of power.

Today, of course, color TV cameras and videotape recorders are combined in single, battery-powered units that easily sit on a person’s shoulder and produce remarkably detailed images without special lighting. Some cameras, in fact, deliver broadcast-quality pictures under near-twilight conditions.

And we’re all familiar with the little home video camera-recorders that fit in the palm of your hand and use cassettes containing eight-millimeter tape. They don’t give studio-quality results yet, but they come pretty close. And they certainly will be improved.
Obviously, there are many other examples of technological advances that have transformed the broadcast industry and will continue to do so, and probably in ways we haven’t even thought of yet.

These changes in broadcasting have occurred, not only at the transmitting end, but for the viewer, as well. Just think of the variety, quality and quantity of video and audio equipment in the hands of consumers today, compared to 20 years ago, or even ten.

Prominent among the changes in TV, of course, has been the advent of satellite transmission of television broadcasts (in which Indonesia, by the way, has pioneered in Asia) and particularly the direct reception of TV programs by viewers right in their homes. Such direct reception began about 20 years ago in the United States and more recently here in Asia.

Receiving television broadcasts in the home straight from satellites not only has been a major technological change in broadcasting, but a dramatic development with multi-faceted social, cultural, political and other implications. Many of these implications already have been discussed during this conference and will be further treated this afternoon.

Asian nations have responded in a variety of ways to the advent of direct satellite TV broadcasting, and their response generally has reflected the control they traditionally have exercised or not exercised over communications media, their populations and information.

The ability of governments to control access by individuals to information of any kind received from satellites is going to become much more difficult, if not impossible, in the next few years. This is precisely because of the convergence of new communications technologies with broadcasting and the delivery of other information services.

I’ll explain why in a few minutes.

But first, I'd like to discuss how the country in which I work, Thailand, has addressed the challenges and opportunities presented by satellite television and other program delivery technologies, as well as uses for those technologies, such as something called "wireless cable."
Thailand Media Situation

I'm happy to say that Thailand is among the democracies of Asia, with vibrant print and electronic media one expects in a democracy.

For example, there is no pre-censorship of radio and television programs, and the printed press is definitely among the freest anywhere in the region.

During the past few years, the Thai government has looked favorably on the expansion of media, especially the electronic media, and has fostered the use of new communications technologies. As part of this, restrictions on the ownership of satellite receiving equipment were removed a few years ago, reflecting the receptivity of Thais to information and ideas from around the world.

It's fair to say that this policy has helped spark a media revolution in Thailand, especially in television, over the last five years. In fact, some television developments in Thailand, such as pay TV, have been the first in Southeast Asia. And I'm proud that my company, the International Broadcasting Corporation, not only launched Southeast Asia's first pay TV system back in 1989, but has played a leading role in the media revolution we've witnessed in recent years.

I feel that what's transpired in Thailand over the last five years indicates what the future of TV will be in programming and technology, not only in Thailand, but to a great extent, in Asia.

Evolution of Thai Television

Let me briefly describe what's happened on the Thai TV scene since 1989. Back then, TV viewers in Thailand had a choice of only five stations, and they couldn't be received everywhere in the country.

The use of satellite receiving equipment was restricted. And even those permitted to own satellite receivers didn't have a great variety of programs to watch.

Thailand's Media Scene Today: IBC

The scene today is dramatically different. The changes began just over five years ago, when we launched Southeast Asia's first multi-channel, subscription television network, IBC Cable TV, in October 1989. We were also the first broadcaster in this region to use "wireless cable" or MMDS technology. MMDS stands for "Multi-channel, Multi-point Distribution System" and employs microwaves to reach subscribers.
IBC's Parent Organization: the Shinawatra Group

IBC is a public company and the primary organization in the broadcasting and printed media division of the Shinawatra Group of Companies. The Group began in 1983, when Dr. Thaksin Shinawatra founded the Shinawatra Computer Company to lease and sell mainframe computers to the Thai government.

The Shinawatra Group has been growing ever since and now consists of several firms contained in five divisions. They are active in virtually all aspects of computers, advertising, radio and television broadcasting, cellular telephone networks, radio paging, communications satellite operations and several related fields in Thailand, Cambodia, Laos and other Asian nations.

Dr. Thaksin, by the way, is no longer with the Shinawatra Group. He resigned as Group Chairman recently and, as you might know, is now Foreign Minister of Thailand.

IBC Cable TV

IBC started with just two channels. But we've added about one channel per year so that now, IBC offers a broad spectrum of programs on six channels.

We have begun an aggressive expansion of our network into major Thai cities outside Bangkok. This expansion is a good example of new and converging technologies in broadcasting. I'll discuss that shortly.

I should mention there's another subscription TV operator in Bangkok. It has five channels on the air and about five percent of the market share. We have 95 percent and plan to keep it that way. At the moment, IBC has 135,000 subscriber connections installed.

IBC is an international broadcaster. We launched a commercial television station in Phnom Penh in May 1993 as a joint venture with the Cambodian government. And in April this year, we put another commercial TV operation on the air in Vientiane. It's a joint venture with the government of Laos. Both stations are the first commercial TV operations in Cambodia and Laos and will expand to become nationwide networks.

Now, in Bangkok today, terrestrial free and pay TV networks provide at least 16 channels, more than three times the number just five years ago.
TV's Future, C's Expansion, New Technology

Beginning next year, IBC, which is now a six-channel MMDS network in Bangkok and six cities in the provinces, will evolve into a satellite-delivered, nation-wide, subscription TV service. It will employ Ku-band transmission and such new technology as MPEG-Two video compression in a direct-to-home or DTH system with a capacity of some 30 channels.

To do this, we'll use the Thaicom One and Thaicom Two satellites, both orbited within the past 12 months by our sister organization, the Shinawatra Satellite Company.

And, in about two years, when Thaicom Three is launched, Ku-band capacity will be at least doubled. This would bring to 60 the numbers Ku-band channels on Thaicom satellites.

The Thaicom satellites are the first covering Southeast Asia with Ku-band transponders, and we are already using one of them to feed programming to our MMDS relay transmitters in cities outside Bangkok.

Thaicom's Ku-band transponders deliver such strong signals that reception on dishes as small as 60 centimeters in diameter will be possible in most areas of Thailand.

Present subscribers to our MMDS network will be switched over to the satellite system with equipment we will issue to them. We expect to have more than 200,000 satellite dishes distributed to IBC subscribers by the end of next year and more than 700,000 by the year 2000.

DTH technology will extend our reach throughout Thailand and into neighboring countries. Our MMDS and DTH systems will operate in parallel for a period of time.

In addition to our DTH satellite network, which will be running full-blast next year, we are also evaluating the desirability of installing hard-wire optical fiber and coaxial cable networks in Bangkok and other cities to provide television and related services. Other companies have similar plans, but no cable services are likely for least another year.

It recently has become somewhat clearer how hard-wire cable networks will be constructed. Thai government agencies, such as the Telephone Organization of Thailand (TOT), the Mass Communications Organization of Thailand (MCOT) and the Communications Authority of Thailand (CAT), are among the government entities that by law can construct the network. They plan to form joint ventures to build one or two optical fiber networks as common carriers and have cable operators invest in and use these cables to provide cable TV services. However, no single firm has been or will be permitted sole use of fiber and coaxial hard-wire systems for cable TV or similar operations.
These joint ventures should be established and construction should begin about the middle of 1995. But, despite all the talk and hype about cable TV you may have heard, it is unlikely that any hardwire cable system will start operating in Thailand before 1996, at the earliest.

New TV Services and Technology in Thailand

Thailand has taken the free-market approach to provide more free TV and cable services. On subscription TV, there were two operators, IBC and Thai Sky at the end of 1993. Early this year, MCOT granted another cable TV license to Thai Cable Vision. And in October, MCOT issued four more licenses, bringing the total number of cable channels to 70.

None of these new licensees, however, are in operation, nor will be for quite a while. Also, all MMDS frequencies already are in use and Ku-band satellite frequencies will be limited until 1996, when Thaicom Three is launched. So the only pathway open to these new operators will be hard-wire cable, once the cables are laid and the regulatory regime is decided on and in place.

Let me mention that another government agency, the Public Relations Department (PRD) also can issue cable TV licenses. So there could be even more cable television operators authorized in the future.

Given the mixed cable salad of what's happening and likely to happen, it's probably high time for some people to start thinking of a "survival strategy."

Regarding free TV in Thailand, there is considerable pressure building for both MCOT and PRD to issue licenses for commercial satellite TV channels. In addition, there's a possibility that bids will be invited for one more UHF TV station and for another VHF outlet, as well.

By the year 2000, it's expected that instead of the existing five VHF networks in Thailand, more than 20 commercial stations will be on the air.

IBC definitely will be involved in the commercial TV network business.

So the future of television in Thailand will include a broad range of free and subscription audio, video, data and other services delivered by a true convergence of technologies. There will be VHF and UHF stations, direct-to-home satellite networks using video compression and hard-wire cable systems. There certainly will be video-on-demand, as well as other programming, and a number of telecommunications services.
Thailand also may be involved in the future of TV as a program provider, joining other Asian countries in launching an international satellite TV program service in the near future. Details of this plan have yet to be worked out.

TV's Future in Asia; Impact of Satellites

Regarding satellites, an overwhelming amount of program material will be available in Thailand and throughout Asia from satellites.

I don't want to wallow in numbers but Multichannel News magazine recently estimated that during the next two years, some 40 satellites are scheduled to be launched over Asia. If only 25 of them actually are orbited, at least 600 channels could be available for TV in this region, using video compression. And that's allowing for one-third of the transponders on these new satellites to be used solely for telecommunications.

It's clear that the light rain of television programming now coming from satellites will become a veritable monsoon. In countries like Thailand, where people may tune in signals from any satellite they equip themselves to receive, program choices will be enormous.

Even in countries restricting or prohibiting the use of satellite reception, control will become difficult, if not impossible, once satellite transmissions start that can be picked up on small dishes around 60 centimeters or so in diameter. Such dishes are easy to hide from any "thought police."

Asian TV Program Trends

But the key to all this activity, of course, is programming. Technology is important, but it's programs that capture audiences, or lose them.

I see the future of television programming in Asia characterized more and more by cooperation between international program suppliers and local program producers and broadcasters to generate software appropriate for Asian audiences. Asian broadcasters, including free TV stations, as well as satellite and cable operators, don't want to be just spoon-fed programs from outside Asia.

They will continue to welcome good non-Asian programs, but also will want to form joint ventures with international suppliers and through them, initiate local program production activities.
Some of this is happening now. I expect to see many more joint ventures in program production throughout Asia in the next few years. We at IBC are increasing our activities in this area now.

**Let the Viewer Decide**

As we proceed into TV's future, I feel strongly that the role of governments in Asia should be to encourage and support private sector efforts to provide a diversity of programming.

Broadcasters, including those in the private sector, should determine what goes on the air. Audiences ultimately will determine what stays on the air. This arrangement, we feel, best serves audiences as we approach the start of the new century.

Thank you.