FORMATS 2
formats

American Television at the Digital Crossroads

Les Brown

The Digital Age in American television opened officially just a few days ago, on November 1, when 42 TV stations in various parts of the country began their transmissions on their new terestrial channels. The stores had just begun to stock the new digital TV sets, at astoundingly high prices, so these early broadcasts --all in high-definition television-- have probably played to fewer people than are in this room.

But that is a chicken and egg situation. We've seen it before with new technologies, not the least of them television itself. By this time next year most of the stations in the country will be broadcasting on their new digital frequencies simultaneously with their regular analog service.

According to the research of the some leading consulting firms, digital TV receivers should be in around 90% of U.S. homes in about 20 years. If so, it will have missed the deadline set by President Clinton by at least a dozen years. His timetable calls for complete conversion to digital --and the end of analog broadcasting-- by the year 2006.

Now why is the President of the United States involved in this to the point of setting absurd timetables? It's unusual for our government to interfere in the affairs of business in this fashion. Ever since the 1980s, the Reagan era, the American approach has been to let the new media compete in the marketplace with the old, without mediation by government. The government's role is to create a level playing field for the industries involved, so that competition among them is fair. In the consumerist society ours has become, the market is regarded the epitome of democracy, and the theory is that when ample competition exists there is no need for government intervention.

But the reason for Clinton's involvement is that the switch to digital was the government's idea in the first place, going back ten years, during the Bush Administration.

It started when some American government officials grew concerned that the japanese MUSE analog HDTV system, developed by NHK, appeared to be the television of the future and might be adopted worldwide. This would give Japanese companies control of all the vital global patents for high-definition television equipment, from the transmitters to the receivers. Economists estimated the value of those patents in the trillions of dollars. Our government reacted in a most uncharecteristic way, sponsoring

research from leading American and European laboratories for a high-definition system that would surpass Japan's. The answer turned out to be a digital system.

After a lengthy evaluation prodess at the FCC during which the weaker proposed systems were weeded out, a group of laboratories were organized into a Grand Alliance to combine the best elements of their respective digital systems and produce the one that finally won the commission's approval. The standard approved by the FCC in December 1996 allows for the use of either interlaced scanning or the single-step progressive scanning technique employed by computer manufacturers. It also provides for 18 different video scanning alternatives -- from 480 lines to 1080.

While the technology was being developed the government faced the problem of how to implement the conversion to digital by the 1.572 local TV stations. The plan devised by de Federal Communications Commission early in the 1990s was to give every existing terrestrial broadcaster an additional 6 megahertz of frequency on the UHF band -- in effect a second channel -- on which to originate a digital service. Under the original plan, when the consumer switch-over to digital television was complete the original analog channels would be returned to the government for other uses.

This had seemed a reasonable scheme at the time, but that was two years before the government made the decision to auction off parcels of the electromagnetic spectrum for wireless telephony. The auction results were an astounding revelation. The first auction, in 1994, brought in over a billion dollars to the federal treasury, and six subsequent ones raised $23 billion. Suddenly there was a relatively quick and painless way to help reduce the national debt, and the spectrum came to be seen as the most valuable real estate in the country.

Many in Congress then became outraged that profit-seeking broadcasters would be given something so valuable for free, but in the ensuing debate the argument that prevailed was that the conversion of free television digital was in the public interest and that it should be allowed to proceed without the government adding to the broadcasters' financial burden.

President Clinton offered a compromise plan: broadcasters would be required to pay for the additional spectrum, not in cash but in the form of public service. A special advisory group was then appointed to study what might reasonably be required in public service -- whether free air time for political candidates, educational programming for children, or something else -- and make its recommendations within a year of convening, which probably will be announced this week.

The President then added another complication. In his zeal to produce a bill that would balance the federal budget by the year 2002, he proposed to escalate the conversion to digital so that the original analog channels could be auctioned off in that year, though not physically surrendered by the broadcasters unitl 2006. The idea that mass consumer switch-over to digital could occur in such a limited time frame, when the significant

adoption of color television took 15 years, was properly dismissed by Congress as wholly unrealistic. And there was an awareness too that progress was being slowed by shortages of digital equipment and the need of many stations to extend or rebuild their towers.

Nevertheless, the FCC is adhering to a timetable of its own to speed along the transition. Its plan calls for the network affiliates in the ten largest metropolitan areas to begin broadcasting in digital format this month, so that retail stores might begin selling high-definition receivers for Christmas. By next November the network affiliates in the 30 largest cities must begin digital broadcasting, and by 2002 all commercial stations must be using their digital slots. The non-commercial public stations have until 2003.

By that same year, 2003, at least 50% of a station's analog programming must also be transmitted in digital, then 75% the following year, and 100% by April 2005. The FCC hopes to reclaim the analog stations in 2006, but it seems highly improbable that conversion at the consumer end will go that swiftly.

The switch to digital is nothing less than the reinvention of television, and it comes at an interesting time -- just when the networks are suffering from an inability to make profits because of the competition from some 50 cable channels. Going digital could turn out to be the networks' salvation, because ir gives them several options. They could either use the full channel capacity for high-definition transmissions if the public should show a preference for vastly improved pictures and sound - to compare with going to the movies -- or, by the use of digital compression, they can create multiple channels on the new frequency, as many as five or six, in standard definition. The networks then could offer multiple services -- an all-news channel, for example, or even a pay television channel.

New technologies are seen by business today as belonging to one of two classifications, wich are designated as "push" and "pull". A pull technology is one that any business must adopt for its survival, because its competitors have it and because it makes for greater efficiency. The Automatic Teller Machines at retail banks are an example of a pull technology. So is color television today. A push technology, on the other hand, is one for which no obvious immediate need exists and has to be marketed to the consumer or to industries. A push technology represents opportunity for the companies that manufacture and distribute it, but of course if it flops it could also be ruinous.

The dilemma that American broadcasters face with high-definition television today is not knowing whether it is a pull technology or a push technology. Since the public has not yet been exposed to it there's no telling whether HDTV can be essentially ignored in the marketplace or will be vital to a station's survival. Until that can be determined, virtually all commercial broadcasters expect to explore various combinations of multicasting and high-definition telecasts. In any event, the networks will each decide how they want to proceed, and their local affiliates for the most part will follow along.

But there is yet another complication, and a quite serious one. Standing between the broadcaster and the consumer in two-thirds of American households is cable. For the terrestrial broadcasters to succeed with either of their digital opinions they will need the cooperation of the cable systems, because if cable refuses to carry those new signals a majority of households will not be able to receive them in what has become the normal way. Broadcasters will have to rely on old-fashioned rooftop antennas.

As it happens the cable industry has no desire to cooperate and, in fact, has a digital agenda of its own that is quite different from the broadcasters'. Cable operators are intent on providing their subscribers with new digital boxes that will allow their systems to expand to 175 channels in standard definition, in the belief that people would rather have more program choices than better pictures. Also they want to blunt any possible competition from the DBS systems which will be offering 175 channels. In order to carry a single broadcast in full HDTV, with 1080 scanning lines, a cable system would have to give up six of its own compressed channels. In cities like New York with 10 over-the-air stations cable would have to give up 60 compressed channels.

So it is left to the government to decide whether to intervene and require cable to carry all the new signals or leave the broadcasters out on a limb with the huge investments they have been forced to make for the conversion.

The FCC is faced once again with having to rule in favor of one or the other industry, and whichever way it rules is almost certain to be challenged in the federal courts. The commission's essential guidepost is always the public interest, but in this collision of business strategies it is difficult to tell where de public interest lies.

Weighing even more heavily, however, will be First Amendment considerations. The first amendment to the U.S. Constitution, which guarantees free speech and a free press, is perhaps the most distinguishing feature of American democracy, and it makes regulation of the electronic media exceedingly difficult. The force of the First Amendment in modern times is to prohibit government from interfering with the content of cable television than to dictate what news stories a newspaper may carry.

So the passage to the digital age in the U.S. has come to an intersection over which a cloud has settled, and the level of visibility beyond the crossing is very low.

Let me wish your country, and all others, a smoother and more felicitous passage to the digital age.


FORMATS
formats