

Panel Discussion

Montreux Television Symposium

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1985

In early 1983, the Joint Council on Intersociety Coordination, or the JCIC as most of us know it, established the ATSC to coordinate and develop voluntary national technical standards for advanced television systems. In addition to voluntary national standards, ATSC is also charged with developing a proposed national position for presentation to the Department of State for purposes of developing a United States position within international organizations.

The five members of the JCIC, which are the NCTA, the NAB, the SMPTE, the EIA, and the IEEE, are the charter members of the ATSC. Altogether, there are 51 member organizations and 12 observer organizations in the ATSC representing cable operators, equipment manufacturers, terrestrial broadcasters, and motion picture producers. The members are easily recognized names in the television industry, for example, ATC, Matsushita, Warner-Amex, Viscom, Ampex, ABC, CBS, NBC, PBS, RCA, Zenith, Hughes Communications, Harris, and so on.

The work of the ATSC is divided among three technology groups. The first group, Improved NTSC, is addressing the ongoing and evolutionary improvements that may be made in the present NTSC system that involve no incompatible changes to the present radiated signal standards. Any such changes would retain the present 525 line scanning standard and the present 4:3 aspect ratio. Examples include improvements in home receivers, studio cameras, etc.

The second group, Enhanced 525 Line Systems, is considering improvements which retain the 525 line scanning structure, but they are not restricted to fully compatible changes. For example, improvements could be obtained by employing wider bandwidths for the luminance and color difference signals, or by using components rather than the encoded NTSC format, or by using a wider aspect ratio.

The third group, High Definition Television is responsible for systems which improve horizontal and vertical resolution by 2 to 1 and employ a wider aspect ratio of at least 5:3. This is the area that has been receiving the most publicity recently because of the worldwide attempt to establish a single worldwide HDTV production standard during the current CCIR study period.

While on the subject of HDTV, I should give you some of the high lights of this activity. In march of this year, the HDTV Technology Group approved a document which was forwarded by the ATSC Executive Committee to the Department of State as our proposal for the position the United States should adopt before the CCIR. Subsequently, the document has become the United States position. The document advocates an HDTV system with 1125 lines, 60 Hz field rate, 2:1 interlace and a 5.33:3 aspect ratio. The United States will be arguing for this position at the final study group meetings of the current CCIR cycle in Geneva in October. It is our goal that there be a single world wide standard, rather than the multiplicity of national standards that exist in current television systems.

The ATSC's decision to recommend to the State Department a particular set of high definition production parameters was motivated largely by the recognition that the year 1985 represents a brief window of opportunity for HDTV standards development. If the CCIR fails to

recommend a worldwide HDTV production standard this year, it will probably never do so. This is because several de facto standards from various countries will undoubtedly develop, each based on different perceptions of optimum technology and market place self interest. The selection of a single worldwide HDTV standard will greatly expand the market for television program exchange.

While it is always tempting to postpone standards decisions in order to incorporate the very latest idea on the engineers' drawing boards, the problem is that those drawing boards are never blank, there is always one new concept just about to bloom. We all know this, we only have to look at past failures to gain a single standard rather than the more common multiplicity of standards.

Market forces are strongly suggesting a demand for higher quality television services. The question now is not whether advanced television standards will come, but when they will become a reality and who will play a role in their development. You can plan, direct, and lead the way or you can let others do it for you.

HDTV will require much more bandwidth than current delivery channels. We are talking of more than 20 MHz in the studio for luminance alone. Various people are working on systems which reduce the bandwidth with only a minimal loss in the signal in order to deliver signals to the consumer through two current channels, with one of the channels being compatible with the current NTSC system. The primary thrust, to date, though, has been to establish first, on a worldwide basis, the production standard.