

Report on IBC '84

By Joseph Roizen

IBC '84 was the epitome of High Tech/High Touch, a term coined by John Naisbitt in his No. 1 best-selling book *Megatrends*, which outlines the ten new directions that will transform human existence in the future. For each new "high tech" advance proposed at IBC by any particular proponent (HDTV, DBS, digital, etc.), there was an equal, if not opposite, concern for the "high touch," or human side of this change — its economics, its effect on society, its viability among the alternatives available.

In almost everyone's opinion, IBC '84, held September 21–25, 1984, was an outstanding success because of the great work of the organizing committee and the benign magnanimity of Mother Nature. Unlike 1982, when that IBC was beset by an incredible heat wave for the first two days, followed by what seemed like a tropical typhoon for the last few, the weather was cool, and occasionally sunny.

On the technology side, everything seems to have been notched up one level over previous exposure. Sony's HDTV looked better than last time; Ampex had a superior PAL, Type-C VTR; Philips' E-MAC now has more motion adaption; Panasonic's Direct Read After Write (DRAW) videodisk pictures were improved; and the BBC's digital stereo audio sounded superb. The IBA was still promoting C-MAC vigorously for DBS in Europe, and even pronounced it the EBU standard.

As can be expected, large and small British audio/video equipment manufacturers are the backbone of IBC—Marconi, Rank, Thorn/EMI, British Aerospace, Vinten, Link, and many others. Each had some newer product to show. However, some of Europe's largest equipment suppliers, like Thomson-CSF and Bosch/Fernseh, also participated heavily in IBC. Thomson-CSF, in particular, had an extensive exhibit featuring new and innovative devices like their contrast corrector and advanced components for the all-digital studio of the future. RCA showed a 625-line, PAL version

of the CCD ENG camera that made such a splash at NAB '84 in Las Vegas.

The beach in front of the Metropole was lined with a long succession of mobile vans bristling with satellite dishes, color cameras, and modern video production facilities. Among these was a Sony van complete with a compact high-definition color camera and 1-in. VTR operating on the NHK-proposed 1125-line, 60-field color system.

Aside from the main exhibition space at the Metropole, equipment was displayed at the Grand Hotel next door, the Bedford, the Old Ship, and the Royal Albion. IBC management published a *Daily News* which announced that 8500 m² of indoor space and 2000 m² of outdoor space was used for the 130 exhibitors who participated. Unfortunately, some 20 companies could not be accommodated. John Etheridge, deputy chairman of Rank Cintel and chairman of the IBC Ex-

hibition Committee claimed that this problem will disappear at IBC '86, when the Brighton Centre will also be used, extending the available exhibit space by 25%. Etheridge also estimated that attendance at IBC '84 was up well over 10% above IBC '82, and that some 2500 exhibitor personnel were on the stands (another new record).

The crowded exhibition aisles, the well-attended conference sessions, the gleeful order announcements, and the pleasant social events all added up to a really great IBC. John Tucker, Peter Mothersole, John Etheridge, and their hard-working IBC staff members deserve the heartiest accolade for a job very well done.

The Technical Conference

Almost 100 carefully screened papers, some in parallel sessions, rounded out the roster of technical presentations at IBC '84. The printed proceedings filled a 425-page manual that

SMPTE at IBC '84

The Society, in continuing its coverage of and participation in national and international meetings of the industry, was well represented at the IBC '84 meeting held in Brighton, England, in mid-September. As a member of the organizing committee, Robert Van Der Leeden, Ampex, Ltd., represented the SMPTE, which is a sponsor, along with the Electronic Engineering Association, the Institute of Electrical and Electronics Engineers, Inc., the Institute of Electrical Engineers, the Institute of Electronic and Radio Engineers, and the Royal Television Society.

The Society's booth, manned by Lynette Robinson, Executive Director, and Alex E. Alden, Manager of Engineering, both from Headquarters, was a hub of activity for attendees requesting information on our membership, *Journal*, engineering work, conferences, and standards. A highlight of the booth, which attracted extremely wide attention, was the display on S-MAC. S-MAC multiplexed analog components for the studio were described in a paper given at IBC '84 by Merrill Weiss, chairman of the Working Group on Component Analog Video Standards. Copies of the proposal were available at the booth and are available from the Engineering Dept. at SMPTE Headquarters. The booth also affords members the opportunity to meet staff and attending officers, make inquiries, and pay their dues.

SMPTE Executive Vice-President Harold J. Eady, Novo Communications, represented the Society at several social functions at the IBC. Engineering Vice-President Richard G. Streeter, CBS Television; Secretary M. Carlos Kennedy, Ampex Corp.; Stephen D. Kerman, Governor, Western Region; and Leonard A. Green, Governor, Canadian Region, also attended.

IBC '84 had 134 exhibitors from 14 countries, with attendance well over 5000 for the five-day show.

— Lynette Robinson

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The SMPTE booth at IBC. (L-R) New member fills out application form, Canadian Governor Leonard Green, Executive Vice-President Harold J. Eady, and Executive Director Lynette Robinson.



(L-R) Joseph Roizen, Judy Puckett-Fibush, and Alex Alden, SMPTE Manager of Engineering, at the SMPTE booth.

each delegate received with his or her registration.

Surprisingly, the first keynote speaker at the opening session, Michael Checkland, BBC, spoke about the economics of television rather than technology.

As the packed hall of more than 550 delegates pondered Checkland's admonitions, the conference turned technical, with Dr. Kerns Powers of RCA Laboratories in Princeton, N.J., discussing enhanced television versus HDTV.

Powers' basic contention is that for the average home viewer with a normal size TV screen, 1125-line television is expensive, incompatible, and overkill. To support his view, he quoted a study done by one of his researchers, Dr. Curt Carlson, who found that television pictures with higher resolution achieved only a 10 just-noticeable difference (JND) response, while pictures with a larger aspect ratio scored 25 JND in controlled observer tests. Powers therefore stated that a wider picture with an aspect ratio of 1.77:1 is the first priority for improved TV in the home.

He also coined a new acronym, HDEP, which he said stood for High Definition Electronic Production. Powers concluded by proposing a specific wider aspect ratio, a single channel transmission system for new media such as DBS, and a worldwide component digital studio standard.

One of the most thought-provoking papers given at IBC was the methodical analysis provided by John Baldwin of the IBA, about the likely future trends in studio television equipment. Baldwin reviewed the dilemma now facing broadcasters of just how soon the all digital studio is likely to emerge. Baldwin's conclusion, which he illustrated with some very succinct slides, is that TV hardware will first go through an analog component phase, which will be slowly replaced by a digital component phase, that in turn setting the stage for all digital at the start of the next decade, going to full digital by 1994.

Some of Baldwin's conclusions were already in evidence at various IBC stands showing analog component Camcorders, component switchers, and component transmission systems such as B-MAC, C-MAC, and E-MAC. There were too many interesting papers to provide a review of all of them, and many of the papers led to even more provocative discussions

during the panel sessions that followed. Two speakers, John Watney of Ampex and John Ive of Sony, gave a good account of the latest coding techniques for digital VTRs. However, when asked as to the likely availability of a commercial DVTR, they both agreed that the industry would not see one much before two or three years hence — this notwithstanding the fact that Sony had a working digital VTR a few floors up in the same hotel.

The Equipment Exhibits

There was little doubt that high-definition television was the principal topic and the major attraction at IBC.

The HDTV demonstrations at the Grand Hotel were excellent, with superb projected pictures on a 120-in. screen coming from Sony, compact, HDTV cameras, and from modified 1-in., Type-C VTRs. The High-Definition Video System, as Sony calls it, operates at the NHK-proposed 1125-line, 60-field scanning standard, with an aspect ratio of 5:3 and a video bandwidth of 30 MHz.

At the entrance to the Sony HDTV demonstrations were two other devices that are capturing broadcasters' attention. One was the Betacart which was shown at NAB, and which has been adequately described before. The second was Super Motion, shown publicly for the first time after being a resounding success at the Summer Olympics in Los Angeles.

In the video recording field, there were at least five other innovations that promised improved images and more flexible operations in the future. These new developments included the following:

1. The Ampex PAL, Type-C enhancement system
2. The Sony BVU-800 with improved bandwidth and chroma signal-to-noise figures
3. The Panasonic DRAW videodisk recorder
4. The Sony 19mm cassette digital videotape recorder
5. The Philips E-MAC system operating with a laser videodisk.

Digital VTRs have fascinated the broadcast industry for many years now, and each major TV conference seems to bring them one step closer. IBC '84 was no exception, and yet another private suite at the Metropole housed an array of Sony digital VTRs built around 19mm (3/4-in.) tape.

At the Royal Albion, Philips showed

this year's version of the E-MAC system, using a laserdisk player as a picture source in addition to the usual range of electronically-generated test signals. Scientific Atlanta had an elaborate demonstration of B-MAC at the Old Ship Hotel, and John Lowry did an excellent job of presenting the features of the system. Lowry's contention was that B-MAC provides all of the features a DBS service needs — secure scrambling, multiple audio channels, teletext, and a host of other services. One demo even included musical selections of high-quality stereo, while the TV screen carried the identification of the musical piece, and other pertinent data about it.

The IBC Champagne Reception at the Corn Exchange attracted 1000 delegates, who watched John Tucker, chairman of the IBC Management Committee, present the first IBC Award to Geoffrey Phillips of BBC Research. Dr. Phillips received a £2500 check with the scroll and the plaque.

A memorable social event at IBC '84 was the Ampex-organized sequence of dinners at the British Engineerium in Hove. Discovered by Joe Williamson, Ampex's manager in Reading, the Engineerium is one of the most unusual museums in the U.K. The building once served as a real pumping station for the city of Brighton. Its attractive Victorian exterior belies the amazing machinery inside, which includes some huge coal-fired steam engines that actually operate. Restored to their original polished brass and burnished steel appearance, those majestic machines, puff away among a collection of some 2000 models of turn-of-the-century engineering.

IBC '84 also was prelude to a series of other important meetings that took place in London and Crawley Court immediately after. The Royal Television Society, recognizing the importance of the HDTV discussions, organized a special HDTV seminar at the Royal Institution at which key proponents of various approaches to HDTV had a chance to air their views. The audience was then invited to participate in the dialogue. The IBA, in Winchester, played host to the Magnum group, and various other standardization committees, who convened at the Crawley Court Engineering headquarters to discuss such thorny issues as DVTR parameters, Camcorder formats, and the like.