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NORTH AMERICAN PHILIPS CORPORATION

PHILIPS LABORATORIES

DR. MARK M. ROCHKIND
PRESIDENT

January 6, 1989

Ms. Bronwen L. Jones, Chairperson
Working Party 6 - Planning Subcommittee
FCC Advisory Committee on ATV
1 Fawcett Place
Greenwich, Connecticut 06836

Dear Ms. Jones:

North American Philips objects to the use of 1125/60/2:1 video signals as the designated source material for the testing of all advanced television (ATV) systems. This position is consistent with those we have taken in past months and in all of our submissions to the FCC and its Advisory Committee. The system designed and developed by North American Philips as a candidate ATV system, HDS-NA, is based on a frame rate of 59.94 (common with NTSC) and 1050 scan lines. We propose herewith an approach whereby the ATTC can use common source material for the testing of candidate systems and yet match the video signal parameters of the source material to the system design parameters of each candidate system.

Options

The KCH-1000 camera manufactured by BTS is capable of producing a range of video signals on a switched basis and, as such, is a suitable multistandard system for use as a source. The KCH-1000 can be switched to yield 525/59.94/1:1, 1050/59.94/2:1, 1125/60/2:1, and, by special order, also 787.5/59.94/1:1.

To supplement a multistandard studio camera, we propose the use of film. Film enables a broad range of subject matter to be captured for ultimate use as a video source. The use of film converted to video by a multistandard telecine would present neither advantage nor disadvantage to any candidate system. Moreover, 35 mm film exposed at 60 frames per second yields high resolution source devoid of motion and other artifacts. Utilizing a Rank Cintel MK-3 HD and a video tape recorder such as the Sony HDV/HDT-1000 (modified to handle the different formats), professional quality videotapes could be produced for use as source material for system testing. We know that the Rank Cintel MK-3 HD can produce 1125/60/2:1, 525/59.94/1:1, and 1050/59.94/2:1. We are confident that 787.5/59.94/1:1 could be produced as well, if required.

Purchase of the camera cited would require about $400,000. Purchase of the telecine and video tape recorder equipment would require about $1.2 million.

Reality

It seems unreasonable to expect the ATTC to invest on the order of $1.6 million to acquire hardware with which to produce video source for system testing. We suggest that system proponents could cooperate with the ATTC so that the ATTC can offer multistandard source for testing purposes. Such an adoption would provide a "level playing field" for all participants.

Proposal by Philips

North American Philips is prepared to offer the ATTC use of its Rank Cintel MK-3 HD which can produce the 525, 1050, and 1125 video signals cited, and use of its Sony HDV/HDT-1000 VTR which has been modified to record these same video signals. The ATTC could then produce source videotapes to "sell" to system proponents for testing purposes.

Specifically, we suggest the following. The ATTC should invest about $100,000 to produce a 35 mm (60 fps) film containing scenes and subject matter deemed suitable for testing purposes. North American Philips (via Philips Laboratories) would then work together with the ATTC to produce the required videotapes from the resulting film. ATTC personnel would work with Philips Laboratories personnel at the Philips Laboratories site in Briarcliff Manor, New York to produce the source videotapes. The ATTC would compensate Philips Laboratories for its expenses estimated to be no more than $5000 per videotape produced. Each source tape would be a one inch first generation video transcription of the film. The ATTC could then sell the source tapes to system proponents at $20,000 per copy to recover all costs.

The ATTC might rent a multistandard BTS KCH-1000 multistandard camera to use as a real time source during the testing process. The costs of such rental could be offset by testing fees paid by proponents whose systems are tested.

Necessary Avoidance of 1125/60/2:1 as Required Source Material

The use of 1125/60/2:1 as required source material is unacceptable. Accordingly, this raises the question of whether systems, based on other video parameters, which are disadvantaged by use of such a biased source should be tested.

The technical reasons we have for this will be clear to you. The field frequency of 60 Hz produces a major stumbling block since converters, of the necessary high quality, to a 59.94 Hz field rate (NTSC compatible parameters) simply do not exist and cannot be built at reasonable cost in a reasonable time. Furthermore, conversion from an interlaced format to sequential scan always introduces motion artifacts. This is unacceptable in our case especially because one of the main design principles in our system is to achieve total absence of motion artifacts.

Summary

The proposal embodied herein would enable the ATTC to maintain a fair testing process at acceptable costs. We are prepared to work with the ATTC and the Committee to shape the ideas presented here so that they conform to what the ATTC and the Advisory Committee would consider suitable.

Sincerely,

c: Planning Subcommittee / Working Party 6
supplementary distribution list attached

CERTIFICATE OF SERVICE

I hereby certify that on this 23rd day of January, 1989, copies of the foregoing Reply Comments of North American Philips Corporation were mailed first class, postage prepaid to the individuals on the attached list.

James L. Casserly

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