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JUL 16 1999

Federal Communications Commission  
Office of Secretary

July 6, 1999

VIA HAND DELIVERY

Bruce A. Franca, Deputy Chief  
Alan R. Stillwell, Economic Counsel  
Federal Communications Commission  
Office of Engineering and Technology  
445 12<sup>th</sup> Street, S.W., Floor 7  
Washington, D.C. 20554

Re: Roundtable On DTV Receiver  
Compatibility With Cable Television Service

Dear Bruce and Alan:

In connection with the above-referenced matter, enclosed please find the Written Statement of Tom McMahon of Microsoft Corporation, which we understand will be included in the briefing book from the DTV Roundtable.

Thank you for your attention to this matter. Please call me if you have any questions about the Statement.

Sincerely,



Kevin S. DiLallo

Enclosure

Cc: Marc Berejka (w/ encl.)  
Pat Griffis (w/ encl.)  
Tom McMahon (w/ encl.)

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Federal Communications Commission  
Office of Secretary

WRITTEN STATEMENT OF

TOM McMAHON

DIRECTOR OF ADVANCED TELEVISION TECHNOLOGY

MICROSOFT CORPORATION

ONE MICROSOFT WAY  
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ROUNDTABLE ON DTV RECEIVER  
COMPATIBILITY WITH CABLE TELEVISION SERVICE

FEDERAL COMMUNICATIONS COMMISSION  
WASHINGTON, D.C.

MAY 20, 1999

WRITTEN STATEMENT OF TOM McMAHON  
DIRECTOR OF ADVANCED TELEVISION TECHNOLOGY  
MICROSOFT CORPORATION  
FEDERAL COMMUNICATIONS COMMISSION  
ROUNDTABLE ON DTV RECEIVER  
COMPATIBILITY WITH CABLE TELEVISION SERVICE

MAY 20, 1999

In order to accelerate the digital television (DTV) rollout, we must consider several technical issues with respect to the compatibility between DTV services provided by cable and other video distribution services and consumer electronics equipment. 1394 offers many advantages. It will be deployed this year and will become one of the standards for interconnecting set-top boxes, DTV and other types of consumer appliances. 1394, however, is not the end of the road in terms of the opportunities that exist to interconnect digital devices. 1394 alone does not insure interoperability.

Instead, 1394 should be viewed in the context of the technology explosion we are experiencing with respect to home networking and consumer type networking technologies. This juncture presents the opportunity to specify connectivity at a higher level than simply the wire itself. If we achieve a level of abstraction in terms of interconnecting these consumer appliances, we would decouple the decision-making process and allow the various stakeholders and players to move forward at their own pace, while permitting them to innovate and

add value where they see fit. Accordingly, we must take steps to achieve consensus on common profiles across platforms to ensure interoperability.

Examples of other technologies for interconnection in the home include electrical power lines, existing phone wiring and various types of wireless technologies. All of these media are capable of distributing audio and video content in the form of compressed transport streams as well as the information services and internet connectivity that will be required in and around the home among these various types of appliances. The one standard that exists today that is basically off-the-shelf, operational and open is Internet Protocol. Internet Protocol can and will be one of the interconnection methodologies or abstraction layer standards that will be used to connect all of these devices. Therefore, it makes sense to broaden our perspective and consider a connectivity protocol extending beyond the physical wire in order to avoid having anyone's hands tied. At the same time, we must develop and approve copy protection technology, including protection for data.

Additionally, it is important to consider the actual content that will be provided to consumers across cable, satellite, terrestrial, DVD and Internet distribution methodologies. Content creators should have the ability to author high value content that may include audio, video and perhaps data (HTML) and to expect that content to run over a digital television set, a cable box, a satellite box, or perhaps over the Internet. With standardization of content across DTV sets and set-tops, we would be able to run that content at either end of the link. For this reason, a common content specification should be developed that would

allow an interoperability level at the content level and that would again decouple the content creators' ability to move ahead with their respective business plans from the actual plans of the set-top boxes and the lower-level standards. This development would allow the industry to move forward at an accelerated pace.