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June 22, 1994

Mr. Julius Knapp, Chief  
Authorization and Evaluation Division  
Federal Communications Commission  
7435 Oakland Mills Road  
Columbia MD 21046

**RE: ex parte Communication in Docket 93-235**

Dear Mr. Knapp:

This is in follow up to your questions raised during the course of our meeting on May 20, 1994 regarding the need for prompt Commission action to allocate additional 46/49 MHz channels for cordless telephones. The questions related to whether the recent development of 900 MHz phones might negate the need for additional 46/49 MHz channels and the potential for TV (including HDTV) interference raised in the Engineering Statement appended to the jointly filed comments of the Association for Maximum Service Television, Inc. and Public Broadcasting Service (MSTV/PBS, filed December 8, 1993).

AT&T strongly believes that the 46/49 MHz channels are needed now. At best, the availability of 900 MHz for cordless phones is a small and only partial solution to the congestion problems existing on 46/49 MHz channels. This is because the 900 MHz products are significantly more expensive to produce and, consequently, require correspondingly higher retail prices. As pointed out in the materials we submitted on May 20, the typical cost of goods ratio for 900 MHz vs. 46/49 products ranges from about 2.8 to 5.4. Please note the following industry data: \*

- 1. The cordless telephone industry average selling price has been declining.

Year	Average Selling Price (Approximate)
1991	\$94
1992	\$90
1993	\$83

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2. The vast majority of industry sales of cordless phones are products priced under \$100.

Price Range	Portion of Sales
Under \$50	6%
\$50 to \$74	37%
\$75 to \$99	36%
\$100 or Greater	21%

\* Source: Industrial Marketing Research, Inc.

Thus, it is unlikely that 900 MHz cordless phones, with their inherently greater manufacturing costs and resulting retail prices, will supplant the need for reliable, economically priced cordless phones operating at 46/49 MHz.

As to the TV interference potential discussed in the MSTV/PBS submission, AT&T scientists conclude, from evidence on the record (e.g., Zenith, Sony and TIA) of this proceeding and our own informal testing, that the potential for interference from proposed new cordless transmit receivers is not significant. Attachment A to this letter addresses this issue in more detail.

Should you require further information or clarification, please feel free to contact me.

Sincerely,



Attachment

cc: George Harenberg  
William F. Caton, Acting Secretary

AT&T Assessment of the "Engineering Statement" by Jules Cohen, appended to the Comments of the Association for Maximum Service Television, Inc. and Public Broadcasting Service (MSTV/PBS, filed jointly on Dec. 8, 1993)

In the above statement, Mr. Cohen discusses the potential for interference with the intermediate frequency (IF) passband from cordless telephone base units using the proposed new frequencies, and implies that there could be interference "at distances greater than three meters (9.8 feet)." Mr. Cohen goes on to discuss high definition television (HDTV), stating that "HDTV receivers are likely to be as vulnerable as NTSC receivers to interference from cordless telephone base station operation in the 43-44 MHz band."

While Mr. Cohen offers no data to support the concerns articulated in the Statement, we believe that the issue he discusses has already been resolved quantitatively by the combination of the Reply Comments of the Zenith Electronics Corporation (filed December 23, 1993) and the subsequent Ex Parte letter from the Telecommunications Industry Association (TIA), filed February 23, 1994. Zenith provided data in its Reply Comments showing measured TV receiver susceptibility in the IF passband as a function of frequency. TIA provided a curve showing the received field strength as a function of the separation between the cordless base unit and the TV set. Taken together, these two pieces of information show that the "interference distances" are roughly 2 feet and 1 foot for the proposed new and the existing cordless base frequencies, respectively. In other words, a base unit using one of the proposed new frequencies near 44 MHz would need to be within about 2 feet of the TV set to cause noticeable interference. As noted by TIA, these distances agree with various informal measurements which have been made. Even if HDTV receivers are "as vulnerable as" existing units, as Mr. Cohen suggests, the interference potential is not significant.

In addition to the combination Zenith and TIA, Sony Electronics Corporation, which manufactures both cordless telephones and TV sets, also has investigated the issue of interference from cordless base stations to TV receivers. In its Reply Comments, Sony had expressed concerns about the potential for interference from cordless base stations to a new cable decoder interface, and requested 60 days to study the problem. Subsequently, Sony filed "Supplementary Reply Comments" addressing its own earlier concerns and stating the: "Since the filing of its Reply Comments. Sony has further evaluated this matter and has determined that the addition as proposed of the 15 new channels to the existing [10] channel cordless telephone service will not interfere significantly with the newly proposed cable decoder interface" Sony further states that "Sony fully supports the addition of the 15 new channels to the existing 10 channel cordless telephone service and believes that the additional channels will have no substantial detrimental effect on current television receivers."

We conclude from the information discussed above, and our own informal testing, that interference from the proposed new cordless base transmit frequencies to TV receivers is not significant. We therefore believe that the concerns expressed in Jules Cohen's Engineering Statement, which were not supported by any data or analysis, have already been effectively addressed by material from Zenith, TIA, and Sony, that is part of the record in this proceeding.