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November 29, 1995

Mr. William F. Caton, Acting Secretary
Office of Managing Director
Federal Communications Commission
1919 M Street, N.W., Room 222
Washington, DC 20554

Re: MM Docket 87-268

Dear Mr. Caton:

Enclosed is an original and 9 copies of John Major's testimony and biography for the upcoming December 12 en banc hearing on digital TV.

If you have any questions, please contact me at (202) 371-6940 or Michael Lewis at (202) 371-6947.

Regards,

Stuart Overby
Assistant Director, Spectrum Planning

Copies to: Saul Shapiro (10)

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BIOGRAPHICAL SKETCH

**John Major
Senior Vice President
and Assistant Chief
Corporate Staff Officer**

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John Major is the Senior Vice President and Assistant Chief Corporate Staff Officer for Motorola. One of his responsibilities is leading Motorola's initiative to become a global leader in software. Previously he managed the Worldwide Systems Group that developed and manufactured private radio systems for voice and data for Public Safety and business users.

He serves on the Board of Directors for the Telecommunications Industry Association (TIA), is Treasurer for the Electronics Industry Association (EIA) and a member of the Board of Governors for EIA. He serves as Vice Chairman on the Board of Directors for the Electromagnetic Energy Association. He serves on the Board of Directors for Littelfuse and Lennox Corporation. He serves on the Computer Science and Telecommunications Board for the National Research Council. He is a trustee of the Allendale School which helps disadvantaged children. He chairs the Planning Committee for Barrington Hills and is also a member of the 911 Committee.

John holds a B.S. in Mechanical and Aerospace Engineering from the University of Rochester, an M.S. in Mechanical Engineering from the University of Illinois, an M.B.A. with distinction from Northwestern University and a J.D. from Loyola University. He received an honorary doctorate from Westminster College in May 1995.

Testimony of:

**John Major,
Senior Vice President and
Assistant Chief Corporate Staff Officer
Motorola**

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1995

**before the
Federal Communications Commission
Digital Television en banc**

December 12, 1995

Good afternoon Mr. Chairman and Commissioners and thank you for the opportunity to present Motorola's views on this historic transition to digital television.

I'll start with three observations:

1. First, in a speech before the International Radio and Television Society on November 21, Reed Hundt said and I'll quote "the Grand Alliance (nurtured by the FCC Advisory Committee) has . . . discovered a wondrous digital genie in a bottle. With it you can broadcast multiple signals of higher resolution than today's NTSC signal, or dozens of audio signals, or software packages, or thousands of pages of text, or a pair of very high resolution movies". In short, a world leading, technical marvel on the order of cellular telephony that includes within it the opportunity to create a whole new industry just as cellular did and PCS will.

2. Second, as the Commission's latest Advanced television Notice points out , today only 120 MHz of the 400 MHz of spectrum allocated to TV is actually used to deliver broadcast service. In other words, with the current system 280 MHz, or 70% of the allocation is going largely unused. This is over five times the amount of spectrum allocated for cellular and double that dedicated to broadband PCS. I should add the caveat that a small portion of the band is used effectively for land mobile on a shared basis, but such sharing is allowed only in 11 urban areas. A Commission proposal to expand land mobile sharing is on the books, but it is pending resolution of the ATV proceeding.

3. Third, while we move purposely to exploit this opportunity for advanced signaling, we cannot lose sight of the obligation to provide for the needs of public safety and essential industries and we cannot lose sight of the potential for market dislocations if

new services are allowed without auctions which would then compete with existing services that paid substantial sums through auctions.

The U.S. enjoys the best voice telephone system in the world and that capability has rapidly moved to the mobile environment. We should be proud of what we've accomplished. However, we are now in a new era-- 40% of today's homes have a personal computer. The internet has happened. The NII and GII are becoming a reality. The need to communicate broadband information including files, images and video with full mobility is expected to be as universal as the use of the mobile phone. The potential applications go far beyond entertainment. Who was not shocked by the Rodney King tapes? Who hasn't been surprised to see the rapid and effective use of video as a part of day to day police work and now viewable on nightly TV? Is it such a stretch after what we've already seen with the internet to visualize, for example, a "Wireless Web Browser" that would give the public access to an almost unlimited array of information and services, anytime, anywhere. New applications for this underutilized spectrum and this exciting new technology are limited only by our capacity to imagine and our ability to deliver a fair, market driven framework to allow it to be developed. The FCC has done this before; it's poised to do it again.

Now let's get more specific--What can the FCC do to help usher in this kaleidoscope of services ? Motorola recommends the following 5 point plan:

- 1) Require that TV receivers shipped after some near-term date be ATV capable, including the capability for bit-divided signals to accommodate multiple speeds and levels of quality as incorporated in the Grand Alliance standard.
- 2) Working with all of the interested and affected parties, accelerate finalization of

an ATV channel allotment plan, associated application filing window, and construction requirements for ATV stations.

3) Strike a balanced approach including technical flexibility and compensation which allows ATV licensees to respond to market requirements, but which also establishes a level, economic playing field among wireless service providers.

4) Make recovery of contiguous block(s) of spectrum an absolute requirement from the outset, rather than a possible option in this proceeding.

A contiguous spectrum block will be more attractive to licensees and equipment suppliers, and helps minimize potential conflicts among dissimilar systems. For example, could an ATV allotment plan be enacted which would not use any channels, say above channel 59? If so, this would then allow the Commission to free up about 50 - 60 MHz of contiguous spectrum. Of course the rights of incumbents, in this case about 100 TV stations, would have to be protected. The emerging technologies principles could provide us guidance here and the spectrum would be highly desirable for mobile services.

5) Structure allocations of the recovered spectrum into segments to accommodate next generation systems which support public safety, essential industries and general public use. I'll caution, however, that, unless broadcast spectrum recovery is a very near-term benefit, and it realistically is not likely to be; this spectrum is not a substitute for more immediate Commission actions to provide spectrum for public safety and essential industries. It will, however, meet important, longer term needs that are only just now being recognized.

We do not pretend to have all the answers to this complex task. However, by using the above 5 point framework, we believe the Commission can accelerate change, provide business opportunities for the broadcast and telecommunications community and usher in an exciting era of new services for the public. This is an important task to help maintain U.S. leadership as we enter a new century in both time and consumer expectations. Motorola pledges its continued support to help make it happen.

Thank you.