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November 9, 1994

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Mr. William F. Caton
Acting Secretary
Federal Communications Commission
1919 M Street, N.W.
Room 222
Washington, D.C. 20554

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NOV 9 1994

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY

Re: GEN Docket 90-314

Dear Mr. Caton:

In accordance with Section 1.1206 (a) (2) of the Commission's Rules, 47 C.F.R. § 1.1206 (a) (2) (1991), this is to notify the Commission that on the morning of November 8, 1994, Sandy Abramson, Peter Murray, and I, on behalf of UTAM, met with Julius Knapp, David Means, Dick Smith, Tom Stanley, and Ralph Haller.

The purpose of these meetings was to discuss the UTAM Plan for Financing and Managing 2 GHz Microwave Relocation. The subjects discussed are fully reflected in the UTAM Plan as well as the attached summary, which was left with those attending the meeting. Should you have any questions regarding this matter, please call me.

Respectfully submitted,

R. Michael Senkowski

R. Michael Senkowski

Attachment

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UTAM AND ITS RESPONSIBILITIES FOR UNLICENSED PCS

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- The FCC designated UTAM as the frequency coordinator for the unlicensed PCS spectrum, conditioned upon submission of an acceptable plan for funding and managing the relocation of incumbent 2 GHz microwave licensees.
- UTAM's membership is broad and diverse. (See Attachment 1.) UTAM also has many participating companies who have joined committees but have not yet become UTAM members. UTAM committee and member meetings are open to all interested parties.
- UTAM Responsibilities for Unlicensed PCS
 - Developing a method for funding microwave relocation costs;
 - Establishing a plan for relocating microwave links; and
 - Serving as frequency coordinator to ensure that unlicensed PCS systems and devices deployed prior to full band clearing do not cause interference to microwave licensees.

PUBLIC BENEFITS FROM UNLICENSED PCS

- Unlicensed PCS products form a cost-effective and flexible extension of the National Information Infrastructure that will ensure affordable and portable telecommunications capabilities.
- There is an enormous public demand for unlicensed PCS products, as is indicated by the record before the Commission.
- There are important business, consumer, education, and health care applications for unlicensed PCS.
- New jobs and improved workplace efficiencies will be an outgrowth of unlicensed PCS capabilities and opportunities.
- Unlicensed PCS systems and devices will ensure continued U.S. technological leadership in the global marketplace, with many of these products having particularly important implications for less developed nations.
- Unlicensed PCS will be available to the public when the unlicensed PCS industry goal of relocating current microwave links from the allocated spectrum is achieved.

FUNDING PLAN

- Microwave Clearing Costs. UTAM has estimated that microwave clearing costs will total approximately \$70 million.
 - The \$70 million is based on an average cost of \$200,000 to relocate a microwave link.
 - Because the microwave systems in the unlicensed band are paired with systems in the licensed PCS band, the Plan assumes that the task of microwave relocation will be evenly divided between licensed and unlicensed PCS.
 - The Plan also provides a reserve for clearing a portion of the links operating on adjacent licensed PCS frequencies because PCS licensees may not need to relocate all links in their spectrum.
 - A more detailed explanation of UTAM's cost calculations is appended as Attachment 2.
- Clearing Fees. To fund these relocation costs, UTAM will assess a fixed charge of \$20 per coordinatable device deployed in the unlicensed band. Each intentional radiator requiring an FCC Part 15.3 label will be required to have a UTAM label attached. Manufacturers will pay their clearing fees through the purchase of UTAM labels for their equipment.
- Kickstart Funds. To begin the relocation and deployment process, several manufacturers have together agreed to advance UTAM several million dollars for which they will receive credits for clearing fees on a dollar for dollar basis plus interest.
- Budgets. UTAM has prepared short term and long term budgets showing revenues and expenses.

MICROWAVE RELOCATION PLAN

- Clearing Philosophy. After consideration of several different options, UTAM has determined that the most efficient way of clearing the unlicensed PCS spectrum is to allow the products sold in each segment of the band, isochronous and asynchronous, to fund the clearing of that segment.
 - This will ensure that spectrum for the products with the highest sales will be cleared more quickly, generating maximum revenues.

- UTAM will begin its relocation efforts by focusing on the links located at and near 1920 MHz. UTAM is exploring the possibility of clearing part of the spectrum which, with the use of guardbands, would allow for the deployment of nomadic data-PCS devices prior to total band clearing.
- UTAM will clear those geographic areas with the largest business population first, since business products are more likely to be coordinatable.
- Expectations for Clearing Time. UTAM expects that the unlicensed PCS band will be cleared within six to twelve years.

PLAN FOR EARLY PCS DEPLOYMENT

- Early Deployment of Coordinatable Devices. In order to allow the industry to raise the funds necessary for the relocation process, the FCC has authorized the deployment of coordinatable devices prior to total band clearing. However, this deployment is subject to several constraints to minimize any interference to microwave operations.
- Early Deployment of Nomadic Devices. By beginning relocation efforts with the frequencies at the center of the unlicensed PCS allocation (1920 MHz) and working outward, UTAM hopes to clear a portion of the spectrum which would allow for the deployment of nomadic data-PCS devices prior to total band clearing.
 - Such deployment would be permitted only in conformance with FCC non-interference requirements.
- Location Verification Process. An important element of the Commission's coordinatability requirements is the obligation of UTAM to verify the locations at which unlicensed PCS systems and devices are initially installed and to which they may on occasion be relocated. This is to ensure that all devices and systems are located in their coordinated areas where they will not cause interference to microwave operations.
 - Manufacturers will be permitted to develop their own mechanisms or procedures for enabling UTAM to verify that the devices are located in a permitted area. UTAM has developed criteria that these mechanisms and procedures must meet. The sufficiency of such mechanisms and procedures will initially be passed upon by UTAM in connection with its certification that an applicant for equipment authorization is a participating member of UTAM.
- Disablement Test Suite. As additional safeguard to preventing microwave interference, the FCC rules require that a coordinatable unlicensed PCS device disable

itself when it is removed from the coordinated zone. To assist the industry in devising the means for implementing these disablement requirements, UTAM has developed testing procedures that can be used to demonstrate compliance with the rules. UTAM's Disablement Test Suite is included as part of the Plan.

- Deployment Areas. UTAM has directed the preparation of interference assessment analyses which divide all parts of the country into one of two areas: Zone 1 or Zone 2. UTAM will be validating these analyses with appropriate industry bodies.
 - Using industry-accepted methods for calculating interference (TIA 14.11), UTAM will determine the number of products which can be deployed in Zone 1 areas without causing interference to incumbent microwave systems. UTAM will issue regular bulletins notifying manufacturers and distributors of which areas are open for product sales.
 - Zone 1 areas are sufficiently free of microwave links to permit some level of early PCS deployment without further interference analysis, but deployments will be monitored.
 - Zone 2 areas have significant amounts of microwave activity and will require site specific coordination to determine whether a PCS device deployed in such a location will cause interference before any products can be deployed.

ATTACHMENT 1

UTAM Board of Trustees

Sandy Abramson (AT&T/NCR) -- President
Steve Sivitz (PCSI) -- Vice-President
Ron Cross (Northern Telecom) -- Secretary
Jerome Leonard (Motorola) -- Treasurer
Geoffrey Anderson (SONY)
Peter Murray (Ericsson)
Peter Kozdon (ROLM)
Brian Stout (Omnipoint)

UTAM Members

Alcatel Network Systems	Motorola
American Association of Railroads	NABER
American Personal Communications	NEC America
Andrew Corporation	North American Telecommunications
AT&T/NCR	Association
BellSouth Wireless	Northern Telecom
California Microwave Telecom	Omnipoint Corporation
Cellular Holding, Inc.	Pacific Bell
Columbia Spectrum Management	PCSI
Communications Certification	Personal Communications Industry
Laboratory	Association
CTP Systems	PTI Communications
Digital Microwave Corporation	Rockwell International
Digital Wireless Corporation	ROLM
Ericsson	SONY
Harris Corporation	SouthWestern Bell
Hitachi	SpectraLink
IBM	Sprint
Industrial Telecommunications	Thompson Consumer Electronics
Association, Inc.	US West
LOCATE	UTC, the Telecommunications Industry
Metrocall	Association
Moffet, Larson & Johnson, Inc.	Wise Communications, Inc.

ATTACHMENT 2

Total Relocation Costs

LINKS	COST
1910-1920 MHz	97 Microwave Incumbents \$19.4 Million Relocation Costs (One-half of 193 x \$200,000)
1920-1930 MHz	96 Microwave Incumbents \$19.2 Million Relocation Costs (One-half of 193 x \$200,000)
Adjacent Channel below 1910 MHz	76 Microwave Incumbents \$15.2 Million Relocation Costs (10% of 760 x \$200,000)
Adjacent Channels above 1930 MHz	66 Microwave Incumbents \$13.2 Million Relocation Costs (10% of 660 x \$200,000)
Approximate Total Cost for Clearing 1910-1930 MHz and Adjacent Channels	\$67 Million to Relocate 335 Microwave Incumbents