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NEWS

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Report No. ACTION IN DOCKET CASE

INQUIRY BEGUN ON ESTABLISHMENT OF NEW PERSONAL COMMUNICATIONS SERVICES (GEN. DOCKET 90-

The Commission has begun a broad inquiry into the development and implementation of new personal communications services (PCS), such as advanced cordless telephones and portable radio systems for personal use.

The Commission is looking for information that will enable it to develop regulatory policies concerning the possible implementation of such services.

Generally, the Notice of Inquiry asks for information to determine:

-- Which new PCS services are needed;

-- Where in the spectrum should they be located;

-- How much spectrum should be allocated to them;

-- Whether and how the services should be regulated; and

-- What technical standards should be adopted.

More particularly, the Notice discusses two petitions for rulemaking, one from Cellular 21, Inc. and another from PCN America, Inc., that propose establishment of particular types of PCS.

PCS encompass a broad range of radio communications services that free individuals from the constraints of the wireline public switched telephone network and enable them to communicate when they are away from their home or office telephone. Basic forms of PCS include the current cordless telephone, which enables individuals to receive or initiate communications in or near their home or office, and paging services, which notify individuals that someone is attempting to communicate with them. Car telephones represent a more advanced form of PCS. Car telephone service has been in operation for over 20 years but was available only to a limited number of users until the mid-1980s when cellular radio service began to be offered in most of the major U.S. cities. Since then its growth has been very rapid and is expected to continue into the 1990s with the continued increased use of hand-held portable telephones, as opposed to car-installed telephones. Portable telephones enable the users to call or be called at any time they are within a cellular system.

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As the public has become more aware of PCS and their benefits, demand has begun to appear for even more advanced forms of PCS. The PCS being developed today have significant improvements over those currently available. The most significant feature of the next generation of these services appears to be a movement towards person-to-person, instead of station-to-station, communications.

Existing PCS require that users have a different telephone instrument for home, office and car, each with a separate number. Advancements in PCS technology have made lightweight, portable telephones more feasible. Thus, future PCS are expected to permit individuals to use the same device in several different environments. Therefore, a person could be reached at any location by dialing a single telephone number. Moreover, future systems are expected to have greater capacity, thus reducing blocking, and the digitization of future communications which will make them more difficult to intercept and, therefore, more private.

The Commission noted that global interest in new PCS has been developing over the last few years, arising, in part, from some countries' desire to introduce provide competition with existing cellular service and to provide their citizens with new and better services. The United Kingdom has been especially active in the area of PCS and has allocated spectrum for an advanced digital cordless telephone technology, referred to as CT-2.

The Europeans have also expressed substantial interest in personal communications networks (PCNs). While no precise definition of PCNs exists, in general, the current prevailing view is that PCNs will be cordless radiotelephone networks based on digital and microcell technologies. They will be self-contained but will have the capability of accessing the public switched telephone network. The Commission noted that the 1992 WARC may possibly consider providing a world wide allocation for PCS in the 1700 MHz to 2300 MHz band.

The Commission said the apparent market demand for PCS, the new technological developments, and the growing world interest in these services has also stimulated interest in the U.S. Several entrepreneurs have approached the Commission in recent months seeking authorizations and rule changes related to development of domestic PCS. In particular, the Commission has received several requests for experimental authorizations to develop equipment and to conduct market studies to assist in the implementation of CT-2 and PCN-type studies.

In addition, the Commission has received two petitions for rulemaking from Cellular 21 and PCN America, a subsidiary of Millicom, Inc., requesting that it commence rulemaking proceedings to allocate spectrum for PCS services. The Commission has asked for comments on the details of these two proposals.

Cellular 21 requested that the Commission allocate the 940-941 MHz band for a second generation cordless telephone, CT-2, that includes a public access service such as the British services. It contended that CT-2 has technical advantages over today's first generation cordless telephones. It said these "older-style" cordless phones are subject to eavesdropping and interference. Cellular 21 proposed that the Commission channelize the band into nine 100 kHz channels with a 50 kHz guardband at each end and limit both the base stations and mobile stations (handset) to 10 milliwatts of power. It asked that the FCC adopt the CAI signalling protocol that the United Kingdom has adopted for its CT-2 operations and asked that as CT-2 use increases, the 941-944 MHz band be made available for its use and the current users of this band be relocated to other bands.

PCN America asked the Commission to allocate 100 MHz from the 1850-1990 MHz band for PCNs. This band is currently allocated to the Private Operational-Fixed Microwave Service. Under this proposal, PCNs would be digital cordless telephone radio networks with extensive service areas built on microcell technology. These networks would use inexpensive, pocket-sized terminals, intelligent networks, smart cards that can be read electronically to provide information about the user for billing purposes, and advanced signalling protocols. They would be essentially self-contained, although some interconnection to the telephone network would be built-in. They would provide integrated services including voice, data and image delivery. PCN America argued that PCNs can provide these services in a way that makes efficient use of the radio spectrum. It proposed that PCNs use spread spectrum techniques to allow sharing the spectrum with the existing users.

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