

SKYCELL CORPORATION
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FEDERAL COMMUNICATIONS COMMISSION
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Donna Searcy, Secretary
FEDERAL COMMUNICATIONS COMMISSION
1919 M Street NW
Washington, DC 20554

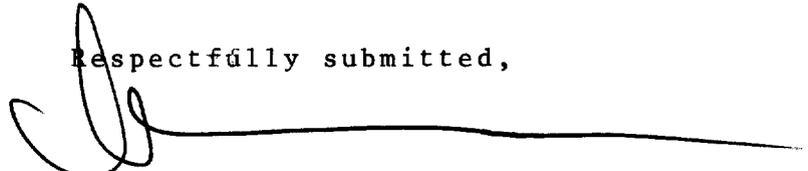
Dear Ms. Searcy:

Enclosed please find a original and four copies each of
two documents:

- 1) Petition for Rulemaking for TMR
- 2) Pioneer Preference Request for TMR

Please process in the usual manner.

Respectfully submitted,



Matt Edwards, President

May 28, 1992

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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the matter of)	
Creation of a new Service:)	Related to GEN Doc 92-100
Telepoint Management Radio)	and 90-314
and allocation of spectrum)	RM-
therefor)	

PETITION FOR RULEMAKING

Skycell Corporation hereby petitions the Commission to allocate a portion of the Advanced Messaging Services ("AMS") band to a new service ("TMR") which would provide certain limited services to carriers licensed in the new PCS arena, and possibly to owners of COCOT (private pay) telephones.

This petition and a related "Pioneer Preference" request are being filed at this time because of the Commission's announced intent of limiting both proposed new uses of the AMS band, and the filing of Pioneer Preference requests related to such proposed services, uses, and technologies.

1. BACKGROUND

The principal of the petitioner, Skycell Corporation (1), Matt Edwards was formerly president of Cellular 21, Inc. and conceived and authored the PRM (assigned RM-7140) which led to the NOI (Docket 90-314) on Personal Communications Services. Later, Edwards was president of Advanced Cordless Technologies, and remains a shareholder of that firm.

(1) Skycell Corporation is incorporated in Delaware.

From the very outset, Edwards has promoted CT-2 Telepoint service as a service which the American public will embrace as the first step to the wireless communications world of the future. Even in the initial PRM, it was clearly defined that for the "public" portion of CT-2 to succeed, paging receivers would have to be built in to the CT-2 handsets to overcome the shortcomings of the CT-2 architecture when used away from the private environment (where two-way calling was standard). By combining the utility of the CT-2 handset's ability to initiate calls through what would be "wireless payphones" ("TELEPOINTS"), and incorporating a pager to signal that an incoming call was waiting at some bridging location, a low-cost pedestrian mobile service could be offered.

In recent months, Motorola (among others) has developed a CT-2 handset with a pager. However, paging channels to provide a special signalling have become UNavailable.

In New York City, it was hoped that a certain paging carrier would hold aside its channel for use in signalling CT-2 handsets. That channel has literally disappeared, necessitating other routes to provision of certain necessary functions.

Since the Commission's proposed rules for PCS have not yet been released, this filing is made in anticipation of that NPRM containing elements creating a Telepoint like service under the PCS umbrella.

It should be noted that certain "intelligent" COCOT pay coin telephones could also use certain TMR services.

WHAT IS A TELEPOINT? WHY DOES IT NEED THIS PROPOSED SERVICE?

In its simplest, a Telepoint is nothing more than a wireless pay phone. If the coin payphone is privately owned, it is connected to the switched network ("PSTN") through an ordinary phone line. The payphone validates the coins presented for payment by determining if the coin is the proper amount and is not counterfeit; if all is well, it sends the call.

A Telepoint works similarly. The handset and cord are replaced by a wireless duplex connection. Payment is made by logging the call into a call register "the coin box" which is emptied periodically, not by hand but through a modem.

Authenticity of the payment medium is done by checking the ESN ("Electronic Serial Number") and other identifying digits against a "denied user list" stored in memory. That list is updated periodically when the "coin box" is emptied. Depending on the size of the system operated, the frequency of calls made through Telepoints, and cost of landline connections, that communication with centralized data base may only occur infrequently.

Users, however, frequently lose their phones, or have them stolen, and to add a particular ESN to the "denied user list" in each Telepoint becomes a costly matter, especially in New York where local calls are over 11 cents each. By their very nature, the Telepoints become expensive to call. What is needed is a quick way of updating the files in thousands of Telepoints simultaneously.

A SECOND USE OF THE "TMR" CHANNEL IS TO INCREASE CHANNEL LOADING.

The CT-2 technology which is in use around the world (2) uses a frequency agile FDMA/TDD format. Dynamic channel allocation is used to avoid interference, and additionally some configurations of CT-2 equipment (also CT-2 Plus, the Canadian standard) incorporate transmit power adjustment to reduce interference. Because home cordless base stations, wireless PBXs, and Telepoint users all occupy the same pool of frequencies at all times, it\ becomes attractive to synchronize the transmissions of base stations and handsets in a given area. Telepoints by GPT, Motorola, and Ferranti all provide a port to permit a synchro line to be run between them if they are in close proximity, thus increasing the number of simultaneous users in a given area.

Skycell Corporation believes that a dedicated channel in the AMS allocation, of 25 kHz bandwidth can provide the means to satisfy the needs described above.

The need for competition in provision of TMR services may lead the Commission to conclude multiple TMR operators are needed. We think two is the absolute limit, since any defects in transmitting denied user data to Telepoints can be costly. One TMR carrier, supported by all the Telepoint licensees offers the best hope for fraud prevention.

(2) CT-2 is in use or under construction in France, Singapore, China, Maylasia, Canada (CT-2 Plus), Finland, Hong Kong, etc.

TECHNICAL DISCUSSION

We propose the TMR channel be operated at an "arms length" basis to benefit all the Telepoint carriers in an SMSA.

The "TMR" channel would provide the following features:

- a) a 400 Hz square wave (or other signal) used by the Telepoints to synchronize themselves. Since all Telepoints would contain a TMR receiver, it should be easy to develop the software necessary to synchronize them.
- b) As an overlaid feature, the TMR operator would provide (in an X.25 packet format) constant updates to the Telepoints' "denied user lists". These would be provided by the various Telepoint licensees to the TMR operator
- c) The Telepoint operator could trigger certain reporting activity by the Telepoints. thus managing more readily the "coin box emptying" function.
- d) The TMR channel could be used to provide certain group-call features to bulk users of CT-2 handsets, in cases such as emergencies or the like.
- e) The TMR channel could be used to signal roaming handsets when used in foreign cities. Since the paging channel used by a particular traveling handset would be unknown, the TMR channel could cause the Telepoint to generate a ringing to a certain handset, as long as it was within range of any Telepoint.
- f) The TMR channel could be used to provide certain types of custom messages which would be stored within Telepoints. Examples would be:

"You must now dial a "1" before the area code in dialing this number"

"Your long distance company is encountering system-wide difficulties, please dial 10XXX to access another carrier"

"Because of the power failure, we will only handle emergency calls at this time"

These messages could be transmitted to all Telepoints simultaneously in emergencies.

g) The TMR channel would contain highly accurate time in BCD code (ties to the NBS at Boulder might be desirable), to be used in the Telepoints for logging calls, and in the handsets to provide super accurate timing.

PROPOSED CHANNELIZATION

Skycell believes that a 25 kHz (or 50 kHz, if the Commission foresees the need for competition in this area) allocation, from a single high power (3500 Watt ERP circularly polarized) transmitter in each area would be ideal.

This would reduce the cost of construction to the TMR operator since one high-power transmitter could penetrate buildings to reached Telepoints buried within, and simplify construction by reducing the number of sites to the minimum.

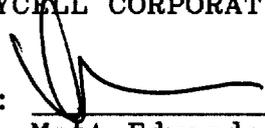
Advanced Cordless Technologies ("ACT") now holds an experimental paging license at 930.500 MHz to be used with its CT-2 experiments in New York City. The channel used by them seems ideal in that it is the center of the AMS band, transmitting equipment is readily available (though not at the 3500 Watt level), and the synchronizing signal broadcast on the TMR channel could be used by other services. Skycell believes that a 25 kHz allocation centered on 930.500 is one possible way; the other would be two 25 kHz channels on either side of 930.500 MHz.

The use of circular polarization for building penetration in large cities has been proven in the FM Broadcast band. The very nature of TMR requires similar penetration characteristics.

For the reasons outlined above, Skycell Corporation believes the Commission should, at the very least, set aside 25 or 50 KHz in the AMS band, for future use in the manner described in this filing, and if PCS developments merit the use of TMR, to create this service in the manner described.

Respectfully submitted,

SKYCELL CORPORATION

By: 

Matt Edwards,
President

May 28, 1992

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