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December 18, 1991

Mr. H. Franklin Wright
Federal Communications Commission
Office of Engineering and Technology
Frequency Liaison Branch
Room 7326
2025 M Street, N.W.
Washington, D.C.

In re: Ericsson Paging Systems, Inc.
Experimental Authorization KF2XEF
File No. 1606-EX-PL-90
Experimental Report No. 4

Dear Mr. Wright:

Pursuant to the conditions set forth in the above-referenced authorization, this letter will serve as the fourth Experimental Report of Ericsson Paging Systems, Inc. ("Ericsson") for Experimental License KF2XEF.

At the outset it should be noted that on December 11, 1991 Ericsson requested that the licensee name for this Experimental Station be changed to Ericsson Business Communications, Inc.

In the quarter for which this report is being filed Ericsson installed on a temporary basis its 862-866 MHz band CT-3 system in an office building at 2400 N Street, N.W., Washington, D.C. Included in this installation were two base stations and three cordless handsets.

The purpose of this installation was to evaluate the CT-3 system operation in a hostile RF environment, i.e., an environment in which all spectrum on which the CT-3 system was being used was occupied by co-channel licensees operating high power two-way mobile radio systems.

To gauge system operation a statistical computer program was utilized to record all activity in a real-time mode for the CT-3 system including but not limited to operation of portable handsets; operation of base stations; system selection of which

of the four 1 MHz carriers and 8 timeslots available per carrier were being used at any given point in time; handover internal to base stations and/or handover between base stations.

The system was set up in a conference room with a glass wall looking out towards the Washington Cathedral with line of site to a location in the northwest section of Washington which is the home of many radio facilities in the Washington D.C. metropolitan area.

The CT-3 system, which uses Continuous Decentralized Dynamic Channel Allocation (in which the cordless handset continuously monitors the RF environment and chooses the best available carrier and time slot for a voice channel and switches carriers and/or time slots to maintain a high quality voice connection) worked flawlessly. In a period of approximately 90 minutes of continuous usage the statistical program referred to above recorded some 900 changes in status in the system. Based on tests of the system Ericsson concluded that most of the changes in the system were due to interference created by the use of high power SMR systems in the 862-866 MHz band exacerbated by the fact that the system was being operated in a glass walled conference room with little to block co-channel SMR signals.

Despite the presence of SMR operations on all frequencies on which the experimental CT-3 system was being operated and the hundreds of handovers made by the system to find a suitable voice channel, the CT-3 system never lost or dropped a call due to interference. The only time a call was dropped or lost was when one of the portable handsets was operated in an interior part of the office building in which there was no CT-3 system RF coverage due to the installation of only two base stations.

On December 4, 1991 this same CT-3 system was set up in the FCC's Meeting Room on the 8th Floor of 1919 M Street. The base stations were set up in two separate corners of the Commission Meeting Room. The system ran continuously for almost three hours. Based on the statistical program referred to above only 250 status changes were registered during this time period. Also, no call placed or received on the experimental CT-3 system was dropped or lost even with interference present. Status changes occurred primarily because the person using the handset moved within the CT-3 system RF coverage area.

Ericsson attributes the significantly reduced number of status changes registered at 1919 M Street (as compared to the 2400 N Street venue) to the fact that the physical structure of the FCC building at 1919 M Street shielded the experimental CT-3 system from the signals of co-channel SMR systems. This factor was not as prevalent when the experimental CT-3 system was being used in a glass walled office looking out to the street.

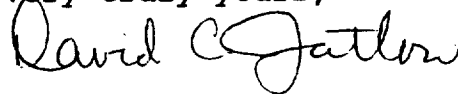
Ericsson concludes that these rudimentary tests support a number of its theories relative to the ability of a CT-3 system

to share spectrum with other licensees who operate in the "external" environment. First, a multicarrier TDMA/TDD system which uses Continuous Decentralized Dynamic Channel Allocation does have the capability to recognize the RF environment in which it operates and continuously select among carriers and/or time slots to provide a high quality voice channel without dropping calls. Second, the multicarrier TDMA/TDD system recognized interference from significantly higher power co-channel systems. The CT-3 system cordless handsets were able to continuously and instantaneously select other carriers and/or time slots on which to move to create a suitable voice channel despite the fact that the CT-3 system was using spectrum occupied by others. Third, a system specifically designed for the in-building, wireless PBX/Centrex market will receive a certain degree of "shielding" and hence interference protection from co-channel radio systems operating externally.

In the first quarter of 1992 Ericsson plans on conducting additional and more comprehensive tests of its experimental CT-3 system in the 862-866 MHz band as well as on its experimental CT-3 system in the 940-952 MHz band. Additionally, in this same time frame Ericsson plans on installing on a permanent basis an experimental system in the Washington, D.C. and Anaheim, California areas.

Should there be any questions with regard to this report, kindly communicate directly with the undersigned.

Very truly yours,

A handwritten signature in cursive script that reads "David C. Jatlow".

David C. Jatlow
Counsel for Ericsson Paging
Systems, Inc.