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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

March 19, 1993

Dr. Thomas P. Stanley, Chief Engineer
Federal Communications Commission
2025 M Street, NW
Washington, DC 20554

Re: Southwestern Bell Technology Resources, Inc.
Call Sign KM2XBI
File Number: 3037-EXPL-92
Quarterly Progress Report Number Three

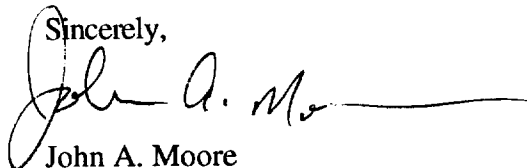
Dear Dr. Stanley:

In accordance with the Federal Rules and Regulations Part 5, Section 5.204(b), attached please find the third quarterly progress report for Southwestern Bell Technology Resources, Inc. in connection with our personal/wireless communications testbed in St. Louis, Missouri.

The main objective in our St. Louis testbed is to verify performance of the emerging wireless communications systems and technologies prior to integration into one of Southwestern Bell Corporation's business units. Attached we are reporting our progress and test results in the area of personal communications systems.

Please direct any inquiries to me at 314-529-7567.

Sincerely,



John A. Moore
Director, Wireless Communications

Attachment

RECEIVED

Third Quarterly Progress Report, File No. 3037-EX-PL-92

MAR 19 1993

TELECOMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

**FCC Quarterly Progress Report Number Three (3)
in Connection with Personal/Wireless Communications
Testbeds in St. Louis, Missouri**

Conducted by Southwestern Bell Technology Resources, Inc.

March 19, 1993

**Authorized by FCC Experimental License
Call Sign KM2XBI, File Number 3037-EX-PL-92**

I) INTRODUCTION

The following summarizes the results of tests and progress in the two areas of Wireless Drop and Wireless PBX/Centrex. The results are to be used in formulating SBC's business strategies to introduce personal communications networks and services, as well as for the PCN/PCS technology and system selections.

The tests reported here were conducted in and around Southwestern Bell Technology Resources' facilities in St. Louis, MO, under the experimental license granted to Southwestern Bell Technology Resources, Inc. (SBTR). For further information on SBC's view of PCS/PCN, and background on Wireless Drop and PBX/Centrex, please consult our first quarterly report filed with the FCC on September 19, 1992.

II) WIRELESS DROP TESTBED PROGRESS

The wireless drop testbed will investigate the technologies and operational requirements involved in replacing the copper drop wire with radio. We anticipate testing multiple technologies as well as varying the parameters of a given technology. Some of the major issues are: voice quality, reliability, economics, transparency to existing CPE, propagation in a suburban microcellular environment, powering, capacity, spectral efficiency, and Operations, Administration, Maintenance and Provisioning (OAM&P).

Contract negotiations with the selected system supplier continue and we hope to have a completed agreement by the next progress report. The results of our propagation and site selection measurements will also be included in that report.

III) WIRELESS PBX/CENTREX TESTBED PROGRESS

The wireless PBX/Centrex testbed enables the testing of various microcellular and telepoint systems and technologies, both to characterize the equipment through laboratory test, as well as to examine the overall system performance as installed in a real environment.

The second system that we have tested in the laboratory is a prototype telepoint system (hereafter referred to as TS2) operating in the 1921-1929 MHz band. Using an ADPCM voice coding scheme, the telepoint base station accommodates up to two lines (conversations) on an outgoing-call-only basis.

The TS2 system is based on CT2 standards. As such the system operates in FDMA/TDD mode with BFSK modulation for a 72 kbps transmission rate in 100 kHz per channel. This version of TS2 uses 200 kHz for channel spacing yielding 40 channels in its 8 MHz of bandwidth (1921-1929 MHz).

Within a base station's cell boundary, the handsets are assigned one of the 40 channels, at which time a dial tone will indicate the readiness for initiation of an outgoing call. The channel assignment is made based on a non-interference criterion defined by the standards. The output power is specified at a maximum of 60 mW.

The overall system operation was subjectively tested by placing calls initiated from the handsets through the base stations to the PSTN. The voice quality was rated at "very good" although a constant "hum" was present at all times and with all test handsets. The RF links established could be maintained at one level above and below the base station in our four story office building, and in some areas of two levels below the base station.

The output power for the base station and handsets were measured and the plots were obtained to examine the power spectrum. Spectrum plots were also obtained for various span widths to examine the in-band, adjacent channel, and the out-of-band (i.e. the 1921-1929 MHz band) spurious emissions.

We continued testing the system by operating it in our business environment, although its use was very limited due to its inability to receive calls. Further tests with this system are planned. The propagation characteristics at 1.9 GHz will also be examined, with results to be included in future quarterly reports.

In compliance with the FCC rules and regulations, the transmission frequency in all tests were carefully chosen as not to create harmful interference to any incumbent user in the 1850-1990 MHz band. The FCC regional office was also notified as to the type and power level of our transmission.