

PCS



**Southwestern Bell
Technology Resources**

June 19, 1995

Mr. Richard M. Smith
Chief - Office of Engineering and Technology
Federal Communications Commission
2025 M Street, NW
Washington, DC 20554

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

Dear Mr. Smith:

In accordance with the Federal Rules and Regulations Part 5, Section 5.204(b), attached please find quarterly progress report number twelve 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 wireless local loop.

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

Sincerely,



John A. Moore
Director, Wireless Communications

Attachment

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

**Conducted by Southwestern Bell Technology Resources,
Inc.**

June 19, 1995

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

1.0 Introduction

This report describes progress in the Wireless Local Loop experimental testbed during the period from March 19 through June 19, 1995.

2.0 Wireless Local Loop Progress

As previously reported, we have received prototype wireless local loop equipment and have deployed it in the field. The equipment consists of 5 Radio Ports (RPs), 30 Wireless Fixed Access Units (WFAUs), a Radio Port Control Unit (RPCU), and a Network Element Manager (NEM). The testbed is configured as shown in Figure 2-1 below. The test participants will receive service from the existing copper drop or the wireless local loop system. The selection of the system will be done under control of the TRI Portable Communications Lab via dial-up control line to an A/B switch. This will be a blind test, the participant will not know which is being used. This should provide an objective evaluation of voice quality and service transparency.

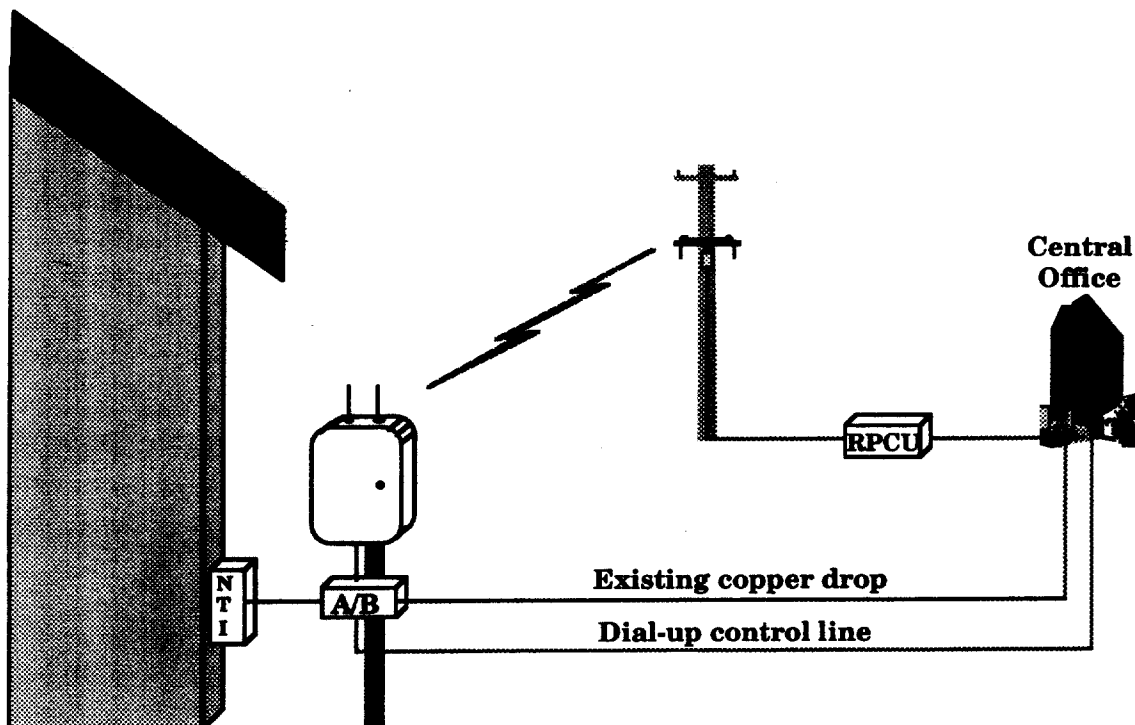


Figure 2-1 - Testbed configuration

We have completed calls on all radio ports, both wireless-to-wireline and wireless-to-wireless. Each radio port is capable of supporting seven simultaneous calls with a TDMA approach as specified in the PACS air interface specification. We have successfully completed seven calls on each radio port.

In this past quarter we began live testing of the system through the blind test as described above. Approximately half of the users will be on the wireless system at any point in time, and the other half will act as controls on the wireline facilities. Each participant is switched monthly and receives quality surveys in conjunction with the change. The first set of surveys has been sent to the participants and we should receive the responses shortly. The participants have been asked to rate the quality of their service in a number of areas from voice quality to feature transparency. They have also been asked to record any instances where they have found problems with the service or phone calls which have not met their expectations. We have implemented a data gathering and analysis system that allows us to examine the performance of the radio system and to correlate any reported problems to radio performance. The data can be analyzed by radio port, by wireless fixed access unit over a number of calls, or by call.

Results to this point have been very promising. The system appears to be meeting its range goals, the voice quality has been excellent (no noticeable difference as compared to wireline), and the features that have been implemented appear to be working properly. Some POTS features were not implemented in the testbed equipment, and the testbed participants have agreed to give up those features for the duration of the trial. Further information on the performance of the system and acceptability of wireless local loop will be presented in the next quarterly report.

3.0 Personal Communications

Southwestern Bell Mobile Systems has won licenses to provide PCS in the Tulsa, Little Rock and Memphis MTAs. In order to support this effort, Southwestern Bell Technology Resources requested, and was granted, an extension of this experimental license to cover those geographic areas as well as our new lab location in Austin, Tx.