



1005 17th Street, Room 1750
Denver, CO 80202-2002
March 15, 1994

Mr. H. Franklin Wright
Office of Engineering and Technology
Frequency Liaison Branch
2025 M Street, N.W.
Room 7326
Washington, DC 20554

RE: U S WEST COMMUNICATIONS, INC. 2148-RR-93
Call Sign KK2XCC; File Numbers; 2148-EX-PL-91,
3306-EX-ML-92, ~~3630-EX-ML-93~~, 3630-EX-R-93, 4064-EX-ML-93
EIGHTH QUARTERLY REPORT
PCS Experimental License for Boulder, CO

Dear Mr. Wright:

Enclosed please find U S WEST Communications' eighth quarterly report addressing the above referenced authorization for PCS field trials in Boulder, Colorado.

Should you have any questions or require additional information, please call me on (303) 896-7576.

Sincerely,

A handwritten signature in cursive script, appearing to read "Elizabeth A. Spellicy".

Elizabeth A. Spellicy
Manager - Network and Technology Services

ENCLOSURES

U S WEST

Wireless Personal Communications

Experiments

Quarterly Progress Report #8
FCC Experimental License
KK2XCC

March 4, 1994

Submitted to

Federal Communications Commission
Frequency Liaison Branch
Room 7326
Washington, DC 20554

Prepared by

U S WEST Technologies
Wireless Communications Services
4001 Discovery Drive
Boulder, CO 80303

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Executive Summary

This quarterly report summarizes field testing conducted by U S WEST Technologies in the Boulder PCS Testbed from December 5, 1993 through March 4, 1994. During this period, substantial progress was made toward expansion of the Boulder Testbed facility. No field testing was conducted during this period, however.

1 Introduction

This report summarizes field testing conducted by U S WEST Technologies in the Boulder PCS Testbed under FCC Experimental License KK2XCC. The period covered by this quarterly report is from December 5, 1993 through March 4, 1994.

2 Progress on Boulder Testbed Expansion

As detailed in the last 2 quarterly reports, the Boulder PCS Testbed is being expanded. Approximately 40 new base station sites are being added, in addition to the initial 9 sites put in place last year, to form 6 distinct environmental areas. These areas include:

- (1) Light urban area with conventional transport backbone
- (2) Residential area with conventional transport backbone
- (3) Residential area with broadband transport backbone
- (4) Medium-tier PCS using rooftop base station sites
- (5) Indoor shopping mall
- (6) Heavy urban area with conventional transport backbone

Detailed descriptions of these areas, along with maps depicting the base station site locations, were presented in the 6th quarterly report. The network infrastructure equipment contained in the testbed was also delineated in this report.

As of March 4, 1994, the testbed expansion is nearly complete. A few of the copper sites do not yet have their AC power connections or circuit orders completed. Additionally, area 3 with the broadband backbone has not been completed due to equipment delivery delays. Finally, 2 of the 4 base station sites in Denver (i.e. area 6) are still being engineered. With these exceptions, the testbed infrastructure buildout is finished.

3 Field Testing

Although many test planning activities were conducted during this period, no field measurements were made. We expect to continue field testing during the next quarterly period.

4 Future Research

We expect to complete the testbed infrastructure expansion during the next quarterly period. In addition, we plan to conduct further evaluations on the WACS and DECT systems operating in the 1900 MHz PCS band. Finally, we hope to conduct propagation tests (using continuous-wave RF test beacons) and delay spread measurements (in conjunction with the NTIA).

As indicated in the last quarterly report, the testbed facility has been offered to the PCS standards bodies (e.g. Joint Technical Committee, PCS Technology Advocacy Group). As such, we are discussing field trial activities with several outside vendors & service providers. These activities may result in non-U S WEST field testing using the Boulder testbed facilities.