

**Interim Progress Report For FCC Experimental Licenses
0006-EX-PL-2000 and 0075-EX-ML-2001**

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1 BACKGROUND

In April 2000, the FCC granted experimental license 0006-EX-PL-2000 to ArrayComm, Inc., to operate in the San Diego area in the 2300-2305 MHz band for the purposes of market validation and continued technical validation of ArrayComm's i-BURST portable broadband data system. In the third quarter of 2001, ArrayComm requested and was granted a modification of the above license, pursuant to experimental license 0075-EX-ML-2001, to move the location to San Jose, California, change the power limits to those for PCS, and to change the frequency band to 1910-1920 MHz. ArrayComm currently has a pending application (Renewal File Number: 0033-EX-RR-2002) to change the expiration date to 2004.

The purpose of this report is to provide information as to what was accomplished during the 2000-2001 period under the 0006-EX-P2-2000 and 0075-EX-ML-2001 licenses.

2 TRIAL PREPARATION

From April 2000, substantial progress was made in all areas necessary to the success of the trial that will be conducted under the aegis of the experimental license. Major accomplishments are detailed below. Many of these accomplishments were made with the participation of ArrayComm's commercial partners. As this report is a public document, the identities of those partners will not be revealed herein. They can be made confidentially available to the Commission upon request.

2.1 TECHNOLOGY DEVELOPMENT

All major elements of the i-BURST air interface were finalized during the period covered by this report. Prototype base stations and subscriber devices were fabricated at ArrayComm's facility in San Jose, and on-air testing at 1.9 GHz has been ongoing since mid-year 2000. The testing continues to provide performance data for the validation and refinement of the air interface.

Significant development progress was also made on the wired network aspects of the i-BURST system architecture. Most notably, ArrayComm and Redback Networks completed the design, integration and test of a mobility solution for i-BURST subscriber devices that makes radio-layer handovers in the network — e.g., as users move from cell-to-cell — transparent to the users' IP sessions. This solution is substantially different from those being employed in other wireless IP systems. It possesses very low protocol overhead, and can be supported by existing, wired, broadband aggregation devices. Also in this period, ArrayComm has begun integration of an open standard solution for mobility with i-BURST using a packet data switched network.

2.2 TRIAL EQUIPMENT DEVELOPMENT

Base stations at 2.3 GHz have been under development; this prototype equipment will be modified to operate at 1.9 GHz. In addition, ArrayComm, in cooperation with two of its partners, has been developing 2.3 GHz user terminals for the trial. These efforts will result in small, power efficient terminals with standard interfaces (PC Card and USB) that will interface with a variety of consumer devices, including laptop computers. These developments can be readily adapted for use at 1.9 GHz.

2.3 RF SURVEYS AND COORDINATION

Since the grant of license 0006-EX-PL-2000, ArrayComm has been assessing both the spectrum and terrain environment in the San Diego area. The spectrum was surveyed for activity and background noise. A number of potential sites were measured to identify whether noise would occur and when. With the transfer of the test site to San Jose, the work done in this area in San Diego will no longer be relevant.

Fortunately, however, similar tests have begun and continue in the San Jose area for 1.9 GHz. The results of these on-going surveys show, as of now, no interference or noise sources that would render either the location or the band unsuitable for the planned market test. The only licensee in the San Jose area is Contra Costa County, WAV 72, located in Martinez, California, approximately 60 miles from the planned test area. There is severe intervening terrain that will further preclude interference.

3 SYSTEM ECONOMICS

Continued technology definition and validation both in San Diego and in San Jose have contributed to, and been complemented by, increased understanding of the system economics and business models for the i-BURST access network operators, service providers and other entities involved in the i-BURST value chain. It has become clear that, due to the high spectral efficiency of the i-BURST radio access system, a substantial number of base stations in the system will be coverage limited, rather than capacity limited, in the early years of commercial deployment. As noted, for this reason, higher base station and user terminal EIRP's — similar to those of PCS systems — will be tested during the San Jose trial.

4 CONCLUSIONS

Significant progress has been made over the last two years towards a trial of ArrayComm's i-BURST system under the terms of FCC experimental licenses 0006-EX-PL-2000 and 0075-EX-ML-2001. The underlying technology has significantly matured, over-the-air tests have been conducted, trial equipment is under development, and the technical and market aspects of planning for the trial itself are well underway. The trial at the new venue is scheduled to begin in the summer of this year.

The opportunity to conduct the trial has been and will continue to be instrumental in attracting partners to the i-BURST program.

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