

## Form 442 Question 7: Experimentation Description

The scope of this project and the need for an experimental license is the testing and evaluation of CDMA2000 WLL equipment. Bechtel's involvement on large, often remote, projects all over the world presents the challenge of providing communications to the jobsite. As technologies have evolved, so have the needs of the employees. CDMA2000 1X EV/DO is one such technology that Bechtel hopes to evaluate as a possible solution to these needs.

The objectives sought to be accomplished during this task is a comprehensive evaluation of the Huawei CDMA2000 equipment, specifically 450 MHz. Huawei equipment was selected for evaluation because they are the market leader with over two thirds of the worldwide market for 450 MHz CDMA WLL equipment. The excellent propagation characteristics of the 450 MHz band were also a major factor in the selection of a WLL solution. Although most of the testing will take place in a telecoms lab, a small portion of over-the-air testing is required. Therefore, we propose placing an antenna on the roof of Bechtel Park Building 5 for limited campus coverage and drive testing around the immediate area. Frequencies are flexible, but we have initially chosen International Class A (452.5 – 457.5 UPLINK, 462.5 – 467.5 DOWNLINK) first and second 1.23 MHz carriers.

This analysis will provide several benefits. First, it can possibly serve as a communications (voice and data) platform for remote jobsites. Second, it can serve as a consolidation of previous technologies. Lastly, infrastructure equipment can be used as an incentive for sustainable development.