Appendix I

Date: 4 February 2000

To: Ms. Kathleen Wallman, Chair
National Coordination Committee

From: Glen Nash, Chair
Technology Sub-committee

At a meeting held on January 27, 2000, in San Francisco, CA, the Sub-committee reached consensus on a recommended standard for data operations on the narrowband interoperability channels. These standards come from the same family of ANSI standards that include the previously recommended standards for voice operations.

Background

The Interoperability Sub-committee has recommended that two 12.5 kHz wide sets of interoperability channels be designated for data operations. They also recommended that equipment operating on these channels be capable of carrying data at a gross channel rate of 9.6 kbps (kilobits per second) with an information throughput of 4.8 kbps or better and with a bit error rate of 1 in 10^6 bits or better. While the specifics of these requirements were not formally established until the Interoperability Sub-committee meeting held prior to the Technology Sub-committee meeting on January 27, the general requirements had been discussed in earlier meetings.

At the NCC meetings held on January 13-14, 2000, in Washington, DC, manufacturers and other committee participants were asked to recommend alternative technologies that could be used to satisfy the data interoperability requirements. Discussions ensued amongst Committee members via the Sub-committee list server and continuing through the January 27 meeting. As a result of these discussions, only one technology was suggested. This technology was evaluated for compliance with the operational requirements and was found to be compliant. In arriving at consensus to make the following recommendation, no objections were expressed by any participant.

Recommendation

The Technology Sub-committee recommends a data interoperability standard based upon the following documents:

ANSI/TIA/EIA 102.BAAA	Project 25 FDMA Common Air Interface
TIA/EIA/IS 102.BAEA	Project 25 Data Overview
TIA/EIA/IS 102.BAEB	Project 25 Packet Data Specification
TIA/EIA/IS 102.BAEC	Project 25 Circuit Data Specification
TIA/EIA/IS 102.BAEE	Radio Control Protocol

The first document describes operation of the basic radio channel and is the same document previously recommended for the voice interoperability mode. As was

recommended for the voice mode, the Sub-committee recommends that the 12.5 kHz bandwidth form of modulation be adopted at this time. A 6.25 kHz bandwidth form of modulation also is described in this document, however, several manufacturers have advised the Sub-committee that there are several technological problems that must be overcome before equipment will be available in the marketplace. These manufacturers also advise the Sub-committee that it likely will be five years or more before those technological problems are overcome. Thus, for reasons of defining an interoperability standard that will enable use of the 700 MHz band as soon as possible, the Technology Sub-committee recommends adoption of the 12.5 kHz bandwidth form of modulation. While future migration to a 6.25 kHz form of modulation may be possible, a decision to define a 6.25 kHz standard should be delayed until the underlying technological problems are better understood.

The remaining four documents apply specifically to the data mode of operation. These documents, as listed above, are "interim standards" (indicated by the "IS" prefix). The Sub-committee has been advised that each of these documents has successfully passed the balloting process required for publication as an ANSI-standard and that each document currently is pending publication by ANSI. Thus, while each of the documents currently shows the "IS" prefix, this prefix will be changed to "ANSI/TIA/EIA" once the documents are published by ANSI to indicate their status as fully approved standards. Normally, publication of the document is a "pro forma" event that follows completion of the balloting process and the forwarding of appropriate documentation to ANSI. ANSI rules, however, prohibit identifying the document with the "ANSI/TIA/EIA" prefix until it has been officially published.