IEEE P802.11
Wireless Access Method and Physical Layer Specifications

Title: **TTC 3-2 Report**

F.Y.Simon
IBM
C70A/B673
PO Box 12195
Research Triangle Park
NC. 27709 USA
Tel: (919) 254-4584
Fax: (919) 254-5410
Email:FYGS@VNET.IBM.COM

Introduction

The Telecommunication Technology Council (TTC) was established on October 25, 1985. The purpose of the TTC is to contribute to standardization activities on telecommunications and to spread their standards in Japan. It makes domestic standards in conformity with CCITT standards.

TTC works on standardization of network interconnection protocols. It is divided into six working groups:

- TTC 1 WG:	Network interface
- TTC 2 WG:	User-Network interface
- TTC 3 WG:	Enterprise network interface
- TTC 4 WG:	Upper layer protocols
- TTC 5 WG:	Coding method
- Technology Survey WG:	Technology survey

The wireless LAN sub-working group belongs to TTC 3-2; it works on interconnection protocols between wireless LAN and wired LAN.

The TTC is currently working on a Technology Survey Report to be released in October 1992. TTC standard is planned to be released in 4Q - 1994.

The editors of the Technology Survey Report are Mr. Y. Kajita (Sumitomo Electric), Mr. Y Moritani (Mitsubishi Electric) and Mr. Y. Kanada (IBM Japan).

Technology Survey Report

The TTC 3-2 is working on the wireless LAN related sections of the report.

Section 2.1 - Status of Standardization Activities -

Summary of discussions in the IEEE 802.11 committee is described in this section. The following protocols are proposed:

Physical Layer

- Narrow-band Digital Modulation
- Direct Sequence of Spread Spectrum
- Frequency Hopping of Spread Spectrum
- Infrared PPM

MAC Layer

- Hybrid Protocol - K. Biba (Xircom)
- Sequential Asynchronous Access Method - C. Rypinski (Lace)
- Slotted ALOHA Demand Assignment Multiple Access - J. Cheah (Hughes Network System)
- MAC Protocol for Wireless LAN - K. Natarajan (IBM)
- High Performance Access Control Method for Base Station Controlled Systems - Y. Takiyasu (Hitachi)

Section 2.2 - Samples of Wireless LAN Products -

Overview of the following four wireless LAN products are introduced:

- Altair-Plus　　(Motorola)
- WaveLAN　　(NCR)
- ARLAN　　(Telesystems)
- Freeport　　(Windata)

Section 5 - Coverage of TTC Standard -

The network models are currently being updated. The following models are going to be discussed:

- Distributed Network
- Single-cell Network
- Multi-cell Network
- LAN Interconnection Network

Section 6.2 - MAC Layer Protocol -

In this section, several wireless MAC protocols will be introduced. The candidates are:

- Distributed access control:

- CSMA/CD
- CSMA/CA

- Centralized access control:

    - CSMA/CD with a buffer repeater
    - Reservation-ALOHA
    -ICMA/PE (Idle-signal Casting Multiple Access / Partial Echo)

The details for these MAC protocols are not yet described.

Section 7.1 - Support of Existing LAN Terminals -

Two kinds of services are proposed for existing LAN terminals:

    - Wireless LAN adapter with IEEE 802.3 AUI interface, and
    - Wired LAN interconnection with wireless LAN.

Section 7.2 - Network Interconnection with Wired LAN -

Three kinds of wireless LAN / wired LAN interconnection methods are described:

    - Buffered Repeater
    - Bridge
    - Router

Next Meeting

The next meeting of the TTC 3-2 will be held on September 18, 1992. Discussion on the whole report is planned.

Acknowledgment

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