IEEE P802.11
Wireless LANs

EUROPEAN RADIO LAN STANDARDISATION

Ft Lauderdale FL, 11-15th November 1991

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1.   Introduction

In February, ETSI Technical Committee RES (Radio Equipment & Systems) approved the establishment of an ad-hoc group (AHG) to study Radio Local Area Networks. The AHG has met four times to date, the first meeting taking place in May. Attendance has been good with 44 members representing 24 manufacturers, 5 telecommunications operators and 2 regulators having participated in one or more meetings.

An introduction to the terms of reference and initial work of the group was given in IEEE 802.11/91-71 (Kauai). This paper is intended to give a progress report on the activities of the AHG and the current status of radio LAN standardisation in Europe.

2.   Strategies

The report submitted to TC RES in June included an initial categorisation of services in order to provide a basis for further work. The AHG chose to divide short-range wireless data systems into three fairly broad categories. While it was recognised that many issues such as range and penetration of building structures would need to be considered, an initial guide to the performance requirements of such services was included. Recently, progress has been made in defining a clear strategy that addresses each of these categories. Considering each of the categories in turn:

Category 1

A flexible service profile characterised by medium, non-critical performance. Relevant to a wide range of specialised applications from portable data capture and office data communications to domestic control and telecommand. Terminal bit rate in the region of 200Kbps, system density <1Mbps/ha/floor

Such services will be included as part of the general deregualtion of the low power bands in Europe. A standard for wireless communication equipment using wide-band modulation including spread spectrum is to be drafted by Sub Technical Commitee (STC) RES-8. The scope of this standard will cover a range of equipment used for short distance, on premises wireless communications on a non-protected, non-

interference basis. The timescales for this activity will be decided at the next RES meeting. In parallel with this, STC RES-2 will draft an associated standard defining the methods of measurement for the Type Approval of such equipment. Work programmes for these activities were drafted by the AHG at the last meeting and will be discussed at TC RES in November.

Category 2

A service offering high performance and good reliability combined with low bulk, cost and power consumption. Primarily aimed at addressing the specific needs of advanced, predominantly portable terminals in office networking. Terminal bit rate in the region of 2Mbps, system density 3-10Mbps/ha/floor

At the meeting of TC RES in June the relevance of DECT as an ETSI standard for category 2 RLANs was agreed and the undesirability of any duplication of standards was noted.

Category 3

Very high performance services, optimised initially for the replacement of wiring in advanced distributed computing environments, with consequent demands on reliability and efficiency. Portable and fixed terminals to be supported. Terminal bit rate in the region of 20Mbps, system density 100-1000Mbps/ha/floor

At the last AHG meeting the group drafted work programmes for the generation of a high performance radio LAN standard (HIPERLAN). The work programme will produce three deliverables:

i)   An ETSI Technical Report (ETR) defining the required Services and Facilities

ii)   An ETSI Technical Specification (ETS) coving the techncial characteristics, modes of operation and management facilities

iii) An ETS covering conformance testing criteria for Type Approval

The generation of this standard will complement a spectrum allocation made by the CEPT.

The need for active communication to be maintained with IEEE 802.11 is noted in the work programme documents. The group already has project team funding agreed by the ETSI Technical Assembly for 1992 both to provide official ETSI representation at IEEE 802.11 and support to the AHG during the generation of the Services and Facilities specification.

Timescales for the proposed work programme will be discussed at the November meeting of TC RES.

4.   Regulatory Developments

The AHG is working closely with the project team (PT) considering radio LANs within the CEPT Frequency Management group. The Chairman of the CEPT project team has participated in the last two AHG meetings. Several members of the AHG have also attended the CEPT project team meetings. This constructive relationship is making progress to ensure that the standards developed within ETSI are supported by harmonised European spectrum allocations.

5.   Future Activities

The AHG next meets on the 5th December, possibly as a full sub-technical committee, to begin structuring the work leading up to the preparation of a Services and Facilities Requirements Specification.

Annex

The officers of the ETSI RES RLAN Ad-hoc group are:

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BACKGROUND

ETSI Technical Committee RES (Radio Equipment & Systems) approved the establishment of an ad-hoc group (AHG) to study Radio Local Area Networks in February.

Four meetings to date, the first meeting taking place in May

44 members participated in one or more meetings representing
- ❖ 24 manufacturers
- ❖ 5 telecommunications operators
- ❖ 2 regulators

Constructive relationship with CEPT

Introduction to the terms of reference and initial work of the group given in IEEE 802.11/91-71 (Kauai)

CATEGORY 1

A flexible service profile characterised by medium, non-critical performance. Relevant to a wide range of specialised applications from portable data capture and office data communications to domestic control and telecommand.

Terminal bit rate in the region of 200Kbps, system density <1Mbps/ha/floor

Will be included as part of the general deregualtion of the low power bands in Europe

STC RES-8 to draft a standard for wireless communication equipment using wide-band modulation including spread spectrum - scope will cover a range of equipment used for short distance, on premises wireless communications on a non-protected, non-interference basis

STC RES-2 will draft an associated standard defining the methods of measurement for the Type Approval of such equipment.

Work programmes drafted by the AHG at the last meetingto be discussed at TC RES in November.

CATEGORY 2

A service offering high performance and good reliability combined with low bulk, cost and power consumption. Primarily aimed at addressing the specific needs of advanced, predominantly portable terminals in office networking.

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Relevance of DECT as an ETSI standard for category 2 RLANs agreed and the undesirability of any duplication of standards noted.

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CATEGORY 3

Very high performance services, optimised initially for the replacement of wiring in advanced distributed computing environments, with consequent demands on reliability and efficiency. Portable and fixed terminals to be supported.

Terminal bit rate in the region of 20Mbps, system density 100-1000Mbps/ha/floor

Work programmes for the generation of a high performance radio LAN standard (HIPERLAN) drafted:

❖   An ETSI Technical Report (ETR) defining the required Services and Facilities

❖   An ETSI Technical Specification (ETS) coving the techncial characteristics, modes of operation and management facilities

❖   An ETS covering conformance testing criteria for Type Approval

Project team funding agreed by the ETSI Technical Assembly for 1992:

❖   provide official ETSI representation at IEEE 802.11

❖   support the AHG during the generation of the Services and Facilities specification.

Work will complement a spectrum allocation made by CEPT

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