

**EUROPEAN RADIOCOMMUNICATIONS COMMITTEE**

ERC Decision  
of 7 March 1996  
on the harmonised frequency band  
to be designated for the introduction of  
High Performance Radio Local Area Networks  
(HIPERLANs)  
(ERC/DEC/(96)03)

*Replaced by ERC/DEC/(99)24)*



WITHDRAWN

## EXPLANATORY MEMORANDUM

### 1. INTRODUCTION

HIPERLANs (High Performance Radio Local Area Networks) are radio based local area networking (RLAN) solutions, intended for connectivity between PCs, laptops, workstations, servers, printers and other networking equipment. HIPERLANs thus enable the replacement of physical cables for the connection of data networks within a building, providing a more flexible and, possibly, a more economic approach to the installation, reconfiguration and use of such networks within the business and industrial environments.

Existing RLANs and other wide band data transmission systems are already operating in the ISM frequency bands. In order to ensure high reliability and high data transfer rates HIPERLANs, however, require a predictable sharing environment. The ISM bands are, therefore, not suitable to meet the requirement of HIPERLANs and other frequency bands have been identified for these kind of services.

### 2. BACKGROUND

In 1990 the European Radiocommunications Committee (ERC) published the CEPT Recommendation T/R 22-03 E, in which the frequency range 59 to 62 GHz is designated for RLANs (referred to as Cordless Local Area Networks) enabling high data transfer rates in a small coverage area. Soon after, in 1991, followed ERC Report No 1 on the harmonisation of frequency bands for RLANs and subsequently CEPT Recommendation T/R 10-01 E relating to Wide Band Data Transmission systems using spread-spectrum technology in the 2.5 GHz band.

T/R 10-01 recognises the need to identify suitable radio spectrum to meet the requirements of a future European Telecommunications Standard (ETS) for HIPERLANs.

After consultation with the European Telecommunications Standards Institute (ETSI), it was established that HIPERLANs required a predictable sharing environment and a band of at least 150 MHz, estimated from the instantaneous data rate of 20 Mbits/s per terminal and an average of 1000 Mbits/s/floor/hectare. A requirement for two different frequency bands was foreseen, one offering good frequency re-use within buildings and the other offering good in-building penetration.

In co-operation with ETSI and after further analysis and spectrum engineering studies, suitable spectrum was identified in the 5 GHz and the 17 GHz frequency ranges. Based on this the ERC approved CEPT Recommendation T/R 22-06 in 1992. The Recommendation was revised in the beginning of 1994, based on a request from ETSI. The restriction with regard to integral antennas was removed, thus allowing both integral and external antennas to be used.

The Detailed Spectrum Investigation Phase I (DSI I) completed in 1994, identified HIPERLANs as the major utilisation in the 5150-5250 MHz band and in the 5250-5300 MHz band on a national basis.

The ETSI standard 300 652 for HIPERLANs in the 5 GHz band is expected to be completed during 1996. Work on an ETSI standard for HIPERLAN in the 17 GHz frequency range has not yet been initiated.

### 3. REQUIREMENT FOR AN ERC DECISION

The allocation or designation of a frequency band for its use by a service or a system under specified conditions in CEPT member countries is laid down by law, regulation or administrative action. The ERC recognises that for HIPERLANs to be introduced successfully throughout Europe, manufacturers and operators must be encouraged to make the necessary investments in this pan-European radiocommunication system and service. The ERC, therefore, believes it will be necessary to designate a frequency band for HIPERLANs under specified conditions. A commitment by CEPT member countries to implement an ERC Decision will depend on a clear indication that the required frequency band will be made available on time and on a European-wide basis.

**ERC DECISION  
of 7 March 1996**

**on the harmonised frequency band to be designated for the introduction of  
High Performance Radio Local Area Networks (HIPERLANs)  
(ERC/DEC/(96)03)**

The European Conference of Postal and Telecommunications Administrations,

*considering:*

- a) that the use of stationary as well as portable computer equipment, computer terminals and peripheral equipment by the business and industrial community is rapidly increasing;
- b) that there is an increasing requirement to exchange information between such equipment through Local Area Networks (LANs);
- c) that existing LANs consist of equipment interconnected by cable resulting in a rigid hardware structure;
- d) that LANs using radio (RLANs) enable a more flexible approach to the installation, reconfiguration and use of such networks, thus minimising the costs of cable and rewiring required to handle changes to and up-dates of the network;
- e) that there is a need to provide harmonised spectrum which enables the rapid deployment of High Performance RLANs;
- f) that ETSI has developed a standard for High Performance Radio Local Area Networks (HIPERLANs), (ETS 300 652);
- g) that the frequency band 5000-5250 MHz is allocated to the Aeronautical Radionavigation Service to be used for the Microwave Landing System (MLS) but there are no international plans for use of the frequency band 5150-5250 MHz by the aeronautical community;
- h) that compatibility studies and spectrum investigations have shown that sharing between HIPERLANs, radionavigation and radiolocation systems operating in the 5 GHz frequency range will be possible under certain conditions;
- i) that with effect from 1 January 1997 WRC-95 allocated the frequency band 5150-5250 MHz to the Fixed Satellite Service (Earth-to-Space) for Mobile-Satellite feeder links, on a co-primary basis with Aeronautical Radionavigation. The band 5091-5150 MHz was similarly allocated on a temporary basis until 2010, subject to conditions designed to protect the International Standard Microwave Landing System which has precedence in the band 5000-5150 MHz;
- j) that compatibility studies and spectrum investigations have shown that sharing between HIPERLANs and MSS feeder links in the 5 GHz frequency range will be possible under certain conditions;
- k) that the band 5250-5300 MHz for the expansion of HIPERLANs may be designated on a national basis, according to market demands.

DECIDES

1. that for the purpose of this Decision High Performance Radio Local Area Networks (HIPERLANs) shall mean equipment complying with the European Telecommunications Standard, ETS 300 652, on HIPERLANs;
2. to designate the frequency band 5150-5250 MHz for HIPERLANs, to take effect by 1 July 1996.
3. that CEPT Member Administrations shall communicate the national measures implementing this Decision to the ERC chairman and the ERO when the Decision is nationally implemented.

Note:

Please check the ERO web site ( [www.ero.dk](http://www.ero.dk) ) under "Documentation / Implementation" for the up to date position on the implementation of this and other ERC Decisions.

WITHDRAWN