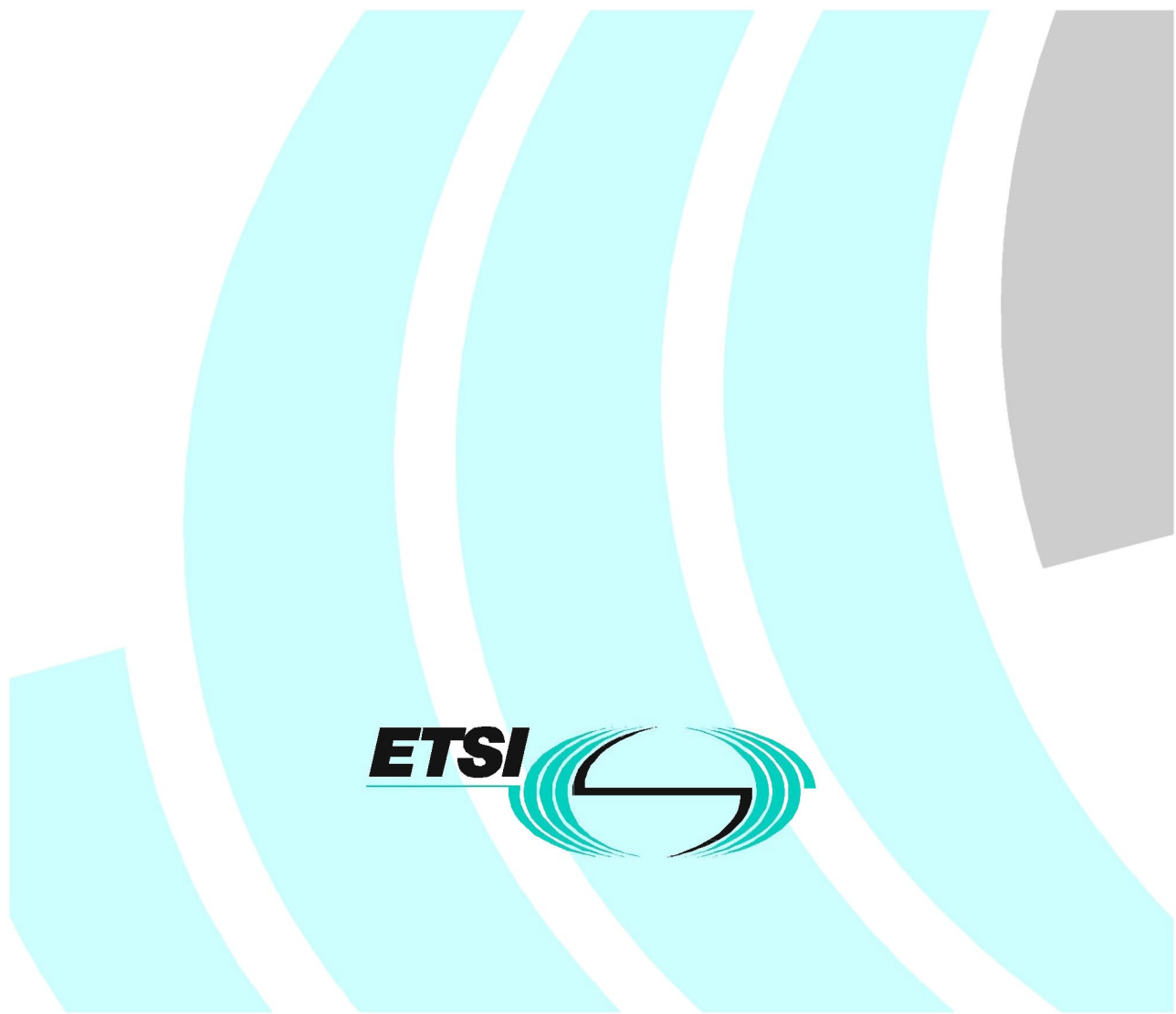


**Broadband Radio Access Networks (BRAN);
High Performance Radio Local Area Network (HIPERLAN)
Type 2;
Requirements and architectures for
wireless broadband access**



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Foreword

This Technical Report (TR) has been produced by ETSI Project Broadband Radio Access Networks (BRAN).

The present document describes the requirements and architectures that are applicable to High Performance Radio Local Area Network (HIPERLAN) Type 2. HIPERLAN Type 3 has been subsumed by licence exempt HIPERACCESS [2f]. HIPERLAN Type 4 has been renamed to HIPERLINK. The latter two are described in separate reports.

Introduction

Wireless networks have enjoyed an increased demand from the general public as well as from business and other professional users.

Wireless networks in existence today range from cellular phones to high speed digital networks supporting high speed computer communications. They operate in licensed as well as in unlicensed frequency bands.

At the same time, wired telecommunications networks have shown a remarkable evolution towards higher transmission rate and support for multi-media applications rather than simple voice oriented services.

ETSI has recognized the trend towards better and faster wireless networking demands from all kinds of users. Working with the CEPT resulted, in the period 1990 through 1992, in spectrum designations in the 2,4 GHz ISM band, in the 5,2 GHz band and in the 17,1 GHz band to allow the development of a variety of standards for wireless networks. The 2,4 GHz ISM band was intended for medium speed "wide band data systems using spread spectrum techniques". The latter two bands were assigned to HIPERLANs, a collective reference to High Performance Radio Local Area Networks. ETSI has identified the need for a family of HIPERLAN standards that together support a wide variety of usage scenarios and applications.

HIPERLAN Type 1 provides an ISO/IEC 8802-1 [5] compatible wireless local area network.

HIPERLAN Type 2 is intended to provide short range broadband wireless access to Internet Protocol (IP), Asynchronous Transfer Mode (ATM) networks and Universal Mobile Telecommunications System (UMTS).

HIPERLAN Type 1 operates in the 5,2 GHz licence exempt band; Type 2 is intended to operate in the 5,2 GHz band and other 5 GHz bands (note 1); HIPERLINK is intended to operate in 17,2 GHz band. The CEPT has designated 100 MHz of spectrum in the 5 GHz band for HIPERLANs with a further 50 MHz available at the discretion of national administrations and 200 MHz in the 17 GHz band. (See CEPT Recommendation T/R 22-06 [1] and ERC Decision 96/03 [6]). Because the current allocation in the 5,2 GHz band is expected not to be sufficient for the projected needs of users and their applications, ETSI has initiated discussions with CEPT aimed at making more spectrum available in this range.

NOTE 1: Other frequency bands around 4 GHz to 6 GHz may be used on a licensed basis.

NOTE 2: The FCC has allocated in the USA 300 MHz of spectrum at 5 GHz band referred to as the U-NII (Unlicensed National Information Infrastructure) bands, in which HIPERLAN devices may be operated.

Developments in other types of wireless networks have increased the scope and potential applications of such networks. A primary example is UMTS (or IMT-2000 as it is known outside Europe). UMTS, in its various forms, supports a wide

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