

**PERFORMANCE AND AVAILABILITY REQUIREMENTS
AND OBJECTIVES FOR FIXED WIRELESS ACCESS
TO PUBLIC SWITCHED TELEPHONE NETWORK**

(Questions ITU-R 215/8 and ITU-R 140/9)

(1999)

1 Introduction

Wireless access systems are a viable alternative to wireline for service access to the public switched telephone network (PSTN). It is, therefore, desirable that the performance and availability of the wireless access systems be equivalent to that provided by wireline.

2 Scope

This Recommendation summarizes the objectives and requirements relating to performance and availability for wireless technology used for PSTN network access. Fixed wireless access (FWA) is the connection between the user network interface (UNI) and the PSTN local exchange (LE) service node interface (SNI) (see Fig. 1).

References to and extracts of material from existing ITU Recommendations dealing with performance and availability parameters are made where appropriate.

In the framework of the generic ITU Recommendations, performance objectives and requirements are a function of the service carried over the access. Requirements and objectives for basic telephony and low speed data services are not as stringent as required for high speed data or integrated services digital network (ISDN) services. In recognition of the differing requirements the following three classifications of services for wireless access systems have been used in developing this Recommendation:

Type 1: Analogue signals such as voice and voiceband data at rates up to 64 kbit/s (minimum 3.1 kHz audio as identified in ITU-T Recommendation G.174).

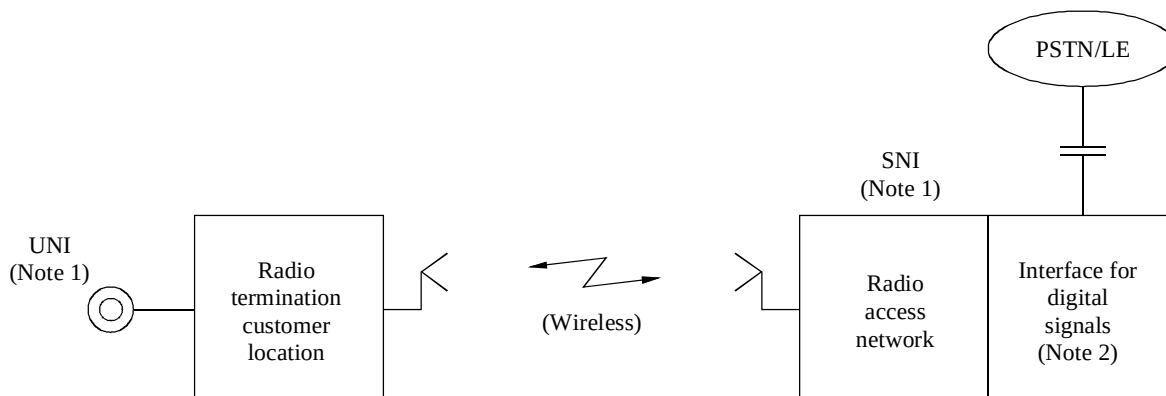
Type 2: Access bearer service from 64 kbit/s to bit rates below the primary rate.

Type 3: Digital services operating at the primary rate or above.

* This Recommendation was developed jointly by Radiocommunication Study Groups 8 (Working Party 8A) and 9 (Working Party 9B), and any further revision should be undertaken jointly.

** This Recommendation should be brought to the attention of Radiocommunication Study Group 8 (Working Party 8A).

FIGURE 1
Reference section for performance and availability objectives



Note 1 – Performance and availability criteria are defined at the SNI and UNI and should be measurable at these points.

Note 2 – Physical layer of the interface should be based on ITU-T Recommendation G.703.

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3 References

ITU-R Recommendations

- Recommendation ITU-R F.697: Error performance and availability objectives for the local-grade portion at each end of an ISDN connection at a bit rate below the primary rate utilizing digital radio-relay systems
- Recommendation ITU-R F.757: Basic system requirements and performance objectives for fixed wireless local loop applications using cellular type mobile technologies
- Recommendation ITU-R F.1104: Requirements for point-to-multipoint radio systems used in local grade portion of an ISDN connection
- Recommendation ITU-R F.1189: Error performance objectives for constant bit rate digital paths at or above the primary rate carried by digital radio-relay systems which may form part of the national portion of a 27 500 km hypothetical reference path
- Recommendation ITU-R F.1330: Performance limits for bringing into service of the parts of PDH and SDH paths and sections implemented by digital radio-relay systems

ITU-T Recommendations

- ITU-T Recommendation E.506: Forecasting international traffic
- ITU-T Recommendation E.541: Overall grade of service for international connections (subscriber-to-subscriber)
- ITU-T Recommendation G.113: Transmission impairments
- ITU-T Recommendation G.114: One-way transmission time
- ITU-T Recommendation G.173: Transmission planning aspects of the speech service in digital public land mobile networks