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Mobility Management Application Protocol (MMAP)

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Mobility Management Application Protocol (MMAP)

Secretariat

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Approved March 8, 1996

American National Standards Institute, Inc.

Abstract

This standard provides an application layer protocol for the exchange of information between peer applications running in a radio system and other network elements (e.g., mobility management platforms, switching systems, and other radio systems). The basic provisions of the protocol provide the semantics and syntax for operations necessary to support the mobility aspects of telecommunication services and call control in a wireless environment.

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Contents

Foreword (This foreword is not part of American National Standard T1.651-1996.)

T1S1 began addressing PCS requirements in ad-hoc committees in 1993. In response to the industry's desire to have a standard solution for support of PCS mobility, T1S1 established the Mobility Management Application Protocol subworking group in 1994 with a charter to create a stage 3 protocol for supporting the mobility management requirements of the radio systems defined by T1P1 and TR46 over the T1P1 'C' and 'D' interface and the TR46 'A' interface.

This document is the first issue of the MMAP to address the immediate industry needs. Future issues are planned to support aspects such as additional radio systems, alternate functional distributions, additional interfaces, convergence function definitions, and additional services.

This standard contains two annexes, which are for information only and are not considered part of this standard.

Suggestions for improvement of this standard will be welcome. They should be sent to the T1 Secretariat, c/o Alliance for Telecommunications Industry Solutions, 1200 G Street, NW, Suite 500, Washington, DC 20005.

This standard was processed and approved for submittal to ANSI by Accredited Standards Committee on Telecommunications, T1. Committee approval of the standard does not necessarily imply that all committee members voted for its approval. At the time it approved this standard, the T1 Committee had the following members:

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Working Group T1S1.1 on ISDN Services and Architectures developed this standard. Over the course of its development, the following individuals participated in the Working Group's discussions and made significant contributions to the standard:

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Mobility Management Application Protocol (MMAP)

1 Scope, purpose, and application

1.1 Scope

The Mobility Management Application Protocol (MMAP) is a communication protocol between a radio system and other network elements (e.g., mobility management platforms, switching systems, and other radio systems). The scope of the radio systems supported are the wireless Personal Communications Services (PCS) radio systems defined by T1 and TIA. The scope of the information and operations is the support of personal and terminal mobility in a wireless environment and includes functionality such as registration, location updating, authentication, roaming, and handover.

In addition the scope of the protocol includes the exchange of information and invocation of operations as necessary to support the mobility aspects of telecommunication services (e.g., call waiting) and call control (e.g., call origination, call termination, call clearing) in a wireless environment. The scope of the protocol is limited to complementary call management functions (e.g., call setup, call manipulation, call clearing, call progress indication).

1.2 Purpose

The purpose of MMAP is to provide a mechanism for the exchange of information between radio systems and other network elements to support personal and terminal mobility in a wireless environment.

1.3 Application

The MMAP is applicable to the interfaces between PCS radio systems and other network elements such as the interfaces defined by the ISDN “A” Interface in TIA and the “C” and “D” interface in T1.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this American National Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this American National Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below.

ANSI J-STD-007-1996, *Air Interface Specification for 1.8 to 2.0 GHz Frequency Hopping Time Division Multiple Access (TDMA) for Personal Communication Services*

ANSI J-STD-008-1996, *Personal Station-Base Station Compatibility Requirements for 1.8 to 2.0 GHz Code Division Multiple Access (CDMA) Personal Communications Systems*

ANSI J-STD-011-1996, *PCS IS-136 Based Air Interface Compatibility 1900 MHz Standard*

ANSI J-STD-014-1996, *Personal Access Communications System Air Interface Standard*

ANSI J-STD-018-1996, *Recommended Minimum Performance Requirements for 1.8 to 2.0 GHz Code Division Multiple Access (CDMA) Personal Stations*