

CEPT/CCH/GSM/WP4  
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at March GSM

GSM 03.41

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GSM RECOMMENDATION: 03.41

Title: Technical Realization of Basic MHS Access

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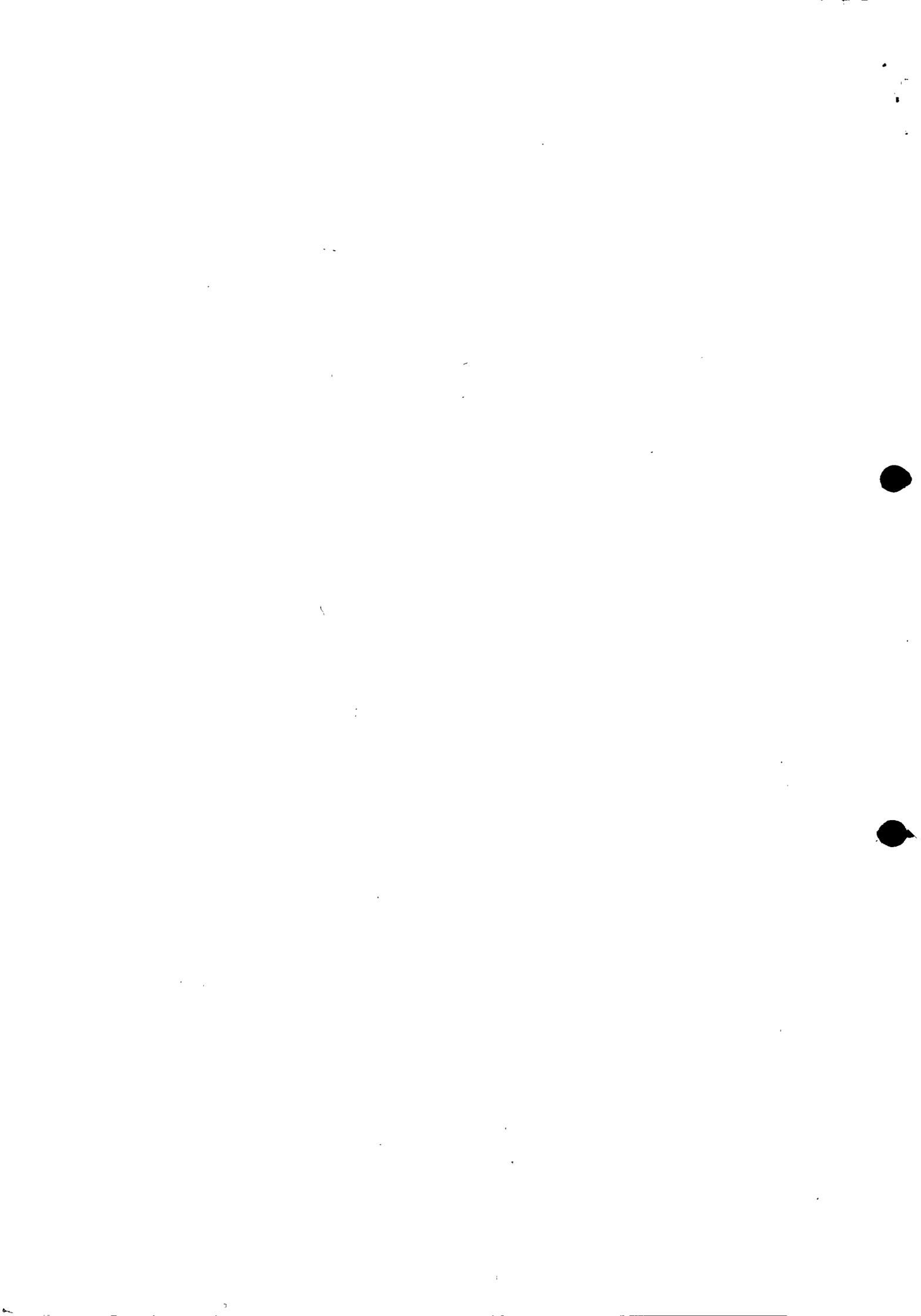
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## 0. SCOPE

This recommendation describes how an MS within a GSM PLMN may access a data Message Handling System within the same or another country. Basic MHS Access uses standard PAD access to the PSPDN which may connect to any MHS Server with which the user has service. The server is not generally operated by the PLMN. Since it employs standard PAD access, this service is available on all PLMNs equipped with this access.

## 1. INTRODUCTION

Basic MHS Access requires that:-

- a) the MS is equipped with the means to send and receive data. This generally includes a terminal (TE) and a Terminal Adaptor appropriate for the chosen bearer service.
- b) the GSM PLMN from which the MS is currently receiving service may interwork with a PSPDN via a PAD, generally within or accessible directly from the PLMN.
- c) a specified access procedure is defined for the user of the MS to a suitable access point, e.g. a mailbox in a Message Handling System with which the user has a service agreement.

This recommendation does not specify any higher layer protocols (such as X.400), so Basic MHS Access is generally available to any electronic mail system.

The user may select any data rate supplied by the PLMN (Teleservice 31: 300, 1200 bit/s E2 introduction; Teleservice 32: 2400, 4800, 9600 bit/s, A introduction).

## 2. KEY DEFINITIONS

**MHS Server:** Server providing messaging capability for a subscriber of the MHS. (Within the context of this recommendation, the subscriber of the MHS will be the mobile user).

**IA5:** International Alphabet no 5; a set of characters and their coding specified in the CCITT Rec. no. T.50

**NUI:** Network User Identification; identifying a user within a PSPDN; applied for user billing and detection of fraudulent calls

**MHS:** Message Handling System; in general related to systems offering service according to the CCITT X.400 Series of Recommendations. In this recommendation, however, MHS denotes any



electronic mail system.

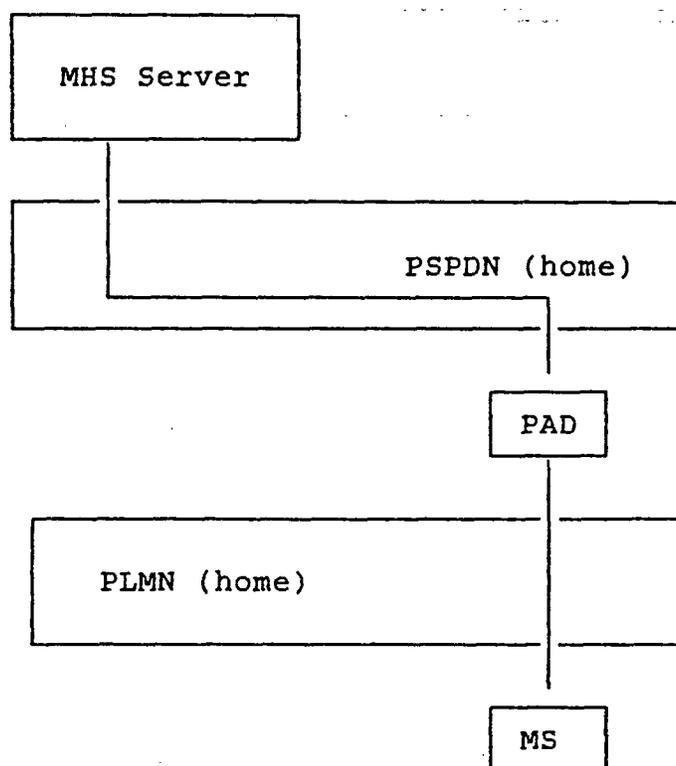
PSPDN: Packet Switched Public Data Network

PLMN: Public Land Mobile Network; defined by the CEPT GSM recommendations

PAD: Packet Assembly / Disassembly; defined by Rec. GSM 09.05, allowing simple asynchronous (start-stop) terminals to access PSPDNs.

### 3. BASIC MHS ACCESS SCHEME

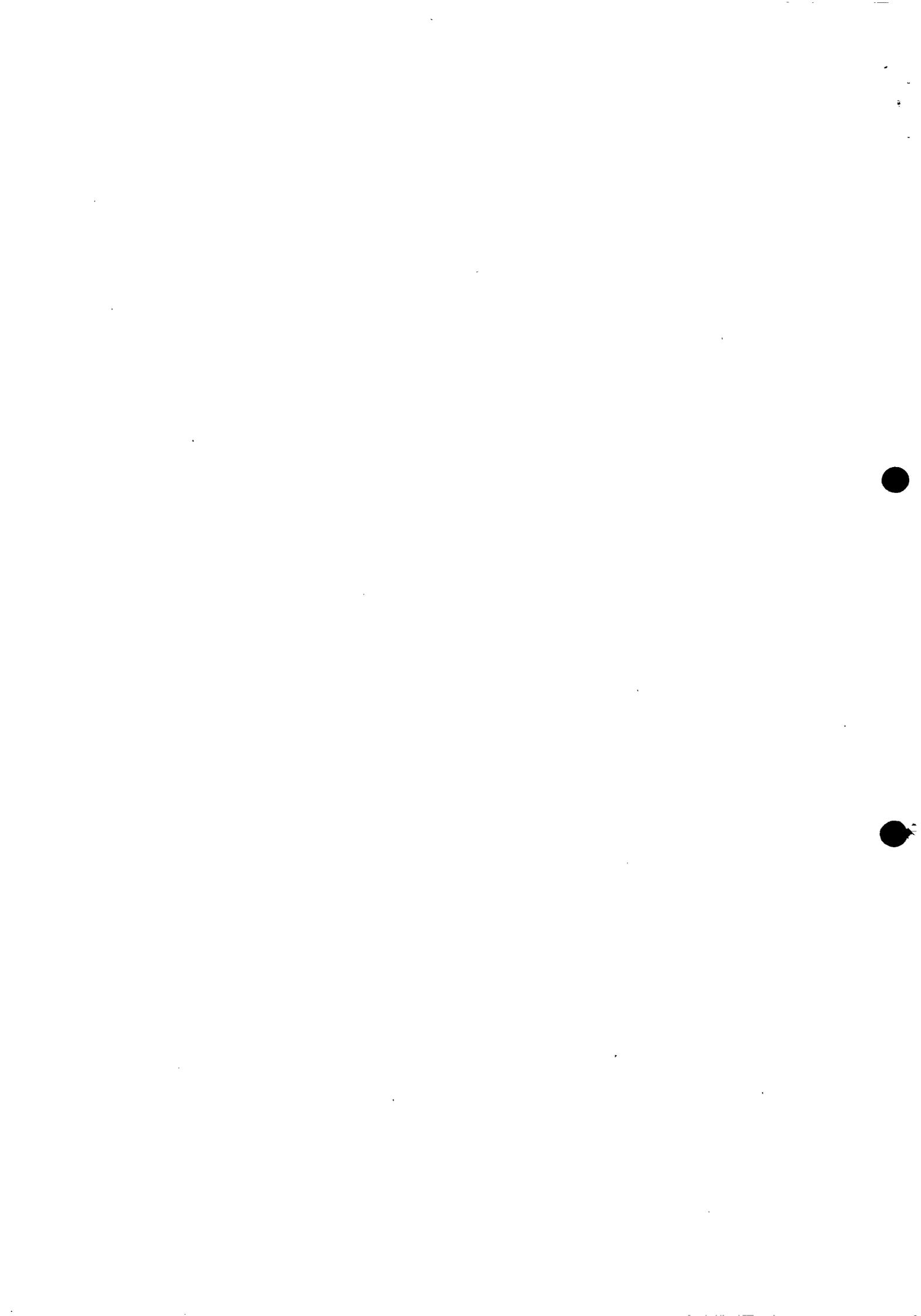
A user of a MS currently located inside his home PLMN or inside a visited GSM PLMN may access his/her MHS Server as shown in Figure 03.41/1 and 03.41/2, respectively.



Note 1: Alternatively the connection between the PAD and the MHS Server may be direct, excluding the PSPDN.

Note 2: The PAD may be accessed via an intermediate network when there is no direct connection via the PLMN available.

Figure 03.41/1 Basic MHS Access scheme for an MS being located within its home PLMN



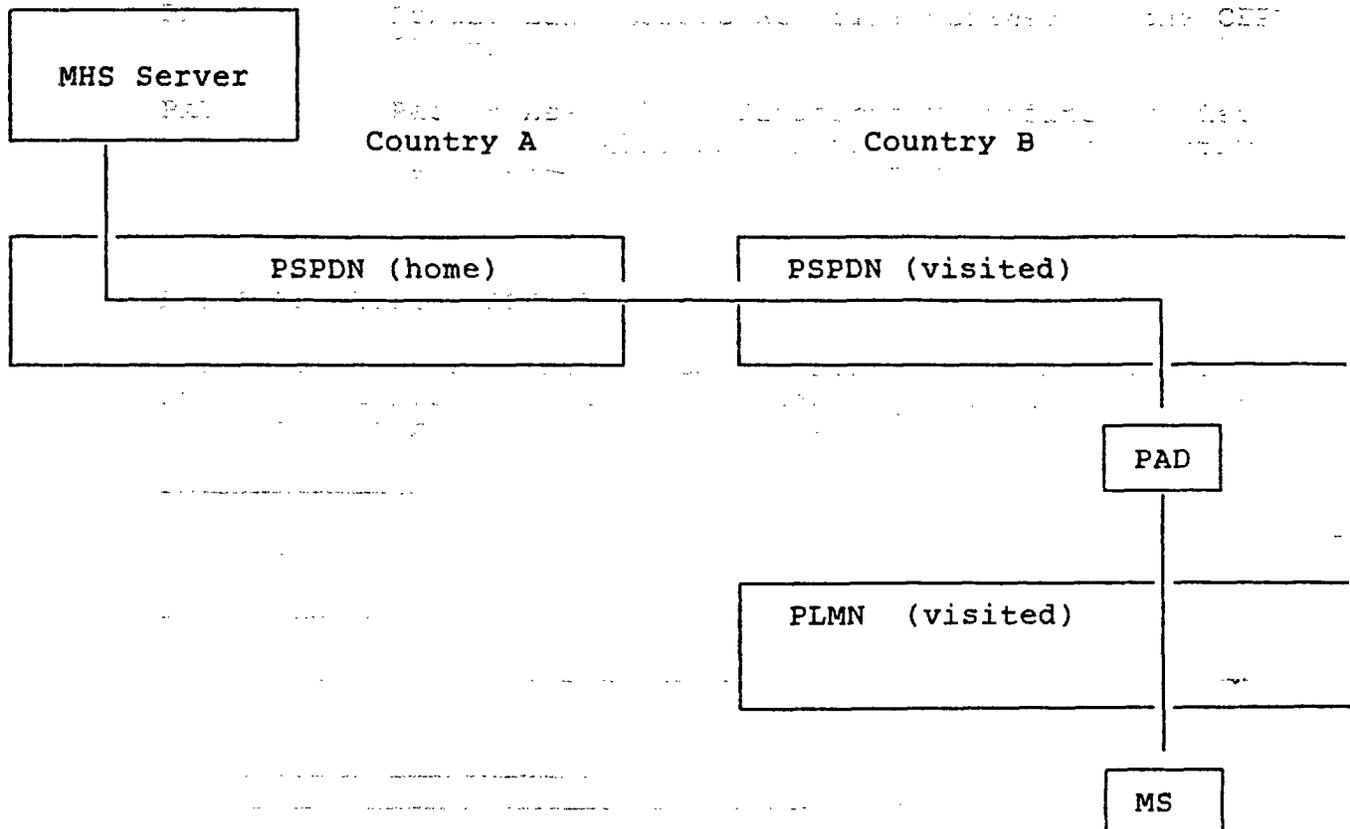


Figure 03.41/2 Basic MHS Access scheme for an MS in a visited PLMN, where PSPDN(s) carry the connection.

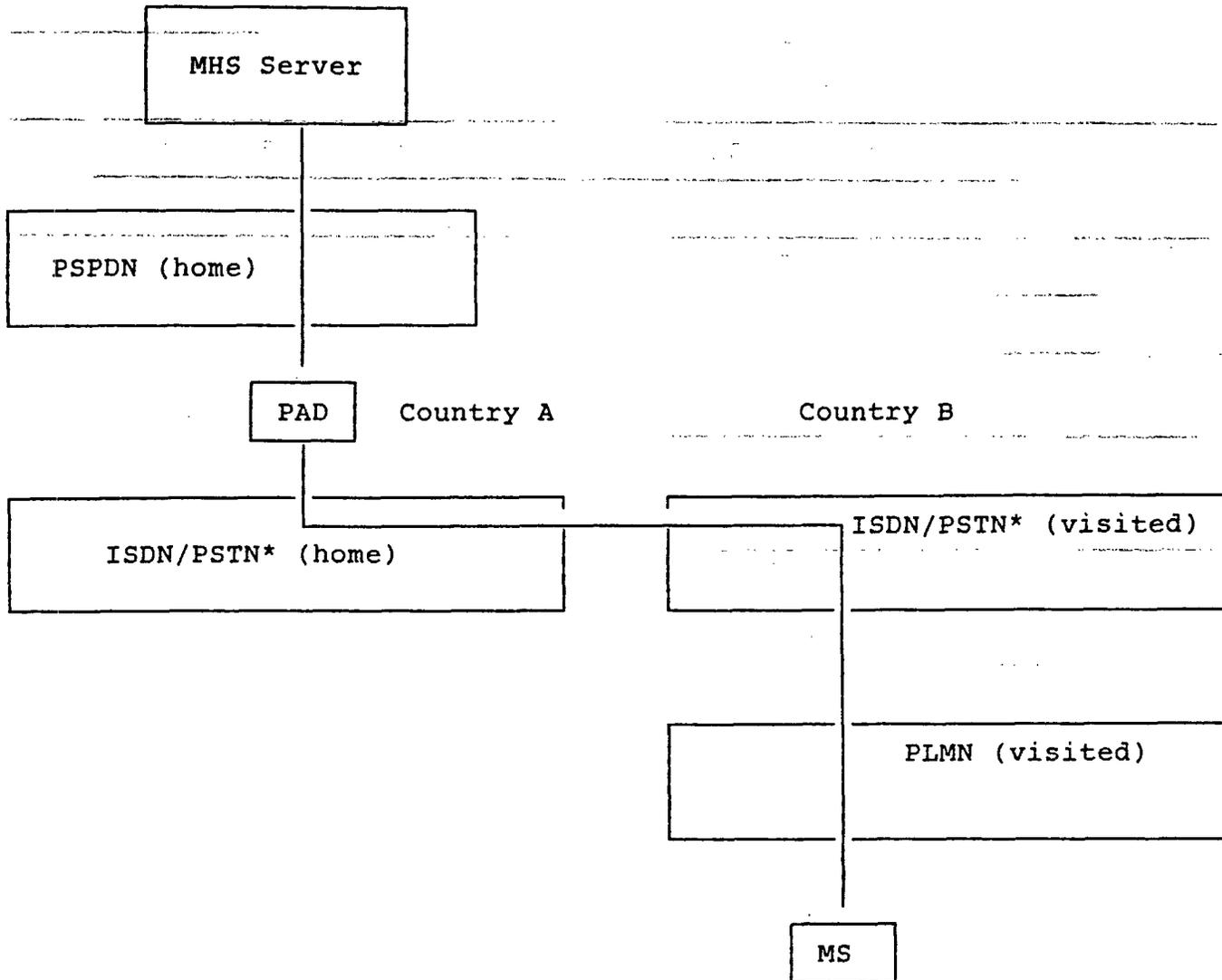
The mobile user connects to his/her MHS Server via:

- 1) the GSM PLMN from which the MS is currently receiving service
- 2) a PAD available for the Basic MHS Access service
- 3) the PSPDN(s) connecting the PAD to the MHS Server.

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The MS could also use the ISDN or PSTN as a carrier for accessing a PAD in a country different from where it is currently being located. These two schemes are shown in Figure 03.41/3.



\* In the PSTN case appropriate modem arrangement will be required

Figure 03.41/3 Basic MHS Access schemes for an MS in a visited PLMN, the connection being established either through ISDN or PSTN

The access scheme shown in Figure 03.41/2 is the preferred one for international access and, when nothing else is stated, this recommendation will refer to this access scheme. The access schemes shown in Figure 03.41/3 are alternatives which may be utilized when the preferred access scheme is - for some reason - not feasible.

The PAD access procedure shall be the same for every PLMN. A solution where the PAD address is location independent, is



to be preferred.

It shall be possible to access existing (public) PAD services. These services may however require the NUI to be presented, and may be different for each location of the PLMN.

#### 4. PAD FUNCTIONALITY OF THE BASIC MHS ACCESS

The PAD functionality of the Basic MHS Access should be in accordance with the Rec. GSM 09.05. The Basic MHS Access is implemented using teleservices 31 and 32 as described in the Rec. GSM 02.03. The bearer service of the link MS - PAD should be the bearer service 41, 42, [43], 44, 45 or 46 within the Rec. GSM 02.02.

#### 5. REQUIREMENTS TO THE MHS SERVER <--> PSPDN INTERFACE

It is required that the MHS Server <--> PSPDN interface is according to the CCITT Rec. X.25.

#### 6. BASIC MHS ACCESS SET-UP PROCEDURE

The Basic MHS Access set-up procedure should be according to Rec. GSM 07.02 and 09.05.

#### 7. BASIC MHS ACCESS CLEARING PROCEDURE

The Basic MHS Access clearing procedure should be according to Rec. GSM 07.02 and 09.05.

#### 8. EXCHANGE OF CONTROL INFORMATION BETWEEN THE MS AND PAD

The exchange of control information between the MS and PAD should be in accordance with the Rec. GSM 07.02 and 09.05.

#### 9. EXCHANGE OF CONTROL INFORMATION BETWEEN THE PAD AND THE MHS SERVER

The exchange of control information between the PAD and the MHS Server should be in accordance with the CCITT Recommendation X.29.

#### 10. ENCODING TYPES REQUIREMENTS

The encoding of the data transferred between the MS and the PAD in the connection in progress state should be according to the IA5 (International Alphabet no 5) and the Rec. GSM 07.02 and 09.05.

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**PROTOCOL MODEL APPLIED BETWEEN MS AND PAD IN THE CONNECTION-  
IN-PROGRESS STATE**

The protocol models 1 and 3 described in Rec. GSM 03.10 are applied.

12.

**TERMINAL REQUIREMENTS**

The TE should

- 1) possess the necessary DTE/DCE interface as specified in the Rec. GSM 07.02. Data rates up to 9600 bit/s are possible as described in GSM Rec. 02.02 and 02.03
- 2) possess the capability of exchanging information with a PAD as specified in the Rec. GSM 09.05.

There are no further requirements imposed by the PLMN to the TE with respect to higher layer protocols.

PAD-access only?

X25 access also? At least mention such access?

charging aspect needed to be studied by WP1.