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Ghcf]hj Y`]b`dfchc_c`]`nUbUdfYXbUca fYÿ'UfGD5 BŁËN[fUXVUj]fUcýhYj]` Yj Ub'Uj g]ghYa i `H9 HF5 žj nUYa bc`XY`cj Ub'Y`]b`j]gc_UfUj Yb`dc`]hj_Y`nUUXa]b]ghf]fUb'Y

Services and Protocols for Advanced Networks (SPAN); The structure of the TETRA numbering resource, interworking and high level policy for administration

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ETSI Guide

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Foreword

This ETSI Guide (EG) has been produced by ETSI Technical Committee Services and Protocols for Advanced Networks (SPAN).

Introduction

The present document provides information on the TETRA ITSI. The ITSI is similar in structure to ITU-T Recommendation E.212 [4] IMSI identity. In addition to providing background on the similarities and differences between these two identities, the present document also describes each of the individual fields of the TETRA ITSI.

In certain circumstances operators may have to relate these two resources together. Given the management of the individual elements of the ITSI (the TETRA Mobile Country Code, the TETRA Mobile Network Code and the Short Subscriber Identity), the present document describes how an approach taken by a National TETRA Numbering Administrator, responsible for managing the TETRA MNC, might assist an operator in the use of both resources.

TETRA Mobile Country Codes (T)MCC are currently administered by the TETRA Memorandum of Understanding (MoU) Group, an industry organisation, which has aligned the digital value of the (T) MCC with the ITU-T Recommendation E.212 [4] MCC. An issue has been raised as to how countries know that these codes are formally/legally assigned to the country allocated. Discussions are under way to move the administration of (T) MCC resources to the ITU-TSB.

1 Scope

The present document provides guidance on the allocation and management of the country code and network code parts of the Individual TETRA Subscriber Identity (ITSI) used in TETRA. It applies to all TETRA networks irrespective of their interconnection arrangements. It includes guidance on the effect of dual mode operations with the GSM family of systems on the allocation of TETRA codes.

The present document is intended primarily for use by National Numbering Plan Administrator and National TETRA Numbering Administrator (NTNA) and network operators.

TR 102 300-5 [2] gives further information about the implementation of the ITSI and the various dialling arrangements that may be used.

2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication and/or edition number or version number) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies.

Referenced documents which are not found to be publicly available in the expected location might be found at http://docbox.etsi.org/Reference. (Standards.Iten.al)

[1]	ETSI EN 300 392-1; "Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Part 1: General network design". Clause 7 Addressing and Identities.
[2]	ETSI TR102 300-5: "Terrestrial Trunked Radio (TETRA); Voice plus Data (V+D); Designers' guide; Part 5: Guidance on numbering and addressing".
[3]	ITU-T Recommendation E.190: "Principles and responsibilities for the management, assignment and reclamation of E-series international numbering resources".
[4]	ITU-T Recommendation E.212: "The international identification plan for mobile terminals and mobile users".
[5]	ITU-T Recommendation X.121: "International numbering plan for public data networks".

3 Definitions and abbreviations

3.1 Definitions

For the purposes of the present document, the following terms and definitions apply:

administration body: body responsible for the allocation and management of the TETRA Mobile Country Code, currently the TETRA MoU Group

National TETRA Numbering Administrator (NTNA): body responsible for the national allocation and management of the TETRA Mobile Network Codes

3.2 Abbreviations

For the purposes of the present document, the following abbreviations apply:

ITSI Individual TETRA Subscriber Identity **IMSI** International Mobile Subscriber Identity HLR Home Location Register MCC Mobile Country Code Mobile Network Code MNC Memorandum of Understanding MoU **MSIN** Mobile Subscriber Identification Number NRA National Regulatory Authority NTNA National TETRA Numbering Administrator SSI Short Subscriber Identity SP Service Provider **TETRA** TErrestrial Trunked RAdio TETRA Mobile Country Code (T)MCC (T)MNC TETRA Mobile Network Code

4 Structure of the TETRA ITSI

An Individual TETRA Subscriber Identity (ITSI) has 3 component parts, a TETRA Mobile Country Code ((T)MCC), TETRA Mobile Network Code ((T)MNC), and a network specific short subscriber identity (SSI) which have fixed number lengths. The ITSI structure and format are as shown in figure 1.

NOTE: In the present document the TETRA MCC and MNC are called (T)MCC and (T)MNC to distinguish them from the ITU-T Recommendation E.212 [4] MCC and MNC. The TETRA main standards use the terms MCC and MNC because they assume the TETRA context.

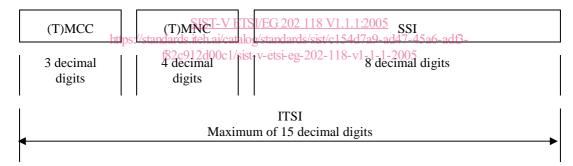


Figure 1: Structure of ITSI

The format of the identity is defined only at the air interface, where each part is separately encoded as a binary string. Mobiles, however, are normally designed to be capable of displaying the identity in decimal form for the human user.

The subsequent text of the present document refers to the decimal form as read by a human.

The structure an ITSI in decimal form is quite similar to that of the ITU-T Recommendation E.212 [4] IMSI, used by public land mobile networks e.g. the GSM family of networks, but it is a separate numbering scheme.

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The IMSI structure and format are as shown in figure 2.

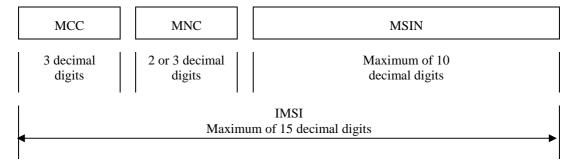


Figure 2: Structure and Format of IMSI

Allocation and administration of TETRA Mobile Country Codes ((T)MCC))

TETRA Mobile Country Codes ((T)MCC) are currently administered by the TETRA Memorandum of Understanding (MoU) Group, which is an industry organisation.

EN 300 392-1 [1] specified initially that the (T)MCC values should copy the values allocated in ITU-T Recommendation X.121 [5], but, because ITU-T Recommendation X.121 [5] relates to an older and different technology, the MoU is currently copying the values allocated under ITU-T Recommendation E.212 [4] for the IMSI. No values other than those allocated under ITU-T Recommendation E.212 [4] have been allocated by the MoU.

NOTE: The current intention is to update the TETRA standards to say that assigned E.212 MCCs will be the basis when (T)MCCs will be assigned and administered in the future by the ITU-TSB.

Because the TETRA MoU is not an intergovernmental body, its allocations are not necessarily recognised by all National Regulatory Authorities (NRA). Discussions are under way to transfer the administration of (T)MCC resources to the ITU-TSB to put the scheme fully under the control of national regulatory authorities and to give international recognition to the TETRA numbering arrangements.

6 Allocation and administration of TETRA Mobile Network Codes((T)MNC))

The administration of TETRA Mobile Network Codes is a national matter. In practice they may be administered by the National Numbering Plan Administrator, under the NRA, or by the National TETRA Numbering Administrator if other than the National Numbering Plan Administrator. The administrator is called in the present document the National TETRA Numbering Administrator.

Where the administrator is not the NRA the NTNA may wish to obtain guidance from the national numbering plan administrator on best practice for the administration of the codes.

NOTE: ITU-T Recommendation E.190 [3] includes some general principles that may be followed.