



WiMAX FORUM® WiMAX™ ROAMING INTERFACE (WRI) CODE

based on WiMAX Forum Certified™ Products

Release 1.0 Version 1

WMF-T40-002-R010v01

WiMAX Forum Approved

2009-05-04

WiMAX Forum Proprietary

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1 Introduction

The WiMAX™ Roaming Interface (WRI) Code is a unique code that identifies business entities, such as, NSPs and WRXs, which use the WiMAX™ Roaming Interface Specifications (WRIs) [1][2]. The WRI Code is used solely for the purpose of roaming and in conjunction with the WRI Architecture. for offline exchange of roaming information between business entities. This information can be used to support one or more of the following accounting functions: wholesale rating, clearing and financial settlement.

Various options were considered for the WRI code as follows:

- Network Service Provider ID (NSP-ID) and Network Access Provider ID (NAP-ID) are used for identifying WiMAX™ Network Service Providers (NSPs) and Network Access Providers (NAPs). These are actually Operator IDs issued by the IEEE Registration Authority Committee (RAC) and are being used by the WiMAX™ industry as NSP-IDs and NAP-IDs. It was decided that this identifier is not appropriate for use as a WRI Code because the use of a country identifier is not mandated in the Operator ID. A country identifier is an essential part of the WRI Code to enable an NSP to know where its subscribers are roaming for a variety of purposes including billing, customer care and marketing. The current NSP-ID and NAP-ID are in binary format which is not human readable while the WRI code is in text format. It is essential any format WRI Code is human readable since it will be used in operational aspects of roaming business, such as, identifying owners of billing records, roaming agreements, and files and data exchanged between roaming entities.
- Other technology organizations, such as GSMA and CDG, issue roaming codes to operators. It was decided not to use these codes because the WiMAX industry would be dependent on non-WiMAX industry organizations for the issuance and administration of these codes. Any changes to roaming codes in the future would impact WiMAX roaming deployments. Further, these organizations may refuse to issue roaming codes for WiMAX™ roaming.
- The WiMAX Forum® can establish, issue, and administer a unique WRI Code. This option was selected. The WRI code will include a country identifier for terrestrial operators and will be issued by the WiMAX Forum. Hence there will be no dependency on another mobile industry organization.

1 **2 Scope**

2 This document defines the WRI Code, format, policies and procedures related to the issuance,
3 maintenance, and cost of the WRI Code.

3 References

- 1
- 2 [1] WMF-T42-001-R010 WiMAX Forum® WiMAX™ Roaming Interface based on WiMAX
3 Forum Certified™ Products Stage 2: Part 0 Overview Release 1.0.
- 4 [2] WMF-T43-001-R010 WiMAX Forum® WiMAX™ Roaming Interface based on WiMAX
5 Forum Certified™ Products Stage 3: Part 0 Overview Release 1.0.
- 6 [3] International Standard Organization: ISO-3166: Codes for the representation of names of
7 countries and their subdivisions.
- 8
- 9

4 Definition and Format

The WRI Code consists of two fields, with a total length of six alpha-numeric characters consisting of:

- A three-character country code (ISO 3166-1) [3] or fixed code assigned by the WiMAX Forum and
- A three-character operator (or company) ID.

Any business entity can apply for one or more WRI Codes.

WRI Codes are allocated by the WiMAX Forum for use as primary identifiers of business entities which exchange roaming information for the purpose of wholesale rating, clearing and financial settlement in accordance with [1] and [2]. WRI Codes are used both as part of file names and file content.

It is strongly recommended that a NSP-ID and a NAP-ID be associated with only one WRI Code.

WRI Codes cannot be transferred to another company unless agreed by the parties. Expired WRI Codes cannot be reused.

The format of the WRI Code will be as follow:

Country Code (ISO 3166-1) + Company Code.

(E.g. Sprint USA: **USASPI**, MACH-Cibernet USA: **USAMAC**)

In certain circumstances, such as non-terrestrial networks including Marine and Satellite, Country Codes are not possible. Therefore, the following codes will be assigned in place of Country Codes:

Marine: **WF1**

Satellite: **WF2**

5 Cost

There will be no charge for the issuance and maintenance of WRI Codes for WiMAX Forum members. For entities that are not members of the WiMAX Forum, or have not renewed their WiMAX Forum membership, the following cost will be applied for each WRI Code:

	WiMAX Forum Member	Non-Member
Issuance and 1st year maintenance	\$0	Contact WiMAX Forum Administrator for Fee
Annual Maintenance	\$0	Contact WiMAX Forum Administrator for Fee

Table 1 Application fee for WRI Code

The WRI Code can be issued at any time and will expire when the WiMAX Forum membership expires or if the above Annual Maintenance fee is not received. A WRI Code will be issued only after WiMAX Forum Finance Department has confirmed active membership or payment.

6 Application Procedure

WiMAX Forum members and non-members can apply for a WRI Code. When applying for a WRI Code the form supplied within this document must be completed and submitted with relevant payment to the WiMAX Forum Finance Department. The applying company will be assigned a WRI code with an ISO 3166-1 country code as the first 3 characters or fixed character string in special cases. The applying company can choose the last 3 characters of their WRI code. The WiMAX Forum will assign the last three characters based on the suggestion (if it's not already in use) and notify the applicant of the assigned code. The last three characters cannot be already assigned or be an ISO 3166-1 Country Code or a specially assigned WiMAX Forum WRI code (e.g., WF1 and WF2). Also, if the code chosen by the company one day becomes an ISO 3166-1 code, the company must cease using the assigned code and must obtain another code following the process described above.

A business entity shall use a unique WRI Code only in the country in which it is assigned for use. Specially assigned codes shall be used when operating in international space. Separate WRI files exchanged via the standardized reference points of the WRI Architecture [1] must be produced for each WRI Code.

7 Issuance and Maintenance Procedure

1
2 WiMAX Forum will issue a WRI Code after it has confirmed all the information included on the WRI
3 Application form and the receipt of applicable payment. WiMAX Forum will also update the online
4 database once a new WRI code has been issued.

5 Each company which has been issued a WRI Code is responsible for updating and downloading the online
6 database on a monthly basis. This is highly critical since WRI Codes are used for clearing and settlement
7 processes and any invalid information could cause delay in settlement and/or interfere with roaming
8 services.

9 WiMAX Forum is establishing an online repository containing the latest mapping of WRI Code to NSP ID
10 and/or NAP ID, which can be downloaded any time. The online repository will be downloadable via http
11 and/or ftp. The file name will be of the format “WRICODE-YYYYMMDD.CSV”, where
12 “YYYYMMDD” represents the year, month, and day the file was transferred. The data in the file will be
13 separated by commas where applicable. A new file will be available on 15th of each month and so any
14 change a company wishes to apply should be made prior to this date. Data supplied within this file should
15 reflect changes that are to be applied to the files exchanged via the standardized reference points of the
16 WRI architecture [1] on the first day of the succeeding month.

8 Application Form

WRI Code Application Form

Application Type: New/Renew

WiMAX Forum Member: Yes/No

Company Name:

Company Address:

Country:

Contact Name:

Contact Address:

Contact Phone:

Contact Email:

Contact Fax:

Current List of NSP-IDs:

Current List of NAP-IDs:

Current WRI Code (Only complete if renewing):

Preferred WRI Code (Only complete if new application. *This is just a preference and does not guarantee the code. The actual final code will be issued by WiMAX Forum*):

Payment Amount:

Note: Above contact person will be contacted with relevant information or questions when application is processed and/or approved.

1 **9 Revision History**

Revision	Changes	Date
1	Initial Publication	May 4, 2009

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