

COMMITTEE 6

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Note by the Secretariat

CONSIDERATION OF THE OPTION OF COLLECTING ANNUAL FEES FOR CERTAIN INRs

1 Introduction

TSB assigns directly or indirectly more than 20 types of International Numbering Resources (INRs). However, most have negligible volume.

Only the following types of INRs have significant annual volume or total volume:

- UIFN (Universal International Freephone Number)
- SANC and ISPC (Signaling Area Network Code and International Signaling Point Code)
- MCC and MNC (Mobile Country Code and Mobile Network Code)
- ICC (ITU Carrier Code)
- IIN (Issuer Identifier Number)

Among the numbers directly assigned by ITU are UIFN, SANC (+the signaling point identification = ISPC), and MCC (+MNC which provides sufficient information to identify the home network).

This paper considers further the option of raising an annual charge for the above INRs. It considers possible differentiated annual fees for a member (Member State, ITU-T Sector Member, or Associate of the relevant ITU-T study group) and non-member.

2 UIFN

- Total volume of UIFNs allocated: 37'000; about 1000 UIFNs assigned per year. About 110+ companies have applied for them, 60% of the companies are not members of ITU-T.
- Distribution is skewed:

- Africa, Arab States and CIS region basically use no UIFNs. Americas (in particular USA, Canada) and Europe are the biggest users:

Regions	Total UIFNs	UIFNs to ITU-T members	% UIFNs to ITU-T members
Africa	0	0	0
Arab States	1	1	100
CIS	59	56	94.92
Asia & Pacific	3197	1242	38.85
Europe	11701	9714	83.02
Americas	22042	17458	79.20
All regions	37000	28471	76.95

Table 1: Total number of UIFNs allocated. Data as of 22 October 2014; only the role of main operator considered; numbers reserved but not yet implemented not considered (negligible)

- The top ten companies with the highest volume of UIFNs have applied for three-quarters of all UIFNs:

Region	Country	Company	ITU-T Member	# of UIFNs	% of total # of UIFNs (rounded)
The Americas	United States	Verizon (includes MCI DBA Verizon Business)	SM	6761	18%
The Americas	United States	AT&T	SM	5194	14%
The Americas	United States	SPRINT	SG15 Associate	4238	11%
Europe	United Kingdom	British Telecom plc	SM	3181	9%
The Americas	Canada	Tata Communications Limited	--	2957	8%
Europe	Germany	Deutsche Telekom AG	SM	2150	6%
The Americas	United States	USA Global Link	--	1474	4%
The Americas	Canada	Bell Canada	SM	1260	3%
Europe	Switzerland	Swisscom AG	SM	1100	3%
Asia & Pacific	Australia	Reach Global Services Limited (ex Telstra)	--	631	2%

Table 2: The companies with the highest volume of UIFNs

- The one-time fee of 200 CHF therefore generates about 200'000 CHF income per year for ITU. This fee was set in 1996.

- Scenarios for an annual fee:

Total # of UIFNs	UIFNs to ITU-T members	UIFNs to non-ITU-T members	Annual fee for members	Annual fee for non-members	Annual revenue
37000	28471	8529	20 CHF	20 CHF	740'000 CHF
			20 CHF	40 CHF	910'580 CHF
			20 CHF	50 CHF	995'870 CHF

Table 3: Various scenarios for an annual fee for UIFN

3 SANCs and International Signalling Point Codes

- TSB assigns SANCs (Signaling area network code) to Administrations. About 20 are allocated per year. The total number of assigned SANCs is about 1'000. SANCs are a scarce resource. The Administration assigns a signaling point identification to its operators on their request. The combination of SANC + signaling point identification is called International signaling point code (ISPC). Operators have one to several ISPCs (e.g. Telefonos de Mexico, not a member of ITU-T has 26 ISPCs). There are no one-time fees for SANCs.
- Scenarios for an annual fee:

Total # of ISPC	ISPC to ITU-T members	ISPC to non-ITU-T members	Annual fee for members	Annual fee for non-members	Annual revenue
5968	907	5061	100 CHF	100 CHF	596'800 CHF
			50 CHF	150 CHF	804'500 CHF
			0 CHF	500 CHF	2'530'500 CHF
			0 CHF	1000 CHF	5'061'000 CHF

Table 4: Various scenarios for an annual fee for ISPC

4 MCC (mobile country code) (+ MNC (mobile network code))

- TSB assigns a Geographic MCC (mobile country code; 235 so far) to an Administration and the Administration assigns MNCs to its operators. An operator has in general one MNC per country (although e.g. Vodafone has 24 MNCs in Japan). MNC in combination with the MCC, provides sufficient information to identify the home network, and it is that code that enables roaming. So an operator will be willing to pay for an MNC. An MNC can be used for millions of subscribers. The value of an MNC is millions (or at least hundreds of thousands) of dollars/CHF, in terms of capital value. So an annual fee of CHF 100/year for an MNC is insignificant in economic terms.
- There are 1716 MCC+MNC, of which only 288 MCC+MNC are assigned to ITU-T members, i.e., close to 85% of MCC+MNC are assigned to non-members of ITU-T.
- Scenarios for an annual fee:

Total # of MCC+MNC	MCC+MNC to ITU-T members	MCC+MNC to non-ITU-T members	Annual fee for members	Annual fee for non-members	Annual revenue
1716	288	1428	100 CHF	100 CHF	171'600 CHF
			50 CHF	250 CHF	371'400 CHF
			0 CHF	500 CHF	714'000 CHF
			0 CHF	1000 CHF	1'428'000 CHF

Table 5: Various scenarios for an annual fee for MCC + MNC

5 IIN (Issuer Identifier Number)

- There are 723 allocated numbers. Annual volume is about 20. Companies usually have only one IIN, so there are about 700+ different companies that have an IIN. Only 91 companies are ITU-T members, i.e. 13%. The number is not assigned directly by ITU. ITU charges 80 CHF to register the numbers assigned to OAs by national Administrations; ANSI charges 1000 US\$ for non-telecom companies (http://www.ansi.org/other_services/registration_programs/iin_registration.aspx?menuid=10).
- **Note that the IIN is an example where TSB does not assign the IIN directly but nevertheless charges a fee.**
- Scenarios for an annual fee (note that ANSI already charges 1000 US\$ for non-telecom companies):

Total # of IIN	IIN to ITU-T members	IIN to non-ITU-T members	Annual fee for members	Annual fee for non-members	Annual revenue
723	91	632	100 CHF	100 CHF	72'300 CHF
			50 CHF	250 CHF	162'550 CHF
			0 CHF	500 CHF	316'000 CHF
			0 CHF	1000 CHF	632'000 CHF

Table 6: Various scenarios for an annual fee for IIN

6 ICC (ITU Carrier Code)

- There are 1155 ICCs assigned, of which 107, i.e. less than 10%, are assigned to ITU-T members.
- According to M.1400, Administrations may choose to establish their own website directly, or through another organization, e.g., NECA (National Exchange Carrier Association, Inc. (NECA) in North America.), which is the case for USA. Assignments in USA have not been published since 2001. So the statistic below does not include the complete list of ICCs assigned in USA which can be accessed at https://www.neca.org/cms400min/NECA_Templates/Code_Administration.aspx.
- Scenarios for an annual fee:

Total # of ICC	ICC to ITU-T members	ICC to non-ITU-T members	Annual fee for members	Annual fee for non-members	Annual revenue
1155	107	1048	100 CHF	100 CHF	115'500 CHF
			50 CHF	250 CHF	267'350 CHF
			0 CHF	500 CHF	524'000 CHF
			0 CHF	1000 CHF	1'048'000 CHF

Table 7: Various scenarios for an annual fee for ICC

7 Estimated total income

The following income might be generated from charging an annual fee, taking into account the lowest cost scenario for ITU members in previous sections:

	Volume of numbers to ITU members	Minimum annual fee	Annual income from members [CHF]
UIFN	28,471	20 CHF	569,420
SANC and ISPC	907	50 CHF	45,350
MCC and MNC	288	50 CHF	14,400
IIN	91	50 CHF	4,550
ICC	107	50 CHF	5,350
			639,070

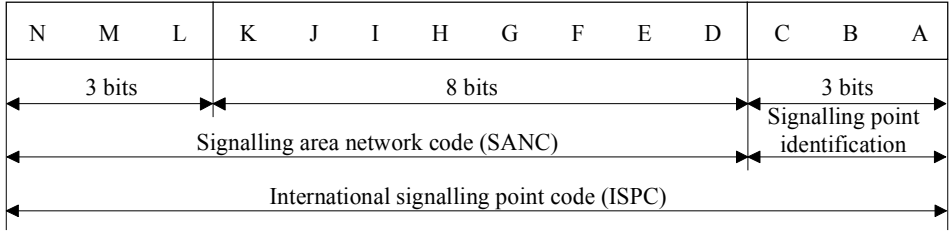
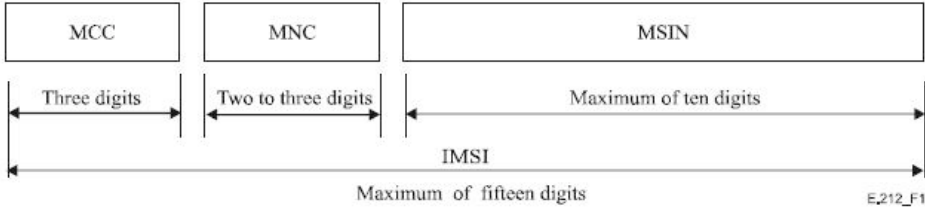
Table 8: Total income from ITU members for scenario with minimum annual fee

	Volume of numbers to non-members	Annual fee for non-members		Annual Income for non-members	
		Lowest proposed fee	Highest proposed fee	Lowest Income/year [CHF]	Highest Income/year [CHF]
UIFN	8,529	20 CHF	50 CHF	170,580	426,450
SANC and ISPC	5,061	100 CHF	1000 CHF	506,100	5,061,000
MCC and MNC	1,428	100 CHF	1000 CHF	142,800	1,428,000
IIN	632	100 CHF	1000 CHF	63,200	632,000
ICC	1,048	100 CHF	1000 CHF	104,800	1,048,000
Total				987,480	8,595,450

Table 9: Total income from non-members of ITU for scenario with low and high annual fee

Annex 1

Brief description of relevant INRs

Resource	Rec.	Description
UIFN (Universal International Freephone Number)	E.169.1	<p>A unique 11-digit E.164 international number led with the Country Code 800 which is assigned to an International Freephone Service (IFS) customer on a global basis for the provision of IFS.</p> <p>An example: + 800 10001111 with SPRINT as Service Provider.</p>
SANC and ISPC (Signalling Area Network Code and International Signalling Point Code)	Q.708	<p>A 14-bit binary code used for the identification of international signalling points which is represented by three (3) decimal numbers. The structure is as following:</p>  <p>The combination of the fields containing bits NML and bits K-D is regarded as the SANC which is a part of the 14-bit binary code used for the identification of international signalling points.</p> <p>An example: ITU assigned SANC 2-201 to France; ARCEP assigned ISPC 2-201-7 to Orange France.</p>
MCC and MNC (Mobile Country Code and Mobile Network Code)	E.212	<p>The MNC, in combination with the MCC, provides sufficient information to identify the home network. And they are the two of three fields consisted of an IMSI (international mobile subscription identity). The structure is as following:</p>  <p>Examples:</p> <p>Geographic MCC and MNC: ITU assigned MCC 208 to France. ARCEP assigned MCC MNC 208 01 to Orange France.</p> <p>Shared MCC (901) and MNC: ITU assigned MCC MNC 901 31 to France Telecom Orange.</p>

Resource	Rec.	Description
ICC (ITU Carrier Codes)	M.1400	<p>The ICC list identifies operators that are recognized by each Member State's Administration. It consists of one to six letters and/or digits. It is used with the <i>Country code</i> in the format of [ISO 3166-1] three alpha-code while filling-out layer 1 record as explained in Recommendation ITU-T M.1400 – 8.3, 13.3 and 20.3.</p> <p>An example: The ICC “BELSIP ” for Hofmeir Media GmbH in Germany</p>
IIN (Issuer Identifier Number)	E.118	<p>It is used to distinguish among multiple OAs who issue cards within a country; or to distinguish individual countries sharing the same country code or, to distinguish both countries and issuers.</p> <p>It is a part of an Issuer Identification Number included in a visible card number with the maximum length of 19 characters. It follows Major industry identifier (MII) with the value “89” for telecommunication purpose and E.164Country Code. The structure is as following:</p> <div style="text-align: center;"> </div> <p style="text-align: right;">E.118_F01</p> <p>An example: 89 44 05 was assigned to BT Skyphone by Ofcom.</p>