

COMMITTEE 6

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Note by the Secretariat

SUMMARY OF THE INFORMATION SESSION ON INTERNATIONAL NUMBERING RESOURCES (INR) 31 OCTOBER 2014

Summary of the Information Session on International Numbering Resources (INR), 31 October 2014

An information session was held on 31 October from 4:45-5:30 PM chaired by Mr Charles Semapondo, Rwanda.

During the information session some Member States asked questions for clarification regarding DL/34 (annexed to this document). The following is a summary of the questions and answers.

Q1: Does the scope of the proposal in DL34 include telephone numbers (ITU-T E.164 Numbers) with a charge of 1c per number?

A1: No, the proposal does not include the option of collecting a fee per year for the (some 6 billion) ITU-T E.164 telephone numbers mentioned in PP14/91.

Q2: What numbering resources are considered in the current proposal?

A2: DL34 proposes a fee for five INRs. They are;

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

ITU already charges a one-time fee of 200 CHF set by Council in 1996 for the **assignment** of each UIFN. The ITU charges a fee of 80 CHF set by Council in 1993 for the **registration** of each IIN in the database.

The fees currently charged do not distinguish between members¹ and non-members. The scenarios for an annual fee suggest a lower fee for members or even no fee, and a higher fee for non-members to be paid for the services rendered on an annual basis.

¹ members refers in this document to ITU-T Sector Members and ITU-T Associates of the relevant study group

Q3: For the MCC/MNC numbers, what's assigned by ITU vs. the Administration?

A3: Shared MCC/MNC resources are **assigned** directly by TSB to the operator pursuant to Annex A to Recommendation ITU-T E.212 on the condition of being an ITU Member.

For the Geographic MCC/MNC resources: ITU assigns the MCC to the Administration that in turn assigns the MNC to the operator. The combined MCC/MNC is **registered** in the ITU database and published in ITU Operational Bulletin. ITU Operational Bulletin in six languages are publically accessible free of charge. The database service is only available to membership and is currently offered at no cost. The proposal in DL34 suggests an annual fee per MCC/MNC registered in the ITU database.

Q4: Does the ITU charge directly the operator or does it go through the administration?

A4: ITU charges directly the operator. For UIFN a fee is charged directly by ITU to the operator when processing an application for a new UIFN. For the other proposed INRs ITU charges directly the operator when notified by the Member State.

Q5: What is involved in the maintenance of the databases?

A5: ITU maintains 16 categories of INRs among those listed in Annex A of [C14/INF/24](#) in various database systems. Others are maintained as electronic document lists on website or annexes to ITU Operational Bulletins. The webpage for INR can be accessed at <http://www.itu.int/en/ITU-T/inr/Pages/default.aspx>.

Engineers maintain the software, servers, and applications; make data analysis and ensure data integrity; improve the services to enable intuitive user interface of the on-line databases. The notification and correspondence with Member States is done by a combination of engineers and assistants.

Q6: What is the enforcement mechanism?

A6: ITU has not had any issues of enforcement to date. Members and non-members are referred to the relevant ITU-T Recommendations or Council decision when fees are required. For entities that do not pay, a similar mechanism to Sector Members that do not pay their fees could be adopted by listing them in the relevant Council document.

Q7: How many numbers have been assigned so far?

A7: The following table captures the volume of numbers assigned/registered to members and to non-members.

INR	Status as of	Volume of numbers to members	Volume of numbers to non-members
UIFN	23 October 2014	28,471	8,529
SANC/ISPC	19 August 2014	907	5,061
MCC/MNC	7 August 2014	288	1,428
IIN	1 August 2014	91	

			632
ICC	1 August 2014	107	1,048

Table 1: Volume of numbers assigned/registered for which an annual fee is proposed

Q8: Which INRs would have the biggest impact in terms of revenue to the ITU?

A8: The total annual revenue if fees were applied only to non-members would be from CHF 1M to CHF 9M, and zero to CHF700k if additionally applied to members, depending on the options shown in the tables below. The resource having the biggest financial impact is the SANC/ISPC:

	Volume of numbers to non-members	Annual fee for non-members		Annual Income from 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/ISPC	5,061	100 CHF	1000 CHF	506,100	5,061,000
MCC/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 2: Total income from non-members for scenarios with lowest and highest annual fee

	Volume of numbers to members	Annual fee for members		Annual income from members	
		No fee	Highest proposed fee	Lowest Income/year [CHF]	Highest Income/year [CHF]
UIFN	28471	0	20 CHF	0	569,420
SANC/ISPC	907	0	100 CHF	0	90,700
MCC/MNC	288	0	100 CHF	0	28,800
IIN	91	0	100 CHF	0	9,100
ICC	107	0	100 CHF	0	10,700
Total				0	708,720

Table 3: Total income from members for scenarios with low and high annual fee

Q9: What would be the typical cost for an operator?

A9: No additional cost for members if annual fee is only imposed to non-members.

For non-members, assuming an operator that has one SANC/ISPC, one MCC/MNC and one ICC, the lowest proposed cost is 300 CHF per year (100 CHF/code/year) and the highest is 3000 CHF per year (1000 CHF/code/year).

Q10: What's the regional breakdown of the INRs proposed?

A10: the following tables provides the regional breakdown.

Regions	Total UIFNs	UIFNs to members	% UIFNs to 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 4: Regional breakdown of UIFN

Regions	Total SANC/ISPCs	SANC/ISPCs to members	% SANC/ISPCs to members
Africa	418	39	9.3
Arab States	234	92	39.3
Asia & Pacific	1188	246	20.7
CIS	175	30	17.1
Europe	2654	359	13.5
The Americas	1299	141	10.9
All regions	5968	907	15.2

Table 5: Regional breakdown of SANC/ISPC

Regions	Total MCC/MNC	MCC/MNC to members	% MCC/MNC to members
Africa	163	11	6.7
Arab States	76	10	13.2
Asia & Pacific	471	150	31.8
CIS	65	2	3.1
Europe	512	48	9.4

The Americas	428	67	15.7
other (Palau)	1	0	0
All regions	1716	288	16.8

Table 6: Regional breakdown of MCC/MNC

Regions	Total ICCs	ICCs to members	% ICCs to members
Africa	59	17	28.8
Arab States	29	13	44.8
Asia & Pacific	158	31	19.6
CIS	51	5	9.8
Europe	743	33	4.4
The Americas	115	8	7.0
All regions	1155	107	9.3

Table 7: Regional breakdown of ICC

Regions	Total IINs	IINs to members	% IINs to members
Africa	62	3	4.8
Arab States	24	6	25.0
Asia & Pacific	111	21	18.9
CIS	22	0	0.0
Europe	285	39	13.7
The Americas	218	22	10.1
other (Palau)	1	0	0.0
All regions	723	91	12.6

Table 8: Regional breakdown of IIN

Plenipotentiary Conference (PP-14)
Busan, 20 October-7 November 2014



COMMITTEE 6

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30 October 2014
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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:

- o 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)

- o 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

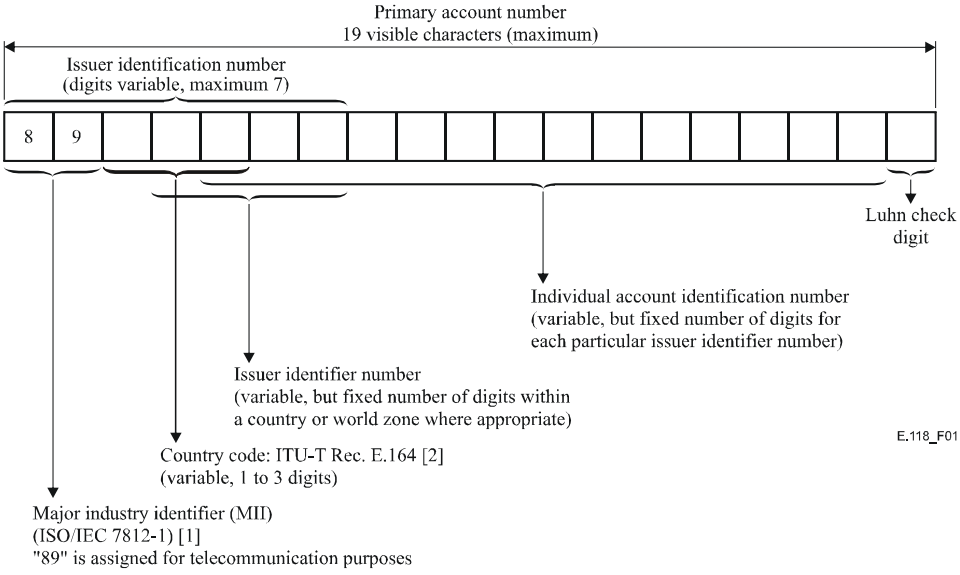
	Volume of numbers to non-members	Annual fee for non-members		Annual Income for non-members	
		Lowest proposed fee	Highest proposed fee	Lowest Income/year [CHF]	Highest Income/year [CHF]
UIFN	8,529	20 CHF	50 CHF	170,580	426,450
SANC and ISPC	5,061	100 CHF	1000 CHF	506,100	5,061,000
MCC and MNC	1,428	100 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: Geographic MCC and MNC: ITU assigned MCC 208 to France. ARCEP assigned MCC MNC 208 01 to Orange France. 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	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. An example: The ICC “BELSIP ” for Hofmeir Media GmbH in Germany
IIN (Issuer Identifier Number)	E.118	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. 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 style="text-align: right;">E.118_F01</p> An example: 89 44 05 was assigned to BT Skyphone by Ofcom.