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| ITU-T Study Group 3 |
| Tariff and accounting principles including relatedtelecommunication economic and policy issues |
| REPORT OF ITU-T SG3 TO THE WORLD TELECOMMUNICATION STANDARDIZATION ASSEMBLY (WTSA-16), PART I: GENERAL |

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| **Abstract:** | This contribution contains the report of ITU-T Study Group 3 to WTSA-16 concerning its activities during the 2013-2016 study period. |

Note by the TSB:

The report of Study Group 3 to the WTSA-16 is presented in the following documents:

Part I: **Document 3** – General

Part II: **Document 4** – Questions proposed for study during the study period 2017-2020

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# 1 Introduction

## 1.1 Responsibilities of Study Group 3

The World Telecommunication Standardization Assembly (WTSA-12) reconfirmed the title of Study Group 3 as "Tariff and accounting principles including related telecommunication economic and policy issues" and attributed, *inter alia*, the responsibility for studies relating to tariff and accounting matters (including costing methodologies) for international telecommunication services and the study of related telecommunication economic, accounting and policy issues. To this end, Study Group 3 shall in particular foster collaboration among its participants with a view to the establishment of rates at levels as low as possible consistent with an efficient service and taking into account the necessity for maintaining independent financial administration of telecommunications on a sound basis.

ITU-T Study Group 3 is responsible for the ITU-T Recommendations of the D-series, which are available at: http://itu.int/rec/T-REC-D.

Study Group 3 was entrusted by the World Telecommunications Standardization Assembly (Dubai, 2012) with the study of 5 Questions. In 2015, Study Group 3 approved an additional 5 questions, which were endorsed by TSAG in June 2015, for a total of 10 questions.

There are also 5 active regional groups of ITU-T SG3 for Africa (SG3RG-AFR), Asia and Oceania (SG3RG-AO), Latin America and the Caribbean (SG3RG-LAC), the Arab Region (SG3RG-ARB) and the Regional Commonwealth in the Field of Communications and the Commonwealth of Independent States (SG3RG-RCC/CIS).

## 1.2 Management team and meetings held by Study Group 3

Study Group 3 met 4 times in Plenary during the Study Period under the chairmanship of Mr Seiichi Tsugawa (KDDI, Japan), assisted by Vice-Chairmen Ms Joséphine Adou Biendjui (Cote d’Ivoire), Mr Facundo Fernandez Begni (Ericsson, Argentina), Mr Byoung Nam Lee (ETRI, Korea), Mr Raynold Mfungahema (Tanzania), Mr Leslie Joseph Martinkovics (Verizon, United States), Mr Ahmed Said (Egypt), Mr Dominique Wurges (Orange, France) and Mr Alexander Yakovenko (Rostelecom, Russian Federation).

TABLE 1
Meetings of Study Group 3 and its Working Parties

| Meetings | Place, date | Reports |
| --- | --- | --- |
| Study Group 3 | 27-31 May 2013 (Geneva) | COM 3 –R 1 to R 4 |
| Study Group 3 | 26-30 May 2014 (Geneva)  | COM 3 –R 5 to R 8 |
| Study Group 3 | 16-29 March 2015 (Geneva) | COM 3 – R 9 to 12 |
| Study Group 3 | 22 February-1 March 2016 (Geneva) | COM 3 – R 13 to 21 |

In addition to the above, there were 15 meetings of the 5 Regional Groups of Study Group 3 held until June 2016, with three more meetings planned before October 2016, for a total of 18 regional study group meetings (see Table 2). Two new regional groups were created during the 2012-2016 Study Period, SG3RG-ARB and SG3RG-RCC/CIS.

TABLE 2
Meetings of Study Group 3 Regional Groups

|  | Meeting | Date | Report |
| --- | --- | --- | --- |
| 1 | SG3RG-AFR | 4-7 February 2013 (Cairo, Egypt) | SG3RG-AFR – R 1 |
| 2 | SG3RG-AFR | 20-21 February 2014 (Congo, Brazzaville) | SG3RG-AFR – R 2 |
| 3 | SG3RG-AFR | 3-5 February 2015 (Sao Tome and Principe) | SG3RG-AFR – R 3 |
| 4 | SG3RG-AFR | 19-21 January 2016 (Abidjan, Cote d’Ivoire) | SG3RG-AFR – R 4 |
| 5 | SGRG-LAC | 19-22 March 2013 (Mexico City, Mexico) | SG3RG-LAC – R 1 |
| 6 | SGRG-LAC | 13-14 March 2014 (San Jose, Costa Rica) | SG3RG-LAC – R 2 |
| 7 | SGRG-LAC | 22-24 April 2015 (Nassau, Bahamas) | SG3RG-LAC – R 3 |
| 8 | SGRG-LAC | 16-17 June 2016 (Brasilia, Brasil) | SG3RG-LAC – R 4 |
| 9 | SG3RG-AO | 8-10 April 2013 (Tokyo, Japan) | SG3RG-AO – R 1 |
| 10 | SG3RG-AO | 1-2 September 2014 (Yangon, Myanmar) | SG3RG-AO – R 2 |
| 11 | SG3RG-AO | 29 September – 1 October 2015 (Kuala Lumpur, Malaysia) | SG3RG-AO – R 3 |
| 12 | *SG3RG-AO* | *20-23 September (New Delhi, India)*  | *\*Forthcoming* |
| 13 | SG3RG-ARB | 29-30 October 2013 (Manama Bahrain) | SG3RG-ARB – R 1 |
| 14 | SG3RG-ARB | 24-25 November 2014 (Kuwait City, Kuwait) | SG3RG-ARB – R 1 |
| 15 | SG3RG-ARB | 30 November – 2 December 2015 (Manama, Bahrain) | SG3RG-ARB – R 1 |
| 16 | *SG3RG-ARB* | *26-29 July 2016 (Tunis, Tunisia)* | *\*Forthcoming* |
| 17 | SG3RG-RCC/CIS | 4 December 2015 (Baku, Azerbaijan) | SG3RG-RCC/CIS – R 1 |
| 18 | *SG3RG-RCC/CIS* | *3-4 August 2016 (Saint Petersburg, Russian Federation)* | *\*Forthcoming* |

# 2 Organization of work

## 2.1 Organization of studies and allocation of work

**2.1.1** At its first meeting of the study period, Study Group 3 decided to establish 3 Working Parties.

**2.1.2** Table 3 shows the number and title of each Working Party, together with the number of Questions assigned to it and the name of its Chairman.

**TABLE 3**

Organization of Study Group 3

| Designation | Questions to be studied | Title of the Working Party | Chairmanand Vice-Chairmen |
| --- | --- | --- | --- |
| WP 1/3 | Q1/3Q6/3 | Development of charging and accounting/settlement mechanisms for international telecommunications services using the Next Generation Networks (NGNs), future networks, and any possible future development, including adaptation of existing D-series Recommendations to the evolving user needs | Mr Leslie Martinkovics (Chairman) andMr. Facundo Fernandez Begni (Vice-Chairman)  |
| WP 2/3 | Q2/3Q7/3 | Development of charging and accounting/settlement mechanisms for international telecommunications services, other than those studied in Question 1/3, including adaptation of existing D-series Recommendations to the evolving user needs | Mr Alexander Yakovenko (Chairman) and Ms Josephine Adou Biendjui (Vice-Chairman) |
| WP 3/3 | Q3/3Q8/3Q9/3Q10/3 | Study of economic and policy factors relevant to the efficient provision of international telecommunication services | Mr Raynold Mfungahema (Chairman) and Mr Dominique Wurges (Vice-Chairman) |

**2.1.3** Study Group 3 also set up an ad hoc group on developing country issues, chaired by
Mr. Ahmed Said, and an ad hoc group on regional models, chaired by Mr Byoung Nam Lee.

**2.1.4** The following regional groups were active:

**TABLE 4**

Regional Groups of ITU-T Study Group 3

| Title of the Group | Chairman | Vice-Chairmen |
| --- | --- | --- |
| SG3 Regional Group for Africa | Mr Abossé Akue-Kpakpo (UEMOA) and Mr Saliou Toure (Orange Sonatel, Senegal)  | Ms Joséphine Adou Biendjui (Cote d’Ivoire)Ms Pauline Tsafak Djoumessi (Cameroon) Mr Raynold Mfungahema (Tanzania)  |
| SG3 Regional Group for Asia and Oceania | Mr Byoung Nam Lee (ETRI, Korea)  | Mr Yasunori Matsuda (KDDI, Japan) Mr Ganbat Tumurbaatar (Mongolia) |
| SG3 Regional Group for Latin America and the Caribbean | Mr Tito Lopez (Paraguay)  | Ms Cynthia Reddock-Downes (Trinidad and Tobago) Mr Dennis Villalobos (ICE, Costa Rica)  |
| SG3 Regional Group for the Arab Region  | Mr Ahmed Said (Egypt)  | Mr Abdelkhalek Boujnah (Tunisia) Mr Adel Darwish (Bahrain) Ms Zeinab Mudathir Hagaz (Sudan) |
| SG3 Regional Group for the Regional Commonwealth in the Field of Communications and the Commonwealth of Independent States | Mr Aleksey Borodin (Rostelecom, Russian Federation)  | Ms Vera Lobanova (Beltelecom, Belarus) Mr Heydar Rustamov (Azerbaijan)  |

# 3 Questions and Rapporteurs

**3.1** WTSA-12 assigned to Study Group 3 the 5 Questions listed in Table 5.

**TABLE 5**

Study Group 3 – Questions assigned by WTSA-12 and Rapporteurs

| Questions | Title of the Questions | WP | Rapporteur |
| --- | --- | --- | --- |
| 1 | Development of charging and accounting/settlement mechanisms for international telecommunication services using next-generation networks (NGNs) and any possible future development, including adaptation of existing ITU-T D-series Recommendations to the evolving user needs | 1 | Mr Leslie Joseph Martinkovics |
| 2 | Development of charging and accounting/settlement mechanisms for international telecommunication services, other than those studied in Question 1/3, including adaptation of existing ITU-T D-series Recommendations to the evolving user needs | 2 | Mr Alexander Yakovenko |
| 3 | Study of economic and policy factors relevant to the efficient provision of international telecommunication services | 3 | Mr Raynold Mfungahema |
| 4 | Regional studies for the development of cost models together with related economic and policy issues |  | Mr Byoung Nam Lee |
| 5 | Terms and definitions for Recommendations dealing with tariff and accounting principles |  | Mr Dominique Wurges |

**3.2** The Questions listed in Table 6 below have been adopted during this period.

**TABLE 6**

Study Group 3 – New Questions adopted and Rapporteurs

| Questions | Title of the Questions | WP | Rapporteur |
| --- | --- | --- | --- |
| 6 | International Internet Connectivity including relevant aspects of IP peering, regional traffic exchange points, cost of provision of services and impact of transition from IPv4 to IPv6 | 1 | Ms Aminata DrameMr Frederick AsumanuMr Farell Folly |
| 7 | International Mobile Roaming issues (including charging, accounting and settlement mechanisms and roaming at border areas) | 2 | Mr Adel DarwishMs Eriko Hondo |
| 8 | Alternative Calling Procedures and Misappropriation and Misuse of facilities and services including CLI, CPND and OI | 3 | Mr Ahmed Said |
| 9 | Economic and regulatory impact of the Internet, convergence (services or infrastructure) and new services, such as OTT, on international telecommunication services and networks | 3 | Mr Ahmed SaidMs Lamia Jedoui |
| 10 | Definition of relevant markets, competition policy and identification of operators with SMP as it relates to the economic aspects of the international telecommunication services and network | 3 | Mr Abraão Balbino e Silva |

The following rapporteur groups were also active during the study period:

**TABLE 7**

Rapporteur groups

| Title of the Rapporteur Group  | WP | Rapporteur |
| --- | --- | --- |
| NGN Charging and Accounting  | 1 | Mr Chul Soo Kim |
| International Aspects of Universal Service | 1 | Mr Tito LopezMs Cynthia Reddock-Downes |
| Dispute Resolution related to Charging and Invoicing | 2 | Mr Lwando M. Bbuku |
| Study of the Use of Commercial agreements for international telecommunications services arrangements  | 2 | Ms Amy Alvarez |
| Economic and Competitiveness Aspects of Mobile Financial Services  | 2 | Mr Ahmed SaidMr Abdul Musoke |
| Improved governance of telecommunication regulators | 3 | Mr Abdelkhalek Boujnah |
| International Internet Connectivity  | 1 | Ms Aminata Drame |
| Economic Impact of transition from IPv4 to IPv6 | 1 | Farell FollyFrederick Asumanu |

**3.3** The Questions listed in Table 6 have been deleted during this period.

TABLE 8
Study Group 3 – Questions deleted

| Questions | Title of Questions | Rapporteurs | Results |
| --- | --- | --- | --- |
| NONE |

# 4 Results of the work accomplished during the 2013-2016 study period

## 4.1 General

During the study period, Study Group 3 examined 236 contributions and generated a large number of TDs and liaison statements.

On the basis of these documents, Study Group 3:

– determined four new Recommendations;

– determined the revision of one existing Recommendation;

– agreed five new Supplements.

## 4.2 Highlights of achievements

The main results achieved on the various Questions assigned to Study Group 3 are briefly summarized below.

a) Four new Supplements related to dispute resolution

b) New Technical Paper on international mobile roaming

c) New supplement on international internet connectivity

d) Determined Recommendation on establishing and connecting Regional IXPs to reduce costs of International internet connectivity

e) Determined Recommendation on International Aspects of Universal Service

f) Determined Recommendation methodological principles for determining international mobile roaming rates

g) Determined Recommendation on principles for market definition and identification of operators with significant market power (SMP)

h) Determined revised Recommendation on NGN Charging and Accounting principles

# 5 List of Recommendations approved during the study period

The list of new and revised Recommendations approved during the study period is found in Table 9.

TABLE 9
Study Group 3 – Recommendations approved

| Recommendation | Approval | Status | TAP/AAP | Title |
| --- | --- | --- | --- | --- |
| NONE |

# 6 List of Recommendations determined/consented at the last meeting

TABLE 10
Study Group 3 – Recommendations consented/determined at the last meeting

| Recommendation | Consent/‌Determination | TAP/AAP | Title |
| --- | --- | --- | --- |
| ITU-T D.52 | 01.03.2016 | TAP | ITU-T Recommendation on establishing and connecting Regional IXPs to reduce costs of International internet connectivity |
| ITU-T D.53 | 01.03.2016 | TAP | ITU-T Recommendation on International Aspects of Universal Service |
| ITU-T D.97 | 01.03.2016 | TAP | ITU-T Recommendation on methodological principles for determining international mobile roaming rates |
| ITU-T D.261 | 01.03.2016 | TAP | ITU-T Recommendation on Principles for market definition and identification of operators with significant market power (SMP) |
| ITU-T D.271 | 01.03.2016 | TAP | Revised ITU-T Recommendation D.271 on Charging and accounting principles for NGN |

# 7 List of Recommendations deleted during the study period

TABLE 11
Study Group 3 – Recommendations deleted during study period

| Recommendation | Last version | Withdrawal date | Title |
| --- | --- | --- | --- |
| NONE |

# 8 List of Recommendations submitted to WTSA-16 for approval

TABLE 12
Study Group 3 – Recommendations submitted to WTSA-16

| Recommendation | Proposal | Title | Reference |
| --- | --- | --- | --- |
| ITU-T D.52 | [37-E](http://www.itu.int/md/T13-WTSA.16-C-0037/en) | ITU-T Recommendation on establishing and connecting Regional IXPs to reduce costs of International internet connectivity | [COM3-R17](http://www.itu.int/md/T13-SG03-R-0017) |
| ITU-T D.53 | [38-E](http://www.itu.int/md/T13-WTSA.16-C-0038/en) | ITU-T Recommendation on International Aspects of Universal Service | [COM3-R18](http://www.itu.int/md/T13-SG03-R-0018) |
| ITU-T D.97 | [39-E](http://www.itu.int/md/T13-WTSA.16-C-0039/en) | ITU-T Recommendation on methodological principles for determining international mobile roaming rates | [COM3-R20](http://www.itu.int/md/T13-SG03-R-0020) |
| ITU-T D.261 | [40-E](http://www.itu.int/md/T13-WTSA.16-C-0040/en) | ITU-T Recommendation on Principles for market definition and identification of operators with significant market power (SMP) | [COM3-R21](http://www.itu.int/md/T13-SG03-R-0021) |
| ITU-T D.271 | [41-E](http://www.itu.int/md/T13-WTSA.16-C-0041/en) | Revised ITU-T Recommendation D.271 on Charging and accounting principles for NGN | [COM3-R19](http://www.itu.int/md/T13-SG03-R-0019) |

# 9 Other publications

During the study period, Study Group 3 agreed on a number of non-normative documents.

A technical paper “*Guide for NRAs on international mobile roaming cost analysis*” was agreed at the Study Group meeting in 2015.

The list of supplements approved during the study period are listed in Table 13.

**TABLE 13**

Study Group 3 – Supplements approved during the study period

|  |  |  |  |
| --- | --- | --- | --- |
| Supplement | Approval | Status | Title |
| D.50, Supp 2 | 2013-05-31 | In force | *Guidelines for reducing the costs of international internet connectivity*  |
| D.195, Supp 1 | 2013-05-31 | In force | *Credit Management Guidelines*  |
| D.195, Supp 2 | 2013-05-31 | In force | *DSO (Day Sales Outstanding) Management Guidelines* |
| D.195, Supp 3 | 2013-05-31 | In force | *Prepayment Guidelines* |
| D.170, Supp 5 | 2013-05-31 | In force | *Guidelines for Fraud Mitigation*  |

# 10 Report of lead study group activities, GSIs and JCAs

None.

# 11 Observations concerning future work

1. Development of charging and accounting/settlement mechanisms for international telecommunications services using the Next Generation Networks (NGNs), future networks and any possible future development, and other international telecommunications services

2. Study of economic and policy factors relevant to the efficient provision of international telecommunication services

3. Regional studies for the development of cost models together with related economic and policy issues

4. Continued studies of international roaming tariffs, with new areas of work on M2M and IoT

5. International Internet Connectivity studies, including cost modelling

6. Economic impact of new services, such as OTT, on international telecommunications services

7. Definition of relevant markets, competition policy and identification of operators with SMP as it relates to the economic aspects of the international telecommunication services and networks

8. Economic and policy aspects of big data and digital identity in international telecommunications services and networks

# 12 Updates to WTSA Resolution 2 for the 2017-2020 study period

There are no proposed updates by Study Group 3 to Resolution 2 concerning the general areas of study, title, mandate, lead roles and points of guidance in the next study period.

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