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| **ITU‑T Study Group 3** | | |
| TARIFF AND ACCOUNTING PRINCIPLES AND INTERNATIONAL TELECOMMUNICATION/ICT ECONOMIC AND POLICY ISSUES | | |
| Report of ITU-T SG3 to the World Telecommunication Standardization Assembly (WTSA-20), Part I: GENERAL | | |

|  |  |  |
| --- | --- | --- |
| **Abstract:** | This contribution contains the report of ITU-T Study Group 3 to WTSA-20 concerning its activities during the 2017-2021 study period. | |
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**Note by the TSB:**

The report of Study Group 3 to the WTSA-20 is presented in the following documents:

Part I: **Document 3** – General

Part II: **Document 4** – Questions proposed for study during the study period 2022-2024

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# 1 Introduction

## 1.1 General Areas of Study (WTSA-16 Resolution 2, Annex A)

### Tariff and accounting principles and international telecommunication/ICT economic and policy issues

ITU-T Study Group 3 is responsible, *inter alia*, for studying international telecommunication/ICT policy and economic issues and tariff and accounting matters (including costing principles and methodologies), with a view to informing the development of enabling regulatory models and frameworks. 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 of maintaining independent financial administration of telecommunications on a sound basis. Additionally, Study Group 3 will study the economic and regulatory impact of the Internet, convergence (services or infrastructure) and new services, such as over-the-top (OTT), on international telecommunication services and networks.

## 1.2 Lead Study Group in Specific Areas of Study (WTSA-16 Resolution 2, Annex A)

– Lead study group on tariff and accounting principles relating to international telecommunications/ICT

– Lead study group on economic issues relating to international telecommunications/ICT

– Lead study group on policy issues relating to international telecommunications/ICT

## 1.3 Points of guidance to ITU-T study groups for development of the post-2016 work programme (WTSA-16 Resolution 2, Annex B)

ITU-T Study Group 3 should study and develop Recommendations, technical papers, handbooks and other publications for members to respond positively and proactively to the evolution of international telecommunication/ICT markets, in order to ensure that the policy and regulatory frameworks governing these markets remain relevant, for the benefit of users and the global economy, and to enable a policy environment for digital transformation.

In particular, Study Group 3 should ensure that tariffs, economic policies and regulatory frameworks are forward-looking and serve to encourage take-up and use, industry innovation and investment. Furthermore, these frameworks need to be adequately flexible to adjust to rapidly evolving markets, emerging technologies and business models, while ensuring the necessary competitive safeguards, the protection of consumers and the maintenance of trust.

In this context, the work of Study Group 3 should also consider new and emerging technologies and services so its work will help drive new economic opportunities and enhance societal benefits in different areas including healthcare, education and sustainable development.

Study Group 3 should study and develop appropriate instruments, with a view to creating an enabling policy environment for the transformation of markets and industries, through the promotion of open, innovation driven and accountable institutions.

New services are emerging which will be provided by a combination of new and traditional operators. This is changing the international telecommunication landscape and it is therefore incumbent on Study Group 3 to develop Recommendations, handbooks and guidelines, to enhance the provision of such services, taking into account the cost of operation of networks and providing services. The financial consequences of such actions on accounting and settlement in relation to international telecommunications/ICT between service providers should be addressed by Study Group 3.

All study groups shall notify Study Group 3 at the earliest opportunity of any development that may have an impact on tariff and accounting principles and international telecommunication/ICT economic and policy issues.

## 1.4 List of Recommendations under the responsibility of Study Group 3 and TSAG in the 2017-2021 study period (WTSA-16 Resolution 2, Annex C)

| Series | Titles |
| --- | --- |
| *D series: Tariff and accounting principles and international telecommunication/ICT economic and policy issues* | |
| D.0-D.0 | Terms and definitions |
| D.1-D.299 | General tariff principles |
| D.300-D.899 | Recommendations for regional application |
| D.1000-D.1179 | Recommendations for international telecommunication/ICT economic and policy issues |
| D supplements | Supplements to ITU-T D-series D Recommendations |
| [*E series: Overall network operation, telephone service, service operation and human factors*](javascript:__doPostBack('ctl00$content_result$treeview','s3/-1\\3/33')) | |
| D.103 (formally D.103/E.231) | Charging in automatic service for calls terminating on a recorded announcement stating the reason for the call not being completed |
| D.104/E.232 | Charging for calls to subscriber’s station connected either to the absent subscriber's service or to a device substituting a subscriber in his absence |
| *X series: Data networks, open system communications and security* | |
| D.1140/X.12611 (formally D.267) | Policy framework including principles for digital identity infrastructure |

Notes:

(1) D.1140/X.1261 was approved in August 2020.

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

Study Group 3 met seven times in Plenary and seven times in Working Partiesin the course of the study period (see Table 1) under the chairmanship of Mr Seiichi Tsugawa (Japan), assisted by the following Vice-Chairmen: Ms Josephine Adou Biendjui (Côte d’Ivoire), Mr Mohammad Ahmad Almomani (Jordan), Mr Abraao Balbino E Silva (Brazil), Ms Liliana Nora Bein (Argentina), Mr Alexey Borodin (Russian Federation), Mr Adel Darwish (Bahrain), Ms Aminata Drame (Senegal), Mr Muneer Elmaki (Sudan), Mr Lancine Fofana (Côte d’Ivoire), Mr Byoung Nam Lee (Rep. of Korea), Ms Karima Mahmoudi (Tunisia), Mr Raynold Mfungahema (Tanzania), Mr Ahmed Said (Egypt), and Mr Dominique Wurges (France).

Additionally, Rapporteur Group meetings (including e-meetings) took place during the study period, see Table 1-bis.

TABLE 1  
Meetings of Study Group 3 and its Working Parties

| Meetings | Place, date | Reports |
| --- | --- | --- |
| Study Group 3 | Geneva, Switzerland, 5-13 April 2017 | [SG3 Report 1](https://www.itu.int/md/T17-SG03-R-0001) |
| Geneva, Switzerland, 9-18 April 2018 | [SG3 Report 6](https://www.itu.int/md/T17-SG03-R-0006) |
| Geneva, Switzerland, 23 April - 2 May 2019 | [SG3 Report 14](https://www.itu.int/md/T17-SG03-R-0014) |
| Virtual, 31 March - 9 April 2020 | [SG3 Report 20](https://www.itu.int/md/T17-SG03-R-0020) |
| Virtual, 24-28 August 2020 | [SG3 Report 28](https://www.itu.int/md/T17-SG03-R-0028) |
| Virtual, 24-28 May 2021 | [SG3 Report 34](https://www.itu.int/md/T17-SG03-R-0034) |
| Virtual, 13-17 December 2021 | [SG3 Report 40](https://www.itu.int/md/T17-SG03-R-0040) |
| Working Party 1/3 | Geneva, Switzerland, 5-13 April 2017 | [SG3 Report 2](https://www.itu.int/md/T17-SG03-R-0002) |
| Geneva, Switzerland, 9-18 April 2018 | [SG3 Report 7](https://www.itu.int/md/T17-SG03-R-0007) |
| Geneva, Switzerland, 23 April - 2 May 2019 | [SG3 Report 15](https://www.itu.int/md/T17-SG03-R-0015) |
| Virtual, 31 March - 9 April 2020 | [SG3 Report 21](https://www.itu.int/md/T17-SG03-R-0021) |
| Virtual, 24-28 August 2020 | [SG3 Report 29](https://www.itu.int/md/T17-SG03-R-0029) |
| Virtual, 24-28 May 2021 | [SG3 Report 35](https://www.itu.int/md/T17-SG03-R-0035) |
| Virtual, 13-17 December 2021 | [SG3 Report 41](https://www.itu.int/md/T17-SG03-R-0041) |
| Working Party 2/3 | Geneva, Switzerland, 5-13 April 2017 | [SG3 Report 3](https://www.itu.int/md/T17-SG03-R-0003) |
| Geneva, Switzerland, 9-18 April 2018 | [SG3 Report 8](https://www.itu.int/md/T17-SG03-R-0008) |
| Geneva, Switzerland, 23 April - 2 May 2019 | [SG3 Report 16](https://www.itu.int/md/T17-SG03-R-0016) |
| Virtual, 31 March - 9 April 2020 | [SG3 Report 23](https://www.itu.int/md/T17-SG03-R-0023) |
| Virtual, 24-28 August 2020 | [SG3 Report 31](https://www.itu.int/md/T17-SG03-R-0031) |
| Virtual, 24-28 May 2021 | [SG3 Report 36](https://www.itu.int/md/T17-SG03-R-0036) |
| Virtual, 13-17 December 2021 | [SG3 Report 42](https://www.itu.int/md/T17-SG03-R-0042) |
| Working Party 3/3 | Geneva, Switzerland, 5-13 April 2017 | [SG3 Report 4](https://www.itu.int/md/T17-SG03-R-0004) |
| Geneva, Switzerland, 9-18 April 2018 | [SG3 Report 9](https://www.itu.int/md/T17-SG03-R-0009) |
| Geneva, Switzerland, 23 April - 2 May 2019 | [SG3 Report 18](https://www.itu.int/md/T17-SG03-R-0018) |
| Virtual, 31 March - 9 April 2020 | [SG3 Report 24](https://www.itu.int/md/T17-SG03-R-0024) |
| Virtual, 24-28 August 2020 | [SG3 Report 32](https://www.itu.int/md/T17-SG03-R-0032) |
| Virtual, 24-28 May 2021 | [SG3 Report 37](https://www.itu.int/md/T17-SG03-R-0037) |
| Virtual, 13-17 December 2021 | [SG3 Report 43](https://www.itu.int/md/T17-SG03-R-0043) |
| Working Party 4/3 | Geneva, Switzerland, 5-13 April 2017 | [SG3 Report 5](https://www.itu.int/md/T17-SG03-R-0005) |
| Geneva, Switzerland, 9-18 April 2018 | [SG3 Report 10](https://www.itu.int/md/T17-SG03-R-0010) |
| Geneva, Switzerland, 23 April - 2 May 2019 | [SG3 Report 19](https://www.itu.int/md/T17-SG03-R-0019) |
| Virtual, 31 March - 9 April 2020 | [SG3 Report 26](https://www.itu.int/md/T17-SG03-R-0026) |
| Virtual, 24-28 August 2020 | [SG3 Report 33](https://www.itu.int/md/T17-SG03-R-0033) |
| Virtual, 24-28 May 2021 | [SG3 Report 38](https://www.itu.int/md/T17-SG03-R-0038) |
| Virtual, 13-17 December 2021 | [SG3 Report 44](https://www.itu.int/md/T17-SG03-R-0044) |

TABLE 1-bis  
Rapporteur group meetings organized under Study Group 3 during the study period

|  |  |  |  |
| --- | --- | --- | --- |
| Dates | Place/Host | Question(s) | **Event name** |
| 2021-11-11 | E-Meeting/MyMeetings | [Q6/3](http://www.itu.int/net/itu-t/lists/rgmdetails.aspx?id=12768&Group=3) | Rapporteur Group E-Meeting for Q6/3 |
| 2021-11-09 | E-Meeting/MyMeetings | [Q3/3](http://www.itu.int/net/itu-t/lists/rgmdetails.aspx?id=12756&Group=3) | Rapporteur Group E-Meeting for Q3/3 |
| 2021-11-08 | E-Meeting/MyMeetings | [Q1/3](http://www.itu.int/net/itu-t/lists/rgmdetails.aspx?id=12754&Group=3) | Rapporteur Group E-Meeting for Q1/3 |
| 2021-01-26 | E-Meeting/MyMeetings | [Q7/3](http://www.itu.int/net/itu-t/lists/rgmdetails.aspx?id=11804&Group=3) | Rapporteur Group E-Meeting for Q7/3 |
| 2021-01-25 | E-Meeting/MyMeetings | [Q9/3](http://www.itu.int/net/itu-t/lists/rgmdetails.aspx?id=11802&Group=3) | Rapporteur Group E-Meeting for Q9/3 |
| 2021-01-22 | E-Meeting/MyMeetings | [Q11/3](http://www.itu.int/net/itu-t/lists/rgmdetails.aspx?id=11801&Group=3) | Rapporteur Group E-Meeting for Q11/3 |
| 2021-01-21 | E-Meeting/MyMeetings | [Q1/3](http://www.itu.int/net/itu-t/lists/rgmdetails.aspx?id=11800&Group=3) | Rapporteur Group E-Meeting for Q1/3 |
| 2021-01-20 | E-Meeting/MyMeetings | [Q12/3](http://www.itu.int/net/itu-t/lists/rgmdetails.aspx?id=11799&Group=3) | Rapporteur Group E-Meeting for Q12/3 |
| 2021-01-19 | E-Meeting/MyMeetings | [Q2/3](http://www.itu.int/net/itu-t/lists/rgmdetails.aspx?id=11798&Group=3) | Rapporteur Group E-Meeting for Q2/3 |
| 2020-02-10 | E-Meeting/Zoom | [Q1/3](http://www.itu.int/net/itu-t/lists/rgmdetails.aspx?id=9774&Group=3) | Rapporteur Group E-Meeting for Q1/3 |
| 2020-02-07 | E-Meeting/Zoom | [Q10/3](http://www.itu.int/net/itu-t/lists/rgmdetails.aspx?id=9914&Group=3) | Rapporteur Group E-Meeting for Q10/3 |
| 2020-02-06 | E-Meeting/Zoom | [Q4/3](http://www.itu.int/net/itu-t/lists/rgmdetails.aspx?id=9913&Group=3) | Rapporteur Group E-Meeting for Q4/3 |
| 2020-01-17 | Switzerland [Geneva]/ITU | [Q12/3](http://www.itu.int/net/itu-t/lists/rgmdetails.aspx?id=9782&Group=3) | Rapporteur Group Meeting for Q12/3 |
| 2020-01-16 | Switzerland [Geneva]/ITU | [Q2/3](http://www.itu.int/net/itu-t/lists/rgmdetails.aspx?id=9776&Group=3) | Rapporteur Group Meeting for Q2/3 |
| 2020-01-16 | Switzerland [Geneva]/ITU | [Q6/3](http://www.itu.int/net/itu-t/lists/rgmdetails.aspx?id=9779&Group=3); [Q13/3](http://www.itu.int/net/itu-t/lists/rgmdetails.aspx?id=9778&Group=3) | Rapporteur Group Meeting for Joint Q6/3 & Q13/3 |
| 2020-01-15 | Switzerland [Geneva]/ITU | [Q7/3](http://www.itu.int/net/itu-t/lists/rgmdetails.aspx?id=9775&Group=3) | Rapporteur Group Meeting for Q7/3 |
| 2020-01-14 | Switzerland [Geneva]/ITU | [Q9/3](http://www.itu.int/net/itu-t/lists/rgmdetails.aspx?id=9781&Group=3) | Rapporteur Group Meeting for Q9/3 |
| 2020-01-13 | Switzerland [Geneva]/ITU | [Q11/3](http://www.itu.int/net/itu-t/lists/rgmdetails.aspx?id=9780&Group=3) | Rapporteur Group Meeting for Q11/3 |
| 2019-03-21 | E-Meeting/E-Meeting | [Q3/3](http://www.itu.int/net/itu-t/lists/rgmdetails.aspx?id=9573&Group=3) | Rapporteur Group E-Meeting for Q3/3 |
| 2019-03-20 | E-Meeting/E-Meeting | [Q4/3](http://www.itu.int/net/itu-t/lists/rgmdetails.aspx?id=9572&Group=3) | Rapporteur Group E-Meeting for Q4/3 |
| 2019-01-25 | Switzerland [Geneva]/ITU | [Q12/3](http://www.itu.int/net/itu-t/lists/rgmdetails.aspx?id=9427&Group=3) | Rapporteur Group Meeting for Q12/3 |
| 2019-01-24 | Switzerland [Geneva]/ITU | [Q11/3](http://www.itu.int/net/itu-t/lists/rgmdetails.aspx?id=9425&Group=3) | Rapporteur Group Meeting for Q11/3 |
| 2019-01-23 | Switzerland [Geneva]/ITU | [Q7/3](http://www.itu.int/net/itu-t/lists/rgmdetails.aspx?id=9426&Group=3) | Rapporteur Group Meeting for Q7/3 |
| 2019-01-22 | Switzerland [Geneva]/ITU | [Q13/3](http://www.itu.int/net/itu-t/lists/rgmdetails.aspx?id=9422&Group=3) | Rapporteur Group Meeting for Q13/3 |
| 2019-01-21 | Switzerland [Geneva]/ITU | [Q9/3](http://www.itu.int/net/itu-t/lists/rgmdetails.aspx?id=9423&Group=3) | Rapporteur Group Meeting for Q9/3 |
| 2017-12-06 to 2017-12-07 | Switzerland [Geneva]/ITU | [Q12/3](http://www.itu.int/net/itu-t/lists/rgmdetails.aspx?id=9046&Group=3) | Rapporteur Group Meeting for Q12/3 |
| 2017-12-05 | Switzerland [Geneva]/ITU | [Q11/3](http://www.itu.int/net/itu-t/lists/rgmdetails.aspx?id=9045&Group=3) | Rapporteur Group Meeting for Q11/3 |
| 2017-12-04 | Switzerland [Geneva]/ITU | [Q9/3](http://www.itu.int/net/itu-t/lists/rgmdetails.aspx?id=9042&Group=3) | Rapporteur Group Meeting for Q9/3 |
| 2017-12-01 | Switzerland [Geneva]/ITU | [Q2/3](http://www.itu.int/net/itu-t/lists/rgmdetails.aspx?id=9044&Group=3) | Rapporteur Group Meeting for Dispute Resolution |
| 2017-11-30 | Switzerland [Geneva]/ITU | [Q13/3](http://www.itu.int/net/itu-t/lists/rgmdetails.aspx?id=9043&Group=3) | Rapporteur Group Meeting for Q13/3 |
| 2017-02-23 to 2017-02-24 | Switzerland [Geneva] | [Q9/3](http://www.itu.int/net/itu-t/lists/rgmdetails.aspx?id=6776&Group=3) | The Economic Impact of OTTs Rapporteur Group (Q9/3) Meeting |

# 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 four Working Parties.

**2.1.2** Table 2 shows the number and title of each Working Party, together with the number of Questions assigned to it and the name of its Chairman.

**2.1.3** Table 3 lists other groups created by Study Group 3 during the study period.

TABLE 2  
Organization of Study Group 3

| Designation | Questions to be studied | Title of the Working Party | Chairman and Vice-Chairmen |
| --- | --- | --- | --- |
| Working Party 1 | Q1/3; Q2/33; Q13/34 | Charging and accounting/settlement mechanisms | Chairman: Byoung Nam Lee  Vice-Chairman: Dominique Wurges |
| Working Party 2 | Q3/3; Q4/3; Q8/3; Q12/35 | General economic and policy factors related to provision and cost of ICT services | Chairman: Abraao Balbino e Silva  Vice-Chairman: Aminata Drame |
| Working Party 3 | Q6/3; Q11/3 | General economic and policy factors related to the enablers of ICT services | Chairman: Ahmed Said  Vice-Chairman: Liliana Nora Bein |
| Working Party 4 | Q7/3; Q9/3; Q10/3 | General economic and policy factors related to the regulatory aspects of mobile communications, competition and convergence | Chairman: Vinod Kotwal1  Chairman: Dominique Wurges2  Vice-Chairman: Alexey Borodin |

Notes:

(1) Chairmanship from April 2017 to July 2020.

(2) Chairmanship since August 2020.

(3) Q2/3 was merged into Q1/3 in January 2021.

(4) Q13/3 was created in March 2017, and was merged into Q6/3 in January 2021.

(5) Q12/3 was created in March 2017.

TABLE 3  
Other Groups

| Title of the Group | Chairman | Vice-Chairmen |
| --- | --- | --- |
| Regional Group for Africa (SG3RG-AFR) | Lwando Bbuku (Co-Chair)  Pauline Tsafak Djoumessi (Co-Chair) | Lancine Fofana  Hilda Mutseyekwa  Matarr Touray  Steven Noamési Kofi Zikpi |
| Regional Group for Latin America and the Caribbean (SG3RG-LAC) | Tito Lopez | Danilo Caixeta Carvalho  Cynthia Reddock-Downes  Dennis Villalobos |
| Regional Group for Asia and Oceania (SG3RG-AO) | Vinod Kotwal1  Shailendra Kumar Mishra2 | Charles Kerua7  Min Suk Lee3  Chaminda Nishantha Palihawadana  Hye Jin Park4 |
| Regional Group for the Arab Region (SG3RG-ARB) | Ahmed Said | Zuhair M. Al-Zuhair5  Adel Darwish6  Zeinab Mudathir Hagaz  Karima Mahmoudi |
| Regional Group for Eastern Europe, Central Asia and Transcaucasia (SG3RG-EECAT) | Alexey Borodin | Vera Lobanova  Heydar Rustamov  Tatiana Smagulova |
| Regional Group for Europe and the Mediterranean Basin (SG3RG-EURM)8 | - | - |

Notes:

(1) Chairmanship from April 2017 to June 2020.

(2) Chairmanship since June 2020.

(3) Vice-Chairmanship since June 2020.

(4) Vice-Chairmanship from April 2017 to May 2020.

(5) Vice-Chairmanship since December 2018.

(6) Vice-Chairmanship from April 2017 to May 2020.

(7) Vice-Chairmanship from April 2017 to March 2021.

(8) SG3RG-EURM is dormant for the time being.

## 2.2 Questions and Rapporteurs

**2.2.1** WTSA-16 assigned to Study Group 3 the eleven Questions listed in Table 4.

**2.2.2** The Questions listed in Table 5 have been adopted during this period.

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

TABLE 4  
Study Group 3 – Questions assigned by WTSA-16 and Rapporteurs

| Questions | Title of the Questions | WP | Rapporteur, Associate Rapporteur |
| --- | --- | --- | --- |
| 1/3 | 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 | WP1 | Lukas Mukoma Musembi5  Eriko Hondo6  Cynthia Reddock-Downes  Lwando Bbuku11  Alexey Borodin12 |
| 2/3 | 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 | WP1 | Eriko Hondo  Asma Massaoudi  Lwando Bbuku  Alexey Borodin |
| 3/3 | Study of economic and policy factors relevant to the efficient provision of international telecommunication services | WP2 | Frederick Asumanu  Arseny Plossky  Nkechi Araka  Fofana Lanciné13 |
| 4/3 | Regional studies for the development of cost models together with related economic and policy issues | WP2 | Hye Jin Park1  Min Suk Lee2  Sharmin Sultana |
| 5/3 | Terms and definitions for Recommendations dealing with tariff and accounting principles together with related economic and policy issues | PLEN | Dominique Wurges |
| 6/3 | International Internet connectivity including relevant aspects of Internet protocol (IP) peering, regional traffic exchange points, cost of provision of services and impact of transition from Internet protocol version 4 (IPv4) to Internet protocol version 6 (IPv6) | WP3 | Aminata Drame7  Hui Chen8  Gillucia N. Rafalimanana  Fofana Lanciné  Hilda Mutseyekwa |
| 7/3 | International mobile roaming issues (including charging, accounting and settlement mechanisms and roaming at border areas) | WP4 | Adel Darwish3  Steven Noamesi K. Zikpi4  Pauline Tsafak Djoumessi  Liza Roussot |
| 8/3 | Alternative calling procedures and misappropriation and misuse of facilities and services including calling line identification (CLI), calling party number delivery (CPND) and origin identification (OI). | WP2 | Lwando Bbuku16  Elizabeth Mendy Johnson15 |
| 9/3 | Economic and regulatory impact of the Internet, convergence (services or infrastructure) and new services, such as over the top (OTT), on international telecommunication services and networks | WP4 | Ahmed Said  Maruff Barrie  Karima Mahmoudi  Charles Zoë Banga  Abraão Balbino E Silva  Frederic Asumanu  Issiaka Alhabibou  Carlos Alberto Inocêncio Silva  Siradié Traore |
| 10/3 | Definition of relevant markets, competition policy and identification of operators with significant market power (SMP) as it relates to the economic aspects of the international telecommunication services and networks | WP4 | Abraão Balbino E SilvaKarima Mahmoudi  Tito Lopez  Carlos Alberto Inocêncio Silva  Ibrahim Y. Diallo  Patricia Ofokansi |
| 11/3 | Economic and policy aspects of big data and digital identity in international telecommunications services and networks | WP3 | Vinod Kotwal9  Shailendra Kumar Mishra10  Sharmin Sultana  Boubacar Dicko |

Notes:

1. Rapporteurship from April 2017 to May 2020.
2. Rapporteurship since August 2020.
3. Rapporteurship from April 2017 to May 2020.
4. Rapporteurship since August 2020; Associate Rapporteurship from April 2017 to August 2020.
5. Rapporteurship from April 2017, co-Rapporteurship since May 2021.
6. Rapporteurship from April 2017, co-Rapporteurship since May 2021.
7. Rapporteurship from April 2017, co-Rapporteurship since May 2021.
8. Co-Rapporteurship since May 2021.
9. Rapporteurship from April 2017 to August 2020.
10. Rapporteurship from August 2020.
11. Mr Lwando Bbuku is the Rapporteur for “Dispute Resolution related to Charging and Invoicing”.
12. Mr Alexey Borodin is the Rapporteur for the “Study of the use of commercial agreements for international telecommunications services arrangements”.
13. Mr Fofana Lanciné is the Rapporteur for “Improved governance of telecommunication regulators”.
14. The following Question titles were updated in January 2021: 1/3, 6/3, 8/3, 9/3, and 10/3.
15. Rapporteurship since December 2021; Associate Rapporteurship from April 2017 to December 2021.
16. Rapporteurship until October 2021.

TABLE 5  
Study Group 3 – New Questions adopted and Rapporteurs

In the 2017 meeting, it was agreed on two new Questions to be studied by Study Group 3 for the 2017-2020 period as follows:

| Questions | Title of the Questions | WP | Rapporteur, Associate Rapporteur |
| --- | --- | --- | --- |
| 12/3 | Tariffs, Economic and Policy Issues Pertaining to Mobile Financial Services (MFS) | WP2 | Ahmed Said  Memiko Otsuki  Shin-Won Kang  Matarr Toure  Abdul Musoke  Frederic Asumanu  Hilda Mutseyekwa  Liza Roussot  Sharmin Sultana  Issiaka Alhabibou  Benson Kekeocha |
| 13/31 | Study of Tariff, Charging Issues of Settlements Agreement of Trans-multi-country Terrestrial Telecommunication Cables | WP1 | Hui Chen  Charles Zoë Banga |

Notes:

(1) Q13/3 was created in March 2017, and was merged into Q6/3 in January 2021.

TABLE 6  
Study Group 3 – Questions deleted

In January 2021, Question 2/3 was merged into Q1/3, and Question 13/3 was merged into Question 6/3.

| Questions | Title of Questions | Rapporteurs | Results |
| --- | --- | --- | --- |
| 2/3 | 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 | Eriko Hondo  Asma Massaoudi  Lwando Bbuku  Alexey Borodin | ITU-T D.1041, *Policy and methodological principles for determining co-location and access charges* |
| 5/3 | Terms and definitions for Recommendations dealing with tariff and accounting principles together with related economic and policy issues | Dominique Wurges | Digital Financial Services Glossary |
| 13/3 | Study of Tariff, Charging Issues of Settlements Agreement of Trans-multi-country Terrestrial Telecommunication Cables | Hui Chen  Charles Zoë Banga | ITU-T D.1040, *Optimizing terrestrial cable utilization across multiple countries to boost regional and international connectivity* |

# 3 Results of the work accomplished during the 2017-2021 study period

## 3.1 General

During the study period, Study Group 3 examined 405 contributions and generated a large number of TDs and liaison statements.

SG3 approved the following texts for the traditional approval process (TAP):

|  |  |
| --- | --- |
| Date | Recommendation |
| 2019-04 | ITU-T D.198, *Principles for unified format of price/tariffs/rates-lists used for exchanging telephone traffic*  Summary: Recommendation ITU-T D.198 recognizes the right of any operator to present price/tariffs/rates charged for telecommunication services in any form deemed convenient for the operator. It recommends that telecommunication companies offering international connections/exchange of traffic make use, as far as possible, of the same templates/forms/format of data to represent traffic destinations and offered price/tariffs/rates including if required optional clarifying information or quality of service criteria. |
| ITU-T D.262, *Collaborative Framework for OTTs*  Summary: Recommendation ITU-T D.262 provides a collaborative framework in order to promote competition, consumer protection, consumer benefits, dynamic innovation, sustainable investment and infrastructure development, accessibility and affordability in relation to the global growth of the over the top (OTT) applications. |
| ITU-T D.263, *Costs, Charges and Competition for Mobile Financial Services (MFS)*  Summary: Recommendation ITU-T D.263 proposes a possible approach to reduce high retail and wholesale telecommunication charges related to mobile financial services (MFS). |
| 2020-03 | ITU-T D.264, *Shared uses of telecommunication infrastructure as possible methods for enhancing the efficiency of telecommunications*  Summary: Recommendation ITU-T D.264 proposes a set of possible methods to help telecommunication providers save costs and enhance efficiency through the shared uses of spectrum and telecommunication infrastructure, including passive and active infrastructure sharing, and active infrastructure sharing , including when enabled by aggregation of frequency bands assigned to operators who have acquired property rights over the spectrum to enable active infrastructure sharing implementation and spectrum sharing in the active infrastructure sharing. |
| 2020-08 | ITU-T D.1040, *Optimizing terrestrial cable utilization across multiple countries to boost regional and international connectivity*  Summary: Recommendation ITU-T D.1040 provides a collaborative framework that can be applied in order to promote optimal cable utilization across multiple countries and boost regional and international connectivity. The framework is based on a proportional allocation model, which allocates circuits based on the length of fibre contributed to the terrestrial multi-country end-to-end cable network. |
| ITU-T D.1101, *Enabling environment for voluntary commercial arrangements between telecommunications network operators and OTT providers*  Summary: Recommendation ITU-T D.1101 addresses the measures for strengthening the commercial cooperation between over the top (OTT) providers and telecom operators. Given that network operators and OTTs are part of the international telecommunication/ICT ecosystem, this Recommendation encourages relevant stakeholders to work towards an enabling regulatory environment that supports and encourages the development of innovative business models in line with the advancement of technology and innovations, which are changing faster than ever. |
| ITU-T D.1140/X.1261, *Policy framework including principles for digital identity infrastructure*  Summary: Recommendation ITU-T D.1140/X.1261 sets out a policy framework including principles for digital identity infrastructure while recognizing the sovereign right of each Member State to regulate its Telecommunications. |
| 2021-05 | ITU-T D.1041, *Policy and methodological principles for determining co-location and access charges*  Summary: Recommendation ITU-T D.1041 offers policy and methodological principles for Member States interested in establishing transparent co-location access and service rates. Co-location is an important telecommunications wholesale service, essential to a competitive telecommunications landscape and a sustainable environment, as it eliminates the need for operators to buildout new or replicate existing infrastructure. A key component for encouraging co-location is the establishment of reasonable co‑location access and service rates on the principles of fairness and equity. |
| 2021-12 | ITU-T D.1102, *Customer redress and consumer protection mechanisms for OTTs*  Summary: Recommendation ITU-T D.1102 proposes possible customer redress and consumer protection mechanisms related to the provision and consumption of OTTs. This comes in the wake of the increasing use of over the top (OTT) applications for voice calling, instant messaging and video calling in the absence of an international framework to ensure consumer protection and redress where necessary. |

SG3 agreed two Supplements to the ITU-T D series Recommendations:

|  |  |
| --- | --- |
| Date | Supplement |
| 2020-04 | Supplement 4 to ITU-T D-series Recommendations  ITU-T D.263 – *Supplement on Principles for increased adoption and use of mobile financial services (MFSs) through effective consumer protection mechanisms*  Summary: This Supplement to the ITU-T D-series Recommendations sets out a number of principles for encouraging adoption and use of MFS services through the establishment of adequate consumer protection mechanisms, such as information availability and transparency, quality of service, data protection and privacy, customer redress fraud prevention as well as contracts and disclosure guidelines. |
| 2021-12 | Supplement 5 to ITU-T D-series Recommendations  ITU-T D.52 – *Supplement on Implementation guidelines for Recommendation ITU-T D.52 focusing on operationalization of regional Internet exchange points*  Summary: This Supplement is focused on addressing the challenges related to the operationalization of regional internet exchange points and identifying the most cost-effective mechanisms for interconnecting regional internet exchange points. |

SG3 agreed the following technical papers and technical reports, see also Table 13:

| Date | Title, Summary |
| --- | --- |
| **2017-04** | ***Title*: Economic impact of OTTs** |
| *Summary*: This Technical Paper seeks to provide technical and policy background to the international community in both developed and developing countries as to the nature and implications of Over the-Top (OTT) and related online services. | |
| **2017-04** | ***Title*: Methodologies for valuation of spectrum** |
| *Summary*: This Technical Report proposes various methodologies that can be used for valuation of spectrum arriving at reserve price for auction of the air-waves. | |
| **2018-04** | ***Title*: Digital Financial Services (DFS) – Glossary** |
| *Summary*: This glossary is a compilation of terms commonly used in the area of digital financial services and an explanation of what these terms mean. | |
| **2019-05** | ***Title*: Digital financial services – The digital financial services ecosystem (DSTR-DFSECO)** |
| *Summary*: This Technical Report defines the Digital Financial Services ecosystem and describes the players and their roles within the Ecosystem. These players include users (consumers, businesses, government agencies and non-profit groups) who have needs for digital and interoperable financial products and services; providers (banks, other licensed financial institutions and non-banks) who supply those products and services through digital means; the financial, technical and other infrastructures that make them possible; and the governmental policies, laws and regulations which enable them to be delivered in an accessible, affordable and safe manner. | |
| **2019-05** | ***Title*: Digital financial services –** [**Regulation in the Digital Financial Services Ecosystem**](http://www.itu.int/en/ITU-T/focusgroups/dfs/Documents/09_2016/Regulation%20and%20the%20DFS%20Ecosystem.pdf) **(DSTR-DFSREG)** |
| *Summary*: This Technical Report outlines the categories of regulation, defines the corresponding sub-issues or topics and highlights the financial inclusion of each topic. Key categories include: 1) agents, 2) consumer protection, 3) market access, 4) payments systems, 5) risk management and, 6) other related issues. This Technical Report also addresses key issues related to managing the regulatory environment. It outlines a survey of how regulators currently work together, provides a draft memorandum of understanding template for Authorities in a given country to formally outline joint goals and methods of working together, and outlines considerations if regulators are interested in formalizing cross-border collaborations. | |
| **2019-05** | ***Title*: Digital financial services –** [**Impact of Social Networks on Digital Liquidity**](https://www.itu.int/en/ITU-T/focusgroups/dfs/Documents/10_2016/ITUFGDFS_REPORT-ON-Impact-of-Social-Networks-on-Digital-Liquidity-11-2016.pdf) **(DSTR-DFSSNDL)** |
| *Summary*: This Technical Report explores whether social networks such as Facebook, WhatsApp and WeChat can accelerate digital liquidity – perhaps by enabling new forms of commerce, giving the Bottom of the Pyramid (BoP) more opportunities to spend and accept eMoney (and thus reduce costly “cash-out” transactions), and/or by providing other tools to enhance financial inclusion. | |
| **2019-05** | ***Title*: Digital financial services –** [**Competition Aspects of DFS**](http://www.itu.int/en/ITU-T/focusgroups/dfs/Documents/201703/ITU_FGDFS_Report-Competition-Aspects-of-DFS.pdf) **(DSTR-DFSCA)** |
| *Summary*: This Technical Report enumerates a sampling of competition issues stemming primarily from access to, and the use of technology in, the digital financial services (DFS) ecosystem from the perspective of its stakeholders. The Technical Report outlines competition issues that have been identified by the author based on publicly available and ventilated examples and studies of DFS ecosystems worldwide, as of January 2017. Insights from market participants, analysts and regulators participating in the ITU Focus Group on DFS and externally are also included. | |
| **2019-05** | ***Title*:** [**The Regulator’s Perspective on the Right Timing for Inducing Interoperability**](http://www.itu.int/en/ITU-T/focusgroups/dfs/Documents/201702/ITU_FGDFS_Report-Right-Timing-for-Inducing-Interoperability.pdf) **(DSTR-DFSRP)** |
| *Summary*: This Technical Report provides insights shared by five regulators who participated in the DFS Focus Group WG on Interoperability. Although it is impossible to generalize conclusions from the survey, some similarities across the surveyed countries can be observed. | |
| **2019-05** | ***Title*: Digital financial services –** [**Access to payment infrastructures**](http://www.itu.int/en/ITU-T/focusgroups/dfs/Documents/09_2016/Access%20to%20Payment%20Infrastructures.pdf) **(DSTR-DFSPI)** |
| *Summary*: The main purpose of this Technical Report is to discuss access-to-payment-infrastructures issues around the world, and how these can affect the development of safe, efficient, interoperable and financially inclusive payment services. This Technical Report builds on the collective experience of the members of the Interoperability Working Group and the broader Focus Group on Digital Financial Services, convened by the International Telecommunication Union (ITU). | |
| **2019-05** | ***Title*: Digital financial services –** [**Review of DFS User Agreements in Africa: A Consumer Protection Perspective**](http://www.itu.int/en/ITU-T/focusgroups/dfs/Documents/01_2017/ITU_FGDFS_Report-on-Review-of-DFS-User-Agreements-in-Africa.pdf) **(DSTR-DFSUAAFR)** |
| *Summary*: This Technical Report explains the findings from an analysis of DFS user agreements in nine African countries, and attempts to give an understanding of the overall consumer experience and whether or not there is a disconnect between contract provisions and the legal and regulatory provisions governing digital financial services (DFS). The Report highlights key findings and makes a number of recommendations for action by the appropriate regulator in the various markets examined. Countries need to take these considerations into account as they continue to nurture their DFS markets so as to safeguard customers from harmful practices and ensure trust in the market. | |
| **2019-05** | ***Title*: Digital Financial Services –** [**Commonly identified Consumer Protection themes for Digital Financial Services**](http://www.itu.int/en/ITU-T/focusgroups/dfs/Documents/09_2016/ConsumerProtectionThemesForBestPractices.pdf) **(DSTR-DFSCP)** |
| *Summary*: This Technical Report is a synthesis of existing research, legal provisions, guidelines, and other related resources related to consumer protection for digital financial services. This Technical Report identifies four common themes that policy makers or regulators may want to consider when developing laws, regulations, or guidelines related to DFS. | |
| **2019-05** | ***Title*: Digital Financial Services – Main recommendations (DSTR-DFSMR)** |
| *Summary*: This Technical Report outlines the main recommendations of the ITU Focus Group on Digital Financial Service (FG-DFS) and identifies key areas where intervention by regulators, DFS operators and policymakers are needed to create a conducive environment for digital financial services. | |

## 3.2 Highlights of achievements

The main results achieved on the various Questions assigned to Study Group 3 are briefly summarized below. Formal replies to the Questions are given in a synoptic table in Annex 1 of this report.

a) Approved ITU-T D.198, “*Principles for unified format of price/tariffs/rates-lists used for exchanging telephone traffic*”

b) Approved ITU-T D.262, “*Collaborative Framework for OTTs*”

c) Approved ITU-T D.263, “*Costs, Charges and Competition for Mobile Financial Services (MFS)*”

d) Approved ITU-T D.264, “*Shared uses of telecommunication infrastructure as possible methods for enhancing the efficiency of telecommunications*”

e) Approved ITU-T D.1040, “*Optimizing terrestrial cable utilization across multiple countries to boost regional and international connectivity*”

f) Approved ITU-T D.1041, “Policy and methodological principles for determining co-location and access charges”

g) Approved ITU-T D.1101, “*Enabling environment for voluntary commercial arrangements between telecommunications network operators and OTT providers*”

h) Approved ITU-T D.1140/X.1261, “*Policy framework including principles for digital identity infrastructure*”

i) Approved ITU-T D.1102, “*Customer redress and consumer protection mechanisms for OTTs*”

j) Agreed Supplement 4 to ITU-T D-series Recommendations: ITU-T D.263 – *Supplement on Principles for increased adoption and use of mobile financial services (MFSs) through effective consumer protection mechanism*.

k) Agreed Supplement 5 to ITU-T D-series Recommendations: ITU-T D.52 – *Implementation guidelines for Recommendation ITU-T D.52 focusing on operationalization of regional Internet exchange points*

l) Agreed Technical Report on Methodologies for valuation of spectrum

m) Agreed Technical Report on Economic impact of OTTs

n) Agreed nine ITU-T Focus Group on Digital Financial Services (FG-DFS) reports.

## 3.3 Report of lead study group activities, GSIs, JCAs and regional groups

### 3.3.1 Lead study group activities

WTSA-16 assigned Study Group 3 to be the lead study group:

– Tariff and accounting principles relating to international telecommunication/ICT

– Economic issues relating to international telecommunication/ICT

– Policy issues relating to international telecommunication/ICT

### 3.3.1.1 Tariff and accounting principles relating to international telecommunication/ICT

The studies on accounting principles were being carried out by Q1/3, Q2/3, Q4/3, Q7/3, Q12/3, and Q13/3. The activities on accounting principles are summarized as below.

– SG3 approved Recommendation ITU-T D.198 on “Principles for unified format of price/tariffs/rates-lists used for exchanging telephone traffic”.

### 3.3.1.2 Economic issues relating to international telecommunication/ICT

The studies on economic issues were being carried out by Q3/3, Q4/3, Q6/3, Q7/3, Q9/3, Q10/3, Q11/3, Q12/3, and Q13/3. The activities on economic issues are summarized as follows.

– SG3 approved Recommendation ITU-T D.263, “Costs, charges and competition for mobile financial services (MFSs)”.

– SG3 approved Recommendation ITU-T D.264, “Shared uses of telecommunication infrastructure as possible methods for enhancing the efficiency of telecommunications”.

– SG3 approved Recommendation ITU-T D.1101, “Enabling environment for voluntary commercial arrangements between telecommunications network operators and OTT providers”.

– SG3 approved Recommendation ITU-T D.1041, “Policy and methodological principles for determining co-location and access charges”.

– SG3 agreed on a new Technical Report on Economic impact of OTTs.

– SG3 agreed on nine reports from ITU-T Focus Group on Digital Financial Services (FG-DFS) to be published as SG3 Technical Reports:

1. The Digital Financial Services Ecosystem
2. Regulation in the Digital Financial Services Ecosystem
3. Impact of Social Networks on Digital Liquidity
4. Competition Aspects of Digital Financial Services
5. The Regulator’s Perspective on the Right Timing for Inducing Interoperability
6. Access to payment infrastructures
7. Review of DFS User Agreements in Africa: A Consumer Protection Perspective
8. Commonly identified Consumer Protection themes for Digital Financial Services
9. Main Recommendations.

### 3.3.1.3 Policy issues relating to international telecommunication/ICT

The studies on policy issues were being carried out by Q3/3, Q4/3, Q6/3, Q7/3, Q9/3, Q10/3, Q11/3, Q/12/3, and Q13/3. The activities on policy issues are summarized as follows.

– SG3 approved Recommendation ITU-T D.262, “Collaborative framework for OTTs”.

– SG3 approved Recommendation ITU-T D.1040, “Optimizing terrestrial cable utilization across multiple countries to boost regional and international connectivity”.

– SG3 approved Recommendation ITU-T D.1140/X.1261, “Policy framework including principles for digital identity infrastructure”.

– SG3 approved Recommendation ITU-T D.1102, “Customer redress and consumer protection mechanisms for OTTs”.

– SG3 agreed Supplement 4 to ITU-T D-series Recommendations: ITU-T D.263 – “Supplement on Principles for increased adoption and use of mobile financial services (MFSs) through effective consumer protection mechanism”.

– SG3 agreed Supplement 5 to ITU-T D-series Recommendations: ITU-T D.52 “Implementation guidelines for Recommendation ITU-T D.52 focusing on operationalization of regional Internet exchange points”.

– SG3 agreed on a new Technical Report on Methodologies for valuation of spectrum.

– SG3 circulated a questionnaire on the implementation status of Recommendation ITU-T D.98, “Charging in international mobile roaming service” and Recommendation ITU-T D.97, “Methodological principles for determining international mobile roaming rates”. The questionnaire is contained in TSB Circular 168.

– SG3 circulated a questionnaire on dispute resolution, as contained in TSB Circular 265.

### 3.3.2 Implementation of ITU Resolutions

SG3 as Lead Study Group on tariff and accounting principles, on economic issues, and on policy issues relating to international telecommunication/ICT considered:

– Implementation of World Telecommunication Standardization Assembly (WTSA-16) Resolutions 29, 44, 54, 61, 62, 64, 65, 84, 88, 89, and 95;

– Implementation of Plenipotentiary Conference (PP-18) Resolutions 2, 21, 101, 102, 123, 130, 137, 146, 180, 197, 203, 204, 205, 206, COM5/Rec.8;

– Implementation of World Telecommunication Development Conferences (WTDC-17) Resolutions 22, 23, 63, and 77;

– Implementation of World Conference on International Telecommunications (WCIT-12) Articles/Resolutions: 3.7, 4.4, 4.5, 4.6, 4.7, 8.1.1, 8.1.2, 8.2.1, 8.3.1, Appendix 1/1.2, Appendix 1/3.1.3, and Resolution 5 (Dubai 2012).

### 3.3.3 PP-18, WTSA-16, WCIT-12, and WTDC-17: Significant items of relevance for the work of Study Group 3

Study Group 3 mapped out significant items of relevance for the work of SG3 related to the outcomes of Plenipotentiary Conference (PP-18), World Telecommunication Standardization Assembly (WTSA-16), World Telecommunication Development Conferences (WTDC-17), and World Conference on International Telecommunications (WCIT-12). This work is contained in [SG3-TD341/PLEN](https://www.itu.int/md/T17-SG03-211213-TD-PLEN-0341).

### 3.3.4 Cooperation with ITU-T Lead Study Groups

SG3 considered incoming liaison statements from other ITU-T Lead Study Groups and responded accordingly on common topics of study:

– SG3 sought ITU-T SG2, SG12 and SG16 input or comment on its work on relation to the Mobile Financial Services.

– SG3 updated ITU-T SG13, SG17 and SG20 on its work related to Big Data.

– In regards to the work related to IoT and M2M Roaming, SG3 collaborated with ITU-T SG2 and SG20.

– On IMT-2020, SG3 collaborated with ITU-T SG13 and its Focus Group on Machine Learning for Future Networks including 5G (FG-ML5G).

– With ITU-T SG2, various liaison statements were exchanged on Telecommunication Management and OAM Project Plan, alternative calling procedures (ACP), and OTTs.

– In 2017, SG3 coordinated with ITU-T SG12 concerning its proposed new question on economic and policy issues pertaining to Quality of Service (QoS) and Quality of Experience (QoE).

– In 2020, SG3 collaborated with ITU-T SG17 on its dual-numbered Recommendation ITU-T D.1140/X.1261, “Policy Framework including Principles for digital identity infrastructure”.

– SG3 mapped Distributed Ledger Technology (DLT) related activities within the group as well with other study groups.

– SG3 liaised with ITU-T SG2, SG9, SG16, SG20 on OTT-related activities.

### 3.3.5 Cooperation with TSAG

SG3 reported to TSAG on the progress of its lead study group roles at the following meetings:

| Meeting | Place, date | Reports |
| --- | --- | --- |
| TSAG | Geneva, Switzerland, 26 February - 2 March 2018 | [TSAG-TD148/GEN](https://www.itu.int/md/T17-TSAG-180226-TD-GEN-0148) |
| Geneva, Switzerland, 10-14 December 2018 | [TSAG-TD301/GEN](https://www.itu.int/md/T17-TSAG-181210-TD-GEN-0301) |
| Geneva, Switzerland, 23-27 September 2019 | [TSAG-TD478/GEN](https://www.itu.int/md/T17-TSAG-190923-TD-GEN-0478) |
| Virtual, 21-25 September 2020 | [TSAG-TD798/GEN](https://www.itu.int/md/T17-TSAG-200921-TD-GEN-0798) |
| Virtual, 25-29 October 2021 | [TSAG-TD1040/GEN](https://www.itu.int/md/T17-TSAG-211025-TD-GEN-1040) |
| Virtual, 10-14 January 2022 | [TSAG-TD1194/GEN](https://www.itu.int/md/T17-TSAG-220110-TD-GEN-1194) |

SG3 considered incoming liaison statements from TSAG, and replied on topics such as inter-sector coordination, and provided information on the Creation, participation and termination of Regional Groups. SG3 also sent liaison statements to inform TSAG regarding new Questions and updates on its WTSA-20 preparations.

### 3.3.6 Cooperation with ITU-D and ITU-R

SG3 liaised with the ITU-D and ITU-R with updates of their ongoing work. In the 2018 meeting, SG3 sent ITU-D SG1 its recent publication of ITU-T Technical Report on Economic impact of OTTs. SG3 also sought ITU-D SG1 for feedback on the Technical Methodologies for valuation of spectrum.

Additionally, after its determination, SG3 shared the Draft new Recommendation ITU-T D.264 on “Shared use of telecommunication infrastructure as possible methods for enhancing the efficiency of telecommunications” with ITU-D SG1, ITU-R SG1, and ITU-R CCV. In March-April 2020, both ITU-D and ITU-R actively participated in the SG3 meeting towards the approval of ITU-T D.264.

Additionally, SG3 replied to various incoming liaison statements on collaboration and inter-sector coordination. SG3 also responded to liaison statements on common areas of study with ITU-D SG1 and SG2.

### 3.3.7 Meetings of SG3 Regional Groups

The following SG3 regional groups took place during the study period:

|  |  |  |
| --- | --- | --- |
| Meetings | Place, Date | Reports |
| Regional Group for Africa (SG3RG-AFR) | Victoria Falls, Zimbabwe, 31 January-3 February 2017 | [SG3RG-AFR Report 1](https://www.itu.int/md/T17-SG03RG.AFR-R-0001)  (also in [TD16/PLEN](https://www.itu.int/md/T17-SG03-170405-TD-PLEN-0016)) |
| Kigali, Rwanda, 5-8 February 2018 | [SG3RG-AFR Report 2](https://www.itu.int/md/T17-SG03RG.AFR-R-0002)  (also in [TD72/PLEN](https://www.itu.int/md/T17-SG03-180409-TD-PLEN-0072)) |
| Antananarivo, Madagascar, 18-22 February 2019 | [SG3RG-AFR Report 3](https://www.itu.int/md/T17-SG03RG.AFR-R-0003)  (also in [TD118/PLEN](https://www.itu.int/md/T17-SG03-190423-TD-PLEN-0118)) |
| Virtual, 6-10 July 2020 | [SG3RG-AFR Report 4](https://www.itu.int/md/T17-SG03RG.AFR-R-0004)  (also in [TD244/PLEN](https://www.itu.int/md/T17-SG03-200824-TD-PLEN-0244)) |
| Virtual, 6-9 April 2021 | [SG3RG-AFR Report 5](https://www.itu.int/md/T17-SG03RG.AFR-R-0005)  (also in [TD307/PLEN](https://www.itu.int/md/T17-SG03-210524-TD-PLEN-0307)) |
| Virtual, 26-29 July 2021 | [SG3RG-AFR Report 6](https://www.itu.int/md/T17-SG03RG.AFR-R-0006)  (also in [TD353/PLEN](https://www.itu.int/md/T17-SG03-211213-TD-PLEN-0353)) |
| Regional Group for Latin America and the Caribbean (SG3RG-LAC) | Port of Spain, Trinidad and Tobago, 6-10 March 2017 | [SG3RG-LAC Report 1](https://www.itu.int/md/T17-SG03RG.LAC-R-0001)  (also in [TD16/PLEN](https://www.itu.int/md/T17-SG03-170405-TD-PLEN-0016)) |
| Managua, Nicaragua, 25-29 March 2019 | [SG3RG-LAC Report 2](https://www.itu.int/md/T17-SG03RG.LAC-R-0002)  (also in [TD119/PLEN](https://www.itu.int/md/T17-SG03-190423-TD-PLEN-0119)) |
| Virtual, 15-17 July 2020 | [SG3RG-LAC Report 3](https://www.itu.int/md/T17-SG03RG.LAC-R-0003)  (also in [TD246/PLEN](https://www.itu.int/md/T17-SG03-200824-TD-PLEN-0246)) |
| Virtual, 12-13 April 2021 | [SG3RG-LAC Report 4](https://www.itu.int/md/T17-SG03RG.LAC-R-0004)  (also in [TD308/PLEN](https://www.itu.int/md/T17-SG03-210524-TD-PLEN-0308)) |
| Regional Group for Asia and Oceania (SG3RG-AO) | Seoul, Korea (Rep. of), 24-27 October 2017 | [SG3RG-AO Report 1](https://www.itu.int/md/T17-SG03RG.AO-R-0001)  (also in [TD70/PLEN](https://www.itu.int/md/T17-SG03-180409-TD-PLEN-0070)) |
| Xi’an, China, 28-31 August 2018 | [SG3RG-AO Report 2](https://www.itu.int/md/T17-SG03RG.AO-R-0002)  (also in [TD116/PLEN](https://www.itu.int/md/T17-SG03-190423-TD-PLEN-0116)) |
| Colombo, Sri Lanka, 2-4 October 2019 | [SG3RG-AO Report 3](https://www.itu.int/md/T17-SG03RG.AO-R-0003)  (also in [TD176/PLEN](https://www.itu.int/md/T17-SG03-200331-TD-PLEN-0176)) |
| Virtual, 23-26 June 2020 | [SG3RG-AO Report 4](https://www.itu.int/md/T17-SG03RG.AO-R-0004)  (also in [TD243/PLEN](https://www.itu.int/md/T17-SG03-200824-TD-PLEN-0243)) |
| Virtual, 12-14 April 2021 | [SG3RG-AO Report 5](https://www.itu.int/md/T17-SG03RG.AO-R-0005)  (also in [TD309/PLEN](https://www.itu.int/md/T17-SG03-210524-TD-PLEN-0309)) |
| Regional Group for the Arab Region (SG3RG-ARB) | Riyadh, Saudi Arabia, 21-22 November 2017 | [SG3RG-ARB Report 1](https://www.itu.int/md/T17-SG03RG.ARB-R-0001)  (also in [TD71/PLEN](https://www.itu.int/md/T17-SG03-180409-TD-PLEN-0071)) |
| Kuwait City, Kuwait, 19-20 December 2018 | [SG3RG-ARB Report 2](https://www.itu.int/md/T17-SG03RG.ARB-R-0002)  (also in [TD117/PLEN](https://www.itu.int/md/T17-SG03-190423-TD-PLEN-0117)) |
| Dubai, United Arab Emirates, 23-24 October 2019 | [SG3RG-ARB Report 3](https://www.itu.int/md/T17-SG03RG.ARB-R-0003)  (also in [TD177/PLEN](https://www.itu.int/md/T17-SG03-200331-TD-PLEN-0177)) |
| Virtual, 28 July 2020 | [SG3RG-ARB Report 4](https://www.itu.int/md/T17-SG03RG.ARB-R-0004)  (also in [TD247/PLEN](https://www.itu.int/md/T17-SG03-200824-TD-PLEN-0247)) |
| Virtual, 20 April 2021 | [SG3RG-ARB Report 5](https://www.itu.int/md/T17-SG03RG.ARB-R-0005)  (also in [TD310/PLEN](https://www.itu.int/md/T17-SG03-210524-TD-PLEN-0310)) |
| Regional Group for Eastern Europe, Central Asia and Transcaucasia (SG3RG-EECAT) | Saint Petersburg, Russian Federation, 21 May 2019 | [SG3RG-EECAT Report 1](https://www.itu.int/md/T17-SG03RG.EECAT-R-0001)  (also in [TD178/PLEN](https://www.itu.int/md/T17-SG03-200331-TD-PLEN-0178)) |
| Minsk, Belarus, 4 March 2020 | [SG3RG-EECAT Report 1](https://www.itu.int/md/T17-SG03RG.EECAT-R-0002)  (also in [TD179/PLEN](https://www.itu.int/md/T17-SG03-200331-TD-PLEN-0179)) |

### 3.3.8 50-year Anniversary of ITU-T Regional Groups

In 2018, SG3 celebrated 50 years of ITU-T Regional Groups and effective presence in the Regions.

The report of Study Group III, which refers to the creation of the regional working parties, was unanimously adopted by the Plenary Assembly during the 4th plenary meeting on 17 October 1968 (reference: Doc. AP IV/117, page. 3).

Following this decision, at its subsequent meeting held in Geneva, Study Group III (General tariff studies) laid down the working methods for the following Regional Tariff Working Parties:

- The Regional tariff Working Party for Latin America (TAL)

- The Regional tariff Working Party for Africa (TAF)

- The Regional tariff Working Party for Asia (TAS)

- The Regional tariff Working Party for Europe (TEUR)

### 3.3.9 Hands-On Bridging the Standardization Gap (BSG) Sessions

During the 2017-2021 study period, SG3 organized hands-on Bridging the Standardization Gap (BSG) training sessions according to WTSA Resolution 44 (rev. Hammamet, 2016) in order to complement the SG3 regional group meetings. The details of the training course, “[Recommendation ITU-T A.1: Working Methods of ITU-T Study Groups 2019](https://academy.itu.int/training-courses/full-catalogue/recommendation-itu-t-a1-working-methods-itu-t-study-groups-2019)”, were additionally made available through TDs at regional meetings as a measure to build capacity and to improve working methods in study group functions, especially through the completion and certification of the ITU-T A.1 training course.

At the kind invitation of the Telecommunications Regulatory Authority (TRA) of the United Arab Emirates, an exceptional two-day Interregional Arab-African Hands-on training on BSG was held in Dubai, United Arab Emirates on 19-20 October 2019. This training was in conjunction of the third meeting of ITU-T SG3 Regional Group for the Arab Region (SG3RG-ARB), as well as the meetings of ITU-T SG2 Regional Group for Africa (SG2RG-AFR) and ITU-T SG2 Regional Group for the Arab Region (SG2RG-ARB). This training was attended by 49 delegates from 21 countries.

### 3.3.10 Engagement of Developing Countries

In conjunction to each regional meeting, an ITU Regional Standardization Forum (RSF) or ITU workshop/forum was organized with the objective to provide an open forum for debating and exchanging views on a number of standardization topics under discussion at ITU-T.

| **Place, Date** | **Event** |
| --- | --- |
| Victoria Falls, Zimbabwe, 30 and 31 January 2017 | Regional Economic and Financial Forum of Telecommunications/ICTs for Africa |
| Port of Spain, Trinidad and Tobago, 6 March 2017 | Regional Standardization Forum (RSF) for Bridging the Standardization Gap (BSG) |
| Seoul, Korea (Rep. of), 24 October 2017 | Regional Standardization Forum for Bridging the Standardization Gap (BSG) for the Asia Pacific Region |
| Riyadh, Saudi Arabia, 19 November 2017 | Regional Standardization Forum (RSF) for Bridging the Standardization Gap (BSG) |
| Kigali, Rwanda, 5 February 2018 | Regional Standardization Forum (RSF) for Bridging the Standardization Gap (BSG) |
| Xi’an, China, 25 June 2018 | Regional Standardization Forum on Economic, Regulatory and Policy Trends in a Fast-Changing Digital World |
| Kuwait City, Kuwait, 17 December 2018 | ITU Regional Standardization Forum on Emerging Economic, Regulatory and Policy Trends In a Fast-Changing Digital World |
| Antananarivo, Madagascar, 18 February 2019 | ITU Regional Standardization Forum on Emerging Economic, Regulatory and Policy Trends for an Inclusive, Sustainable and Trustworthy Digital World |
| Managua, Nicaragua, 25-26 March 2019 | ITU Workshop on International Numbering Resources (INRs) for the Americas |
| Saint-Petersburg, Russia Federation, 21-23 May 2019 | ITU Forum “Internet of Things: Future Applications and Services Perspective 2030”, the Fourth ITU Workshop on Network 2030 |
| Colombo, Sri Lanka, 1 October 2019 | ITU Regional Standardization Forum on Addressing Competition Issues in ICT Economy |
| Dubai, United Arab Emirates, 22 November 2019 | Inter-regional Standardization Forum on “Operational issues on numbering, emergency service and OTTs” |
| Minsk, Belarus, 3-5 March 2020 | ITU Forum “Smart sustainable cities: from concept to implementation” |

### 3.3.11 Capacity Building

– Newcomers’ training sessions are typically held during the first week of the SG3 parent meetings and a newcomer’s pack is made available that includes an overview of the ITU-T approval processes, and a general introduction with practical and logistical information. SG3 mentors are also introduced to new meeting participants.

– Tutorials and guidelines on the presentation, format and submission of contributions are routinely presented at meetings in order to advance the work of ITU-T SG3.

– ITU-T Leadership Team training and a tutorial and live demonstration on ITU-T MyWorkspace were also provided in April-May 2019.

– Special workshops and sessions were held on topics such as “Cooperation with ITU-T SG12”, and “Economic and Policy aspects of IoT”.

– A BSG-related session on ITU-T Approval Processes on regional Recommendations and on the ITU-T A.5 qualification and justification process was given during the SG3RG-AFR virtual meeting during 6-10 July 2020.

# 4 Observations concerning future work

1. Development of charging and accounting/settlement mechanisms for current and future international telecommunications/ICT services and networks, if needed.

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

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

4. Continued studies of international roaming tariffs and roaming aspects of IoT/M2M.

5. International Internet Connectivity studies, including cost modelling.

6. Economic and policy aspects of the Internet, convergence (services or infrastructure), and OTTs in the context of international telecommunication/ICT services and networks.

7. Competition policy and study of the definition of relevant markets, with a view to enabling Member States to identify where significant market power exists as it relates to the economic and policy aspects of the international telecommunication services and networks.

8. Economic and policy aspects of international telecommunications/ICT services and networks.

9. Economic and policy issues related to international telecommunication/ICT services and networks that enable use of digital financial services with particular reference to consumer protection and empowerment, competition, and cooperation and collaboration between the relevant stakeholders.

# 5 Updates to the WTSA Resolution 2 for the 2022-2024 study period

Annex 2 contains the updates to WTSA Resolution 2 proposed by Study Group 3 concerning the general areas of study, title, mandate, lead roles and points of guidance in the next study period.

# ANNEX 1 - List of Recommendations, Supplements and Other Materials Produced or Deleted During the Study Period

The list of new and revised Recommendations approved during the study period is found in Table 7.

The list of Recommendations determined/consented at the last meeting of Study Group 3 is found in Table 8.

The list of Recommendations deleted by Study Group 3 during the study period is found in Table 9.

The list of Recommendations submitted by Study Group 3 to WTSA-20 for approval is found in Table 10.

Tables 11 onwards list other publications approved and/or deleted by Study Group 3 during the study period.

TABLE 7  
Study Group 3 – Recommendations approved during the study period

| Recommendation | Approval Date | Status | TAP/ AAP | Title |
| --- | --- | --- | --- | --- |
| ITU-T D.198 | April 2019 | New, in force | TAP | Principles for unified format of price/tariffs/rates-lists used for exchanging telephone traffic |
| ITU-T D.262 | April 2019 | New, in force | TAP | Collaborative Framework for OTTs |
| ITU-T D.263 | April 2019 | New, in force | TAP | Costs, Charges and Competition for Mobile Financial Services (MFS) |
| ITU-T D.264 | April 2020 | New, in force | TAP | Shared uses of telecommunication infrastructure as possible methods for enhancing the efficiency of telecommunications |
| ITU-T D.1040 | August 2020 | New, in force | TAP | Optimizing terrestrial cable utilization across multiple countries to boost regional and international connectivity |
| ITU-T D.1101 | August 2020 | New, in force | TAP | Enabling environment for voluntary commercial arrangements between telecommunications network operators and OTT providers |
| ITU-T D.1140/X.1261 | August 2020 | New, in force | TAP | Policy framework including principles for digital identity infrastructure |
| ITU-T D.1040 | August 2020 | New, in force | TAP | Optimizing terrestrial cable utilization across multiple countries to boost regional and international connectivity |
| ITU-T D.1041 | May 2021 | New, in force | TAP | Policy and methodological principles for determining co-location and access charges |
| ITU-T D.1102 | December 2021 | New, in force | TAP | Customer redress and consumer protection mechanisms for OTTs |

TABLE 8  
Study Group 3 – Recommendations consented/determined at the last meeting

| Recommendation | Consent/ Determination | TAP/AAP | Title |
| --- | --- | --- | --- |
| None. |  |  |  |

TABLE 9  
Study Group 3 – Recommendations deleted during study period

| Recommendation | Last version | Withdrawal date | Title |
| --- | --- | --- | --- |
| None. |  |  |  |

TABLE 10  
Study Group 3 – Recommendations submitted to WTSA-20

| Recommendation | Proposal | Title | Reference |
| --- | --- | --- | --- |
| None. |  |  |  |

TABLE 11  
Study Group 3 – Supplements

| Recommendation | Date | Status | Title |
| --- | --- | --- | --- |
| ITU-T D.Suppl4 | April 2020 | New, in force | Supplement 4 to ITU-T D-series Recommendations  ITU-T D.263 – Supplement on Principles for increased adoption and use of mobile financial services (MFSs) through effective consumer protection mechanisms |
| ITU-T D.Suppl5 | December 2021 | New, in force | Supplement 5 to ITU-T D-series Recommendations  ITU-T D.52 – Supplement on Implementation guidelines for Recommendation ITU-T D.52 focusing on operationalization of regional Internet exchange points |

TABLE 12  
Study Group 3 – Technical Papers

| Acronym | Date | Status | Title |
| --- | --- | --- | --- |
| - | 2017-04 | New | Economic impact of OTTs |

TABLE 13  
Study Group 3 – Technical Reports

| Acronym | Date | Status | Title |
| --- | --- | --- | --- |
| - | 2017-04 | New | Methodologies for valuation of spectrum |
| DSTR-DFSECO | 2019-05 | New | [The Digital Financial Services Ecosystem](http://www.itu.int/en/ITU-T/focusgroups/dfs/Documents/09_2016/FINAL%20ENDORSED%20ITU%20DFS%20Introduction%20Ecosystem%2028%20April%202016_formatted%20AM.pdf) |
| DSTR-DFSREG | 2019-05 | New | [Regulation in the Digital Financial Services Ecosystem](http://www.itu.int/en/ITU-T/focusgroups/dfs/Documents/09_2016/Regulation%20and%20the%20DFS%20Ecosystem.pdf) |
| DSTR-SNDL | 2019-05 | New | [Impact of Social Networks on Digital Liquidity](https://www.itu.int/en/ITU-T/focusgroups/dfs/Documents/10_2016/ITUFGDFS_REPORT-ON-Impact-of-Social-Networks-on-Digital-Liquidity-11-2016.pdf) |
| DSTR-DFSCA | 2019-05 | New | [Competition Aspects of DFS](http://www.itu.int/en/ITU-T/focusgroups/dfs/Documents/201703/ITU_FGDFS_Report-Competition-Aspects-of-DFS.pdf) |
| DSTR-DFSRP | 2019-05 | New | [The Regulator’s Perspective on the Right Timing for Inducing Interoperability](http://www.itu.int/en/ITU-T/focusgroups/dfs/Documents/201702/ITU_FGDFS_Report-Right-Timing-for-Inducing-Interoperability.pdf) |
| DSTR-DFSPI | 2019-05 | New | [Access to payment infrastructures](http://www.itu.int/en/ITU-T/focusgroups/dfs/Documents/09_2016/Access%20to%20Payment%20Infrastructures.pdf) |
| DSTR-DFSUAAFR | 2019-05 | New | [Review of DFS User Agreements in Africa: A Consumer Protection Perspective](http://www.itu.int/en/ITU-T/focusgroups/dfs/Documents/01_2017/ITU_FGDFS_Report-on-Review-of-DFS-User-Agreements-in-Africa.pdf) |
| DSTR-DFSCP | 2019-05 | New | [Commonly identified Consumer Protection themes for Digital Financial Services](http://www.itu.int/en/ITU-T/focusgroups/dfs/Documents/09_2016/ConsumerProtectionThemesForBestPractices.pdf) |
| DSTR-DFSMR | 2019-05 | New | [FG DFS recommendations report](http://www.itu.int/en/ITU-T/focusgroups/dfs/Documents/201703/ITU_FGDFS_Main-Recommendations.pdf) |

TABLE 14  
Study Group 3 – Other publications

| Acronym | Date | Status | Title |
| --- | --- | --- | --- |
| - | 2018-04 | New | Digital Financial Services Glossary |

# ANNEX 2 - Proposed Updates to the Study Group 3 Mandate and Lead Study Group Roles (WTSA Resolution 2)

The following are the proposed changes to the Study Group 3 mandate and Lead Study Group roles agreed at the last Study Group 3 meeting in this study period, based on the relevant portions of [WTSA-16 Resolution 2](https://www.itu.int/pub/publications.aspx?lang=en&parent=T-RES-T.2-2016).

[Provide below the proposed changes to the SG mandate **using** revision marks against the WTSA‑16 text.]

PART 1 ‑ General areas of study

*[No changes requested to the general areas of study.]*

**Study Group 3**

**Tariff and accounting principles and international telecommunication/ICT economic and policy issues**

ITU T Study Group 3 is responsible, inter alia, for studying international telecommunication/ICT policy and economic issues and tariff and accounting matters (including costing principles and methodologies), with a view to informing the development of enabling regulatory models and frameworks. 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 of maintaining independent financial administration of telecommunications on a sound basis. Additionally, Study Group 3 will study the economic and regulatory impact of the Internet, convergence (services or infrastructure) and new services, such as over-the-top (OTT), on international telecommunication services and networks.

PART 2 ‑ Lead Study Groups in specific areas of study

*[No changes requested to the general areas of study.]*

SG3 Lead study group on tariff and accounting principles relating to international telecommunications/ICT  
Lead study group on economic issues relating to international telecommunications/ICT  
Lead study group on policy issues relating to international telecommunications/ICT

Annex B  
(to WTSA Resolution 2)  
  
Points of guidance to study groups for the development  
of the post-2021 work programme

ITU‑T Study Group 3 should study and develop Recommendations, technical reports, handbooks and other publications for members to respond positively and proactively to the development of international telecommunication/ICT markets, in order to ensure that policy and regulatory frameworks remain supportive of innovation, competition, and investment, for the benefit of users and the global economy.

In particular, Study Group 3 should ensure that tariffs, economic policies and regulatory frameworks related to international telecommunication/ICT services and networks are forward-looking and serve to encourage take‑up and use, as well as industry innovation and investment. Furthermore, these frameworks need to be adequately flexible to adjust to rapidly evolving markets, technologies, and business models, while ensuring the necessary competitive safeguards and the protection of consumers.

In this context, the work of Study Group 3 should also consider new and emerging technologies and services so its work will help drive new economic opportunities and enhance societal benefits in different areas including healthcare, education, and sustainable development.

Study Group 3 should study and develop appropriate instruments, with a view to creating an enabling policy environment for the transformation of markets and industries, through the promotion of open, innovation-driven, and accountable institutions.

All study groups shall notify Study Group 3 at the earliest opportunity of any development that may have an impact on tariff and accounting principles and international telecommunication/ICT economic and policy issues.

Annex C  
(to WTSA Resolution 2)  
  
List of Recommendations under the responsibility of the respective   
study groups and TSAG in the 2022-2024 study period

Study Group 3

ITU‑T D-series

ITU-T D.103/E.231

ITU-T D.104/E.232

ITU-T D.1140/X.1261

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