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| **The Meeting of the SATRC Working Group on Spectrum** | **SAPVIII-SPEC1/ OUT-03** |
| 21 – 23 June 2022, New Delhi, India | 28 June 2022 |

Work Group on Spectrum

**QUESTIONNAIRE ON WORK ITEM**

**REGULATORY APPROACHES FOR SHARING, TRADING AND LEASING OF SPECTRUM**

1. **Licensing regime**
2. Whether service license is required for offering mobile services? What is the tenure of such license?
3. Whether Mobile license is granted for national operation or regional basis? In case of regional, kindly provide details
4. Whether spectrum is assigned along with the service license (in bundled manner)?

If yes,

a) how much spectrum is assigned along with the license?

b) what is the mechanism to acquire additional spectrum?

c) what is the validity period of service license and spectrum?

1. If spectrum assignment is delinked with the service license, when was it done?

a) In which year was it done?

b) How is access spectrum assigned and what is the validity period?

1. Is spectrum assigned to telecom operators technology specific or technology agnostic? In case it is technology specific, what is the procedure to change the technology?
2. Which spectrum bands are used for backhaul purpose?
3. What is mechanism for assignment of backhaul spectrum?
4. Whether mobile operators demand for more access spectrum? Kindly provide details.
5. How is the mobile quality of service rated in your country? Key QoS parameters, prescribed benchmarks and actually achieved by the mobile operators may also be provide.
6. Whether 5G services launched in your country? If yes, kindly share details. If no, what are the plans?
7. **Mobile Services in the country**

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| Name of the operator | Area(s) of operation | Quantum of Access spectrum held in | | Mobile technology(ies) being offered | No. of mobile subscribers | Monthly mobile data usage in GB | Average mobile data usage per subscriber per month in MB |
| FDD bands (paired) | TDD bands (unpaired) |  |  |  |  |
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1. **License fee, spectrum charges and other levies**

Kindly provide details of the applicable License Fee, Spectrum charges and other regulatory levies

1. **Spectrum bands earmarked for IMT services**

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| Spectrum band | Uplink frequency range | Downlink frequency range | Band plan adopted | Quantum of spectrum assigned to the mobile operators |
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1. **Average access spectrum holding per mobile operator (spectrum in FDD bands may be counted as 2x)**

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| Sub-1 GHz bands |  |
| Mid-bands (1-6 GHz) |  |
| >6 GHz bands |  |

1. **Mobile Data usage**

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|  | 2G | 3G | 4G | Average |
| Monthly mobile data usage in GB |  |  |  |  |
| Average mobile data usage per subscriber per month in MB |  |  |  |  |
| Average Data speed (in Mbps) |  |  |  |  |

1. **Spectrum sharing**

Whether spectrum sharing is permitted in your country?

If yes,

a) when was it permitted?

b) what type of spectrum sharing is permitted?

c) what are the key terms and conditions?

d) whether there is any regulatory financial levy post spectrum sharing? If yes, kindly share details.

e) How has been the uptake of spectrum sharing?

f) Kindly share a copy of the spectrum sharing guidelines in your country

g) Is spectrum sharing permitted among more than two operators?

If no,

a) whether telecom operators have ever demanded for permitting spectrum sharing? If yes, kindly share details

b) whether the need for spectrum sharing has been examined? What was the outcome?

c) whether permitting spectrum sharing among telecom operators in plan? If yes, kindly share details

1. **Spectrum trading (when right to use of spectrum is transferred by the spectrum holding telecom operator to another telecom operator for the remaining validity period)**

Whether spectrum trading is permitted in your country?

If yes,

a) when was it permitted?

b) what is the eligibility criteria?

c) what are the key terms and conditions?

d) whether there is any regulatory financial levy upon spectrum trading? If yes, kindly share details

e) How has been the uptake of spectrum trading?

f) Kindly share a copy of the spectrum trading guidelines in your country

g) Is change of spectrum use (technology) permitted upon transfer?

If no,

a) whether telecom operators have ever demanded for permitting spectrum trading? If yes, kindly share details

b) whether the need for spectrum trading has been examined? What was the outcome?

c) whether permitting spectrum trading among telecom operators in plan? If yes, kindly share details

d) whether telecom operators are permitted to surrender spectrum before the expiry of the validity period of right to use of spectrum? If yes, kindly share details as well as a copy of the guidelines.

1. **Spectrum leasing (when right to use of spectrum is transferred by the spectrum holding telecom operator to another telecom operator or a private entity for a certain period)**

Whether spectrum leasing is permitted in your country?

If yes,

a) when was it permitted?

b) what is the eligibility criteria?

c) what are the key terms and conditions?

d) whether there is any regulatory financial levy upon spectrum leasing? If yes, kindly share details

e) How has been the uptake of spectrum leasing?

f) Kindly share a copy of the spectrum leasing guidelines in your country

g) Is change of spectrum use (technology) permitted upon leasing?

If no,

a) whether telecom operators or private entitles have ever demanded for permitting spectrum leasing? If yes, kindly share details

b) whether the need for spectrum leasing has been examined? What was the outcome?

c) whether permitting spectrum leasing in plan? If yes, kindly share details

d) whether there is a demand from private entities for spectrum for captive use, particularly for Industry 4.0? If yes, kindly share details

1. **Delicensed / License-Exempt Spectrum for WiFi use**

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| Spectrum band | Frequency range delicensed for WiFi applications | Restrictions for indoor and outdoor use |
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1. **Spectrum Cap (maximum quantum of spectrum a Telecom Operator can hold)**

Whether any spectrum cap has been prescribed for access spectrum bands? Kindly provide details

1. **Efficient Use of Spectrum**

How is efficient use of spectrum ensured? Provide details of practice adopted.