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|  | ASIA-PACIFIC TELECOMMUNITY | **Document No:** |
| **The 4th Meeting of the APT Conference Preparatory****Group for WRC-19 (APG19-4)** | **APG19-4/OUT-10** |
| 7 – 12 January 2019, Busan, Republic of Korea | 11 January 2019 |

Working Party 5

**PRELIMINARY VIEWs on WRC-19 agenda item 1.10**

**Agenda Item 1.10:**

*to consider studies on spectrum needs and regulatory provisions for the introduction and use of the global aeronautical distress and safety system, in accordance with Resolution* ***426 (WRC-15)****;*

**1. Background**

Recent tragedies of aircraft flight highlighted limitation of the current air navigation system and stressed the necessity of timely identification and location of aircraft on distress occasions. To address issues, the International Civil Aviation Organization (ICAO) held a Special Meeting on global flight tracking (GFT) of Aircraft in May 2014 and formed two groups. One of them was an ICAO ad hoc Working Group tasked to develop a concept of operations (ConOps) to support the development of a global aeronautical distress and safety system (GADSS). GADSS was designed to address all phases of flight under all circumstances including distress.

The ConOps is the guideline for the development of ICAO performance-based standards, outlining specific technical and operational requirements that an aircraft must meet. Based on these requirements, the aircraft operators will determine which specific systems need to be installed on an aircraft.

The version 6.0 of the ConOps describes in particular the following functions:

* Aircraft Tracking Function;
* Autonomous Distress Tracking function;
* Post Flight Localization and Recovery function; and
* GADSS Information Management and Procedures

The ConOps for the GADSS does not identify specific systems proposed to contribute to GADSS. Studies within ICAO in preparation for WRC-19 have determined that the GADSS requirements can be satisfied using existing systems operating within existing aeronautical frequency allocations and distress spectrum (e.g. 406.1 MHz) in accordance with the provisions of the Radio Regulations.

With regards to spectrum needs and regulatory provisions necessary for the implementation of the GADSS, WRC-15 adopted Resolution 426 (WRC-15) and WRC-19 agenda item 1.10.

ITU-R Working Party (WP) 5B which is the responsible group of this agenda item has completed its work on GADSS. Draft CPM report has been submitted to the CPM Chapter Rapporteur after WP 5B meeting in May 2018 and the Report ITU-R M.2436-0 “The global aeronautical distress and safety system” has been completed and afterwards approved by Study Group (SG) 5 in November 2018.

Two methods (Method A and Method B) have been identified in the draft CPM report, both of which states that no changes to Radio Regulations (RR) Article 5 is required in addition to suppression of Resolutions **426 (WRC-15)**. Method B is different from Method A as it proposes to develop a new Resolution, which invites ITU-R to develop the relevant Recommendation(s) to reflect frequency bands used by GADSS, system elements and technical characteristics. Details of each method are described in section 5/1.10/4 and 5/1.10/5 of the draft CPM report.

**2. Documents**

* Input Documents APG19-4/INP-19 (AUS), APG19-4/INP-26 (NZL), APG19-4/INP-46 (MLA, THA), APG19-4/INP-63 (J), APG19-4/INP-80 (KOR), APG19-4/INP-99 (CHN), APG19-4/INP-122 (INS)
* Information Documents APG19-4/INF-04 (ICAO), APG19-4/INF-22 (CITEL), APG19-4/INF-23 (CEPT), APG19-4/INF-24 (RCC), APG19-4/INP-09(Rev.1)

**3. Summary of discussions**

**3.1 Summary of APT Members’ views**

**3.1.1 Australia** - **Document APG19-4/INP-19**

* Australia supports current ITU-R studies in Working Party 5B for the introduction and use of Global Aeronautical Distress and Safety System (GADSS) in accordance with Resolution 426 (WRC-15). These studies should take into account specialist advice from ICAO relevant to the GADSS concept.
* Australia supports Method A of the Draft CPM Report. GADSS is a system of systems using existing frequency allocations. Method A allows GADSS to evolve with minimal need to change the Radio Regulations.

**3.1.2 New Zealand** - **Document APG19-4/INP-26**

* New Zealand is of the view that no additional spectrum is needed to facilitate the implementation of GADSS and therefore no change to Article 5 of the Radio Regulations is required.

**3.1.3 Malaysia/Thailand** - **Document APG19-4/INP-46**

* Malaysia and Thailand support no change to Article 5 and supports modification of Article 30 to the Radio Regulations. Malaysia and Thailand also support that (i) GADSS be included as a distress and safety communications system in Chapter VII – Distress and safety communications (addition of Article 34A) in the Radio Regulations; and (ii) details of the GADSS elements and technical characteristics be contained in the Annexes to the ICAO Convention.

**3.1.4 Japan** - **Document APG19-4/INP-63**

* Japan supports ITU-R studies for the introduction of GADSS in accordance with Resolution 426 (WRC-15) and it is desirable to follow the policy of Method A to implement GADSS.

**3.1.5 Republic of Korea** - **Document APG19-4/INP-80**

* The Republic of Korea proposes modifications to the APT Preliminary Views developed at the APG 19-3 meeting;
* “APT Members support the ITU-R studies undertaken for the introduction and use of Global Aeronautical Distress and Safety System (GADSS) in accordance with Resolution 426 (WRC-15).”
* “APT Members are of the view that:
* no additional spectrum allocations and no changes to Article 5 of the Radio Regulations are required
* the details of the GADSS elements are contained in Annexes to the ICAO Convention
* modification of Radio Regulations other than Article 5 to facilitate introduction of GADSS may be required eg. modification of Article 30 General provision
* any regulatory provisions required for the implementation of GADSS should take into account the GADSS concept provided by ICAO”

**3.1.6 People’s Republic of China** - **Document APG19-4/INP-99**

* China is of the view that:
* GADSS elements shall use frequency bands which are provided for safety purposes;
* GADSS shall only operate using primary service allocations;
* The system elements of the GADSS including their operating frequency bands and technical characteristics should be included in a future ITU-R Recommendation.

**3.1.7 Republic of Indonesia** - **Document APG19-4/INP-122**

Indonesia supports that activities of WP 5B to implement the GADSS concept.

**3.2 Summary of issues raised during the meeting**

There was a general consensus that no additional spectrum allocation is required and modifications in provisions other than Article 5 of Radio Regulation are needed.

**4. APT Preliminary View(s)**

APT Members support the ITU-R studies being undertaken for the introduction and use of Global Aeronautical Distress and Safety System (GADSS) in accordance with Resolution **426 (WRC-15)**.

APT Members are of the view that:

* no additional spectrum allocations and no changes to Article 5 of the Radio Regulations are required
* modification of Chapter VII in the Radio Regulations to facilitate introduction of GADSS is required including modification of Article 30 General provision and addition of Article 34A
* the details of the GADSS elements are defined in Annexes to the ICAO Convention
* any studies on regulatory provisions required for the implementation of GADSS should take into account the GADSS concept provided by ICAO

APT Members support the modifications of the Radio Regulations as proposed in the Method A contained in the draft CPM report regarding this agenda item.

**5. Other View(s) from APT Members**

None

**6. Issues for Consideration at Next APG Meeting**

APT Members are encouraged to contribute their views including identification of their preferred method, taking into account the ITU-R studies, outcome of the CPM19-2 and APT preliminary views and submit contributions to the next APG meeting to develop the draft PACP on WRC-19 agenda item 1.10.

**7. Views from Other Organisations** (as provided in the information documents to

APG19-4)

**7.1 Regional Groups**

**7.1.1 ASMG** - **Document APG19-4/INP-09(Rev.1)**

* ASMG Position is to support: Following-up the on-going studies in ITU-R and related results and ensuring the protection of existing services in the case of new allocations are required.

**7.1.2 ATU** - **Document APG19-4/INP-09(Rev.1)**

* No Change to Article 5 of Radio Regulations but rather support regulatory provisions that facilitate the implementation of the Global Aeronautical Distress and Safety System (GADSS) in accordance with ICAO’s requirements, while protecting incumbent services.

**7.1.3 CEPT** - **Document APG19-4/INF-23**

* CEPT is of the view that:
* systems contributing to the GADSS shall operate in accordance with ICAO requirements or recommendations contained in Standard and Recommended Practices (SARPs), manuals or guidance material;
* any changes to the Radio Regulations should be determined on the basis of the GADSS concept developed by ICAO;
* systems identified to contribute to the GADSS do not require any change to Article 5 of the Radio Regulations;
* [the list of the frequency bands and systems used by GADSS and also their technical and operational characteristics and operational parameters should be included in the corresponding ITU-R Recommendations.]
* additional regulatory actions for the introduction and use of GADSS should not place any additional constraints on the existing and planned systems.

**7.1.4 CITEL** - **Document APG19-4/INF-22**

* DIAP supporting Method A which introduces GADSS in Article 30, under Chapter VII, and establishes a new Article 34A outlining the applicable regulatory framework.

**7.1.5 RCC** - **Document APG19-4/ INF-24**

* The RCC Administrations support the need in the development of the Global Aeronautical Distress and Safety System (GADSS).
* The RCC Administrations support the identification of frequency bands and aircraft on-board systems to implement GADSS system, as well as developing the proposals for modifying RR Articles of Chapter VII - Distress and safety communications and Chapter VIII – Aeronautical services.
* The RCC Administrations support the incorporation in the Radio Regulations of provisions allowing to use the signals of radionavigation satellite service (space-to-Earth) for all these purposes in frequency band 1 559-1 610 MHz in case of including the return link in the GADSS Concept for transmitting through Global Navigation Satellite System (GNSS) satellites the messages acknowledging receipt of a distress alert, as well as other messages and commands addressed to emergency beacon.
* The RCC Administrations consider that if the existing frequency allocations to aeronautical services are intended to be used for GADSS system, in this case the list of aircraft systems in GADSS, technical characteristics and protection criteria as well as frequency bands they use, should be included in relevant ITU-R Recommendations. Such use of frequency bands for GADSS should be restricted to the systems which operate in accordance with recognized international aeronautical standards, and should not preclude the use of these frequency bands by any applications of the services to which they are allocated and should not establish priority for GADSS in the Radio Regulations.

**7.2 International Organisations**

**7.2.1 ICAO** - **Document APG19-4/INF-04**

* To support action by WRC-19 to integrate changes into the Radio Regulations (RR) that:
* Introduce GADSS as performance requirements for the radiocommunication systems utilized for conducting functions such as aircraft tracking, autonomous distress tracking, and post flight localization and recovery;
* Identify that relevant GADSS elements are defined in ICAO SARPs;
* Preclude use of GADSS systems operating under RR No. 4.4.
* To oppose changes to the RR that:
* Identify specific GADSS elements or operating frequency bands

**7.2.2 WMO** - **Document APG19-4/INF-02**

* No contribution covering this Agenda Item

**7.2.1 IARU** - **Document APG19-4/INF-03**

* No contribution covering this Agenda Item

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