



ICAO

INTERNATIONAL CIVIL AVIATION ORGANIZATION

A UN SPECIALIZED AGENCY



ICAO WRC-27 Preparatory Workshop

Agenda item 9.1: Activities of the ITU-R Radiocommunication sectors since WRC-23

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Presentation Overview

01 Background

02 Potential Issues

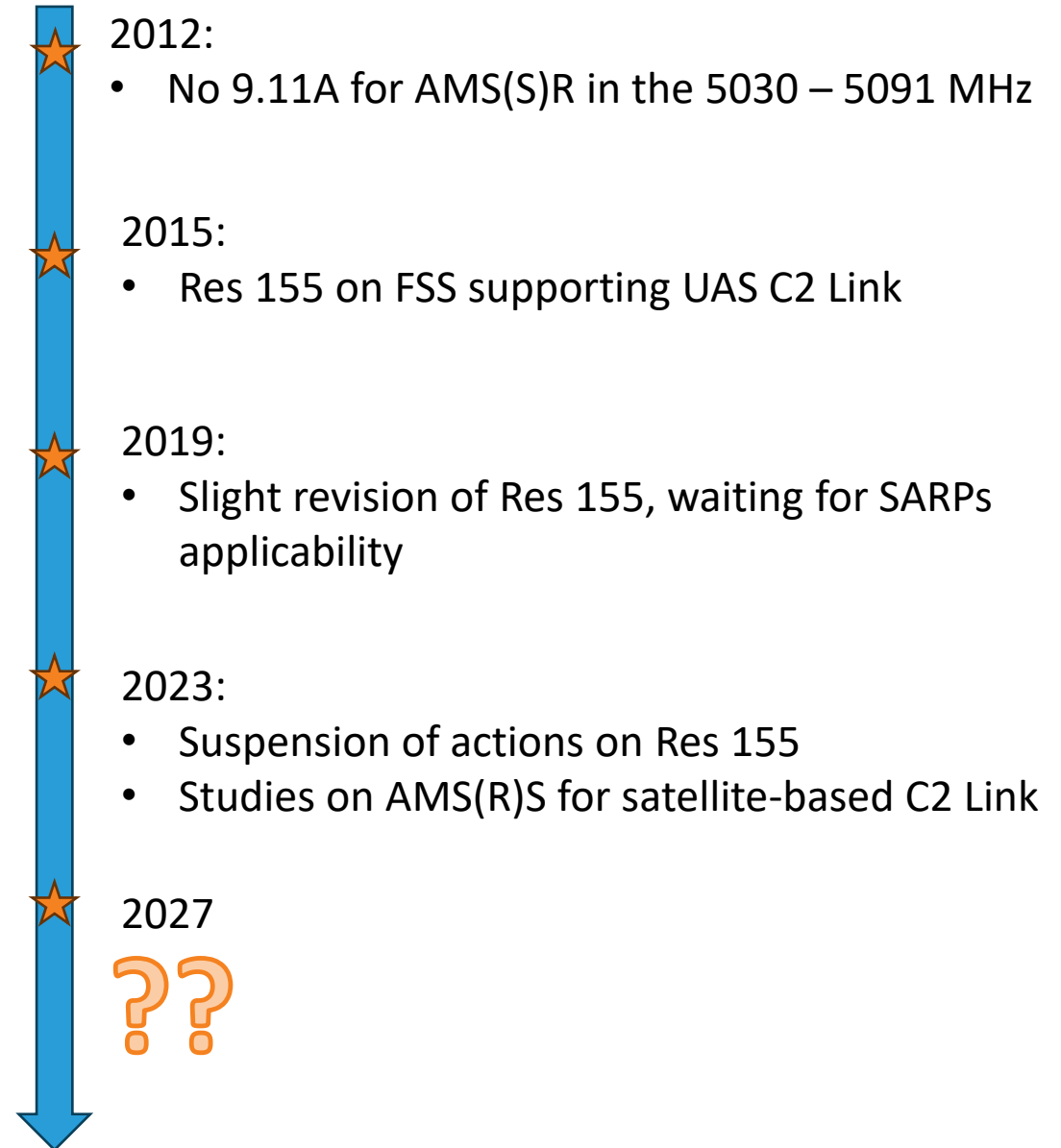
03 ICAO Position

04 Conclusion

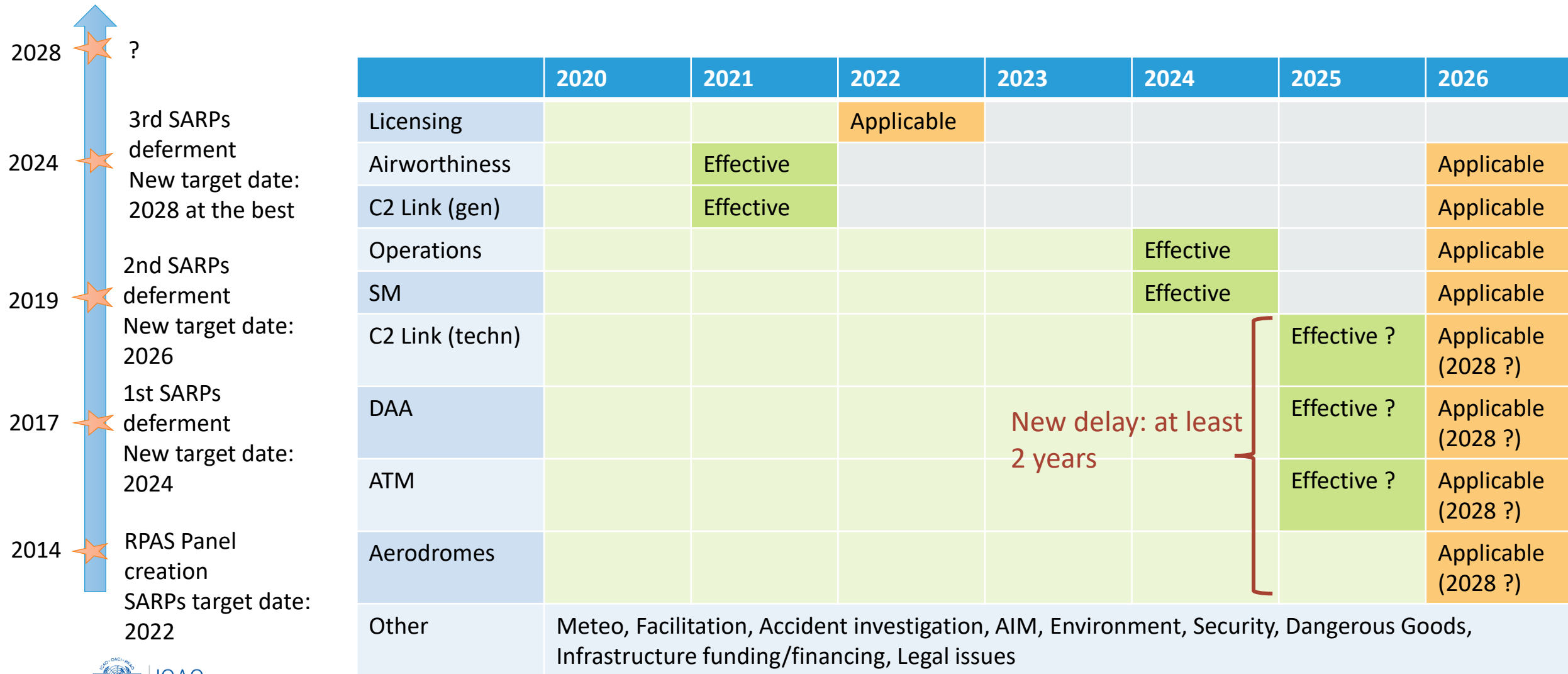
Background

WRC-23 “decided to suspend any further action on Resolution 155” (use of the fixed satellite service for Unmanned Aircraft System Command and Control Link).

A new item has been agreed by this conference to study, as a matter of urgency, necessary measures to facilitate C2 Link for non-segregated airspace operation operated in non-segregated airspace using satellite links by the aeronautical mobile satellite (route) service (AMS(R)S) in suitable frequency bands in order to decide on the appropriate course of action to be taken for WRC-31



— Background: ICAO RPAS activities

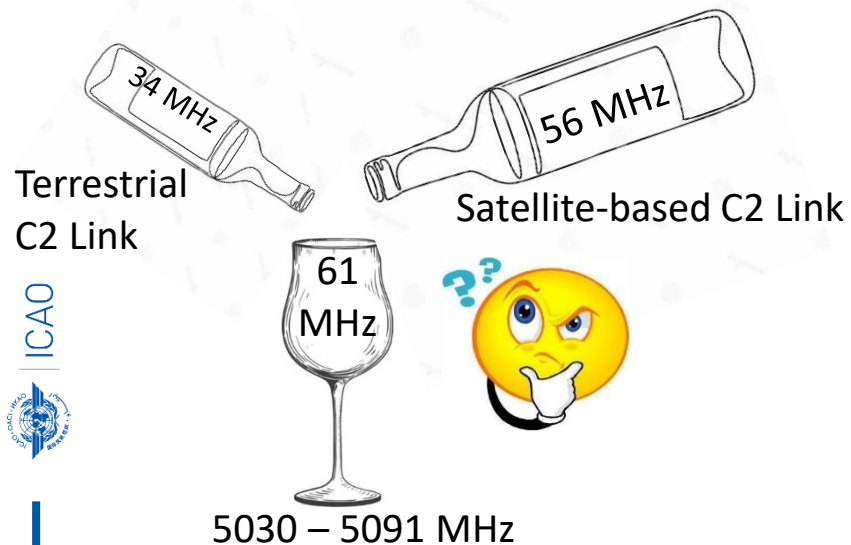


Potential issues ... or opportunities

Capacity of the 5030 – 5091 MHz to support terrestrial and satellite based C2 Link

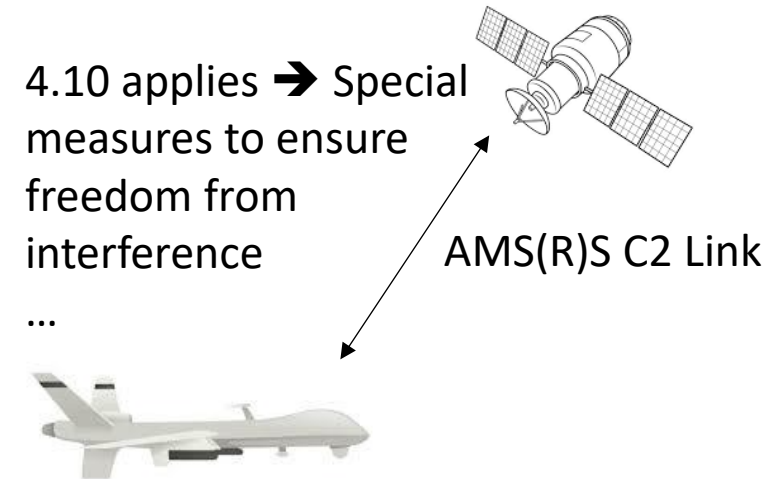
ITU-R Rep M.2171 concluded that the maximum amount of spectrum required for UAS are:

- 34 MHz for terrestrial C2 Link
- 56 MHz for satellite C2 Link



Safe operation of C2 Link

- Application of No 4.10



On-going work at ITU-R and regional telecommunications organizations

ITU-R responsible group for this topic is WP-5B, with support of WP-4C.
No contribution has been submitted to ITU-R for the moment.

CEPT is considering to propose to include this topic in a new agenda item for WRC-31

- Proposition consists in extending the coordination under No 9.11A to the bands 5000 – 5030 MHz and 5030 – 5091 MHz of the currently existing AMS(R)S allocation
- Currently, only the band 5030 – 5091 MHz is under No 9.11A. No 9.21 applies in the bands 5000 – 5030 MHz and 5030 – 5091 MHz
- Compared to No 9.21, coordination with 9.11A facilitates the use of safety services with appropriate protection on a global basis

ICAO Position

9.1

To support ITU-R studies, as a matter of urgency, on necessary measures to facilitate the operation of Earth stations on board unmanned aircraft used for control and non-payload communication operated in non-segregated airspace using satellite links by the aeronautical mobile satellite (route) service (AMS(R)S) in suitable frequency bands in order to decide on the appropriate course of action to be taken for WRC-31

Conclusion

The question of spectrum for satellite-based C2 Link is open since 2007.

WRC-27 represents an opportunity for civil aviation to ask access to spectrum with suitable protection and to facilitate the long term accommodation of aviation satellite-based data communication need.

ICAO should assess the need for any WRC-27 action by actively contributing to ITU-R studies on this topic.

Thank You

