



Circumstances after the URSI resolution on continuous reference time scale

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The previous General Assembly and Scientific Symposium (GASS) of URSI held in Rome in 2021 adopted 7 resolutions and one of which was the resolution on the need for a continuous reference time scale [1]. The draft of the resolution was prepared by the ad-hoc group formed in 2020 by 20 radio scientists inside the URSI community recognizing the importance for URSI to voice its opinion regarding the future of the reference time scale. As a result of comprehensive discussions by the members of the ad-hoc group, the draft resolution was finalized and proposed to the board of URSI for consideration. The ad-hoc group tried to summarize the current situation of the long discussions about the possible redefinition of the Coordinated Universal Time (UTC) and described the importance of a unique and continuous reference time scale. The resolution was then slightly modified by the board and proposed to the council of URSI, and the council approved the resolution during its meeting at the GASS2021. This resolution is clearly representing the position of radio scientists by recommending the present limitation on the maximum magnitude of UT1-UTC should be withdrawn after a suitable period of public notice provided that real-time UT1-UTC dissemination is achieved and that no unforeseeable problem at the time of 2021 is identified before 2023 [2].

After the resolution was approved by the URSI council, it has been posted on the URSI website and was forwarded to other stakeholders including Radiocommunication Bureau of International Telecommunications Union (ITU-R) and International Bureau of Weights and Measures (BIPM). Under the ITU-R, the Study Group 7 on science services and its one of four working parties WP-7A on time signals and frequency standard emissions have been conducting rigorous studies from their perspectives. On the other hand, General Conference on Weights and Measures (CGPM) held its 27th meeting in November 2022 and approved a resolution on the use and future development of UTC [3] supporting the idea to increase maximum value for the difference UT1-UTC.

References

- [1] “Resolution on the need for a continuous reference time scale”, URSI Resolution 2021U01, August 2021, GASS2021 in Rome (https://www.ursi.org/content/Resolutions/2021/2021_U01_Time_scale.pdf)
- [2] Y. Koyama, P. Tavella, and J. Levine, “Statements from International Union of Radio Science (URSI) on the Need for a Continuous Reference Timescale”, *URSI Radio Sci. Let.*, **3**, 2021, DOI: 10.46620/21-0047
- [3] “On the use and future development of UTC”, Resolution 4 of the 27th CGPM, November 2012, General Conference on Weights and Measures (<https://www.bipm.org/en/cgpm-2022/resolution-4>).