QUESTION ITU-R 207-3/7[[1]](#footnote-1)\*

Time and frequency transfer using digital  
communication links

(1993-1997-2001-2011)

The ITU Radiocommunication Assembly,

considering

a) that the performance of time and frequency transfer in digital communication links has been improved and offers additional capabilities for standard time and frequency dissemination;

b) that a variety of digital communication systems, based on both optical and RF technologies, are available which enable long-distance communication, standardized interfaces and low timing jitter;

c) that time and frequency transfer via digital communication systems offer promising methods for national and international time and frequency transfer;

d) that evolving applications for standard time and frequency reference signals require time and frequency services with improved coverage, accuracy and reliability of reception;

e) that time and frequency transfer can be made simultaneously available without impacting the data carrying capacity of digital communication services,

decides that the following Question should be studied

**1** What are the performance characteristics required of digital communication technologies to support specific time and frequency transfer applications?

**2** What standardized digital communication methods, interfaces and formats meet both the transmission technology requirements and are compatible for use in time and frequency transfer?

**3** What are the optimum digital communication systems and configurations available to support national and international two-way and common-view time transfer applications between timing centres?

**4** What are the optimum methods for improving the time synchronization accuracy of time transfer in digital communication networks with different time delays in the transmitting and receiving directions?

further decides

**1** that the results of the above studies should be included in (a) recommendation(s) and/or report(s);

**2** that the above studies should be completed by 2023.

Category: S2

1. \* This Question should be brought to the attention of Study Group 13 of the Telecommunication Standardization Sector. [↑](#footnote-ref-1)