ITU-T ‘s Standards for Telephone Relay Service

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ITU-T, Study Group 16, Question 26 -Multimedia Accessibility-

- ITU: Part of United Nations, Agency for Information Communications
- The oldest international organization, est. 1865
- ITU-T is Telecom Standardization Sector
- Q26 SG16 lead group for Accessibility standardization in ITU-T

Question 26/16

- specifically designated to deal with Accessibility to Multimedia Systems and Services, including telephones, for persons with disabilities (PWDs).
- responsible for developing (or assisting in the development of) multimedia technical standards addressing accessibility needs of persons with disabilities
- It also reviews accessibility features included in telecom standards developed in other groups in ITU
- Cooperation with PWD (persons with disabilities) organizations, e.g., WFD and IFHOH, and with other UN agencies e.g., WHO
  - PWD actually participate in the creation of Recommendations

ITU-T Standard: 2-time Emmy Award Winner

- H.264 and H.265 (HEVC), wic
  used world-wide, are 2 well-
  known standards from ITU-T

Photographer: Jordan Strauss; Copyright: Television Academy

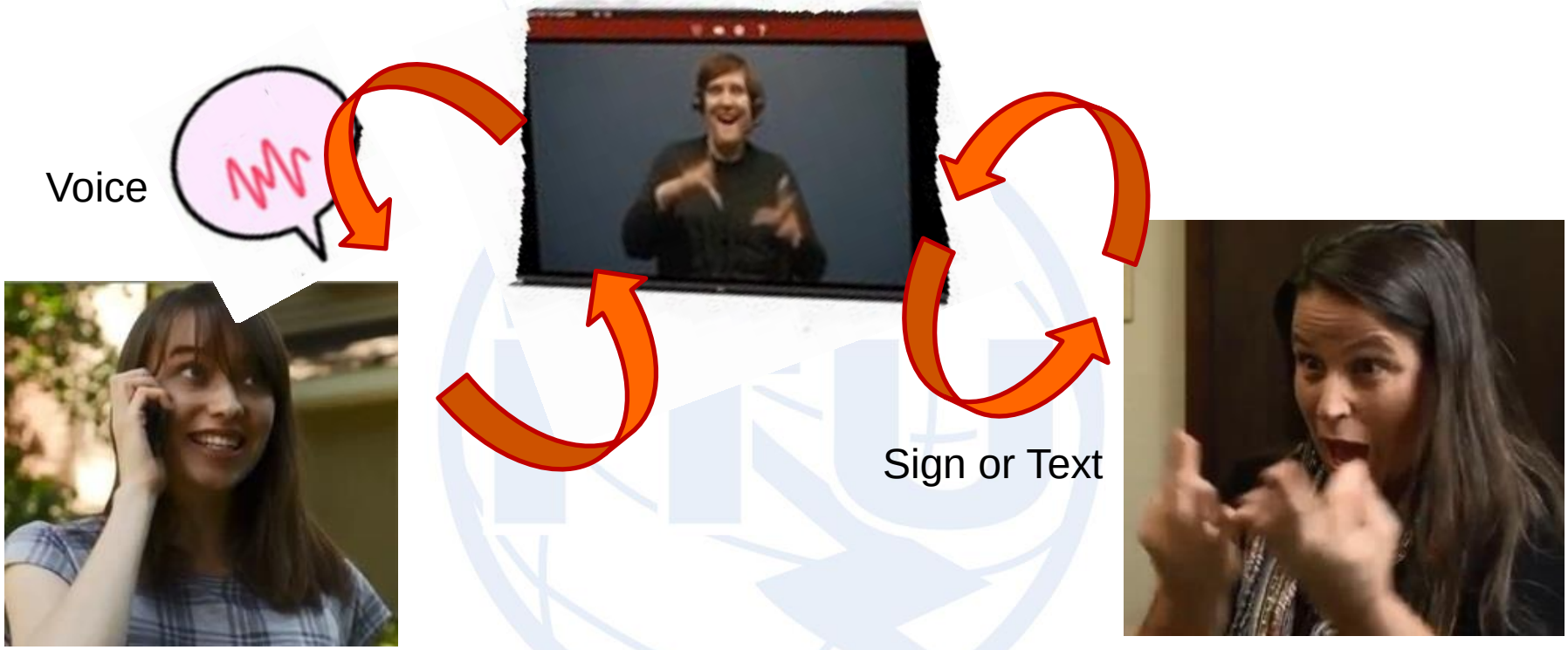
Some of ITU-T Standards

- H.264 (MPEG-4) : Video Compression
- H.265 (HEVC) Video Compression
- E.164 : International Telephone country code
- 5G/IMT2020:
- H.702: Accessibility Profile for IPTV
- F.921 (Wayfindr):
- **F.930 : Multimedia telecommunication relay services <- New!**

ITU-T F.930
Multimedia telecommunication relay services

- Drafted by the experts of ITU-T SG16, Question 26
- provides a functional description of four common types of relay services in use today: text relay, video relay, captioned telephone service relay and speech-to-speech relay.
- lays out specific functional requirements of relay services pertaining to equipment, call set-up, call experience, emergency communications and message retrieval.

How a typical Telephone Relay Service works?



- A way for a Deaf and Hard-of-Hearing to communicate (using voice) with a hearing person in another location
- “Voice” is mediated by CA (Communication Assistant)

What is a Telephone Relay Service?

- Should be a basic telephone service like “voice” telephone service
- Should be able to provide “functional equivalency”
- Should be able to provide emergency calls
- Should be provided to anyone on an equal basis
- Should be provided 24 hours, 7 days a week

Functional Equivalency

- The capability to which persons with different range of abilities (in particular persons with disabilities and persons with specific needs) are able to use a communication service or system with a level of offered functions and convenience-of-use that is similar to those offered to the wider group of users in a population.
- implies that the users of relay services would not be at a disadvantage compared to the calling options available to the mainstream

Voice Telephone	Telephone Relay Service (current)
24/7, Stable operation, available to anyone, anytime	Not necessarily available 24 hours a day or everyday
For any purpose (emergency, bank, hospitals, etc.)	Some restrictions may apply, e.g., emergency calls may or may not be supported
Real time and interactive	
Appropriate cost	Sometimes more costly to the PWD user
Bi-directional: Anyone (hearing or non-hearing) can talk to anyone , anywhere in the world, if a phone number is known, and vice versa.	International calls may still be difficult; Sometimes, the service can be initiated only by PWD;
Standardized.	Different solutions for different countries/regions/services

Accessibility in UN-CRPD

- Article 9: States Parties shall take appropriate measures to ensure to persons with disabilities access, on an equal basis with others to information and communications, including information and communications technologies (ICT) and systems
- Telecom Relay Service is currently the only way for Deaf and Hard of hearing people to communicate with hearing people. Therefore it is something to be provided as part of Rights of Deaf and Hard-of-Hearing people

Values of Standardization

- Ease of providing functional equivalency
- Ease of International communication
- Lower cost of service and equipment

Further Work Items at ITU-T related to Telecom Relay Service

- TRS-KPI: Requirements and Key performance indicators for Telecom Relay Service
- TRS-Roaming: Framework for international roaming for Telecom Relay Service.
- AI-for-Accessibility: Guideline and requirements on the use of AI, especially Automatic Speech Recognition (ASR) in Accessibility Services, including Telecom Relay Service

Conclusion

- ITU-T is creating global ICT standards for an accessibility, as required by UN-CRPD
- Telephone Relay Service is currently the only way for Deaf and Hard-of-Hearing people to communicate with hearing people in voice, and therefore it should be included as “basic telephone service”
- “functional equivalency” in ICT is required, just in the same way as voice-based telephone service
- ITU-T new Recommendation F.930 for Telephone Relay Services gives a framework and requirements for global telephone relay services
- ITU-T is working on new work items for Relay Services s.a. KPI, AI, International Roaming
- Now is the time for implementing global Accessibility services

- Thank you!!
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