3GPP TSG SA #7
March 15-17 2000, Madrid

TSGSA#7(00)0115

Background for development of Global Text Telephone services

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Users of text conversation
6% of the population has limited use of voice telephony

- 5% are Hard - of - hearing -- need text or lip-reading
- 2 per 1000 are Deaf - need text, signing or lip-reading
- Many are deaf by age – need voice out – text in.
- 1 per 1000 are Speech impaired - need text one way, voice in the other + visual contact
- 1 per 10 000 are deaf-blind - need tactile and visual enlargement
- + All of us need language amplification by text and video
- Conclusion: Clear need for text conversation services

User needs in ”ETSI ETR 333 Text Telephony, User Requirements and Recommendations”.

- Character set for any language used (ISO 10 646)
- Transmission character by character.
- Suitable transmission rate. 10 – 15 char/second.
- Display so that it is easy to follow the conversation even if both are writing concurrently.
- Simple editing consisting of new line and erase last character.
- Visual call progress and network info
- Combination with voice

Important requirements on text telephone services

- Emergency services
- Relay services, for translation between text and voice, for accessibility to all voice telephone users
- Interoperability wherever voice services are offered.
- Not continue the fragmentation of text telephony from the PSTN

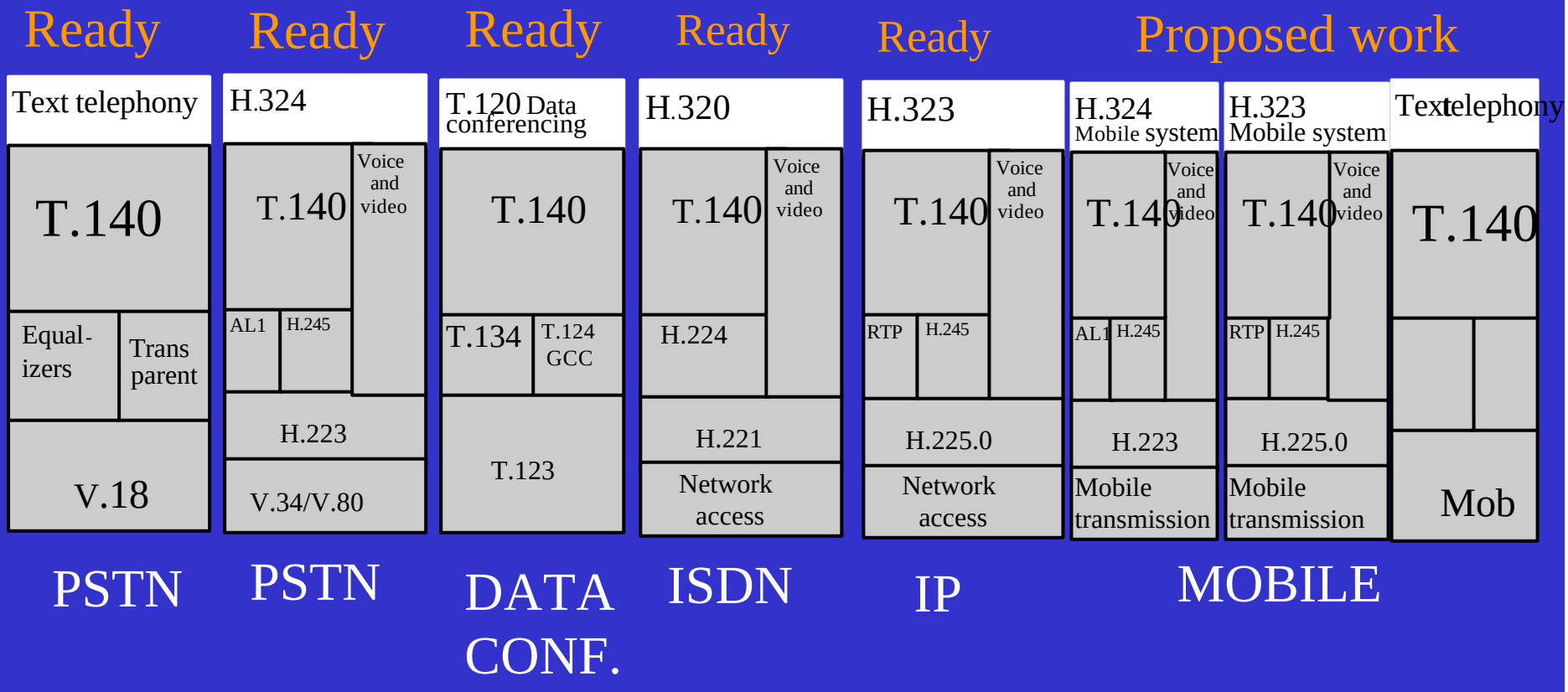
Status of standardisation

- Main work in ITU-T SG16 Q9. Accessibility to Multimedia for people with disabilities.
- Main work 1997-2000:
  - Add a text conversation facility in a clean way to all Multimedia Protocols.
  - Mainenance on the automoding modem standard V.18.

T.140, the common base for text conversation

- Extremely simple text chat protocol
- User input to Unicode UTF-8 coded transmission
- UTF-8 transmission to display
- Easy to include everywhere

Total Conversation - a growing family



H.248 Annex F Text Conversation gateway

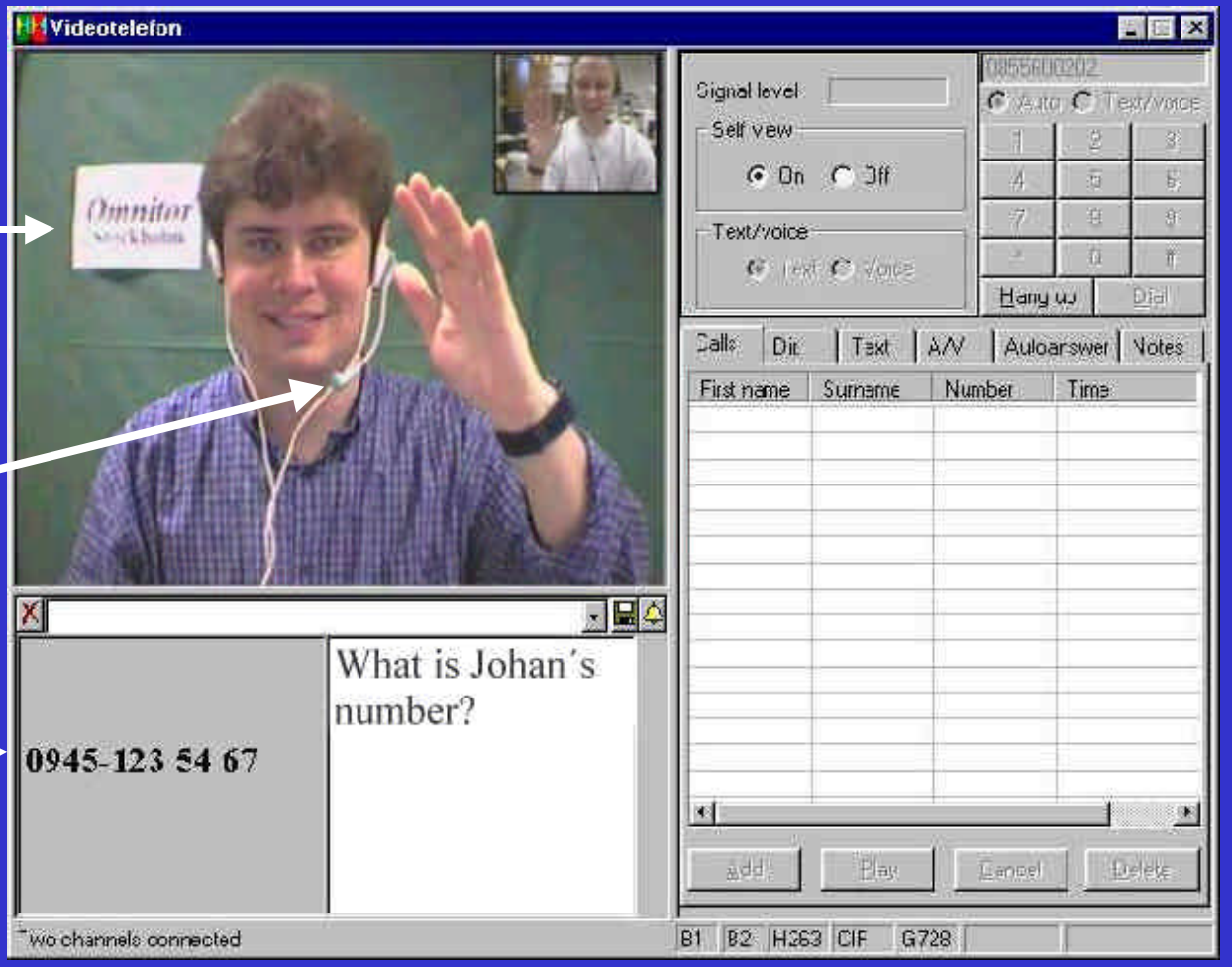
On the way

Total Conversation – a full example, but subsets are possible

Video

Voice

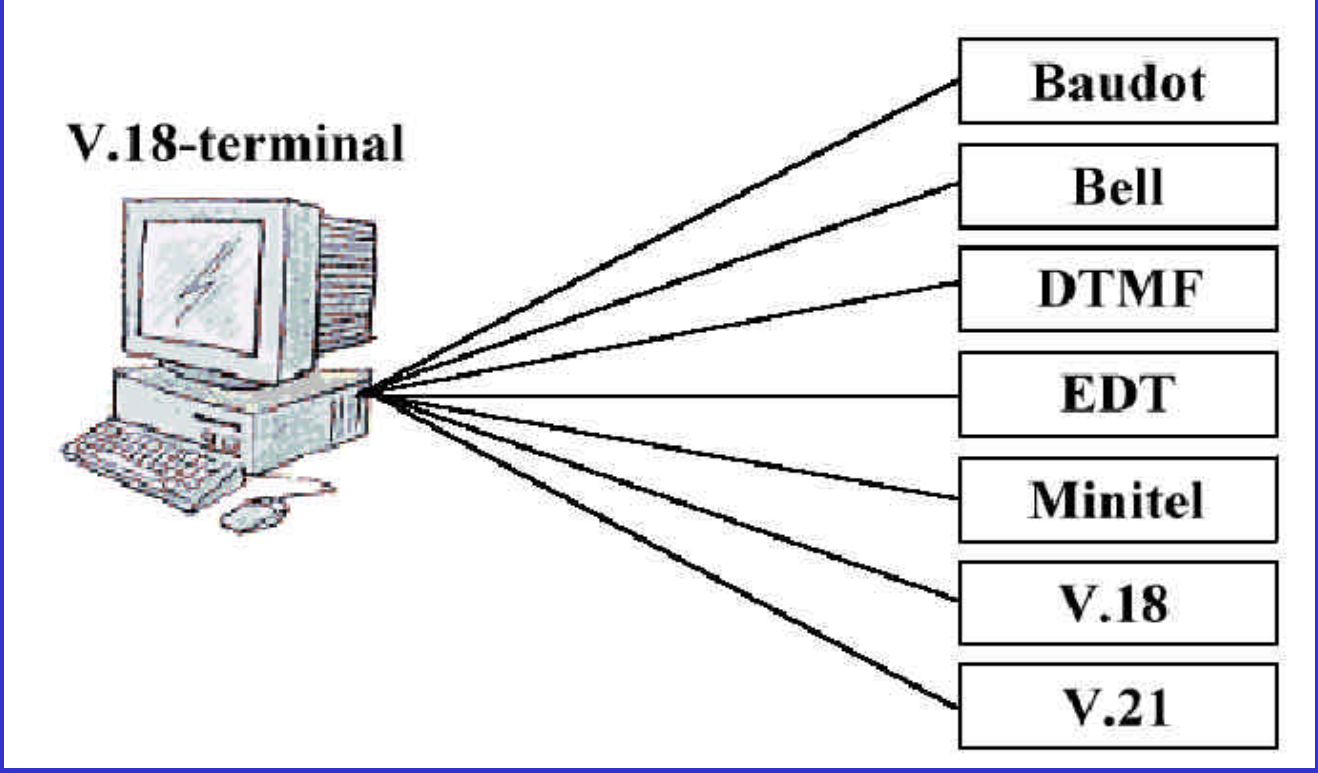
Text



V.18 An automoding modem

- a bridge to unify a fragmented world

Can be used in terminals, gateways and servers



Example of use

USA, UK
USA
Holland
Germany
France
Anywhere
Sweden, UK

Existing text telephone methods
Summary

- Text telephony suffers from not being harmonized
- V.18 is created to be a vehicle for harmonization
- All current methods are possible to use and should be expected to continue to exist for many years.
- New services should offer harmonised international communication

Expectations on mobile text telephony

- Internationally useful – based on T.140
- Interoperability with legacy modes text telephones through V.18.
- Interoperability with other mobile textphones
- Digital wireless interface from handset to text device.
- Complete handsets with text foreseen
- Text and voice combinations

Short term proposals

- In T1P1.5 and 3GPP S4, proposals for text coding in the radio interface of three strains are discussed.
  - (Lucent ”no gain”) Use history bits in audio coding to carry 5-bit Baudot characters. Solution for USA, Canada, Australia, NZ only. Implement in mobile station and TRAU.
  - (Nokia ”data”) Use IWU with textphone modem, and mobile data services. Requires data services.Gives text only support.
  - (Ericsson ”EMT”) Use new voice band modem and interworking unit or TRAU implementation for text + voice support.

Long term expectations on mobile text solutions

- Total Conversation implementations with Video Text and Voice
- Mobile variants of H.324 and H.323 with text conversation additions
- Interworking with land based variants of Multimedia protocols and text telephony

Proposed actions for Global Text Telephony

- Start a work item in 3GPP SA for Global Text Telephony
- Specify
  - Service description
  - Architecture
  - Coding
  - Interworking
  - Terminal aspects (?)
- Aim at short term completion Dec – 2000, long term completion Dec 2001