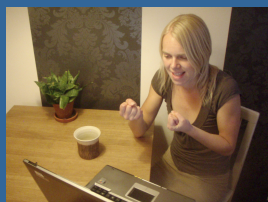


**FROM ASSISTIVE TECHNOLOGY
TO INTEGRATED ACCESSIBILITY
IN TELECOM SERVICES**

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From assistive technology to integrated accessibility in telecom services

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Sharing experience on best practices and services for people
with disabilities



Video telephony



Text telephony

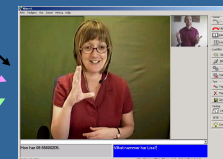


Voice telephony

Total Conversation:

A central concept in accessible communication,
joins video, text and voice communication in
one mainstream telecom service
useful for all.

Talk, type, sign, show, all in the same call



Defined by ITU-T SG 16.
Good progress in deployment, policy and
standardisation of Total Conversation.

Standardisation – the base for communication for all

- Communication possible between all products and services regardless of make
- Unquestionable in voice telephony
- Must be applied also on features for communication with people with disabilities.
- Global interoperability – one of the most important accessibility goals.



3G Mobile IMS Multimedia Telephony -Total conversation in practice

- Latest standardisation achievement: 3GPP IMS Multimedia Telephony
- Good sign of accessibility features picked up in mainstream standards.
- Standardised to offer real-time text, video and voice communication in a compatible way
- Base for an increasing part of deaf communication in the near future
- Preview today: 3G mobile with HSDPA, allows good video for sign language and lip reading with real-time text and voice.

Supplementary Services: Video Relay Service

For fluent communication between deaf and hearing people

Deaf user signing in videophone



Sign language interpreter



Talking voice telephone user



Video relay service
-rapid access to interpreter anywhere
-equal opportunities to participation in society

Other relay services available: text relay, subtitled speech, speech-to-speech relay,
Good practice from society to provide relay services without extra charges.

Call setup through most relay services

Three steps in the invocation



1. The user calls the service number
2. Perform a dialogue about the destination
3. The service calls the destination

Important service, but this cumbersome call setup is not in line with modern telecom services, Swedish users responded in service experience survey.

”Call direct” project make trials with single number dialling through the service – to the destination.



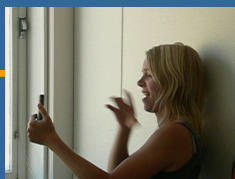
Relay services today

Relay services with Call direct



Call direct

- Created in a project funded by Swedish Telecom Agency, PTS
- New ways to get the relay services into the call
- Call direct number: One step dialling from voice phone users.
- One-step dialling to voice users
- Invoking relay service mid-call
- Call transfer from hearing user to relay service user by single operation
- Call direct to emergency service number 112. Emergency service invokes relay if needed.
- Technology established for multiple solutions by Omnitor. Most IP based.
- An application for enum translation from phone number to SIP address
- Evaluation will give guidance for decision on further deployment
- Description brought to standardisation to benefit for all.
- Can be applied on existing relay services.



Conclusions

- Relay services form the base for telecom accessibility
- User interviews revealed inconveniences in current relay service calling
- Agency responsible for accessible services funded prestudy and trials to improve service.
- Methods to make accessibility service integrated in modern telecom environment eliminates inconveniences.
- An important step is taken towards equal opportunities to communication.
- User experiences contribute to improve best practices
- Good interaction
users – Service responsible authority – accessibility industry

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