

Watching TV (real time)



- Content of digital TV programmes relies on speech
- Films and series are not subtitled as standard
- Digital TV programmes that do not subtitle speech are inaccessible



Watching TV (real time)

- The system for sending text pages to a television is Teletekst (teletext). Teletext information scrolls over and is displayed screen by screen (=pages). One well-known page is 888, which is used to provide subtitles.





Watching TV (real time)

- The digital version of Teletekst is DigiText
- Only for subscribers of Telenet Digital TV.
- Graphic i.e. photos, a wider colour palette, better image quality and with the TV picture in the top left corner
- Page numbering is retained





Basic equipment for watching digital TV programmes in real time.

	Hearing (without 888 ST)	Deaf (with 888 ST)
	Decoder	Decoder
	Digibox	Digibox

Playing back a recorded TV programme



Digicorder
(Telenet Digital TV)




Belgacom decoder
(Belgacom TV)

- All digital TV programmes can be recorded with a digital video recorder.
- In order to be able to enjoy a programme that you yourself have recorded on your video, it is necessary to record the teletext subtitles with it.
- Digital video recorders can only be used in this way if they can also record teletext subtitles



Basic equipment for recording and watching digital TV programmes.

	Hearing without 888 ST	Deaf with 888 ST
	Decoder	Decoder
	Digicorder	Digicorder

Electronic programme guide (EPG)



- An EPG gives a detailed summary of today's and future TV programmes on the various channels
- With an EPG you can consult the programmes of all available broadcasters for today and a few days ahead via a television set
- Operation, user interface and language use are the elements that affect the accessibility of the EPG.



Electronic programme guide (EPG)

- Operation of the EPG
 - No problem
- User interface of the EPG
 - No problem
- Language use
 - A problem for a restricted group
 - Within the group of the deaf and hearing-impaired, the language used by the EPG at both Belgacom TV and Telenet Digital TV may impede access for the early or prelingual deaf.





Video on demand

- is a service that permits a user to watch a video which is requested from Belgacom TV or Telenet Digital TV, whenever he wishes
- Video on demand is an example of interactive TV which is not part of the basic subscription and for which you usually have to pay per programme.



Basic equipment for watching digital TV programmes via video on demand.

	Hearing without 888 ST	Deaf with 888 ST
	Decoder	Decoder
	Digibox	Under development





Video on demand

- Is provided on all digital platforms that support video on demand:
 - VRT has an active service on demand: programmes of the news service, “Net Gemist” (just missed) and “Ooit Gemist” (missed at any time)
 - VTM, 2Be and Jim-TV have a similar service under the name of iWatch
 - Vitaya and vitaliteit have Video-cast
 - TMF, Nickelodeon and MTV have RE:PLAY
- Offered only to Telenet Digital TV subscribers:
 - VT4 and Vijft tv have C-watch





Accessibility of the video on demand TV programmes provided by broadcasters

	Net Gemist		Ooit Gemist	
	Hearing without 888 ST	Deaf with 888 ST	Hearing without 888 ST	Deaf with 888 ST
	Decoder	Decoder	Decoder	Decoder
	Digibox	Under development	Digibox	Under development



Accessibility of the video on demand TV programmes provided by broadcasters

	iWatch		C-More	
	Hearing without 888 ST	Deaf with 888 ST	Hearing without 888 ST	Deaf with 888 ST
	Decoder	Impossible	Not provided	Not provided
	Digibox	Impossible	Digibox	Under development



Improved accessibility for the deaf: KOC's conclusion

- **Broadcasters** need to make accessible digital programmes:
 - TV programme subtitles
 - Interpretation of TV programmes in Flemish sign language (for children and for the prelingual deaf)
- **Providers** of digital television must make digital channels available so that broadcasters can provide accessible digital programmes
 - A separate digital video channel for interpreted TV programmes

- Transition from **hearing** to **visual** impairment target group





Watching TV in real time for the visually impaired (1/2)

- The visually impaired use an overlay screen or a bigger screen or they sit closer to the screen.



Watching TV in real time for the visually impaired (2/2)

- Teletekst with its programme guide has an inbuilt 2x magnification facility. A solution for some of the visually impaired.

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201      tt-EEN 201 wo 27 mei      10:25:02
  EEN      woensdag 27 mei
12.00    1200  Extra journaal
          n.a.v. lancering Frank De
          Winne
13.00    1300  Het journaal t
13.30    1330  Het weer t 300
13.35    1335  Man bijt hond t
14.00    1400  Ronde van Belgie t 420
16.00    1600  Ronde van Italie t 420
17.35    1735  Buren 212
18.00    1800  Het journaal t
18.10    1810  De rode loper t
18.35    1835  Blokken t
19.00    1900  Het journaal t
19.40    1940  Man bijt hond t

PDC: druk ?-toets      t ondertiteling 888
EEN>20u  KETNET  Canvas  Info over PDC
  
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201      tt-EEN 201 wo 27 mei      10:25:02
  EEN      woensdag 27 mei
12.00    1200  Extra journaal
          n.a.v. lancering Frank De
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16.00    1600  Ronde van Italie t 420
  
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Watching TV in real time for the blind (1/3)

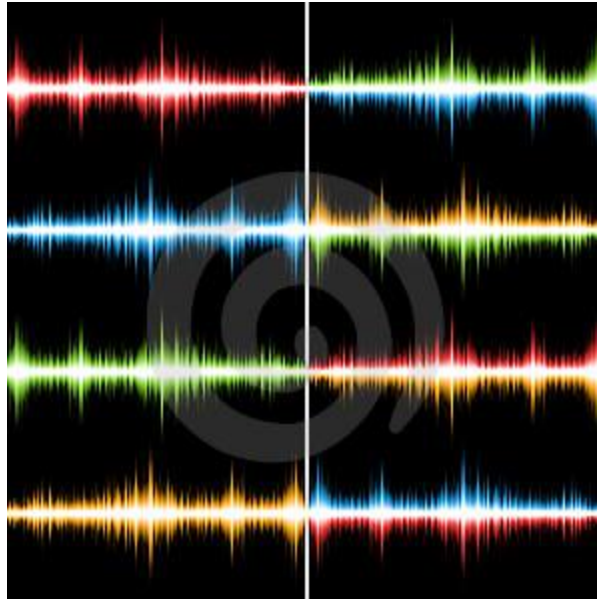
- The blind listen to the television. They “watch” together with a sighted person who gives oral explanations of the images.





Watching TV in real time for the blind (2/3)

- Better: extra sound tracks for spoken subtitles and/or descriptive commentary.
The latter option depends to a great extent on the programme provider.





Watching TV in real time for the blind (3/3)

- Komfox is available in the Netherlands. With this, the three public TV stations, RTL4, RTL5, RTL7, SBS6, NET5 and Veronica can be provided with spoken subtitles. To date there is not a single television station in Belgium or Flanders that is accessible via Komfox.





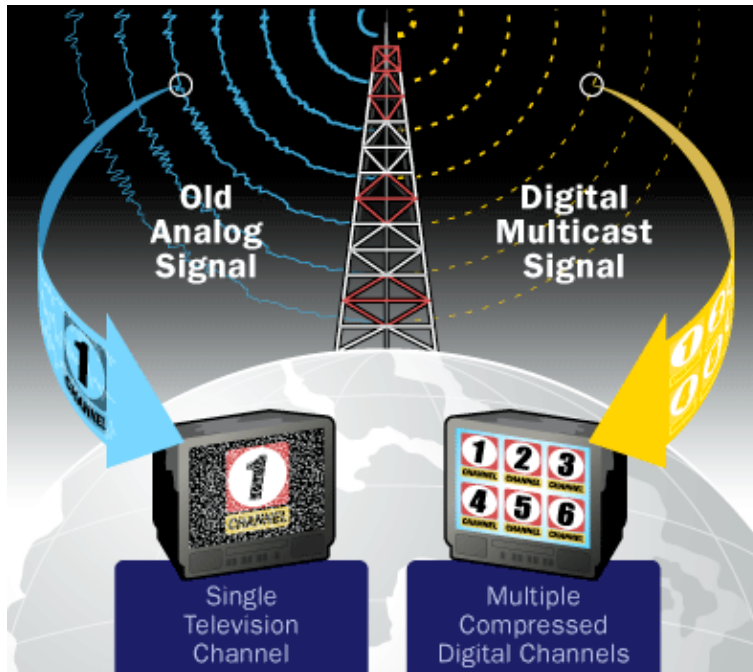
Playing back a recorded programme

- The blind and the visually impaired:
The same problems as with real-time watching.
→ 3 previous slides



Accessibility of digital TV: watching programmes

- The blind and the visually impaired:
Digital TV programmes are no more or less accessible than with traditional analogue television.





Playing back digital recordings with a DVR

- DVR stands for Digital Video Recorder. A hard disc is used instead of a tape for storing programmes.



- The visually impaired: If the text on the screen (DVR interface) is entirely legible, then no problems arise here.
- The blind: If the text on the screen (DVR interface) is accessible via speech reproduction, then, just as with analogue television, no problems arise here.

EPG – Electronic Programme Guide (1/3)

- Operation
- ✓ Operated by remote control.
- ✓ Telenet system works more intuitively than the Belgacom one.
- ✓ With Telenet, an optional wireless keyboard is available.
- ✓ After a short period of familiarisation, in our view, blind operation of the additional keyboard is possible.





EPG – Electronic Programme Guide (2/3)

- User interface:
Cannot be adjusted for font, font size or background colour.
Adjustability of these aspects would make accessibility a great deal better for a large group of the visually impaired.
- Telenet has chosen a better font and a slightly bigger font size.
So legibility is better than with Belgacom TV.
- Because of the lack of speech reproduction,
the EPG is inaccessible to the blind.



EPG – Electronic Programme Guide (3/3)

- Language use: No problem for the target group.



Video on demand

- The visually impaired
On the condition that the text on the screen is entirely legible, no problems arise here other than those with watching live TV.
- If the text on the screen is accessible via speech reproduction, no problems arise here. This is currently not the case.





Increasing accessibility for the target group **CONCLUSIONS**

- The visually impaired
 - ✓ Choice of bigger font sizes in the EPG
 - ✓ Choice of the background colour and of the font
- The blind
 - ✓ Extra audio channel for spoken subtitles (Komfox)
 - ✓ Second extra audio channel for a spoken description to be given of what is being shown
 - ✓ Spoken subtitles and spoken description of the images mean extra cost. This extra cost is best borne by society in general.





Accessible Digital Television for the Visually and Hearing-Impaired in Flanders



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