INTERLINGUAL SUBTITLES AND SDH IN HBBTV
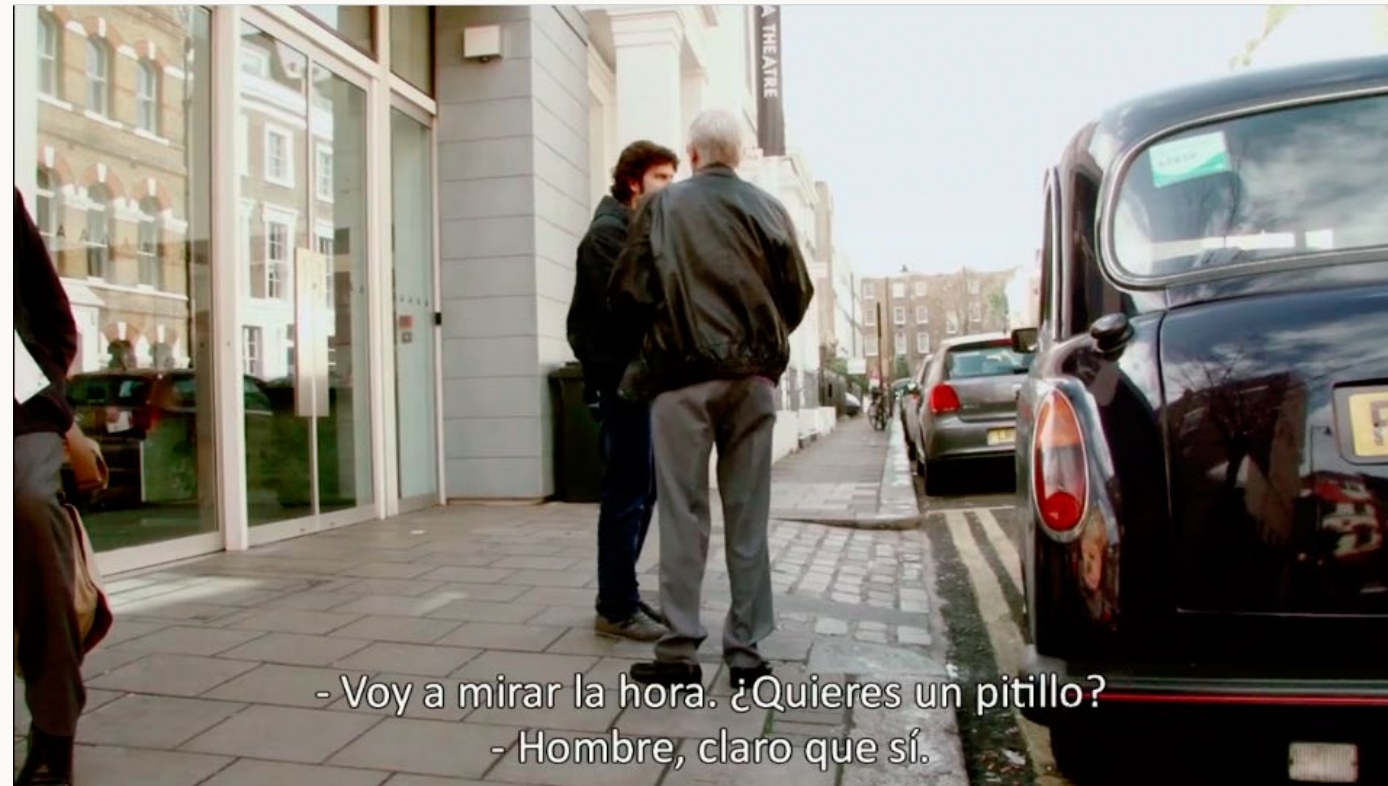
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0. DEFINITION

Subtitles are the translation of spoken language into text form for an audiovisual product.

Interlingual subtitles (English into Spanish)

They should not be confused with subtitles for the deaf and hard of hearing (SDH) or captions (as they are referred to in the US, Canada and Australia), which is the transcription of spoken words, sound effects, relevant musical cues and other relevant audio information to enable deaf or hard-of-hearing persons to follow an audiovisual programme.

SDH may or may not involve translation from one language into another. Interlingual subtitles always do.

SDH (English audio to English subtitles for the deaf and hard of hearing)

1. DISTINCTIVE FEATURES OF SDH

Unlike interlingual subtitles (also known as translation subtitles), subtitles for the deaf and hard of hearing (SDH) include not only the spoken words but also four non-verbal features: character identification, sound effects, tone/mood and music. The format used to indicate these features varies across countries.

Character identification may be shown through the use of hyphens, name tags, displacement (the subtitles are placed underneath every speaker) or colours. White, yellow, cyan and green are the most common colours, but magenta, red and blue may also be used.

Yellow subtitles for character identification in SDH

In SDH, whenever possible, any relevant sound effect not imme-diately obvious from the visual action must be subtitled. Sound effects are normally subtitled in capitals and/or in brackets.

Sound effect subtitle over a black screen at the beginning of the documentary *Joining the Dots*

When necessary and not obvious from the picture, SDH can also indicate tone and mood, which include, for example, volume, intensity and emotions.

Mood/tone subtitle to indicate that Trevor is laughing as he speaks

SDH should also include all music that is either part of the action (i.e. He whistles a jolly tune) or significant to the plot (background music and songs with lyrics).

Music subtitle at the end of *Joining the Dots*

2. PRESENTATION

Whereas open subtitles are shown by default, closed subtitles allow the users to activate the subtitle option if they wish.
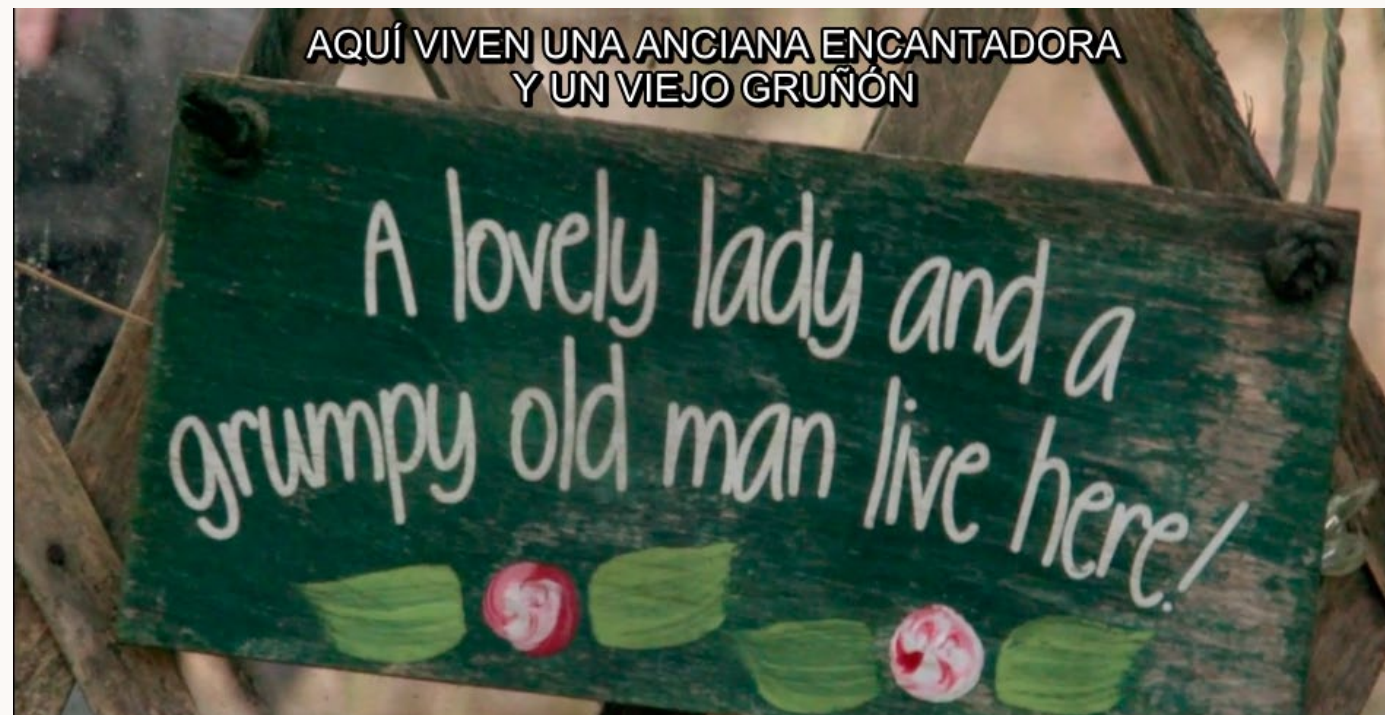

Closed Spanish subtitles for *Joining the Dots*

3. DISPLAY ON THE SCREEN

Both interlingual subtitles and SDH are normally placed at the bottom of the screen. However, they may be raised to the top of the screen so as not to obscure on-screen text, characters' mouths or any other important activity.
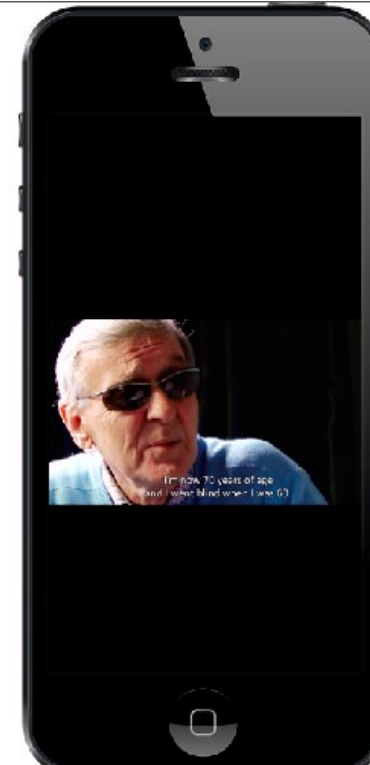

SDH at the bottom of the screen

Interlingual subtitles at the top of the screen

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4. FONT SIZE

Subtitle size varies depending on the display device.

SDH on a phone screen

SDH on a tablet

SDH on a desktop computer

5. FONT TYPE

Interlingual subtitles and SDH normally use sans-serif fonts such as Arial, Verdana or Helvetica, which are recommended for reading on screen. The font type may change depending on the device used.
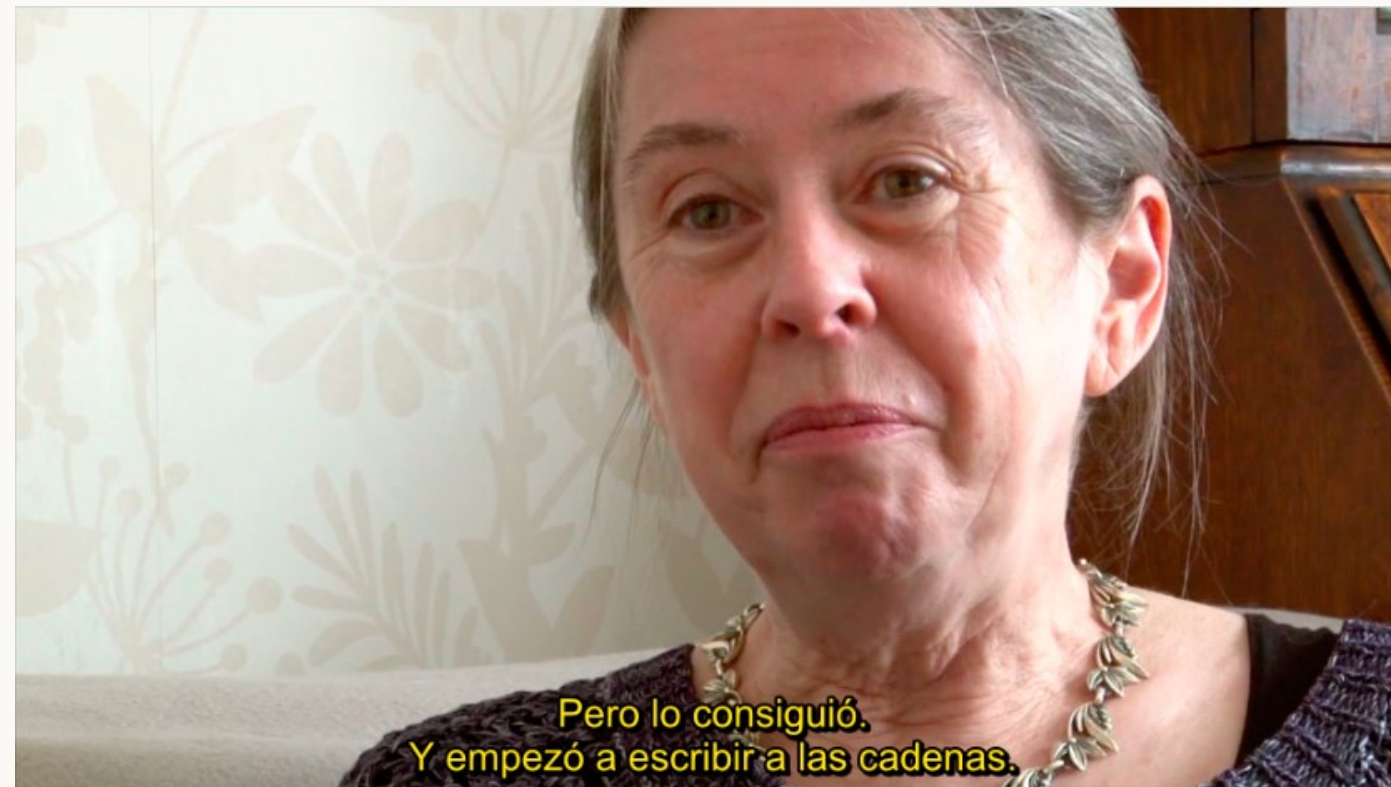

Use of Arial font in the SDH of *Joining the Dots*

6. COLOUR AND CONTRAST

Interlingual subtitles are usually in white or yellow, whereas SDH may take different colours for character identification (see section 1 above).

Yellow interlingual subtitles

White interlingual subtitles

In order to increase contrast, subtitles can be framed in a black box.

SDH displayed against a black box

HbbTV technology allows the end user to choose size, font and box.

HBBTV technology

7. NUMBER OF LINES

The number of lines should be one or two and exceptionally three.

Excessive number of lines obscuring Trevor's chin in *Joining the Dots*

8. SEGMENTATION

Ideally, each subtitle should comprise a single complete sentence.
When this is not possible, segmentation should be done at major phrase boundaries. This applies to segmentation across lines within a subtitle and across different subtitles over two or more images.

A lot of people go to these places
and they offer some kind of assistance.

Full sentence included in a subtitle

Therefore, the community soup kitchen
of the foundation is a response

Segmentation of a long sentence over two subtitles (I)

to a need of the children.

Segmentation of a long sentence over two subtitles (II)

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9. SYNCHRONISATION

Pre-recorded subtitles (whether interlingual subtitles or SDH) should be synchronized with the video and audio content. This also applies to semi-live subtitles, whereas live subtitles are often delayed with regard to the audio (see document "Real-time subtitling by respeaking in HBBTV").

10. SUBTITLE SPEED

Subtitles should be displayed for a minimum duration of one second in the case of one word or short words and normally no longer than six seconds for two full lines.

The faster the subtitles and the more movement they present (for example, scrolling subtitles as opposed to subtitles displayed in blocks), the more time is spent reading them and the less time is left to look at the images.

Subtitle speed may be measured in characters per second (cps) or words per minute (wpm) and it varies across countries and companies, ranging from 10cps to 16cps (120-192wpm).

In the DTV4ALL and HBB4ALL projects it has been found that block subtitles displayed at 150 words per minute (wpm) enable viewers to spend an average of 50% of the time on the subtitles and 50% of the time on the images. With 180wpm, the ratio is changed to 60%-65% on the subtitles and 40%-35% on the images.