

# Video Localization in the Era of the Cloud

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# Video content is in high demand

Video is a powerful tool for:

- Entertainment: films, series, shows
- Education: e-learning content
- Advertising & marketing: commercials, product demos, explainer videos
- Medical & engineering training or instruction
- Public service announcements & government campaigns
- News & information: broadcasts, non-fiction material

# More LSPs specialize in video loc



Percentage of companies providing the service

Nimdzi

# Video localization modes

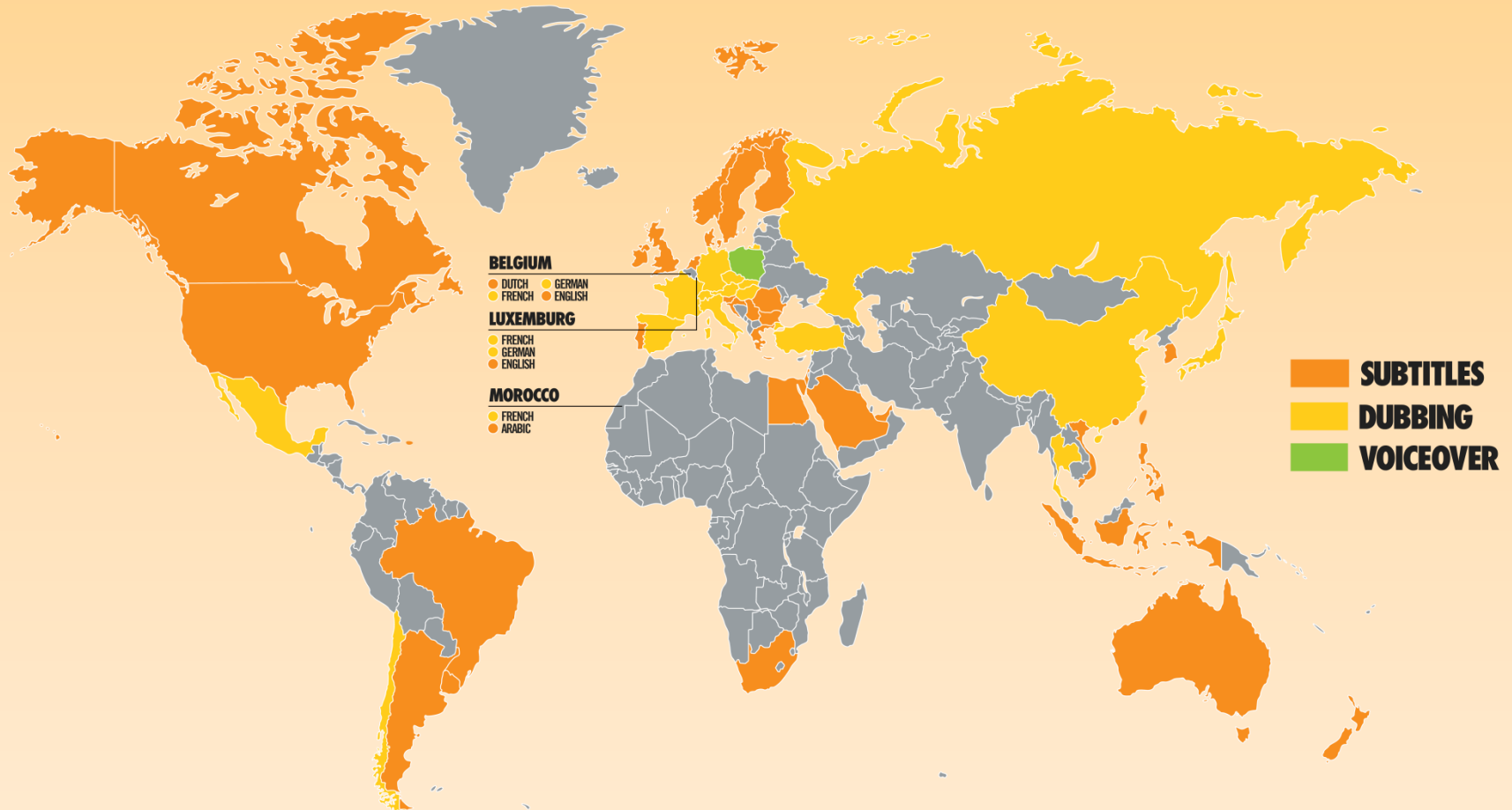
## TRANSLATION

- Dubbing
- Voice-over
- Subtitling

## ACCESSIBILITY

- Audio description
- Subtitles for the Deaf and Hard-of-Hearing (SDH)

# PREFERRED MEDIA LOCALIZATION MODES AROUND THE WORLD



# Advantages of high quality subtitling

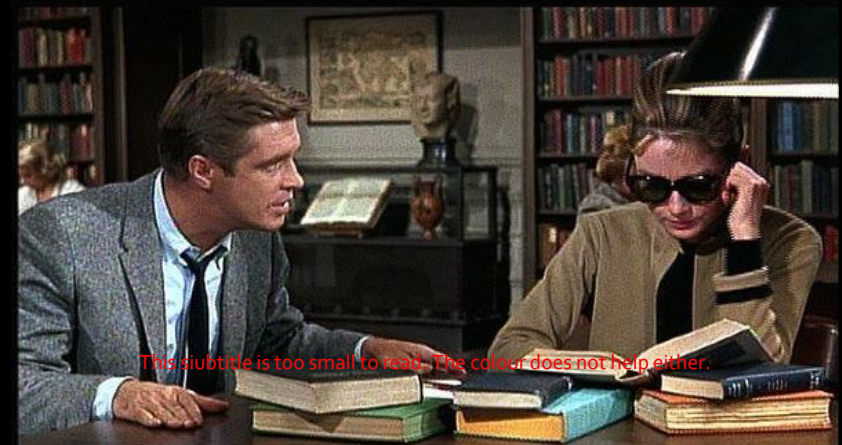
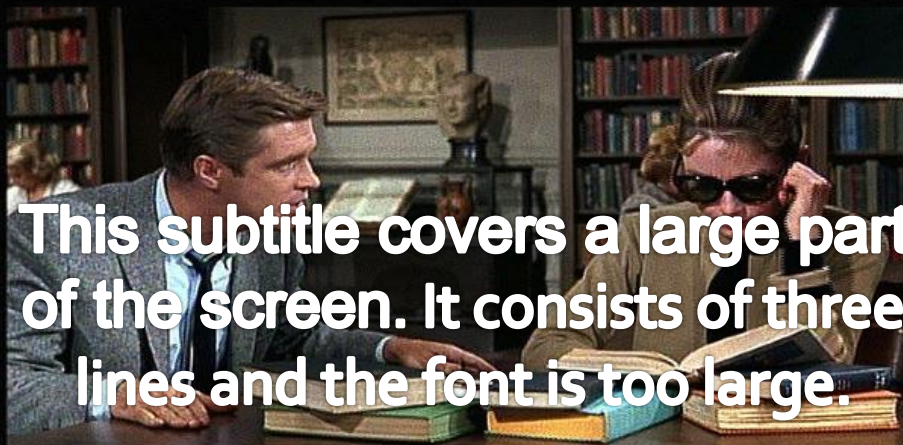
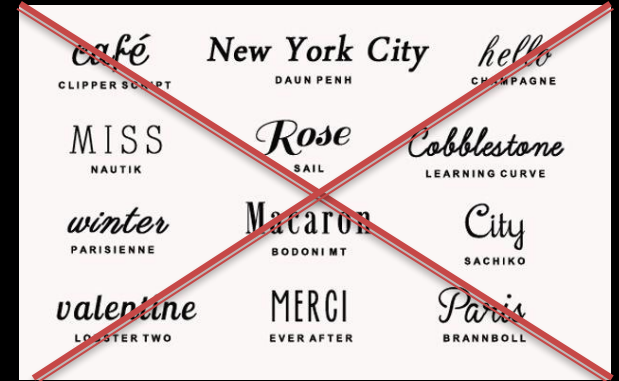
- Improved comprehension
- Cultural adaptation
- SEO friendly
- Increased engagement
- Branding
- Legal compliance





# Legibility

- Font size, type & color
- Number of lines: up to 2
- Positioning: bottom
- Characters per line: up to 42





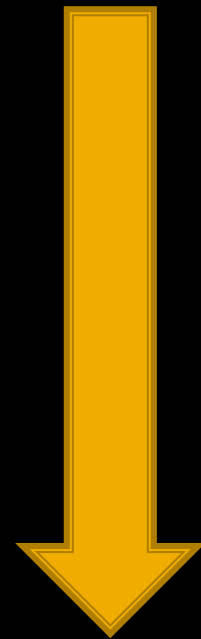
A woman with long dark braids is sitting in a modern living room. She is wearing an orange turtleneck and a brown cardigan. She has her hands clasped in her lap and is looking directly at the camera with a slight smile. The background features a large window with sheer curtains, a blue sofa, a wooden shelving unit with books and plants, and a white coffee table.

ChatGPT is based on large language models  
and is fine-tuned with learning techniques.

**Would you have time  
to read the previous subtitle  
if it was displayed  
for only one second?**

# Reading speed factors

- Audience
  - Age
  - Hearing status
  - Education
  - Familiarity with source language
- Material
  - Specialized vocabulary
  - Important visuals
- Medium
  - Screen size
  - Surroundings

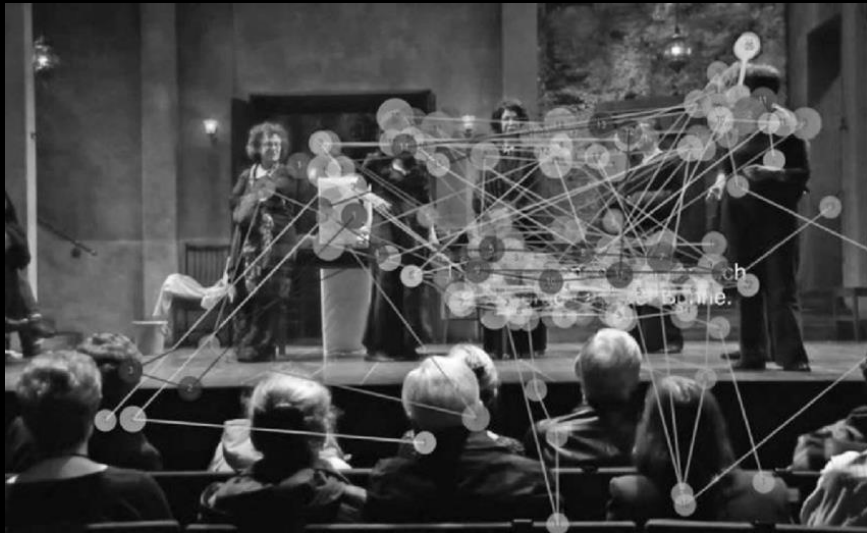


CPS

# Readability

Subtitles draw the viewers' attention away from the visuals

Without subtitles



With subtitles



# Measurable readability: Characters per second (CPS)

- Maximum number
- Varies depending on language and medium
  - Japanese: 4 cps
  - Scandinavian countries: 12 cps
  - Netflix (most languages): 17 cps

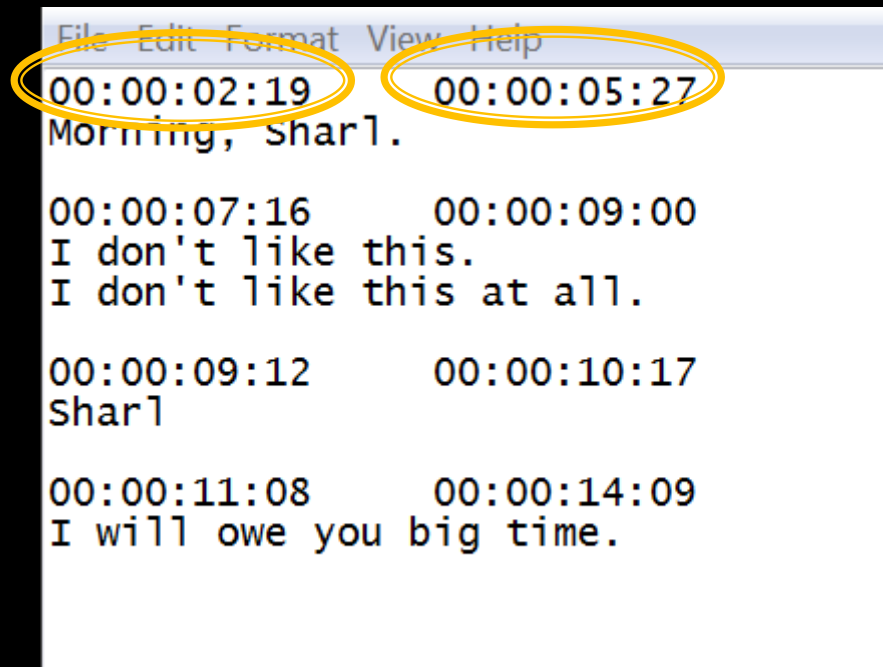
# Accurate timing

- In and out times
  - synchronized with the audio
- Duration
  - min. 1 sec
  - max. 6 sec

# Subtitles: Timed text

HH:MM:SS:FF

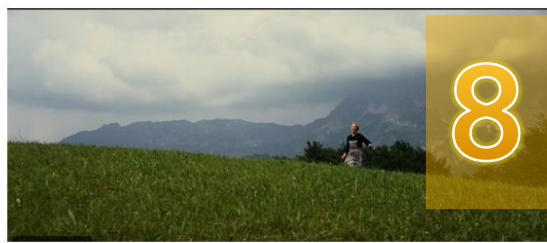
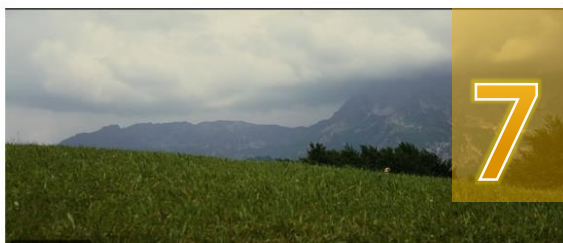
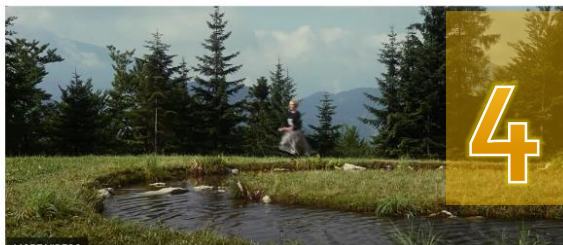
Time in



Time out



# Frames & shot changes



# Create Pro

The screenshot displays the Create Pro software interface, which is used for video editing and subtitle management. The main window is divided into several sections:

- Top Bar:** Contains the 'Create Pro' logo, a menu bar with options like 'Project', 'Import/Export', 'Media', 'Edit', 'Subtitle', 'Timecode', 'Settings', 'View', and 'Help', and a status bar showing 'English, 25fps' and 'xmaswedding-original-only-worse-timing'.
- Video Preview:** A large window on the left showing a video of a man in a white chef's coat and glasses talking to a woman in a red top. Subtitles are overlaid on the video.
- Subtitle Editor:** A panel on the right showing a list of subtitle lines. Each line includes a timecode, the text, and a character count. The current line being edited is: 'I really need your help on this one.' with a character count of 36.
- Timeline:** A horizontal bar at the bottom showing the video's duration and the positions of the subtitle lines. The timeline is marked with timecodes from 00:24:14:00 to 00:24:28:00.

The subtitle editor shows the following lines:

- Line 10: 'We went over this. It's gonna be fine. And...' (17 CPS, 45/48)
- Line 11: 'I really need your help on this one.' (23 CPS, 36/28)
- Line 11: 'I will owe you big time.' (23 CPS, 24/19)
- Line 11: 'I'm a terrible liar. This isn't going to work.' (22.1 CPS, 46/37)

A red error message is displayed in the bottom right corner: 'Text line exceeds 42 characters'.

# Strategies to improve measurable readability (cps)

- Extending the subtitle
- Closing the gaps and subtitle chaining (2-frame gap)
- Merging subtitles

# Hotkeys

Saved Schemas

Hotkeys

Ooona Default Schema

Swift

Swift New

Laptop

Full Keyboard

VIEW

EDIT

Search hotkey

Video

Add shot change:		Jump to current in cue:	numpadDecimal
Jump to current out cue:	ctrl+numpadDecimal	Jump to next shotchange:	
Jump to previous shotchange:		Mark section end:	
Mark section start:		Next frame:	numpad6
Play current subtitle:		Play video at double speed:	
Play video at half speed:		Play video backwards:	alt+r
Play/Pause video:	numpad5	Previous frame:	numpad4
Remove shot change:		Set video timecode:	
Step -1 minute:	numpad7	Step -1 seconds:	numpad1
Step +1 minute:	numpad9	Step +1 second:	numpad3
Step backwards (custom):	alt+,	Step forwards (custom):	alt+.
Toggle video follows subtitles:		Toggle video x2 speed:	

Timing

Timing correction (prev subtitle):

APPLY

SAVE AS

CLOSE

# Merging & snapping to shot changes





# CPS problem solved

The screenshot displays the Create Pro video editing software interface. The main video preview window shows a scene with a man in a white chef's coat and glasses talking to a woman in a red top. Subtitles are visible at the bottom of the preview: "I'm a terrible liar. This isn't going to work." The timeline at the bottom shows a sequence of subtitle clips with their respective start and end times and chapter markers (10, 11). The right panel shows the subtitle list with columns for ID, start time, end time, duration, and text. The current subtitle being edited is #396, starting at 00:24:16:20 and ending at 00:24:20:17. The text is "I really need your help on this one. I will owe you big time." The interface also shows various toolbars and settings, including "REVIEW MODE" and "English, 25fps".

SAFE AREA 10%

00:24:15:00 00:24:16:00 00:24:17:00 00:24:18:00 00:24:19:00 00:24:20:00 00:24:21:00 00:24:22:00 00:24:23:00 00:24:24:00 00:24:25:00 00:24:26:00 00:24:27:00 00:24:28:00 00:24:29:00

10 I really need your help on this one. I will owe you big time. 11 But you're not lying. 10 I told Michelle she can pick up her cookies here instead of the bakery. 10 Why would I... 11

#396 00:24:16:20- 00:24:20:17, Outline #397 00:24:20:19- 00:24:23:03, Outline #398 00:24:23:05- 00:24:24:00, Outline #399 00:24:24:21- 00:24:28:07, Outline #400 00:24:28:07- 00:24:29:00, Outline

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# Improving unmeasurable readability

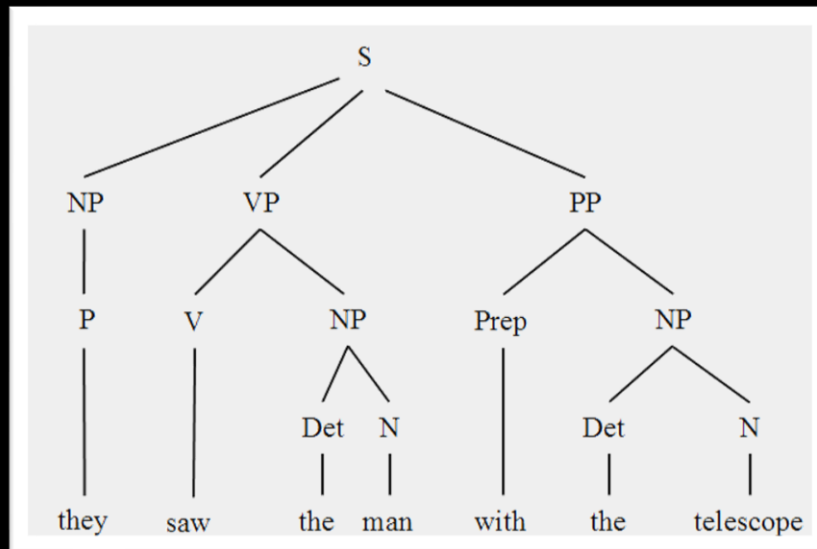
- Complete meaning in each subtitle
- Preference for longer two-liners instead of short “flashing” subtitles
- Maintaining a rhythm
- Unambiguous, uncomplicated structures



# Line division

Linguistic units  
should be kept together

both within the subtitle  
and across subtitles.



# Translate Pro

Translate Pro APPS Open With Open with Create Pro Stavroula xmaswedding

Project Import/Export Media Edit Subtitle Timecode Translate Settings View Help

Translate Current Subtitle Translate All

SAFE AREA 10%

Soy una terrible mentirosa.  
Esto no va a funcionar.

00:24:20:23 / 01:26:16:10 1x

Bottom 22.7 CPS (36/29)

396 00:24:17:11 01:08 00:24:18:19 (24)

I will owe you big time.

Annotation / Remarks

Bottom 17.9 CPS (24/24)

397 00:24:19:07 02:08 00:24:21:15 (20,25)=46

I'm a terrible liar.  
This isn't going to work.

Annotation / Remarks

Bottom 21.4 CPS (50/42)

397 00:24:19:07 02:08 00:24:21:15 (27,23)=51

Soy una terrible mentirosa.  
Esto no va a funcionar.

Annotation / Remarks

Bottom 19.2 CPS (45/42)

398 00:24:22:01 01:01 00:24:23:02 (21)

But you're not lying.

Annotation / Remarks

Bottom 15.1 CPS (24/29)

398 00:24:21:17 01:14 00:24:23:07 (24)

Pero no estás mintiendo.

Annotation / Remarks

Bottom 20.1 CPS (21/19)

399 00:24:23:23 02:20 00:24:26:19 (31,39)=71

I told Michelle she can pick up

Annotation / Remarks

Bottom 15.1 CPS (24/29)

399 00:24:23:23 02:20 00:24:26:19 (0)

00:24:12:13 00:24:14:13 00:24:16:13 00:24:18:13 00:24:20:23 00:24:22:12 00:24:24:12 00:24:26:12 00:24:28:12 00:24:30:12

#393 #395 #396 #397 #398 #399 #400

hail, look, we went  
it's gonna be fine.

I really need

I will owe

I'm a terrible liar  
This isn't going to

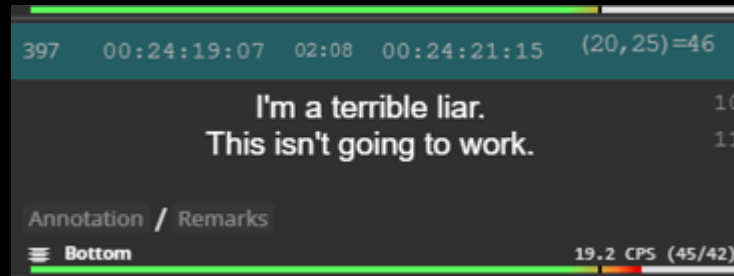
But

I told Michelle she can pick up  
her cookies here instead of

Why would I tell  
Why am I here?

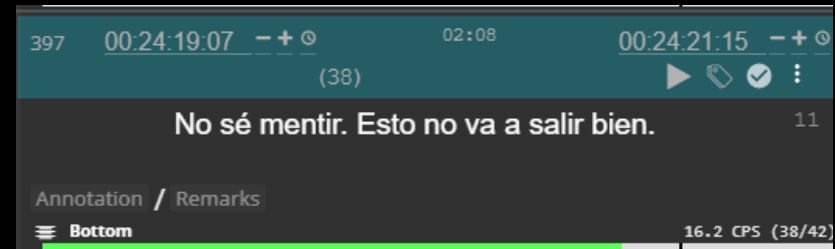
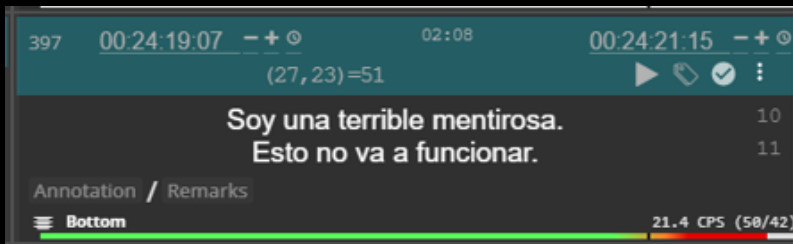
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# Text reduction



Machine translated subtitle

Rewritten subtitle



# Text reduction strategies

- Reformulate
  - Syntax (positive<->negative, declarative <-> interrogative)
  - Synonyms
- Omit
  - Filler words, vocatives, exclamations, repetitions, etc
- Merge dialogues

# Final checks

Saved Presets

↑ Subtitles checks

• Information  
• Medium issue

• Minor issue  
• Critical issue

✕

✓ Custom checks

✓ Critical checks

✓ Spelling checks

Search

☐ Punctuation ^

☐ Has underscore •

☐ 2 or 4+ dots •

☐ Uppercase after comma •

☐ Styling ^

Align • Left ▾

Has bold •

Box is • Fixed box

Is uppercase •

Color • Any ▾

Is font • 2 ▾

Is italic •

Has partial italics •

☒ Has Justification •

☐ Has underline •

☐ Technical ^

Above reading speed •

Column 32 italics •

Format glyph list •

Has remarks •

☒ Chain / Fix time gap • 1

☒ Invalid Duration •

☒ Too long text lines •

☒ Too many lines •

☐ Too long time gap •

☒ Missing timecode •

☐ Not aligned to top/bottom •

☒ Out of sequence •

☐ Text ^

Blank space •

Empty line •

Japanese missing ruby •

Japanese custom bouton •

Japanese positioned ruby •

Japanese ruby overlap •

☒ Leading/Trailing space •

☒ Multiple spaces •

☒ Empty subtitles •

☐ One word on line •

☐ Profanity check •

☐ Repeated word •

CLEAR

RUN CHECKS

CLOSE

# File formats

**Create Pro** APPS Open With Open with Translate Pro Stavroula xmaswedding

Project Import/Export Media Edit Subtitle Timecode Settings View Help

REVIEW MODE English (UK), 23.976fps #1227 10 errors

### Export subtitles file

Search template ...

- Custom settings
- Last used export settings
- PAC hb
- SRT YouTube
- VTT Eng

DFXP (.dfxp)  
DSS Timed Text IMSC1 (.ttml,.xml)  
DSS Timed Text IMSC1.1 (.ttml,.xml)  
EBU-TT (.xml)  
IMSC1 Fox (.xml)  
NBC-Universal IMSC1.1 (.ttml)  
NBC-Universal SMPTE TT (.xml)  
Netflix Timed Text (NFLX-TT) (.xml,.dfxp,.ttml)  
Paramount Timed Text (TT) (.xml)  
SMPTE-TT (.xml)  
SMPTE-TT ST-2052 (.ttml,.xml)  
TTML 2 Audio Description (.ttml,.xml,.zip)  
TTML ST-2052 Disney Component (.xml,.ttml)  
Timed Text (TTML) (.xml,.dfxp,.ttml)  
Timed Text IMSC1 (.xml,.ttml)  
Timed Text IMSC1.1 (.ttml,.xml)

**SRT SETTINGS**

Mode: Open

Encoding: Unicode (UTF-8)

Tags export filter

Export empty subtitles: Default (ask)

Framerate: 23.976

Start TC

☐ SMPTE clock

**EXPORT** **CANCEL**

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# Thank you!

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