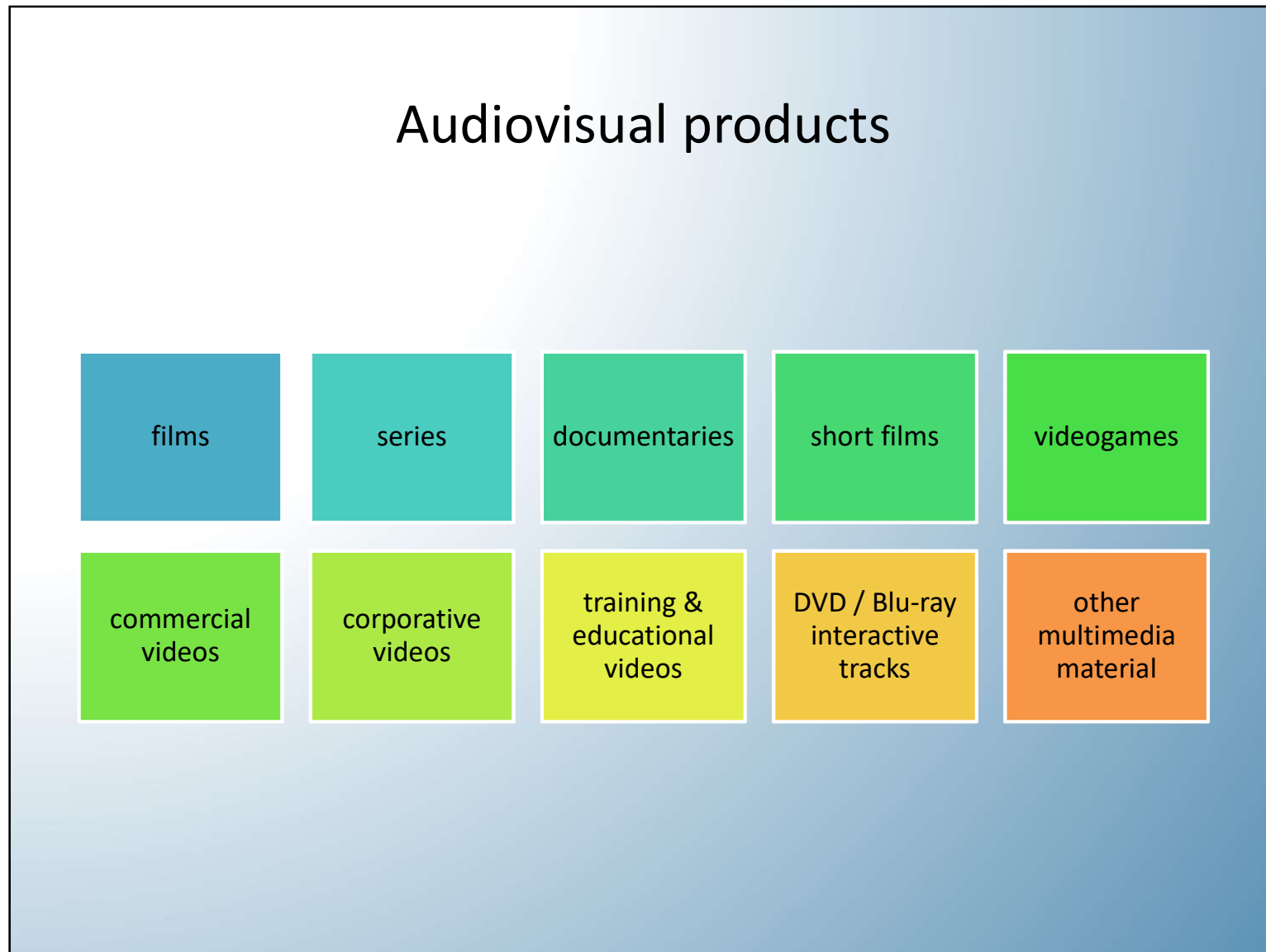# Cloud Subtitling
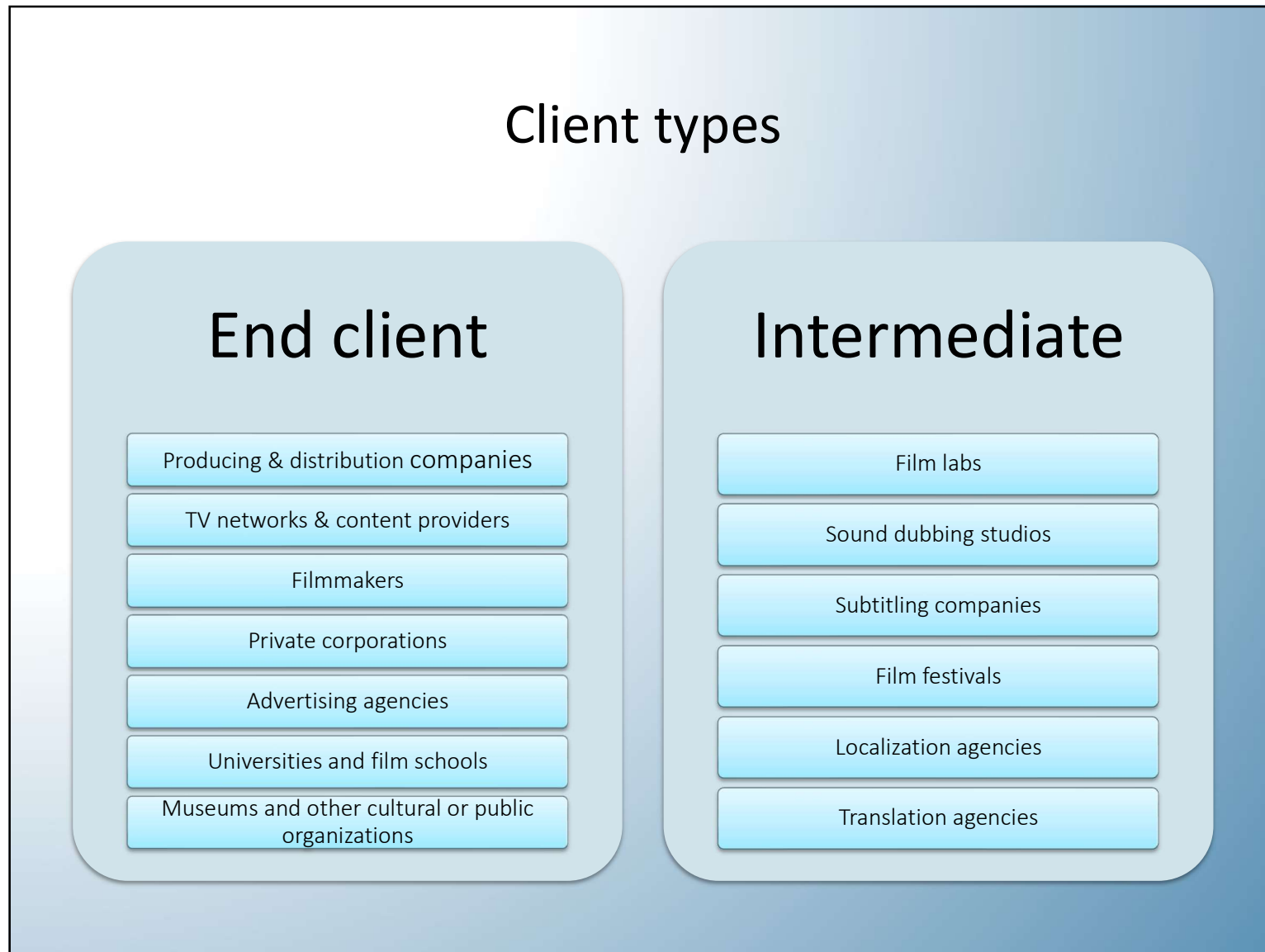
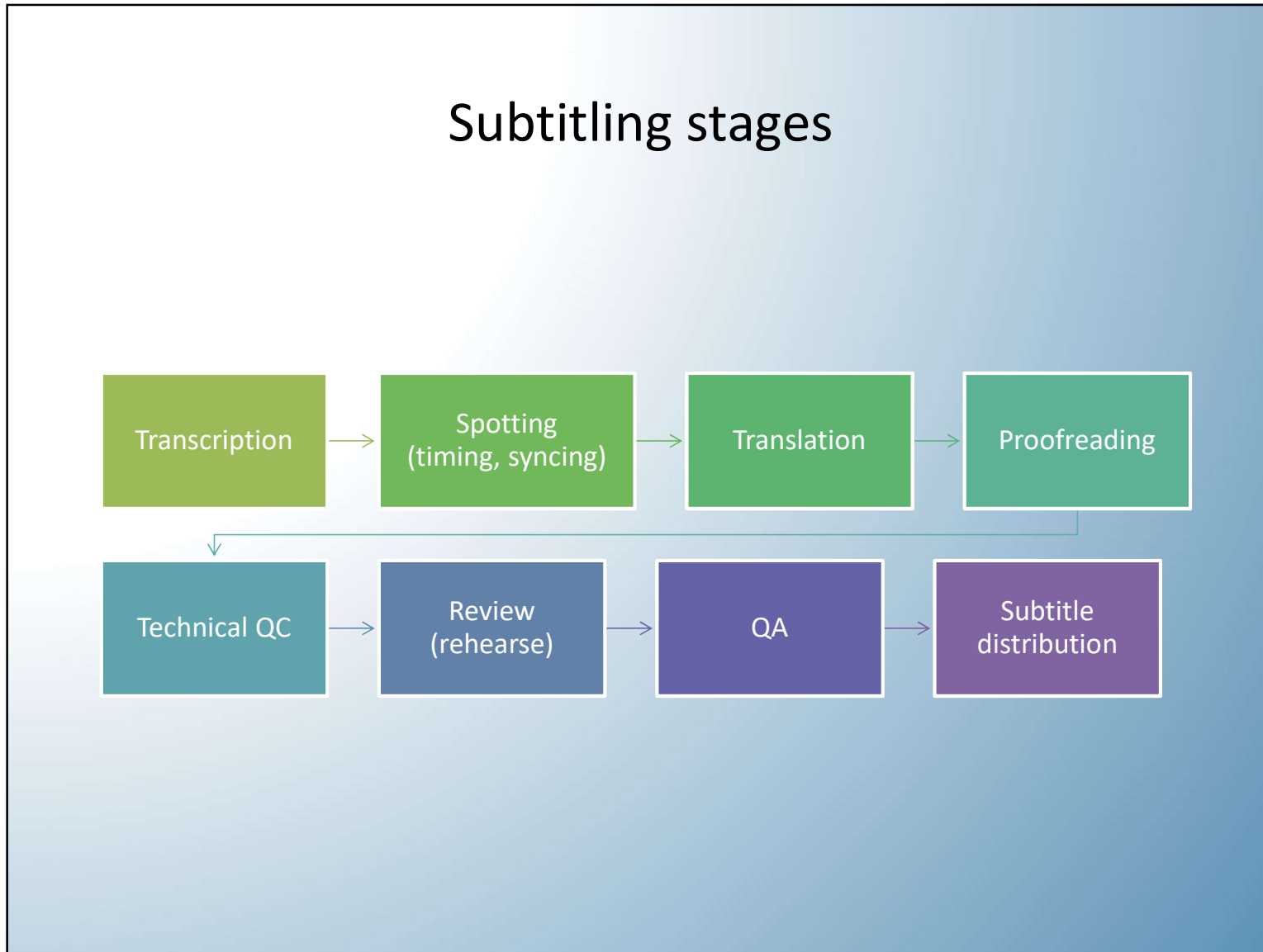Pablo Fernández Moriano   @pfmoriano

Contents

- A quick look at the subtitling industry
- Basic concepts
- Main online subtitling tools and platforms
- Exercises
- Q&A

Audiovisual products

films	series	documentaries	short films	videogames
commercial videos	corporative videos	training & educational videos	DVD / Blu-ray interactive tracks	other multimedia material

Client types

End client

- Producing & distribution companies
- TV networks & content providers
- Filmmakers
- Private corporations
- Advertising agencies
- Universities and film schools
- Museums and other cultural or public organizations

Intermediate

- Film labs
- Sound dubbing studios
- Subtitling companies
- Film festivals
- Localization agencies
- Translation agencies

Subtitling stages

Transcription	→	Spotting (timing, syncing)	→	Translation	→	Proofreading

Technical QC	→	Review (rehearse)	→	QA	→	Subtitle distribution

Work modes

- Subtitles
  - create from scratch
  - use a template (previously timed subtitles)
- Files
  - local
  - remote (in the cloud)
- Software
  - your choice
  - imposed by client

Anyone can subtitle

- Making amateur subtitles is super easy!
  - https://www.youtube.com/watch?v=-NxoPqYwVwo&feature=youtu.be&list=PLjdLzz0k39ykXZJ91DcSd5IIXrm4YuGgE
- Making professional subtitles… not so simple
  - https://partnerhelp.netflixstudios.com/hc/en-us/articles/215758617-Timed-Text-

Basic parameters in professional subtitling

- Characters-per-line limit

- Maximum 2 lines per subtitle

- Minimum and maximum duration

- Suitable reading speed

- Minimum gap between subtitles

- Keep in mind shot changes

- Use colors for closed captions (SDH)

BASIC CONCEPTS

Subtitles and Captions

- Subtitles provide a video's dialogue in written form (usually in a different language)

- Captions include subtitles plus a written description of what is happening in the video (usually in the original video language) for viewers who might not be able to hear or understand the sound, also known as SDH (Subtitles for the Deaf and Hard of hearing)

- Closed captions (CC) are the ones that can optionally be hidden or shown

From a technical point of view...

- ... they are all the same:

  subtitles = units

  contained in files

- Many different formats

- One common structure: timecodes and text
  - in-time (TC in)
  - out-time (TC out)
  - text line(s)

Subtitle file example 1(.srt)

```
1
01:00:48,560 --> 01:00:51,120
Buenas tardes. Soy Butt-Head.

2
01:00:54,240 --> 01:00:56,080
La película que estáis a punto de ver

3
01:00:56,240 --> 01:00:58,400
se presentará utilizando
una tecnología especial en 3D.

4
01:00:58,640 --> 01:01:00,360
Veréis a estos idiotas
```

Subtitle file example 2 (.plt)

```
1, ·40c. · · · · · · · · · ·00:00:52:12 · · · ·00:00:55:01¶
¶
Buenas ·tardes. ·Soy ·Butt-Head.¶
¶
2, ·29c. · · · · · · · · ·00:00:58:04 · · · ·00:01:00:00¶
¶
La ·película ·que ·estáis ·a ·punto ·de ·ver¶
¶
3, ·34c. · · · · · · · · ·00:01:00:04 · · · ·00:01:02:08¶
se ·presentará ·utilizando¶
una ·tecnología ·especial ·en ·3D.¶
¶
4, ·27c. · · · · · · · · ·00:01:02:14 · · · ·00:01:04:07¶
¶
Veréis ·a ·estos ·idiotas¶
¶
```

Subtitle file example 3 (.xml)

Some commonly used subtitle file formats

SRT (SubRip Text)

- Originally not conceived to support text formatting

- Style and position tags can be used, but some programs don't read them properly

ASS (Advanced SubStation Alfa) / SSA (SubStation Alfa)

- Supports text formatting (styling and positioning)

- Works with style sheets

VTT Web Video Text Tracks Format (WebVTT)

- Widely used on internet platforms

Subtitles – basic concepts

- In/out (start/end) timecodes (times, cues, time cues)

- Subtitle duration (= TC out - TC in)

- Length (spaces and punctuation marks included):
  - characters per line
  - total characters per subtitle

- Reading speed

- Gap between subtitles and shot changes

Reading speed

- Measured in characters per second (cps)
  - Sometimes, in words per minute (wpm)
- 6-second rule: an average reader needs 6 seconds to read the subtitles with two lines of 37 characters each (i. e. 12 cps)
- Usually between 12-20 cps

Video – basic concepts

- Frame (picture, image)
- Running time (video duration)
- Video framerate
- Timecode (TC)

Video: moving picture

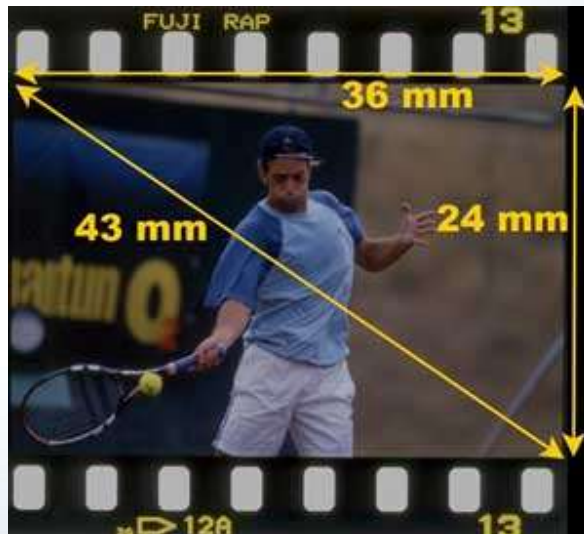- A series of images projected in a certain amount of time
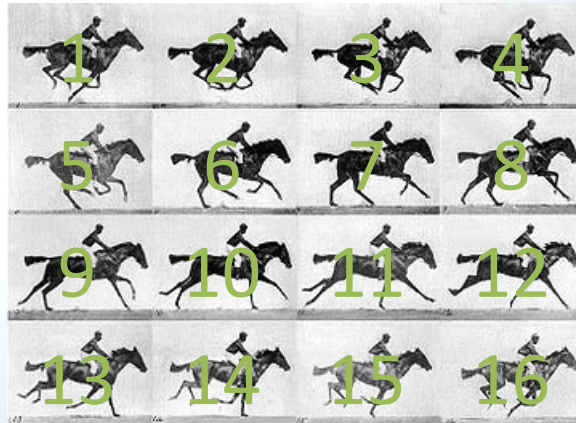
16 frames per second

moving picture

Frame: minimum unit of image

- Sizes vary according to video type

- Example: 35 mm cinema

Video measurement units

- A video's duration (or extension) can be measured in:
  - number of images that make up the video
    length units: feet and frames

  OR

  - amount of time elapsed while playing those images
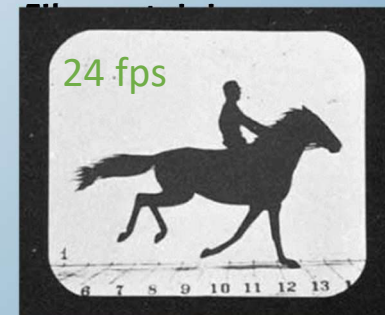   time units: hours, minutes, seconds, and milliseconds

Video framerate

- Measured in frames per second (fps)

- Varies depending on projection medium or system

    24 fps (cinema: DCP, 35 mm)
    25 fps (PAL video)
    30 fps (29,97 fps) (NTSC video)

Timecode - 3 main types

1. feet . frames
...999.15

2. hours : minutes : seconds . milliseconds
59:59:59.999

3. hours : minutes : seconds : frames

Number of second fractions depends on video framerate

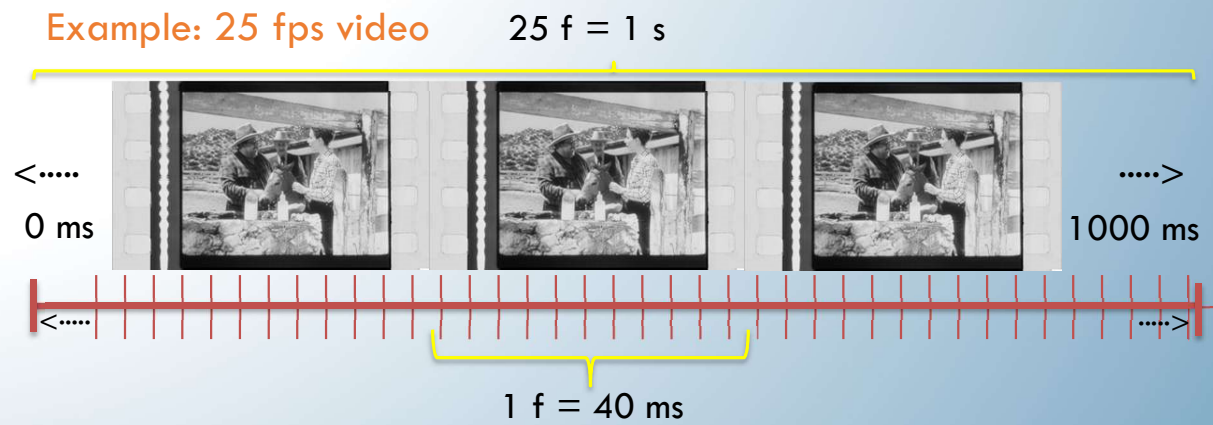|		
24 fps->	59:59:59:23	(cinema DCP, 35 mm)
25 fps->	59:59:59:24	(PAL video)
30 fps->	59:59:59:29	(NTSC video)

Timecode reading (TCR)
burnt in on screen

relative TCR
(indicates reels,
not hours)

TC in feet and
frames (absolute)

Milliseconds/frames equivalence

Example: 25 fps video   25 f = 1 s

<.....   .....>

0 ms   1000 ms

<.....   .....>

1 f = 40 ms

SUBTITLE SPOTTING

Definition

- Spotting, timing, syncing, time-cueing...
Different names for the process of assigning in and out timecodes to a text fragment so it becomes a subtitle.

General directions
(unless otherwise indicated by client)

- Good rule of thumb: 'nail the in-time', 'extend the out-time'
  - Nail the in-time: TC IN as close to start of spoken intervention as possible (max. 10 f before or after start)
    - A subtitle that comes in before speech start looks worse than one that comes in later
  - Extend the out-time (TC OUT): leave a small 'tail' after each spoken intervention (5-30 f), do not spot exactly on voice stop (except when next intervention comes immediately after)

General directions

- Segmentation (subtitle and line breaks):
  - Do not break sense blocks or grammatical units
  - observe visual balance

- Take into consideration dialogue and action rhythm:
  - Film edition (shot and scene changes)
  - Dramatic pauses and effects, humor...

General directions

- Shot changes (SC):

  – It is a good practice (not compulsory) not to start or end a subtitle right on the SC, but rather leave at least 2 frames before or after the SC

  – Try timing to shot changes (avoid subtitles that remain on screen after a SC) <u>whenever possible</u>

  – If a subtitle must cross the SC, extend it at least 12 f from it or up to the next SC (-2 f)

  – Never make subtitles of less than 16 f duration in fast shot change sequences (e. g. shot/countershot)

General directions

- Minimum gap:

  – Between subtitles: 2 f to 1/4 s (~6 f)
  average: 4 f

  – Between shot changes: 2-8 f
  average: 2 f before and 2 f after shot change (4 f in total)

General directions

- Subtitle position and height:

  – Avoid subtitles overlapping with narrative titles and other on-screen text that may interfere with reading (raise or move them to minimize obstruction)

  – Audible information in SDH captions

Credit

- The subtitler(s) should be credited adding one or several last subtitles acknowledging the translator, the subtitler and even the proofreader Normally, at the end of the credit roll. Example:

Translation: Jane Doe

Subtitles: John Smith

Proofreading: Smane Joe

ALWAYS KEEP IN MIND:

- Characters-per-line limit

- Reading speed limits

- Minimum gaps (both between subtitles and SC)

- Line segmentation

Our guidelines

- 38 characters per line

- 1 line per subtitle (minimum)

- Lines per subtitle: min. 1, max. 2

- 16 cps (target reading speed)

- Duration: min. 1 s, max. 6 s

- 4 f minimum gap between subtitles

- 2 f before and 2 f after SC

- SC overlap: min. 12 f

SUBTITLING SOFTWARE

Preparing files (video)

- Can be hosted on:
  - Content publishing platform
    - YouTube: has its own subtitling tool
    - Vimeo: no subtitling tool, must upload previously made subtitle files (formerly used Amara editor)
  - Dedicated server
- Can be:
  - Uploaded by client
  - (Downloaded from client and) uploaded by you

Online subtitling programs

- Proprietary software (not everyone can get access)
  - META Subtitler (Eikon), GTS (SDI Media)...
- Free access
  - Free
    - YouTube
    - Amara
    - Dotsub
    - Subtitle Horse
  - Paid
    - Ooona Toolkit
    - Amara (Enterprise)

Evaluating subtitling software

- Goal: find out whether it allows to create subtitles according to professional quality standards
- How to do it quickly?
  - Examine setting options
  - Examine keyboard shortcuts

What should a good subtitle editor offer?

- Reading speed control
- Accurate and efficient spotting
- Shot change control
- Frame-by-frame video and time-code handling
- Formatting (applying / importing): italics, colors, position
- Different framerates
- Video and subtitle file format versatility
- Error checking (technical and linguistic)
- Keyboard shortcuts customization
- As much control as possible over functionalities (fine-tuning)

LET'S DO THIS!
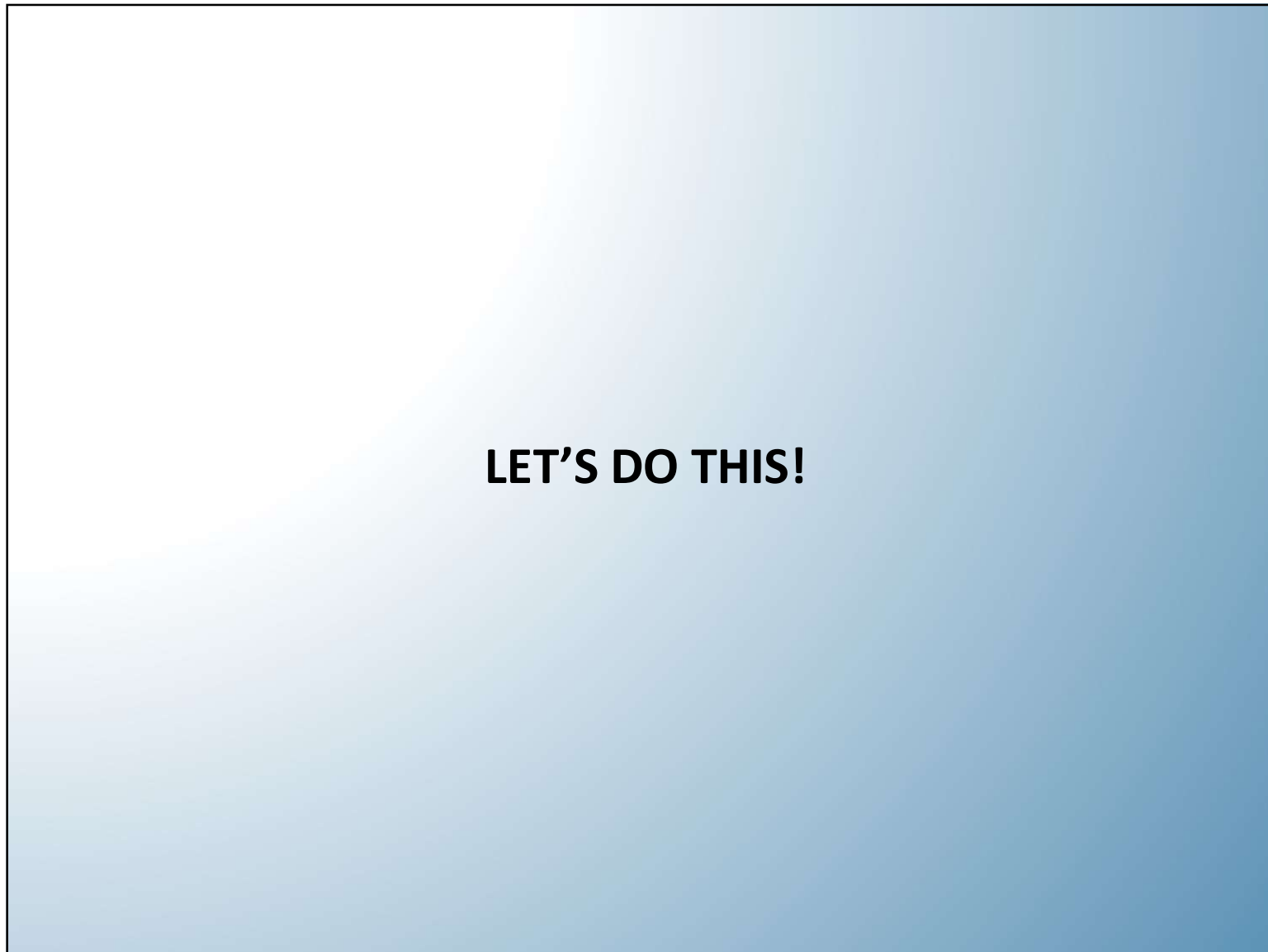
Prepare materials

- Videotoolbox
  - Download a video from YouTube
- Vimeo
  - Upload a video
- YouTube
  - Upload a video
  - Manage videos and subtitles
  - Download subtitles

Videotoolbox

- Free (quite heavy advertising)
- Import videos from URL or local drive
- Deleted after one month
- Convert to several video formats (use advanced mode)
  - certain frame rates can't be forced (e. g. 24 fps)
- Crop
- Burn subtitles (doesn't keep formatting/styling)
- Acceptable quality for working copies and non-professional use

▶ YouTube

- Free

- Collaborative

- Total control only over videos uploaded by you (public / unlisted / private)

- Easy to use (too simple)

- No formatting

- Process automation
  - transcription (speech recognition)
  - spotting (sound-wave guided)

Create subtitles

Amara
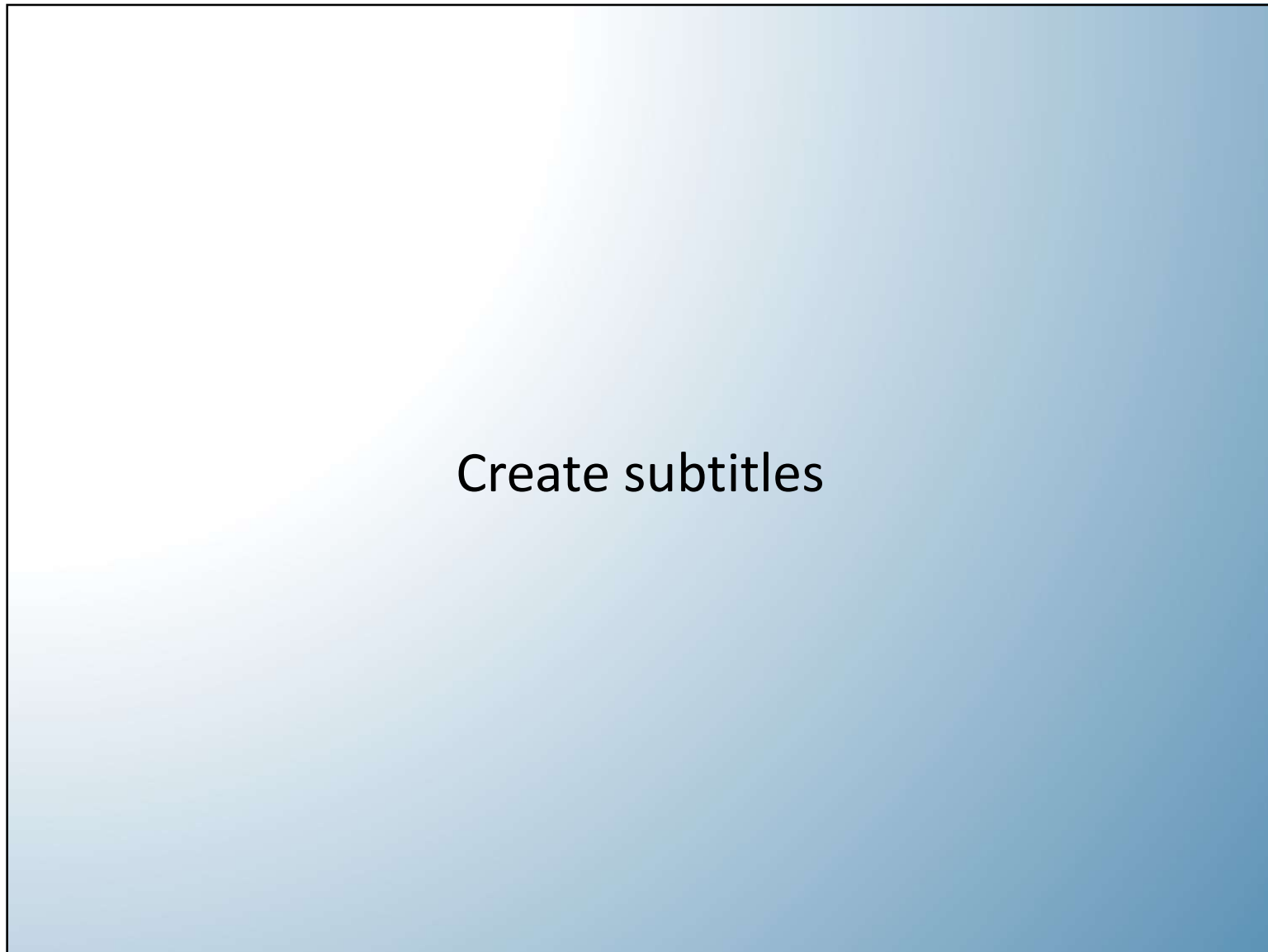
- Free, although there is a paid version (Enterprise)
- Works with cloud-hosted videos
- Philosophy: collaborative platform
- Zero privacy (in free version):
  - content is compulsory public
  - anyone can subtitle your videos
  - videos can't be deleted
- Easy to use (too simple)
- No formatting (position, italics, colors) supported
- Imports several subtitle file formats
- Can be linked to accounts: YouTube, TED, etc. (Vimeo not anymore)

Subtitle Horse

- Free

- No need to sign up

- No video hosting (works with external URL, doesn't support Vimeo)

- Considers gap between subtitles

- Non-customizable keyboard shortcuts

- Frame-by-frame video handling

- Allows for quality subtitle creation (except colors)

- Several subtitle file formats

Ooona

- Fee-based professional platform with different modules
  create, translate, review, convert, transcribe, QC, burn & encode, compare
- Creates projects
- Dedicated server for video hosting
- Works in frames, not milliseconds (yay!)
- Considers gap between subtitles and shot changes
- Customizable keyboard shortcuts, different profiles (bravo!)
- Accurate and efficient spotting
- Doesn't generate soundwave or shot change files (only for local files and you need Ooona Agent)

Encoding and/or publishing video

- Closed captions (can be shown or hidden)
  - YouTube: publishes semi-automatically or after validating community contributions
  - Amara: publishes on corresponding platform after validating
  - Other platforms: upload corresponding file
- Embedded (burnt-in) subtitles (always visible)
  - Load file on corresponding app

Pros and cons

- No software installed locally

- Work anywhere or from any computer

- Better control on materials and processes by client

- Uninterrupted internet connection: good download **and upload** speed required

- Room for improvement of subtitling platforms

- Not one single free option that covers all stages (Ooona does)

- Possible privacy issues with cloud storage of client's material

Other cloud tools

- [Dotsub](): similar to Amara
- [Subtitle Edit online](): simple editor, great variety of subtitle file formats, though not completely updated
- [SubsEdit](): another simple editor
- [Downsub](): downloads subtitles from videos
- [Captions Converter](): converts .sbv (YouTube) subtitles to different formats

Subtitling software

- Proprietary software: offline or in the cloud

- Professional (commercial) programs: EZTitles, WinCAPS, FAB, Subtitle NEXT, Annotation Edit (Mac), Ooona Create (cloud)...

- Free software: VisualSubSync (VSS), Aegisub (also Mac), Subtitle Edit, Subtitle Workshop, Belle Nuit (Mac), Subtitle Horse (cloud)...

EZTitles (offline)

VisualSubSync (free)

Best free subtitle editors

- Spotting (depending on personal preference)
  - VisualSubSync, Aegisub, Subtitle Edit, Subtitle Workshop

- Fixing spotting errors
  - VisualSubSync

- Styling and positioning subtitles
  - Aegisub

- Importing and exporting to different formats, syncing and changing speed
  - Subtitle Edit

THANK YOU!

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