Journal of Audiovisual Translation

Template Files: The Holy Grail of Subtitling

Panayota Georgakopoulou ✉
Athena Consultancy

Citation: Georgakopoulou, P. (2019). Template files: The Holy Grail of subtitling. *Journal of Audiovisual Translation, 2*(2), 137–160.

Editor(s): G.M. Greco & A. Jankowska

Received: September 19, 2019

Accepted: December 6, 2019

Published: December 31, 2019

Abstract

The use of English template files in the creation of multilanguage subtitles from the same source audio assets, typically English, was one of the greatest innovations in the subtitling industry at the turn of the century. It streamlined processes, eliminated duplication of work, reduced direct costs, improved timelines and facilitated the quality control of large volumes of subtitle files whilst expanding the pool of available translators to complete the work (Georgakopoulou, 2006). Template files became the cornerstone for the globalisation of the subtitling industry and, almost two decades since their inception, they are still a topic of debate among language service providers and subtitlers. The present paper is a descriptive work, presenting a set of guidelines originally devised by the present author at the turn of the century, and used in practice for almost a decade in the production of multilingual subtitling work, enhanced and improved upon by the very subtitlers that worked with them. It aims at providing a reference point for debate to researchers in the subtitling field, so as to further the ongoing discussion on interlingual subtitling quality, practices and standards.

Key words: subtitling, templates, norms, quality, audiovisual localisation, language service providers.

✉ yota@athenaconsultancy.eu, https://orcid.org/0000-0001-9780-1813

1. Introduction

Template files have dominated the globalised audiovisual localisation industry since the DVD era, starting in the mid '90s and used extensively as of the turn of the century. Being a young PhD researcher at the time of the DVD boom and eager to implement my learnings in DVD localisation, I decided to focus on subtitling templates, which I considered the Holy Grail of the subtitling industry (Georgakopoulou, 2005). "Holy Grail" because templates helped Language Service Providers (LSPs) better manage multilanguage subtitling production, by enabling efficient quality assurance across files in multiple languages, while also cutting down production times and cost, and at the same time expanding the pool of freelance translators available to work on such files by simplifying their training (Georgakopoulou 2006, 2009). "Holy Grail" also because of their elusive quality, as creating a template file suitable for translation into any given language would require substantial additional considerations to subtitling in a single language for a hearing audience.

In fact, the quality and suitability of subtitling templates for a given project or language has been at the heart of the debate between subtitlers and LSPs ever since their inception (O'Hagan, 2005, p. 10; Georgakopoulou, 2012, p. 81; Artegiani & Kapsaskis, 2014, pp. 420–421). Despite the intense dialogue between practitioners and agencies in the industry, rather surprisingly, there has been limited research on the topic of templates in the academic community. Kapsaskis (2011) and Nikolić (2015) wrote on the repercussions of the template phenomenon that dominated the industry in the first decade of the 21st century, whilst Artegiani and Kapsaskis (2014) also performed a qualitative analysis of the impact of template files on translation decisions, but not much else has been published to date. This is justified to an extent, due to the fact that template guidelines are typically part of internal company documentation and not publicly available. As template files have been serving the purpose of an intermediary file to aid in multilanguage subtitle production, they did not become a deliverable requested by content owners until recently. Hence, it is not surprising that not many such style guides on templates can be found online, with the notable exception of the guide supplied by Netflix (n.d., a).

After two decades of English-audio material dominating the multilanguage production chain at large LSPs, who have been catering to the need for centralisation, security and quality assurance that major content owners demand, the industry is now shifting to non-English language production, again for a multilingual audience. This is bound to raise questions once again regarding the appropriateness and suitability of workflows employed for such work, especially where these are tailored around the use of pivot English source template files for the translation in any and all languages required in a project, irrespective of its source audio language.

Having worked on the first published set of template subtitling guidelines (Georgakopoulou 2003), which were enriched and used for approximately a decade by professional subtitlers, I think it is appropriate to re-publicise them, accompanied by notes and examples collected over the years, so they can be referenced, discussed and questioned by researchers in the subtitling field,

as the industry is moving on to a new, exciting era that is bound to question a lot of established subtitling norms. This paper is, as a result, written in a descriptive manner, showcasing a representative example of an industry practice that still holds strong today. It is not meant to be an analysis of the practice of template writing, a justification of the rules it presents, or contrasted with recent research on subtitling norms and conventions, as it would be impossible to do so within the word limit of this article. Rather, the intention is for it to be used as a reference point in future discussions on current practices, so as to enable comparisons and the exploration of trends, as well as help shape new practices in an informed manner.

2. The History of Template Files

Template files first came about as a result of the need for multilanguage subtitle production for the same source material. The first traces of a template-based workflow in subtitling were found among subtitle files in Scandinavian languages, as I concluded from my PhD research (Georgakopoulou 2003, pp. 246–250): subtitling providers catering to Scandinavian audiences often used the Swedish file they created as the basis for the creation of files in other Scandinavian languages, largely retaining the subtitle segmentation and timing of the original Swedish files. The fact that subtitling traditions among Scandinavian countries were very similar certainly must have helped in this practice. The creation and use of spotting lists as templates by subtitling houses in workflows involving multiple subtitle stream creation was employed even before the DVD era, e.g., in corporate multilingual workflows (Bywood, 2019). Nikolić (2015) provides a useful analysis of the various types of template files in use in the industry today, many of which are created on the basis of the same workflow logic.

With the advent of the DVD, LSPs had to deal with the demands of content owners for large volume subtitling work in many languages simultaneously, reduced turnaround times for the completion of said projects, cost concerns, as well as security issues because of fears of piracy (Georgakopoulou, 2006). The template methodology served all these purposes, as it helped achieve shorter project turnaround times through the reuse of subtitle timing information from source template files and also reduced the creation cost for the language versions required per project. Templates also helped address the issue of multilanguage quality control (QC) of subtitle files from experts, typically linguists, who however did not necessarily speak all the target languages involved in a project, but who were fluent in the source English language and typically one or two other languages as well. The need for standardisation in multilanguage subtitle production, as well as security concerns were addressed with the centralisation of work in the hands of a handful select localisation service providers primarily located along the London – Los Angeles axis (Georgakopoulou, 2003, pp. 208–209; Carroll, 2004).

As no guidelines for the creation of template files existed at the dawn of the DVD era, LSPs naturally experimented with different styles of subtitling until each created their own internal guidelines.

Some used English Subtitle files for Deaf and Hard-of-hearing (SDH) as the basis, under the influence of ITC's (Independent Television Commission, 1999) subtitling guidelines, since the LSPs' headquarters were located in the UK and, as a result, often staffed by subtitlers trained in UK's hard-of-hearing subtitling standards. Eliminating hard-of-hearing elements from English subtitle files was the obvious thing to do to turn them into template files, and subtitle timings also needed to be adjusted so that sync would be with the dialogue rather than other sounds or shot changes, mimicking the style of translated subtitles that were the norm in traditionally subtitling countries.

Influenced by my PhD research and on the receiving end of subtitle template files for translation into Greek for a while, I embarked on drafting guidelines for subtitle template creation that our team of subtitlers would follow at the company I was working at the time, so that subtitle translation into other languages could be facilitated. I had read the *Code of Good Subtitling Practice* in Ivarsson's and Carroll's seminal book *Subtitling* (1998) and I was investigating dialogue reduction from audio to the subtitles in several European languages as part of my PhD, before the use of template files became the norm. I was interested in finding the golden mean so as to produce a template file that would be agnostic, a fair compromise among country-specific subtitling styles, which could easily be tailored to the norms and needs of each country if needed. I was also fortunate to be surrounded by colleagues from a good variety of language backgrounds and thus had the opportunity to debate template creation guidelines and their appropriateness for translation into Swedish, Norwegian, Portuguese, Dutch, Greek, Bulgarian and several other languages, thus indirectly taking into consideration a good representation of European subtitling country standards. The result was a set of guidelines that became part of my PhD thesis (Georgakopoulou, 2003), which were presented at conferences and later also published (Georgakopoulou 2010), but more importantly used in practice, amplified by the various subtitlers that worked with them, resulting in thousands of subtitle files distributed internationally.

3. English Template Guidelines

The present style guide builds on those earlier guidelines and includes further detail, especially as regards timing and reading speed issues, to exemplify the best practices followed for template file creation by a multilanguage subtitle service provider at the turn of the century. As traditional norms for subtitle (and thus template) file creation are questioned (Perego, del Missier, Porta, Mosconi, 2010; Krejtz, Szarkowska, & Krejtz, 2013; Szarkowska & Gerber-Morón, 2018), the present guide can provide topical information to serve as example in current discussions and comparative research on the topic.

An English template file is a subtitle file in English, meant to be used as the basis for translation into other languages, which may follow different linguistic conventions. As such, it seeks a compromise between different national styles of subtitling and is meant to aid the translator in focusing on the translation aspect of his/her job without being distracted by the timing of individual subtitles.

English template files are typically used in work involving English source audio assets, however they have also extensively been used as a pivot language in the case of non-English language pair combinations; this style guide addresses the creation of files from English source audio assets.

Although it is possible that template files are amended for timing at translation stage to best fit the chosen translation, this style guide assumes a strict template workflow, i.e., one in which translators are not allowed to manipulate the timings or the number of subtitles in the file they are translating, which are to remain identical in all language versions created out of a single template file, thus facilitating quality control and highlighting the importance of a well-crafted template file.

The style guide is meant to inform the practice of experienced subtitlers, i.e., people that have already mastered the art of timing and transcription of dialogue from audio, and who are familiar with various subtitling or captioning styles and guides, such as Ofcom's Code on Television Access Services (2017), the BBC Subtitle Guidelines (2018), the Captioning Key (DCMP, n.d.) and EBU-Tech I44-2004 (2004). As such, settings like number of lines per subtitle (typically two), number of characters per line (the file format required may impose its own limitations, such as 32 characters for closed captions and 37 for teletext, while 42 is most frequently used for open subtitles), font colour, style and size (white fonts without serifs are typically used, such as Arial), etc. are not explained or discussed further. The latter vary per project anyway, whereas the guidelines below are written so as to be valid irrespective of what these settings may be.

Finally, this style guide is written in a prescriptive manner but its rules are not absolute. It is understood that there may be occasions where the complex plot information one is required to convey in the subtitles overrides some of the rules presented here.

3.1. Timing the Subtitles

A template file is (usually) addressed to a hearing audience. Although there are situations involving the translation of SDH subtitles into other languages, in which SDH-styled templates need to be utilised, templates are most frequently used in contexts involving hearing audiences in multiple languages.

Accurate timing is crucial for the creation of high-quality subtitles, i.e., determining the exact moment when a subtitle should appear on screen (in-time) and disappear from view (out-time). Translation templates need to be timed in sync with the audio and, therefore, SDH conventions that bring subtitles in to shot changes, even if the character only speaks a second later, are not acceptable. Also, it is not the onset of sound that should trigger off a subtitle as in SDH files, but the onset of actual speech. If a character laughs, coughs or makes any other noise before s/he actually speaks, the subtitle should not appear until the first word is uttered. Hearing audiences can *hear* if subtitles are out of sync with the audio so, unless shot changes are an issue, as will be explained below,

a subtitle should come in on the same frame as a character starts speaking and come out when s/he has stopped speaking.

It is recommended that subtitles in template files are timed back-to-back to provide a smooth viewing experience, but also so as to give the subtitles ample reading time, which will be needed for the translation in other languages. Thus, subtitles in a sequence are usually contiguous, as are captions, unless there is a gap of over 20 frames in the dialogue. If the gap is less than 20 frames and does not cross a shot change, it is recommended that it is closed in order for the subtitles to be timed back-to-back, observing a set minimum subtitle separation which should be consistent throughout the file.

An exception to this rule would be if a shot change intervened between the two subtitles, e.g., if a subtitle ended on a shot change whereas the following subtitle begun 15 frames in. Such subtitles would typically be timed to audio, though for a translation template it may be advisable to close the gap between such subtitles as well, by extending the out-time of the first to cross the shot change and come up to one frame before the time-in of the second, so as to allow for more reading time.

When, on the other hand, the slow pace of dialogue allows for a gap between the subtitles or there is a dramatic pause that needs to be conveyed, it is recommended that the separation between subtitles is a minimum of 12 frames (half a second).

Finally, where no other subtitle follows immediately afterwards, a subtitle should not be taken off as soon as people have stopped speaking, as it may appear abrupt to the audience; it is best that there is at least a beat before the subtitle comes off. Delaying the time off of the subtitle in such cases also amplifies its reading time.

The proposed timing settings are the ones below:

- *Minimum duration of a subtitle: 1 second*
  Minimum durations down to 12 frames have been observed in the industry, but rarely below.
- *Maximum duration of a subtitle: 7 seconds*
  6 or 7 seconds is the most common industry setting, with the exception of songs that can stay on the screen for as long as the lyrics are being sung.
- *Minimum separation between subtitles: 1 frame*
  2, 3 or even 4 frames are also very common; 4 frames is stipulated by the *Code of Good Subtitling Practice* (Ivarsson & Carroll, 1998).

3.1.1. Deviation from Sync

Ideally, subtitles will appear in perfect sync with the dialogue as outlined above. If pressed for time, however, it is possible to 'borrow' time before or after the speech so as to maximise reading time.

Where there is no previous subtitle, it is possible to bring in a subtitle a little early. This is a practice to be generally avoided, but when necessary it is recommended to bring the subtitle in ahead of speech by no more than 7 frames or it may be noticeable to the viewer and could create confusion as to the identity of the speaker.

Where there is no subtitle following the speech, it is possible to extend the out-time of a subtitle by up to a second for readability purposes.[1]

In flowing speech, where subtitles are contiguous, the maximum deviation from sync should be 12 frames (forward or back). Such leniency should be applied only to gain a clear advantage in readability, i.e., that a subtitle can contain a complete sentence or clauses of a sentence, which would not otherwise be possible, and so awkward splits can be avoided.

3.1.2. Shot Changes

The aim when timing subtitles is to synchronise them with speech, however difficulties are encountered around shot changes. As a rule of thumb, shot changes are to be respected when timing subtitles, as "[s]ubtitles that are allowed to over-run shot changes can cause considerable perceptual confusion" (ITC, 1999, p. 12). The importance of shot changes though is generally lesser than that of ample reading time and appropriate subtitle breaks that make the reading of the subtitles effortless and faster for the viewer. Thus, cases of subtitles carried over shot changes are not rare in practice, especially as modern filmography makes more use of frequent shot changes.

Below are some handy rules so as to avoid the flashing effect of subtitles around shot changes:

- The one-second minimum duration of subtitles must always be respected.
- If a subtitle is to be carried over a shot change and its time-in or time-out is up to 6 frames either side of a shot change, it is advisable to 'snap' such time-in or time-out to the shot change.
- If a subtitle needs to be carried over a shot change so that it has enough time to be read, move its in-time and/or out-time so that is it at least 12 frames from the shot change. This is frequent in two-way conversations, where the audio is ahead of the shot change and the film cuts between the speakers.

[1] The Netflix English Template Guide (n.d., a) states a 12-frame maximum, or half a second.

- If a subtitle is to come out on a shot change and there is no subtitle following it, it is advisable to bring it out 2 frames before the shot change, so that it does not give viewers the impression of hanging on.
- If a subtitle is to come out on a shot change and the subtitle following it is more than 6 frames after the shot change, it is recommended to increase the gap between the subtitles, so that they don't flash (e.g., bring the first one out 2 frames before the shot change and the second in when the character starts speaking).

3.2. Editing – Helping the Translator

The definition of a template is that it is to be used as a base file for translation into other languages. Despite the fact that different percentages are quoted as to the exact degree of expansion when translating from English into other languages, it is generally agreed that considerable **text expansion** takes place when translating from English into most European languages.[2] As a result, a full two-liner in English loaded with information that cannot be omitted, such as nouns and uncommon or cultural-specific abbreviations cannot always be rendered easily in other languages as expansion will almost certainly have to be involved as part of the translation process. Full lines should thus be avoided in English template files, especially in two-liners. It is also recommended to always give a subtitle the maximum time possible, especially where many nouns are involved, as the latter are particularly difficult for translators to edit.

In the following example, the subtitle has enough time to be easily read in English, but the fact that it consists of a main and a secondary clause, however short, and includes an acronym could make it very tricky to find an adequate rendering in most languages. A higher duration should be given to such a subtitle to ensure it will have ample reading time when translated in other languages as well.

(1)
11:34:58:01 11:35:00:00
Reports say it's SOL.

Not every sound needs to be subtitled. Internationally recognisable features, such as exclamations and information that can be deducted from body and facial expressions, may easily be omitted. This is due to what is known as the "feedback effect" of film (Nedergaard-Larsen, 1993, p. 214) and is based on the fact that subtitles are added to the original production and, as such, do not need

[2] Indicative LSP sites quoting expansion percentages from English into other languages (and vice versa) are: Kwintessential (n.d.); Arancho Doc (2017); Andiamo (2019). There is guidance on this topic by W3C (Ishida, 2007), while IBM includes relevant instructions in its Knowledge Center (n.d.) regarding expansion allowances that should be made available when translating from English.

to reproduce the information that is already covered in the visuals or the soundtrack. (This same phenomenon can cause problems in the opposite scenario, i.e., when the visuals or soundtrack provide information that is contrasting to the target language audience's knowledge and culture and this dissonance needs to be mediated in the subtitles.) Easily omittable items from the audio to the subtitles are shown in the list below, which was inspired by Marleau's classification (1982, pp. 278–279) and Newmark's advice on redundancy and clichés (1995, p. 208):

- Repetitions;
- Names in appellative constructions;
- False starts / ungrammatical constructions;
- Certain internationally known words, such as "yes" and "no;
- Expression followed by gestural language to denote salutation, politeness, affirmation, negation, surprise, telephone responses, etc.;
- Exclamations;
- Phatic phrases, such as "naturally", "of course", "understandably", repeated implied superlatives ("basically", "fundamentally"), prepositional phrases ("in view of the fact that"), rhetorical flourishes, sonorous phrases.

(Georgakopoulou, 2003, p. 216)

If it's irrelevant or obvious – leave it out! This simple rule of thumb goes back to the feedback effect of film (regarding the 'obvious' part) and constitutes a subtitler's core technique when it comes to editing down text. This is the very logic behind the cases below as well.

- There is no need to subtitle **stuttering and hesitation** for a hearing audience; hard-of-hearing audiences need such information, however hearing audiences have access to it in the dialogue track.
- No need to subtitle **exclamations** like "Oh!" and "Aah!" for the same reason. However, it would be advisable to subtitle "Oh dear" or "O Lord". "Hey!" as an exclamation to attract someone's attention does not need to be subtitled, but when it is a substitute for "Hi" it is advisable to include it, e.g., "Hey, honey, I'm home!".
- **Non-verbal utterances** should also be left out when subtitling. An exception would be the phrase "*Pretty, huh?*", where the "huh" is necessary to indicate the type of question, i.e., "*isn't she pretty?"* rather than "*is she pretty?*".
- **Names** should be subtitled if they are not well-known to the audience, for the first couple of times they are spoken, as it is not always obvious which words are names in other languages. It is good practice to introduce all names in the subtitles and leave them out in subsequent occasions.
- **Music.** Songs need not be subtitled unless specifically requested or if it is necessary to translate something sung in order for the audience to understand what comes after it. For example, if someone on screen is singing an entire song, leave it out. If someone bursts into a song in the middle of a conversation and only sings a line, this may need to be translated

if there is a reference in the dialogue to what has just been sung. Such plot-pertinent songs are typically sung to camera. It is recommended to use a symbol to indicate song lyrics, such as the music note if supported, or hash. Use a capital at the beginning of every song line, but do not use full stops or commas at the end of song lines, however commas can be used within the lyric lines if needed. Question marks and exclamation marks may also be used as needed.

3.2.1. Reading Speed

Reading speed is one of the most important settings in a subtitle file, as it determines the amount of text that can fit in the subtitles for the viewers to be able to read them. Thus, different reading speed settings are used depending on the audience, with subtitle files created for children having lower reading speeds than those addressed to adults. Different countries also follow different norms in terms of subtitle reading speed, and hence the amount of dialogue that is represented in the subtitles differs from country to country, with traditionally subtitling countries in Europe showing a strong preference for lower reading speeds than traditionally dubbing ones (Georgakopoulou, 2003, pp. 274–278).

Reading speed is traditionally measured in characters per second (cps), characters per minute (cpm) or words per minute (wpm), where a "word" in English is defined as 5 characters on average, including spaces and punctuation.[3] The difference between the time-in and time-out of a subtitle is the subtitle's duration. The latter, in combination with the reading speed setting applied to a specific file, determines how much text it is advisable for a subtitle to contain, so as to ensure there is enough time for the viewers to read it. Research has shown that reading text on the screen is considerably slower than reading text on printed paper, approximately 20–30% slower according to Dillon (1992).[4]

Reading time should be further maximised in template files, due to the expansion inherent when translating from English to other languages. It is thus recommended that the reading speed used in template files does not exceed 750 cpm (12.5 cps; 150 wpm). In particularly fast-paced

[3] However it is an imprecise metric as not all words can be read in a time proportional to their length – word frequencies make a difference, as does syntax (discussed below) and also the video element that allows a viewer to spend more or less time on the subtitles depending on how much action is taking place on the screen. The use of this traditional subtitling metric is currently questioned in a relevant discussion among subtitle professionals on Twitter (Sokoli, 2019).
Between the two metrics, cps/cpm versus wpm, Martí Ferriol (2013) has shown that cps/cpm is more accurate across languages.

[4] More recent research on print versus screen reading speeds would be interesting, as reading habits are changing over time with the effect of technology. Some studies on subtitle reading speeds listed in Section 4 indicate an increase in the tolerance of higher reading speeds among viewers.

scenes, reading speed can be increased exceptionally up to 900 cpm, i.e., 15 cps or 180 wpm, if needed.

However, keeping subtitles in sync may still be problematic, so it may also be necessary to edit the dialogue on behalf of the translator in order to allow for additional reading time. This technique is meant to help the translator, irrespective of whether the latter may well have to edit further anyway.

Breaks also affect the audience's reading speed, so that awkward line breaks and particularly subtitle breaks may disrupt the reading process (ITC, 1999, p. 8–9). The better a subtitle file is chunked into subtitle units and separate subtitle lines, on the basis of syntax and semantics, as explained in the section below, the greater the reading speed, as reading is facilitated (ITC, 1999, p. 8–9).

3.2.2. Syntax

Adherence to syntactic rules helps the audience process textual information easier. Thus it is better for the viewers but also for the translator if subtitles contain entire sentences. An ideal subtitle is sentence-long. When dealing with more sentences within a single subtitle, it is recommended they are placed in separate subtitle lines, unless they are too short. If a sentence needs to be split, it is recommended that this is done in up to three consecutive subtitles, as it is hard for audiences to retain information further back than that. In general, it is good practice to create fuller subtitles with a longer duration, as opposed to more, shorter subtitles with a short duration. The latter are harder to translate well, and they also require more of an effort by the viewer to read, according to Brondeel (1994, p. 28).

If sentences have to be split over two or more subtitles, it is important that this is done in a way that takes semantics into consideration, as this will increase the audience's reading speed, subtitle comprehension and overall film enjoyment.[5] Such a split is called a **subtitle break**. As different languages use different sentence structures to English, awkward splits can cause problems, whereas subtitle breaks at the clause level facilitate both translation and readability. If subtitle breaks cannot be achieved at the clause level, then it is important to try and retain entire phrases, e.g., noun phrases, prepositional phrases, etc. within the same subtitle.

[5] Keeping semantic units together has always been one of the cardinal rules of interlingual subtitling; one can read further on this in Ivarsson & Carroll (1998, pp. 76–78) and Díaz-Cintas & Remael (2007, pp. 172–180).

For example, the two subtitles below (Examples 2 and 3) may reflect the pauses the speaker makes in the audio, but for translation they are preferable as a single subtitle in order to form a complete sentence, or alternatively split after “fair” so that each subtitle contains an entire clause.

(2)
I’m going to the fair
and I’m going to buy

a strawberry ice-cream!

(3)
I’m going to the fair

and I’m going to buy
a strawberry ice-cream!

As one cannot possibly know what is appropriate syntactically in other languages, equivalence can be achieved more easily in larger syntactical structures, i.e., entire sentences, clauses and noun or verb phrases, which should preferably be kept within the same subtitle. Conjunctions usually provide a natural split for subtitle breaks. For example, the subtitles below are read and translated easier if split as in (5).

(4)
11:05:32:02 11:05:34:23
Announce a state of emergency
and arrest all members

11:05:34:24 11:05:38:10
of the Executive Council.
Break their chain of command.

(5)
11:05:32:02 11:05:36:06
Announce a state of emergency
and arrest all members of the Council.

11:05:36:07 11:05:38:10
Break their chain of command.

In the following example editing down helps retain a clearer syntactic structure across subtitles:

(6)
10:22:55:13 10:22:58:16
Although you're under 15
if you get more than 50

10:22:58:17 10:23:02:10
penalty points on your record,
you go to the regular courts.

(7)
10:22:55:13 10:23:00:09
Although you're under 15, if you
get more than 50 penalty points,

0:23:00:10 10:23:02:10
you're sent to the regular courts.

Though not as critical as subtitle breaks, **line breaks**, i.e., breaks within a subtitle from the top to the bottom line, can also ease reading and help viewers understand subtitles faster. Very much like subtitle breaks, line breaks should also be made at the highest syntactic node possible. Common mistakes to be avoided include separating articles or adjectives from the nouns they accompany, prepositions from the prepositional phrases they introduce, splitting proper noun phrases, etc. Punctuation is typically a good guide as to where to insert a line or subtitle break, as in most cases it will ensure semantic units are kept together. In the examples below the optimal line breaks are the ones in (9).

(8)
You'll all be surprised when
you see what I accomplished.

I really hope that the teacher will
not be late again this time.

It's incredible, I would have
never recognised him.

(9)
You'll all be surprised
when you see what I accomplished.

I really hope that the teacher
will not be late again this time.

It's incredible,
I would have never recognised him.

Simplifying syntax also helps viewers process a subtitle faster. Although a variety of syntactic structures may be possible in different languages, the most common word order is preferred as it is simpler and thus easier to read: *Subject-Verb-Object*. Canonical forms are generally shorter and simpler to read, argues Karamitroglou (1998), and hence they should be preferred in subtitles. One such example is the preference of active over passive voice, which also tends to be more concise and this helps reduce character count in the subtitles. This is a technique recommended specifically for interlingual subtitles, where translation takes place, and as such can be employed in the case of template files too, but not in SDH files where viewers are likely to lip-read.

(10) Original voice track:
One thing people never ought to be when they're buying used cars is in a hurry.

It is reported by many students that the course is particularly hard.

(11) English template file:
People never ought to be in a hurry
when buying used cars

Many students report
that the course is particularly hard.

3.3. Formatting the Subtitles

3.3.1. Dialogue

Subtitles ideally contain a single speaker's speech, but when two speakers need to be combined in a single subtitle, then each speaker's speech should be strictly placed on a separate subtitle line and preceded by a dialogue dash. Dialogue dashes are either consistently followed or not by a space, depending on the style chosen.

Dialogues can present a particularly problematic case in subtitling when the bulk of the information load rests on one of the two dialogue lines and expansion is not possible into a second line (as is the norm in some countries). The original needs to be restructured in such cases, as per the example below (Georgakopoulou, 2003, p. 212):

(12)
01:56:55:18 01:57:00:21
– Sunset? No! I mean, it's very late.
– What?

The possible alternatives are:
1. Splitting the subtitle in two subtitles.
2. Omitting the dialogue in the translation and translate the first line only.
3. Omitting 'Sunset' from line 1.

3.3.2. Punctuation

An old and widely used subtitling convention is the use of continuation and linking dots to indicate that a sentence continues from one subtitle to the next. While continuation dots are still used to a large extent in some countries, their use has been reduced over the years, and linking dots are a rare occurrence, while audiences are now largely conditioned not to rely on them.

In the benefits of saving space, and as viewers are able to deduct that a sentence has not finished by the proper use of sentence end punctuation marks, it is recommended that neither continuation nor linking dots are used in template files. They can be inserted, if needed, in the translation files.

Suspension dots (ellipsis) are however used to indicate speech trailing off, a pause in the speech, or speech picking up mid-sentence.

3.3.3. Italics

Italics are used to indicate speech that is coming from a source that is not visible on the screen. Common examples of the use of italics are for voice over speech, TV/radio speech, announcements at stations/airports, telephone responses where the person at the other end of the line is not visible, etc.

Italics should be applied to complete sentences only; if the speaker comes into vision at any point of the dialogue/scene, then italics are not needed.

Italics are also commonly used for:

- Single words or short phrases in a third language (L3) that have been transliterated rather than translated in the subtitles.[6].
- Song lyrics, when subtitled.
- Book, film, album and programme titles, though song titles are usually presented in quotes.

3.3.4. Positioning

Subtitles cover a significant part of the screen and as such it is best to have the largest load of text at the very bottom of the screen, where less action is taking place. Template subtitles are typically placed at the bottom of the screen and centred, with the exception of dialogues which are centred and left justified (in left-to-right languages). Thus, assuming syntax allows for it, it is best to keep the second line of a subtitle fuller than the first, and to place one-liners at the very bottom of the screen (where the second line would be placed in the case of a two-liner).

When there is principal photography on screen, however, e.g., newspaper text, or captions burnt-in on the screen, e.g., “London, 1941”, “John Smith: Producer”, then one must take care that the subtitle text does not cover the on-screen text. In such cases, subtitles should be raised either just above the on-screen text or to the top of the screen. Such subtitles are called **raised subtitles**. It is recommended to raise subtitles to the top of the screen in the case of template files. When doing so, the distribution of text in the subtitles should again follow the logic of placing the bulk of the text towards the edges of the screen where there is less action, i.e., the top line should be fuller than the bottom one in the case of raised subtitles.

[6] For a detailed analysis on the use of L3 in subtitles, see Corrius & Zabalbeascoa (2011).

3.3.5. Forced Narratives

When text appears on the screen as part of principal photography, e.g., newspaper text, signs, letters, etc. or as captions burnt-in on the screen, e.g., date and time or location stamps, such text also needs to be subtitled and translated if plot pertinent. For example, you do not need to add a subtitle to translate the word "RESTAURANT" when a character is running past a restaurant on screen and this makes no difference to the plot. On the other hand, it is likely to be necessary to add a subtitle for the word "POLICE" if a character goes into a police station, or reads a note saying "Back in five minutes".

Such subtitles are known as **forced narratives**. This is because forced subtitles will need to appear (to be "forced") on a dub track in the target language as well, as such text would not normally be covered in the dubbed dialogue. It is important to mark forced narratives as such in a subtitle file, e.g., using a note or annotation or special commands in your subtitling software, as it may be necessary to also deliver a forced subtitle stream separately to the end client if one is needed for the dub track of the same film.

Forced narratives are typically timed to match the on-screen text, and also copy its punctuation and case style. It is recommended, however, that forced narratives which appear in between consecutive dialogue, e.g., the phrase "John Smith: Producer" appearing on screen in the middle of a character's speech, are typed in ALL CAPS so they stand out from the dialogue that surrounds them. The exception to this rule is when there is a large block of text on the screen, such as the exposition or the epilogue of the film, in which case it is best to use sentence case for readability.

Forced narratives need only be subtitled once, even if they appear on the video recurrently (e.g., the name of a producer in an interview). When there is dialogue running consecutively over forced text and it is necessary to subtitle the forced text (if not, the dialogue always takes precedence), then it is allowable to go out of sync in order to include the forced narrative and give it a minimum duration. A forced narrative should never be combined with dialogue in the same subtitle.

Text in a third language (L3) in the dialogue is only meant to be subtitled in a template file (so that it is translated in all the target languages) if it is subtitled in the original version of the film, so as to follow the director's intent and create the same effect to the target audience as for the source audience. Such subtitles are also considered forced narratives and need to be flagged as such.

3.3.6. Checklists

A template creation task is not complete until the following accompanying documents have been prepared: an italics list, a raised subtitles list, a forced subtitles list, and a names & notes list. All these lists are particularly useful when performing a QC of the ensuing translated files across multiple languages, even without knowledge of said target languages.

The first three types of lists have already been discussed. A **names & notes list** would include all proper names in a video, properly checked for spelling against the credits, script, official website, IMDb, Halliwell's, or other available source, and including information such as a person's sex if not obvious from the film, so this can be taken into account when translating. Information about song lyrics can also be included here, as well as notes regarding the relationship between film characters, especially in the case of series, where different episodes may be translated by different translators and, hence, it would be important in some languages to determine the familiarity level between characters so as to use appropriate politeness markers in the translation. Other translation notes are explanations designed to help the translator better understand the source dialogue, by providing useful information regarding the use of slang, dialect or cultural references in the subtitles that would be difficult for a non-native speaker to be familiar with. Frequently this is information that can also be found in the film script, if available.

4. Discussion

As already mentioned in the introduction, the motivation for writing this paper is to contribute to the ongoing discussion regarding quality and standards in subtitling by providing one additional source of reference, specifically for the creation of template files, which is a topic that remains under-researched to date.

Template files have, out of necessity, become a representation of a golden mean between varying subtitling practices and norms, favouring the ease of production and quality assurance of increasingly larger volumes of content, whilst trying to allow for regional variation to the extent possible. The language-specific subtitling guidelines published by Netflix (n.d., b) are a good representative example of this process in practise, by standardising aspects such as characters per line and subtitle reading speed, while allowing for regional treatment in formatting issues of subtitles, such as the use of dialogue dashes and italics. Despite their predominance in today's market, templates are still relatively unpopular among some groups of professional subtitlers and unions, mainly because of financial concerns, but also for reasons of quality (Artegiani & Kapsaskis, 2014; Nikolić, 2015), which are worth examining further, as specifications are being revisited.

With the developments in the entertainment industry and the Over-The-Top (OTT) distribution of content in any country and language, as well as the possibilities offered by online communication,

modern subtitling software and tools applied to subtitling research, such as eye-trackers, we are noticing today a rekindled discussion on subtitling norms and the questioning of long established practices. Some examples are: the study by Perego et al. (2010) on subtitle processing, which goes against the cardinal rule of subtitling for line segmentation; the analysis of the effects of crossing shot changes on subtitle re-reading by Krejtz et al. (2013), which shows that viewers are not induced to re-reading subtitles that go over shot changes, but also points to a higher number of gaze shifts from the subtitles to the image in such instances, a factor that would affect reading speed; Szarkowska's and Gerber-Morón's (2018) empirical work on the appropriateness of the famous six-second rule for subtitle readability; or their empirical verification of the rule about subtitle layout with respect to syntax (Gerber-Morón & Szarkowska, 2018).[7] Such reception studies are extremely important in order to better define the needs of today's global audiences, which may have evolved and diverged from those catered for by national subtitling practices of the previous century as a result of technological innovation, exposure to and processing of vast amounts of audiovisual information, and conditioning to practices that promote homogenisation, such as subtitling workflows involving template files for translation purposes.

The most notable difference in the specifications laid out for template file creation in Section 3 above as compared to current practices by global LSPs providing subtitles in multiple languages, is the subtitle reading speed setting analysed in Section 3.2.1. The 1999 ITC standards for subtitling of pre-recorded programmes for adults in the UK recommended a reading speed of 140 wpm (or roughly 12 cps). This was later revised by Ofcom to 160–180 wpm (or roughly 13–15 cps) to reflect an increase in the audience's reading abilities, which was corroborated with a relevant study (2005),[8] and it remains Ofcom's (2017) and the BBC's (2018) recommendation to date. This was also the standard loosely followed when drafting the present guide albeit for interlingual subtitles, which stipulates a reading speed of 150 wpm or 12.5 cps, with an allowable increase to 180 wpm or 15 cps in exceptional cases. This setting was verified in practice at the time, against locally-produced subtitle assets in a variety of European languages, and was shown to represent the average of the reading speeds applied in the sample files examined (Georgakopoulou, 2003, pp. 274–278). Such reading speeds are also in line with traditions in France, Spain and Germany (Mikul, 2014, p. 25)

[7] Reception studies are also being carried out on the effects of innovative subtitling practices commonly used by fansubbers, which may also shed interesting light on today's audiences' reception capacities – see Künzli & Ehrensberger-Dow (2011), as quoted in van Tonder (2015).

[8] The study performed by Ofcom was on deaf and hard-of-hearing participants, and intralingual subtitles. Nevertheless, its results could also be loosely applied to hearing interlingual audiences, who also "rely more heavily on subtitles" – "speed is much more of an issue because if they cannot read them fast enough they will literally lose the plot" (Ofcom, 2005). The comments of the participants and the results of the study regarding the issue of increasing subtitling speeds are of particular interest to those wishing to investigate this issue further.

as well as in Scandinavian countries (Pedersen, 2011, p. 133).[9] Still, a lot of subtitling today, especially when produced in a centralised manner with a template workflow, is much closer to American standards of verbatim captions, with reading speeds above 200 wpm or 17 cps being the norm rather than an exception. For example, the Netflix Partner Help Centre specifies a reading speed of 20 cps (approx. 240 wpm) for adult programmes and 17 cps for children when it comes to English templates and SDH files (n.d., a), and 17 and 13 cps respectively for most other languages for interlingual subtitles (n.d., b).

This is a striking difference to the reading speed recommended for use in English template files in the previous decade. It is also the cause for a lot of debate. The Danish Subtitlers' Association, for instance, recently published a set of subtitling guidelines for Denmark, which are endorsed by the most prominent players in the Danish subtitling industry (Forum for Billedmedieoversættere, 2019); they specify 10–15 cps (120–180 wpm) as the reading speed standard in the country and encourage everyone involved in Danish subtitling production to respect it. On the other hand, the BBC R&D published a white paper (Sandford, 2015) on the impact of subtitle display rate on the enjoyment of television programmes, that speaks for higher reading speeds in SDH viewers, a tolerance as high as 242 wpm before the viewers started having difficulty to follow the programme and concludes that speed is not an issue if the subtitles follow the rhythm of natural speech. A similar finding was reported by Szarkowska and Gerber-Morón for hearing viewers (2018), who show that audiences are able to keep up with higher reading speeds, such as 20 cps, and even report re-reading of slower paced subtitles at 12 cps. Finally, Jean-Louis Kruger (2019), at a keynote speech he delivered at the 8th Media for All conference, spoke about studies performed on the topic of visual perception and skilled reading, and how audiences consume subtitled audiovisual material. He concluded that appropriate subtitle presentation speed is much more complex than simply counting words: word frequencies and word length also make a difference in viewers' reading speed, for instance, but other filmic elements, such as sound, are also factors in subtitle processing. Clearly reading speed is a topic that lends itself to research, thus new reception studies would be welcome in order to shed more light on the debate and help foster audience-friendly subtitling standards.

[9] Romero-Fresco (2009) provides an excellent analysis of reading speed for SDH viewers and how this compares to the respeaking rate used in the UK for live intralingual subtitles. His analysis includes a section on reading speed research, including the findings of D'Ydewalle, Rensbergen and Pollet (1987) on the subtitle reading speed of hearing adults and the history of the famous "six second rule" (Romero-Fresco, 2009, p. 114).

5. Conclusion

This paper is a detailed presentation of a subtitling style guide used for the creation of English template files and practiced for approximately a decade, one of the few to be published to date. It is meant to serve as an example of best practice followed by a multilanguage subtitle service provider at the turn of the century and to be compared to the style guides in use today, so that it contributes to the ongoing debate about subtitling quality and practice, and highlights areas where research is necessary. The most important such area has been identified as the reading speed settings in use today and how well they cater to the needs of local audiences. More research on this topic would be most welcome.

Acknowledgements

This work would not have been completed without the contribution of multiple subtitlers I had the privilege to work with at the European Captioning Institute and who I learned from. They helped refine the present rules on the practice of English template file creation and produced some of the best subtitle template files I have come across. This paper is dedicated to them – thank you all!

References

Andiamo (2019). How Much will your Text Expand or Contract? Retrieved from https://www.andiamo.co.uk/resources/expansion-and-contraction-factors/

Arancho Doc (2017). Text Expansion & Contraction Chart. Uploaded 2017, July. Retrieved from http://www.aranchodoc.com/wp-content/uploads/2017/07/Text-Expansion-Contraction-Chart3.png

Artegiani, I., & Kapsaskis, D. (2014). Template files: Asset or anathema? A qualitative analysis of the subtitles of *The Sorpanos*. *Perspectives: Studies in Translation Theory and Practice*, *22*(3), 419–436. https://doi.org/10.1080/0907676X.2013.833642

BBC (2018, May). Subtitle guidelines. Version 1.1.7. Retrieved from http://bbc.github.io/subtitle-guidelines/

Brondeel, H. (1994). Teaching subtitling routines. *Meta 39*(1), 26–33.

Bywood, L. (2019, May 13). [personal communication with Author of the paper].

Carroll, M. (2004, September 14). Subtitling – Changing standards or new media? *Globalization Insider*, *XIII*(3.3). Retrieved from https://www.translationdirectory.com/article422.htm

Corrius, M., & Zabalbeascoa, P. (2011). Language variation in source texts and their translations: The case of L3 in film translation. *Target 23*(1), 113–130. Retrieved from https://www.researchgate.net/publication/233638429_Language_variation_in_source_texts_and_their_translations_The_case_of_L3_in_film_translation

D'Ydewalle, G., Van Rensbergen, J. & Pollet, J. (1987). Reading a message when the same message is available auditorily in another language: The case of subtitling. In J. K. O'Reagan & A. Lévy-Schoen (Eds.), *Eye movements: From physiology to cognition* (pp. 313–321). Amsterdam / New York: Elsevier Science Publishers.

Described and Captioned Media Program (n.d.). *Captioning Key*. Retrieved from http://captioningkey.org/about_c.html

Díaz-Cintas, J., & Remael, A. (2007). *Audiovisual translation: Subtitling*. Abingdon: Routledge. Retrieved from www.routledge.com/Audiovisual-Translation-Subtitling/Diaz-Cintas-Remael/p/book/9781900650953

Dillon, A. (1992). Reading from paper versus screens: a critical review of the empirical literature. *Ergonomics*, *35*(10), 1297–1326. Retrieved from https://www.ischool.utexas.edu/~adillon/Journals/Reading.htm

EBU Tech I44-2004 (2004, June). *EBU report: Access services, includes recommendations*. Retrieved from https://tech.ebu.ch/docs/i/i044.pdf

Forum for Billedmedieoversættere (2019, January 11th) *Guidelines for subtitling in Denmark* (Version 1). Retrieved from https://undertekstning.dk/english

Gerber-Morón, O., & Szarkowska, A. (2018). Line breaks in subtitling: An eye tracking study on viewer preferences. *Journal of Eye Movement Research*, *11*(3). http://dx.doi.org/10.16910/jemr.11.3.2

Georgakopoulou, P. (2003). Reduction levels in subtitling. DVD subtitling: A compromise of trends. *Theses from the University of Surrey*, *Paper 242*. Retrieved from http://epubs.surrey.ac.uk/id/eprint/602

_____ (2005). Subtitling: A quest for the Holy Grail? In B. Mayor (Ed.), *Readings booklet, Book 5 – Getting to work: Putting grammar into professional practice* (pp. 46–56). Milton Keynes: Open University.

_____ (2006, July). Subtitling and globalisation. *The Journal of Specialised Translation*, *6*, 115–120. Retrieved from http://www.jostrans.org/issue06/art_georgakopoulou.php

_____ (2009). Subtitling for the DVD industry. In J. Díaz-Cintas, & G. Anderman (Eds.), *Audiovisual translation: language transfer on screen* (pp. 21–35). London: Palgrave Macmillan. https://doi.org/10.1057/9780230234581_2

_____ (2010). *Reduction levels in subtitling. DVD subtitling: A convergence of trends.* Saarbrücken: Lambert Academic Publishing.

_____ (2012). Challenges for the audiovisual industry in the digital age: The ever-changing needs of subtitle production. *The Journal of Specialised Translation*, *17*, 78–103. Retrieved from http://www.jostrans.org/issue17/art_georgakopoulou.php

IBM Knowledge Center (n.d.). Text translation design. Retrieved from https://www.ibm.com/support/knowledgecenter/ssw_ibm_i_72/nls/rbagstextdatatransdesign.htm

Ishida, R. (2007). Text size in translation. *W3C Internationalization*. Retrieved from https://www.w3.org/International/articles/article-text-size.en

Ivarsson, J., & Carroll, M. (1998). *Subtitling*. Simrishamn: TransEdit.

Independent Television Commission (1999). *ITC Guidance on standards for subtitling*. February 1999. London, UK. Retrieved from http://sign-dialog.de/wp-content/richtlinien_199902_england.pdf

Kapsaskis, D. (2011, July). Professional identity and training of translators in the context of globalisation: the example of subtitling. *The Journal of Specialised Translation*, *16*, 162–184. Retrieved from http://www.jostrans.org/issue16/art_kapsaskis.php

Karamitroglou, F. (1998, April). A proposed set of subtitling standards in Europe. *Translation Journal*, *2*(2). Retrieved from http://translationjournal.net/journal/04stndrd.htm

Krejtz, I., Szarkowska, A., & Krejtz, K. (2013). The effects of shot changes on eye movements in subtitling. *Journal on Eye Movement Research*, 6(5), 1–12.

Kruger, J.-L. (2019, June 17–19). Towards an understanding of AVT as multimodal mediation. *The 8th Media for All* conference – *Complex Understadnings*, Stockholm, Sweden. Retrieved from https://www.tolk.su.se/english/media-for-all-8/programme/live-streaming/opening-welcome-1.441494

Künzli, A., & Ehrensberger-Dow, M. (2011). Innovative subtitling – A reception study. In C. Alvstad, A. Hild, & E. Tiselius (Eds.), *Methods and strategies of process research: Integrative approaches in translation studies* (pp. 187–200). Amsterdam: John Benjamins Publishing Company. https://doi.org/10.1075/btl.94

Kwintessential (n.d.). Text contraction and expansion in translation. Retrieved from https://www.kwintessential.co.uk/resources/expansion-retraction

Marleau, L. (1982). "Les Sous-Titres… Un Mal Necessaire". *Meta* 27(3), 271–285.

Martí Ferriol, J. L. (2013). Subtitle Reading Speeds in Different Languages: The Case of *Lethal Weapon*. *Quaderns. Revista de Traducció* 20, 201–210. Retrieved from https://ddd.uab.cat/pub/quaderns/quaderns_a2013n20/quaderns_a2013n20p201.pdf

Mikul, C. (2014). Caption quality: International approaches to standards and measurement. Sydney: Media Access Australia. Retrieved from http://www.mediaaccess.org.au/sites/default/files/files/MAA_CaptionQuality-Whitepaper.pdf

Nedergaard-Larsen, B. (1993). Culture-bound problems in subtitling. *Perspectives Studies in Translatology*, *1*(2), 207–241. Denmark: Museum Tusculanum Press. https://doi.org/10.1080/0907676X.1993.9961214

Netflix Partner Help Centre (n.d., a). English template timed text style guide. Retrieved from https://partnerhelp.netflixstudios.com/hc/en-us/articles/219375728-English-Template-Timed-Text-Style-Guide

_____ (n.d., b). Timed text style guides. Retrieved from https://partnerhelp.netflixstudios.com/hc/en-us/categories/202282037-SPECIFICATIONS-GUIDES

Newmark, P. (1988). *A Textbook of Translation*. London: Prentice Hall.

Nikolić, K. (2015). The pros and cons of using templates in subtitling. In R. B. Piñero, & J. Díaz-Cintas (Eds.), *Audiovisual translation in a global context: Mapping an ever-changing landscape* (pp. 192–202). Hampshire: Palgrave Macmillan. https://doi.org/10.1057/9781137552891_11

O'Hagan, M. (2005). Multidimensional translation: A game plan for audiovisual translation in the age of GILT. In H. Gerzymisch-Arbogast, & S. Nauert (Eds.), *MuTra 2005 – Challenges of multidimensional translation. Conference proceedings*. Saarbrücken. Retrieved from http://www.euroconferences.info/proceedings/2005_Proceedings/2005_O'Hagan_Minako.pdf

Ofcom (2005, January 6). Subtitling – An issue of speed? Retrieved from https://www.ofcom.org.uk/research-and-data/tv-radio-and-on-demand/tv-research/subtitling-speed

_____ (2017). *Code on Television Access Services*. 30 January 2017. Retrieved from https://www.ofcom.org.uk/__data/assets/pdf_file/0020/97040/Access-service-code-Jan-2017.pdf

Pedersen, J. (2011). Subtitling norms for television: An exploration focusing on extralinguistic cultural elements. Amsterdam: John Benjamins.

Perego E., del Missier, F., Porta, M., Mosconi, M. (2010). The cognitive effectiveness of subtitle processing. *Media Psychology*, *13*(3), 243–272. https://doi.org/10.1080/15213269.2010.502873

Romero-Fresco, P. (2009). More haste, less speed: Edited versus verbatim respoken subtitles. *VIAL-Vigo International Journal of Applied Linguistics*, *6*(1), p. 109–133. Retrieved from https://vialjournal.webs.uvigo.es/pdf/Vial-2009-Article6.pdf

Sandford, J. (2015). The impact of subtitle sisplay rate on enjoyment under normal television viewing conditions. *IBC2015 Conference*. BBC Research & Development, White Paper WHP 306. Retrieved from http://downloads.bbc.co.uk/rd/pubs/whp/whp-pdf-files/WHP306.pdf

Sokoli, S. (2019, May 21). On #subtitling quality: When will we stop measuring readability just by counting characters per second? Message posted to https://twitter.com/StavroulaSokoli/status/1130940807735857152

Szarkowska, A., & Gerber-Morón, O. (2018). Viewers can keep up with fast subtitles: Evidence from eye movements. *PLoS ONE*, *13*(6), e0199331. https://doi.org/10.1371/journal.pone.0199331

van Tonder, L. C. (2015). Fansubbing and creative subtitling – How amateur approaches can help improve professional products. *South African Translators' Institute – Second Triennial Conference: The Changing Face of Translation and Interpreting*. Kempton Park, South Africa. Retrieved from https://www.academia.edu/16564660/Fansubbing_and_Creative_Subtitling_How_Amateur_Approaches_can_Help_Improve_Professional_Products