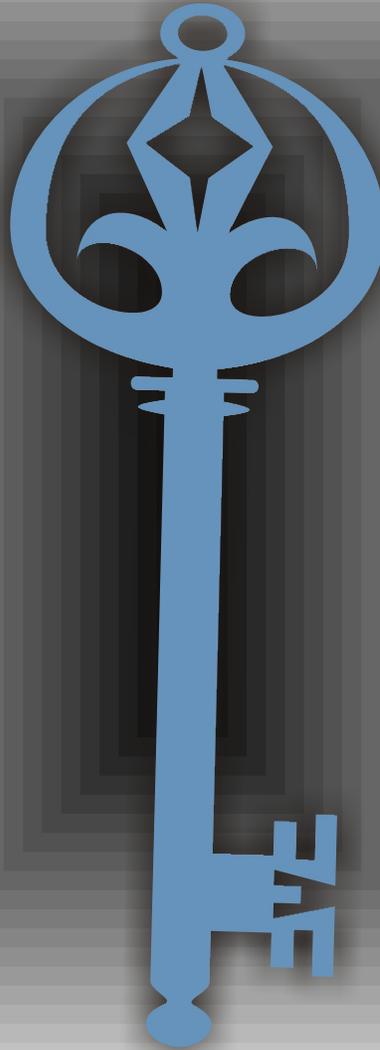


2006

Captioning Key

Guidelines and Preferred Techniques



Captioned Media Program



Captioning Key

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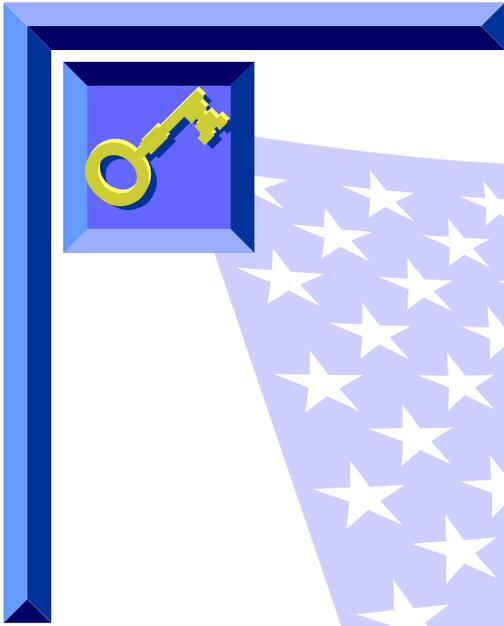
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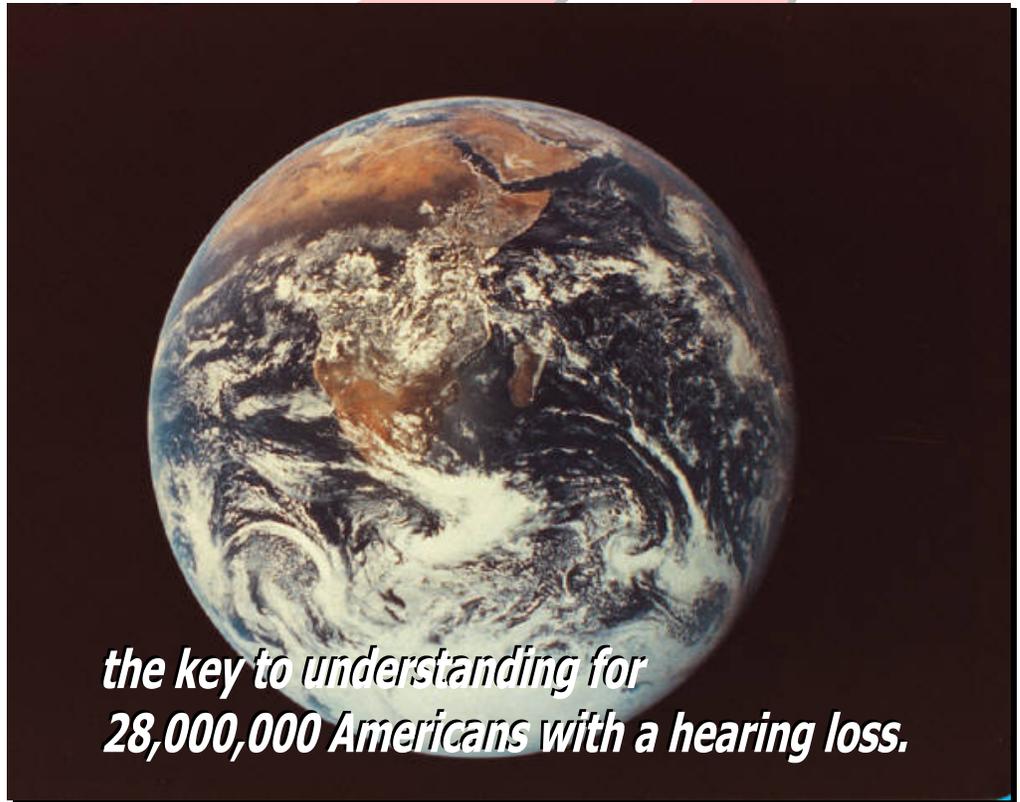
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Captioning...



*the key to understanding for
28,000,000 Americans with a hearing loss.*

The Key

Captioning is the key . . . to opening up a world of information for persons with a hearing loss or literacy needs. There are more than 28 million Americans with a hearing loss. Millions of others are illiterate, learning to read, or use English as a second language.

This manual is a key . . . for captioning agencies performing Captioned Media Program (CMP) open-captioning. However, much of the information is applicable to closed-captioning. Thus, it will also be useful to video producers/distributors and others who are considering close-captioning their products or learning about captioning. Some background information and rationale is included for the novice.

About the CMP

Sound was introduced to motion pictures in 1927. This made them inaccessible to deaf and hard of hearing persons who had enjoyed equal viewing participation with hearing persons during the silent film era.

Efforts to overcome the problem of inaccessibility did not begin for two decades. In 1947 the first true "captioning" occurred as captions were placed between film frames. Quickly thereafter the Captioned Films for the Deaf (CFD) program was organized and incorporated in Connecticut with an office at the American School for the Deaf.

In 1959 the CFD became federal Public Law 85-905. Although the initial purpose of the CFD was to provide subtitled Hollywood films for deaf people, educators were quick to recognize the potential of captioned films and other visual media as tremendous untapped educational resources. Consequently, the Congress amended the original law to authorize acquisition, captioning, and the distribution of educational films.

In 1984 CFD introduced videocassettes, and CFD became CFV (Captioned Films/Videos). As films were withdrawn from the collection in 1998, the program again changed names and became the Captioned Media Program (CMP). Today, 4,000 captioned videos and other media are available for free loan. Deaf and hard of hearing persons, teachers, parents, and others who work with deaf and hard of hearing people are eligible to borrow these materials.

The National Association of the Deaf (NAD) has a cooperative agreement with the U.S. Department of Education (ED) to select and caption new CMP videos and other media. Approximately 300 new materials are purchased, captioned, and added to the CMP collection each year. The NAD also distributes these materials to consumers nationwide.

Guidelines in this manual have evolved over the 47-year history of the CMP program. However, captioning research and technological developments continually dictate changes and improvements in the captioning process. The CMP staff, with a combined near century of captioning experience, rely heavily on consumer input when incorporating these changes.

A Definition of Captioning

Captioning is the process of converting the audio content of a television broadcast, webcast, film, video, CD-ROM, DVD, live event, and other productions into text which is displayed on a screen or monitor. Captions not only display words as the text equivalent of spoken dialogue or narration but also include speaker identification and sound effects. It is important that the captions be: (1) synchronized and appear at approximately the same time as the audio is available; (2) equivalent and equal in content to that of the audio, including speaker identification and sound effects; and (3) accessible and readily available to those who need them.

CMP Captioning Philosophy

The CMP captioning philosophy is that all media should incorporate as much of the original language as possible; words or phrases which may be unfamiliar to the audience should not be replaced with simple synonyms. Extreme rewriting of narration for captions develops problems of "watered-down" language and deleted concepts. Do not censor language unless previously done in the audio. Editing should only be done if required to meet the specified presentation rate.

Review by the CMP

First, a ½" VHS time-coded window proof dub and a hard copy or electronic file of the caption script must be sent to the CMP by all agencies performing CMP work. The CMP will notify the captioning agency if changes are to be made, and a second dub (check dub) will be required upon request. Requested changes are panned on script pages which are faxed or mailed to the captioning agency. See Appendix 1 for symbols used for proofreading by the CMP.

Second, captioning agencies are expected to research spelling, capitalization, and punctuation. Company scripts are not always reliable. All research work should be reported on the "Captioning Research Record" (see Appendix 2) or a CMP-approved substitute. The time code or caption number must be indicated. A copy of the record should be sent to the CMP along with the proof dub and caption script.

TYPES, METHODS, AND STYLES



Definition:

Types vary according to how the captions appear, how they are accessed, and what information is provided.

Closed Captions (CC)

These are invisible without a special decoder. Since 1980, analog TV programs, home videos, and other productions that have been closed-captioned present these captions on the 21st line of the vertical blanking interval (VBI). They are made visible by a decoder at the time of viewing, and they are usually white letters encased in a black box. (See Figure 1.) The closed-caption standard used today is EIA-608. The broadcast industry is in a state of transition to digital television and high-definition TV. As part of this transition, closed captions will have to support the digital closed-caption format, EIA-708, and will be much improved. Examples of improvements include the ability of viewers to alter the size and type of font, to select text and background colors, and to replace the black box with a translucent (see-through) background.

Subtitles for the Deaf and Hard of Hearing (SDH)

These are similar to subtitles used for foreign films, but also include information such as sound effects, speaker identification, and other essential "nonspeech" features. The CMP captions are this type. Sometimes they are called "open captions," though this term most often refers to "closed captions" made permanently visible by duplicating copies of a closed-captioned video while the decoder is engaged. (See Figure 2.)

(Subtitles, which are written for hearing viewers [traditionally in a foreign film and today often seen on DVD] do not indicate information other than dialogue and often are edited. Some may translate important onscreen printed information, such as a street sign or a written message. These, as well as some SDH captions, are displayed utilizing the mediums menu option on DVDs and the Internet).



Definition:

Methods vary according to when the captions are created and displayed.

Off-Line

Captions created and added after a segment has been recorded and before it is aired or played. Examples of productions that utilize off-line captioning are prime-time TV programs, home videos, and educational videos.

On-Line

Captions created and added during a live broadcast or event. Sometimes called "real-time captions," this method is used to describe the captioning of live political debates, sporting events, classroom lectures, and other live productions.

Figure 1. Closed-captioning sample

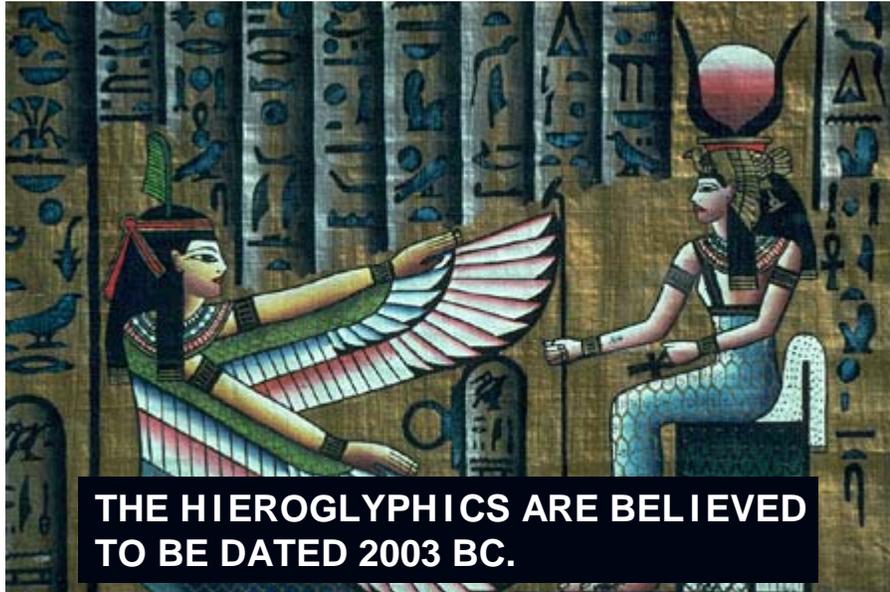


Figure 2. Subtitles for the deaf and hard of hearing (SDH) sample





Definition:

Style refers to the way captions are presented. Three common styles of captioning include: pop-on, roll-up, and paint-on. The method of the captioning sometimes dictates the style.

Pop-On

Between one and three lines of captions appear onscreen all at once, stay there for a few seconds, and then are replaced by another caption. The captions are timed to synchronize with the audio and are placed on the screen in such a way as to help identify the speaker. These are used for off-line captioning.

The CMP requires pop-on captions in upper- and lowercase letters with descenders. Characters must be Helvetica Medium or a font similar to it. These captions must have good resolution and fit the requested 32 characters to a line. (See Figure 3.)

Roll-Up

Each line rolls onto and off the screen in a continuous motion. Usually two to four lines of text appear at one time, with the top line of the text disappearing as a new bottom line is added. Roll-up captions are used for on-line captioning but are also used for some off-line captioning. These are synchronized less precisely than pop-on captions. Although it is possible to move captions (to avoid on-screen graphics), more often they remain in one place throughout the program. Double chevrons are often used to indicate a change in speaker, but the speaker is not always identified.

Paint-On

Similar to roll-up captions, individual words are “painted-on” from left to right, not “popped-on” at once as an entire caption. These are primarily used in on-line captioning, but may also appear in off-line.

Figure 3. CMP caption sample



CMP Master Key:

- ◆ Open-captioned format
- ◆ Pop-on method
- ◆ Upper- and lowercase letters with descenders
- ◆ Proportional spacing
- ◆ 32 characters per line
- ◆ Helvetica Medium (or similar)

Definition:

Text is the appearance of the letters on the screen. Text considerations include: caption placement, line division, and font.



Caption Placement

1. Caption placement (vertical and horizontal) refers to the location of captions on the television screen. Placement must not interfere with existing visuals/graphics such as maps, illustrations, names of countries, job titles, or names, faces, or mouths of speakers. Should interference occur, captions should be placed at the top of the screen. If placing captions at the top of the screen also interferes with visuals/graphics, place captions elsewhere on the screen.

2. Captions that have two or more lines must be left-aligned. Examples:

Inappropriate

a. Today's main event is
the Monster Truck Rally.

b. I'm sorry, Norman.
I'd never
left if I had known.

c. [steamship whistle blows]
tooooooot

Appropriate

a. Today's main event is
the Monster Truck Rally.

b. I'm sorry, Norman.
I'd never left if I had known.

c. [steamship whistle blows]
tooooooot

3. No more than two lines of captions are preferred. The CMP uses a 1 to 8 line-numbering system. (See Figure 4.) Most captions are placed on lines 7 and 8. Example:

Acceptable

I wish to seek your approval.

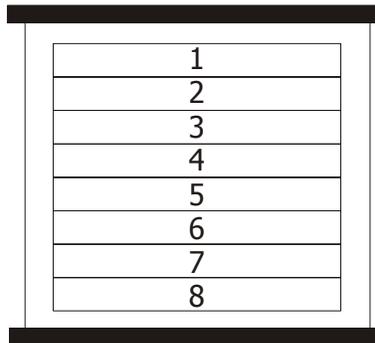
Preferred

I wish to seek
your approval.

4. For media with one offscreen narrator and no preexisting graphics, captions should be left-aligned at center screen on lines 7 and 8.

Single-line captions should be centered on line 8.

Figure 4. Line-numbering system



5. It is essential to place all captions within the “safe zone” because of the variation in picture size of televisions in homes today. This will avoid the possibility of missing characters at right or left screen or missing descenders/ascenders at bottom or top screen.
6. Three- or four-line captions are also occasionally acceptable if a one- or two-line caption would interfere with preexisting graphics or be confusing in speaker identification. (See Figure 5.)

Figure 5. Acceptable three- and four-line captions



7. The only exception to number 2 above occurs when both lines of captioned dialogue or narration are exactly the same. In this case, indent the second line two spaces. Example:

Inappropriate

Where are you?
Where are you?

Appropriate

Where are you?
 Where are you?

However, if two caption lines begin with the same word—but are not identical sentences—the second line should not be indented. Example:

Inappropriate

and there is some
and then there is none.

Appropriate

and there is some
and then there is none.

8. If essential sound effects are used simultaneously with captioned dialogue, they must be placed at the top of the screen.
9. When people onscreen speak simultaneously, place the captions underneath the speakers. Do not use other speaker identification techniques like hyphens. (See Figure 6.) If this is not possible due to length of caption or interference with onscreen graphics, caption each speaker at different time codes.
10. Captioned dialogue must be placed under the speaker as long it does not interfere with graphics or other preexisting features. (See Figure 7A and 7B.)

Figure 6. Inappropriate captioning (It's confusing as to who is speaking.)

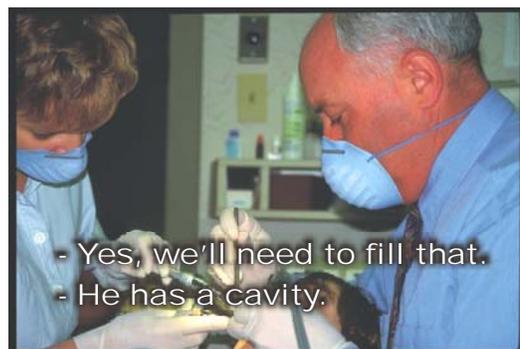


Figure 7A. Appropriate captioning (Clearly shows that the woman is speaking.)

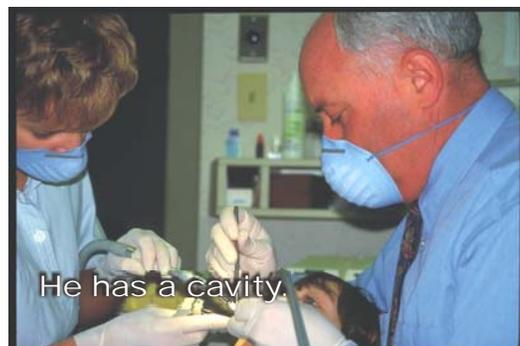
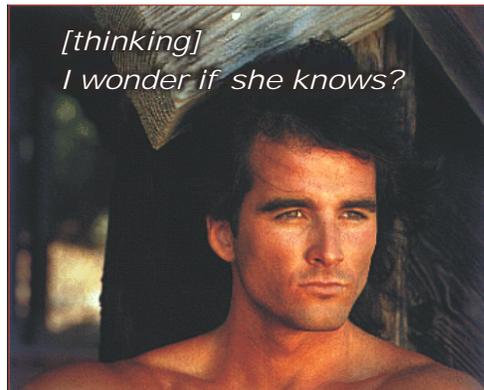


Figure 7B. Appropriate captioning (Clearly shows that the man is speaking.)



11. If a speaker continuously moves from one location onscreen to another, one placement for captions of that speaker's dialogue must be used. Confusion occurs when captions jump around the screen.
12. When a person is thinking, dreaming, or the like, list the description in brackets and place italicized captions above the head. (See Figure 8.)
13. Do not mix Roman type with italics at the same time code except in cases of word emphasis.

Figure 8. Caption of a person thinking



Line Division

1. When a sentence is broken into two or more lines of captioning, it should be broken at a logical point where speech normally pauses, unless it would exceed the 32-characters-per-line requirement.
2. When breaking a sentence into a two-line caption, the following guidelines should be followed:

a. Do not break a modifier from the word it modifies. Example:

Inappropriate

Mark pushed his black truck.

Appropriate

Mark pushed his black truck.

b. Do not break a prepositional phrase. Example:

Inappropriate

Mary scampered under the table.

Appropriate

Mary scampered under the table.

c. Do not break a person's name and do not break titles from a personal name. Examples:

Inappropriate

(1) Bob and Mr. Smythe are at the movies.

Appropriate

(1) Bob and Mr. Smythe are at the movies.

(2) Did you and Doris meet Jake
Albright at the mall?

(2) Did you and Doris meet
Jake Albright at the mall?

d. Do not break a line after a conjunction. Example:

Inappropriate

In seconds she arrived and
he ordered a Pepsi.

Appropriate

In seconds she arrived
and he ordered a Pepsi.

e. Do not break an auxiliary verb from the word it modifies. Example:

Inappropriate

Mom said I could
have gone to the movies.

Appropriate

Mom said I could have gone
to the movies.

3. Never end a sentence and begin a new sentence on the same line. Examples:

Inappropriate

a. He suspected that his face
turned pale. He knew he
wouldn't be able to speak
if spoken to. Running toward
the void, he halted...

Appropriate

a. He suspected that his face
turned pale.
He knew he wouldn't be able
to speak if spoken to.
Running toward the void,
he halted...

b. Kate visits a dairy farm.
She learns how cows are fed,
milked, and cared for.

b. Kate visits a dairy farm.
She learns how cows are fed,
milked, and cared for.

4. Unless they are short related sentences containing one or two words. Examples:

Appropriate

- a. Voila! A sentence we could write
without a subject.
- b. Why? Why not me?



Font

1. A font, or typeface, is a set of characters at a certain size, weight, and style. Consistency throughout the video is extremely important.
2. The CMP requires that subtitled characters be Helvetica Medium or a font similar to it.
3. The weight must support a 32-character line.
4. Characters must be sans serif, have a drop or a rim shadow, and be proportionally spaced.

5. The font must include upper- and lowercase letters with descenders that drop below the baseline.
6. Pick a font and spacing technique that does not allow overlap with other characters, ascenders, or descenders. Example:

Inappropriate

My dog Puggy happily chewed on
the T-bone all day.

Appropriate

My dog Puggy happily chewed
on the bone all day.

7. If possible, translucent box is necessary.

PRESENTATION RATE

Definition:

Presentation rate is the number of captioned words shown onscreen each minute and is a crucial factor in captioning.

Time is required to read the captions, look at the picture, integrate the captions and the picture, and then internalize the message. When calculating reading rate, count one word as one word, as opposed to basing the calculation on the number of characters. Example: "Jackson disappeared into the woods" would equal five words, and "It was never-ending" would equal four words. Speaker identification and sound effects must be included in the word count when calculating presentation rate.

Rate control is particularly important with educational videos when much of the content presented is unfamiliar to the viewers. More time is necessary to complete the caption-reading process. Research dating back to 1980 has supported captioning presented at 120 words per minute (wpm) as being comprehensible to elementary and secondary students. This rate has been the standard for educational videos in the CMP program and for captioning children's programs at various captioning agencies.

For some notes relating to presentation rate, see Appendix 3.



Specifications and Guidelines

1. Many educational, special-interest, and theatrical videos are not scripted to allow the time necessary for the process of reading captions and often have extremely rapid narration/dialogue. Therefore some editing may be necessary.
2. All lower- to middle-level educational videos should be captioned at a presentation rate range of 120-130 wpm. Upper-level educational videos may be captioned slightly above the 120-130 range. No caption should remain onscreen less than two seconds.
3. Adult special-interest videos require a presentation rate of 150-160 wpm. The presentation rate can be increased if heavy editing radically changes the original meaning, content, or language structure. No caption should remain onscreen less than two seconds.
4. Children's movies should be captioned at a rate range of 150-160 wpm. No caption should remain onscreen less than two seconds.
5. Adult movies should be captioned at a near verbatim rate, but no caption should remain onscreen less than two seconds or exceed 235 wpm.



Editing

1. Editing is performed only when a caption exceeds the specified presentation rate limit. Proper editing should maintain both the original meaning/content and meet presentation rate requirements. Examples:

- a. Original narration:

“Today many colorful and varied tales are told of just how it all started.”
(Target rate 120-130 wpm--words per minute)

Inappropriate (over-edited)

Today many tales are told
of how it all started. **116 wpm**

Appropriate

Today, colorful
and varied tales are told **122 wpm**

of how it started. **120 wpm**

- b. Original narration:

“It's time to stop talking and time to act before they bleed us dry.”
(Target rate: 150-160 wpm--words per minute)

Inappropriate (adulteration of language)

We must stop talking and
act before they bankrupt us. **163 wpm**

Appropriate

It's time to act
before they bleed us dry. **145 wpm**

- c. Original narration:

“All them boys do is get you in trouble...and they're gonna kick you...”
(Target rate: 150-160 wpm--words per minute)

Inappropriate
(did not caption)

They're going
to kick you **127 wpm**

Appropriate

Them boys
get you in trouble... **148 wpm**

they're gonna
kick you **152 wpm**

2. The only times when presentation rate is ignored are when a famous person is quoted, a well-known person is speaking onscreen, poems and other published works are quoted, and/or song lyrics are sung. These must be captioned verbatim.
3. Do not caption the same--or nearly the same--information that is already shown onscreen.

LANGUAGE MECHANICS

Definition:

Language mechanics incorporates the proper use of spelling, grammar, punctuation, capitalization, and other factors deemed necessary for high-quality captioned media. Rules included in this manual are primarily those which are unique to captioning and speech-to-text.



Spelling and Capitalization

1. To check spelling and capitalization, the CMP uses *Merriam-Webster Online* c. 2004 (<http://www.m-w.com/netdict.htm>) as our primary source along with *Random House Webster's Unabridged Dictionary* c. 1999 (Version 3.0). Proper nouns are researched in *The Gregg Reference Manual* and *The Chicago Manual of Style*. Only as a last resort are proper nouns researched on the Internet.
2. Do not use British spellings or punctuation.
3. Do not emphasize a word using all capital letters unless this indicates screaming.
4. Written English rules on capitalization are difficult. First of all, there are a seemingly endless number of rules to master. Second, the authorities themselves don't agree on the rules. Try to remember the basic purposes of capitalization: to load special significance into words and to give importance, emphasis, and distinction to words.
5. Captioning agencies are **expected** to:
 - a. Use a reputed dictionary and choose the most common or preferred variant.
 - b. Be consistent in the spelling of words throughout the video. This includes words that can be spelled either as one or two words or in hyphenated form.
 - c. Capitalize proper names for speaker identification. All other speaker identification should be lowercased unless the character is being used as a proper name.
Examples:

Inappropriate

- (1) (Male Nurse)
- (2) (bobby)
- (3) (iguana)
(Used as a general term.)

Appropriate

- (1) (male nurse)
- (2) (Bobby)
- (3) (Iguana)
(Used as a proper name.)

- d. Lowercase sound effects, including both description and onomatopoeia except when a proper name is part of the description. Examples:

Inappropriate

- (1) [Machine Gun Firing]
Rat-a-tat-tat
- (2) [Frog croaking]
- (3) [Plinky Squealing]

Appropriate

- (1) [machine gun firing]
rat-a-tat-tat
- (2) [frog croaking]
- (3) [Plinky squealing]



Research

When performing CMP captioning work, captioning agencies are expected to extensively research spelling, capitalization, and grammar. All research work should be recorded on the "Captioning Research Record." (See Appendix 2.)



Grammar

1. Unless contractions (shouldn't, isn't, etc.) are spoken, avoid using them in captions.
2. Do not use abbreviations unless spoken that way. Example:

Inappropriate

Bring catsup, mustard,
relish, etc.

Appropriate

Bring catsup, mustard,
relish, et cetera.



Punctuation

1. For other language mechanic features, the CMP uses *The Gregg Reference Manual*, *The Chicago Manual of Style*, and others. If the media is based exactly on the book, the language mechanics used in the book should be followed.
2. As a general rule, written English language depends largely on word order to make the relationships between words clear. When word order alone is not sufficient to establish these relationships, the CMP typically resorts to punctuation.

It is not easy to determine the appropriate punctuation for written language. Spoken language sometimes appears improperly constructed when put into written form and can be even more difficult to punctuate.

Acceptable and understandable speech may consist of broken sentences, incomplete sentences, run-on sentences, and other constructions normally considered not acceptable when originated as written language. Transcription of these speech constructions into text sometimes requires use of punctuation that is unique to the captioning process.

3. Emotion/tone should be conveyed by standard punctuation marks, with multiple exclamation points used for strong emotion. Examples:

Inappropriate

- a. aaaauuggghhh.
- b. Sit down right now.
- c. Why are you doing that.

Appropriate

- a. aaaauuggghhh!!!
- b. Sit down right now!
- c. Why are you doing that?!

Hyphens and Dashes

1. Nonessential information that needs special emphasis should be conveyed by double hyphens or a single long dash. Examples:

Inappropriate

- a. So French officials,
not Spanish, were back
- b. Then he is off on the next leg
of his journey, 325 miles

to Flagstaff, Arizona,
eating sandwiches.

Appropriate

- a. So French officials--
not Spanish--were back
- b. Then he is off on the next leg
of his journey--325 miles

to Flagstaff, Arizona--
eating sandwiches.

2. When a speaker is interrupted and another speaker finishes the sentence, the captions should be conveyed by double hyphens or a single long dash.

3. When a speaker stutters, caption what is said. Example:

Inappropriate

book

Appropriate

b-b-b-ook

4. When captioning **fingerspelling**, separate letters with hyphens. Example:

A-N-T-O-I-N-E-T-T-E

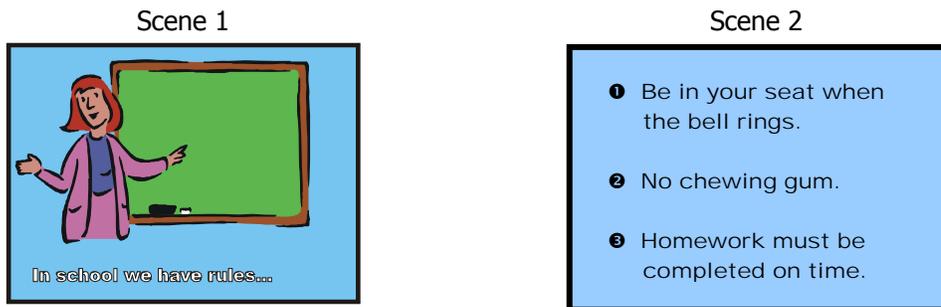
Ellipsis

1. Use ellipsis—not a comma or other punctuation—when there is a significant pause within a caption. Example:

Original narration: "Look at that sunset...isn't it beautiful?"

2. Do not use ellipsis to indicate that the sentence continues into the next caption except to indicate a pause.
3. Use ellipsis or a colon to lead into audio relating to an onscreen graphic. (See Figure 9.)
4. Use only ellipsis to lead out of audio relating to an onscreen graphic.

Figure 9. Use of ellipsis



Quotation Marks

1. Double quotation marks must have appropriate curvature direction or be vertically aligned:
" " or " "
2. Quotation marks are used to distinguish titles of books, periodicals, plays, films, videos, short stories, and other titles of complete works. Also, quotation marks are used to distinguish names of individual ships, trains, airplanes, and spacecrafts.
3. Use quotation marks for onscreen readings from a poem, book, play, journal, or letter. However, use quotation marks and italics for offscreen readings or voice-overs.
4. Beginning quotation marks should be used for each caption of quoted material except for the last caption. The last caption should have only ending quotation marks. Example from a reading of a journal:

Inappropriate

"Mother knelt down
and began thoughtfully fitting"

"the ragged edges
of paper together."

"The process was watched
with spellbound interest."

Appropriate

"Mother knelt down
and began thoughtfully fitting

"the ragged edges
of paper together.

The process was watched
with spellbound interest."

5. Use both double and single quotation marks when there is a quote within a quote.

Spacing

1. Font size should allow for a thirty-two (32) character caption line.
2. Spaces should not be inserted before ending punctuation, after opening and before closing parentheses and brackets, before and after double hyphens and dashes, or before/between/after the periods of an ellipsis mark. Examples:

Inappropriate

- a. What did she say ?
- b. [gun firing]
- c. (narrator)
- d. left unsaid -- we just talked.
- e. I am happy . . . thank you.

Appropriate

- a. What did she say?
- b. [gun firing]
- c. (narrator)
- d. left unsaid--we just talked.
- e. I am happy...thank you.

3. A space should be inserted after the beginning music icon (♪) and before the ending music icon(s). Example:

♪ There's a bad moon rising ♪

Italics

1. Italics should be used to indicate:
 - a. A voice-over reading of a poem, book, play, journal, letter, etc. (as this is also quoted material, quotation marks are also used).
 - b. When a person is dreaming, thinking, or reminiscing.
 - c. When there is background audio that is essential to the plot, such as a PA system, TV, and so forth.
 - d. The first time a new word is being defined, but do not italicize the word thereafter.
 - e. Offscreen dialogue, narrator (see exception in #6 below), sound effects, or music (this includes background music).
 - f. The offscreen narrator if there are multiple speakers onscreen.
 - g. Speaker identification if the dialogue is in italics and speaker identification is necessary.
 - h. Foreign words and phrases unless they are in English dictionaries. However, some exceptions apply. For example: "passado" and "punto reverso" are in the dictionary, but not the "hay." For the sake of being consistent, leave all in italics. Example:

Inappropriate

Ah, the immortal pasado!
The punto reverso! The *hay!*

Appropriate

Ah, the immortal *pasado!*
The *punto reverso!* The *hay!*

2. Italics should also be used when a particular word is heavily emphasized in speech.
Example:
You *must* go!
3. Excessive slanting of italics should be avoided.

4. Underlining should never be used in place of italics.
5. When an entire caption is already in italicized format, use Roman type to set off a word you would normally italicize.
6. If there is only one narrator and no other speakers, whether on- or offscreen, use Roman type with no italics.
7. Do not italicize while translating for a person onscreen. Example:

Inappropriate

(female interpreter)
I enjoyed New Mexico...

Appropriate

(female interpreter)
I enjoyed New Mexico...

SPECIAL CONSIDERATIONS

Definition:

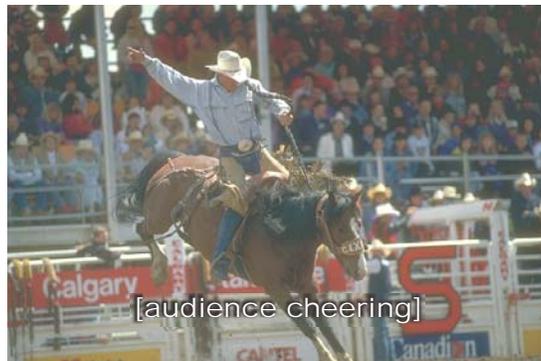
Other significant features should be incorporated into captioning. **Special considerations** include: sound effects, speaker identification, synchronization, music, foreign language/dialect/slang, numbers, and others.



Sound Effects

1. Sound effects necessary to the understanding and/or enjoyment of the video should be captioned.
 - a. A description of sound effects, in brackets, should include the source of the sound and a representation of it. Avoid use of discriminatory terms. (See Figure 10.)

Figure 10. Use of description only



- b. Description can be eliminated if you can clearly see the source of the sound onscreen. For example, if a wolf is shown in the process of growling, only onomatopoeia is necessary. (See Figure 11.)

Figure 11. Use of onomatopoeia only



- c. If the presentation rate permits, also include an imitation or onomatopoeia of the sound. A study by Gallaudet University showed that "A combination of description and onomatopoeia was the preference of more consumers (56%) than was description alone (31%) or onomatopoeia alone (13%). (See Figure 12.)

Figure 12. Description and onomatopoeia for onscreen sound effects



2. Offscreen sound effects should be italicized. (See Figure 13.) This includes background music.

Figure 13. Description and onomatopoeia for offscreen sound effects



3. Place the description of the sound effect as close as possible to the sound source.
4. A description must be enclosed in brackets.
5. Both sound effect and onomatopoeia must be lowercased.
6. If description is used for offscreen sound effects, it is not necessary to repeat the source of the sound if it is making the same sound a few captions later. Example:

First caption

[pig squealing]

Later caption

[squealing]

7. The description should be on the first line of the sound effect caption, separate from the onomatopoeia. Examples:

Inappropriate

a. [bell ringing] bbbriinnngg!!

b. [machine gun firing] rat-a-tat-tat

Appropriate

a. [bell ringing]
bbbriinnngg!!

b. [machine gun firing]
rat-a-tat-tat

8. Use punctuation to indicate speed or pace of sound. Examples:

Slow

[clock chiming]
dong...dong...dong

Rapid

[gun firing]
bang, bang, bang

9. A sound represented by a repeated word is not hyphenated. A sound represented by two different words is hyphenated. Examples:

Repeated words

[doorbell ringing]
ding, ding

Two different words

[doorbell ringing]
ding-dong

10. When describing a sustained sound, use the present participle form of the verb. When describing an abrupt sound, use the third person verb form. Examples:

Sustained sound

a. [dog barking]
woof, woof...woof

b. [papers crinkling]

c. [Paige whistling]

Abrupt sound

a. [dog barks]
woof!

b. [papers crinkle]

c. [Paige whistles]

11. Caption background sound effects only when they're essential to the plot.

12. Caption audience response only if the speaker is interacting with them or when it is essential to a better understanding of the plot. Example:

Inappropriate

(John)
So, you'd like that, huh!?

Appropriate

(John)
So, you'd like that, huh!?

[audience cheering]

13. When possible, use concrete rather than abstract terms to describe sounds. Examples:

Abstract

a. [horse running]

b. [bird singing]

Concrete

a. [horse galloping]

b. [robin singing]

14. Never use the past tense when describing sounds. Captions should be synchronized with the sound and are therefore in the present tense.



Intonation/Play on Words/No Audio

1. If the speaker is not visible onscreen or visual clues as to emotional state are not shown, indicate the speaker's emotion. Example:

Inappropriate

Well, whatever.

Appropriate

[angrily]
Well, whatever.

2. When a person is whispering, caption as:

[whispering]
Okay, you go first.

3. When feasible, describe puns. Example:

Why do they call her "Ouisy"?
["Wheezy"]

4. When people are seen talking but there is no audio, caption as:

[no audio]

6. When a person is already identified and is not onscreen but has started speaking again, caption as:

[voice-over]



Speaker Identification

1. When possible, use caption placement to identify an onscreen speaker by placing the caption under the speaker.

2. a. If offscreen speakers are speaking simultaneously, appropriate speaker identification must be added.

- b. When a speaker cannot be identified by placement and his/her name is known, the speaker's name should be in parentheses. Also, the speaker's name needs to be on a line of its own, separate from the captions. Examples:

Inappropriate

(1) [President Bush]
I'm reviewing the bill.

Inappropriate

(1) President Bush:
I'm reviewing the bill.

Appropriate

(1) (President Bush)
I'm reviewing the bill.

(2) (Jack) I don't see
how blasting would work
on this building.

(2) (Jack)
I don't see how blasting
would work on this building.

- c. When a speaker cannot be identified by placement and his/her name is unknown, identify the speaker using the same information a hearing viewer has: female #1, male narrator, etc.

- d. If speaker is offscreen, place captions to the far right or left, as close as possible

onscreen to the offscreen speaker.

- e. Do not identify the speaker by name until the speaker is introduced in the audio or by an onscreen graphic.
3. Caption the most commonly used character name for speaker identification, depending on how that character is introduced. Should "Smith" be spoken more often than "Bobby," use (Smith). If "Bobby" is used more often, caption as (Bobby).
4. If there is one narrator, identify as (male narrator) or (female narrator) at the beginning of the video. It is not necessary to identify gender for each caption thereafter.
5. When an actor is portraying a well-known person—for example, Michelangelo—caption as: (as Michelangelo).



Synchronization

1. Keep the captions as closely synchronized to the original audio as possible.
2. Borrowing 15 frames before and after the audio occurs is hardly noticeable to the viewer. This "borrowing" technique can be used occasionally when presentation rate is a factor.
3. Do not simultaneously caption different speakers if they are not speaking at the same time.



Music

1. When captioning music, use descriptions that indicate the mood. Be as objective as possible. Avoid subjective words such as *delightful*, *beautiful*, or *melodic*.
2. If music is vocal, caption the lyrics verbatim. The lyrics should be introduced with the name of the vocalist/vocal group and the title (in brackets), if known/significant, and if the presentation rate permits. Example:

*[The Beatles singing
"Yesterday"]
♪ Yesterday...
all my troubles ♪*

3.
 - a. Caption lyrics with music icons (♪).
 - b. Use one music icon at the beginning and end of each caption within a song, but use two music icons at the end of the last line of a song.
4. A description (in brackets) should be used for instrumental/background music or when verbatim captioning would exceed the presentation rate. If known, the description should include the performer/composer and the title. Examples:
 - a. *[Louis Armstrong plays
"Hello Dolly"]*

- b. *[pianist playing the national anthem]*
- c. [romantic orchestral music]

5. Beware of misplaced modifiers in your descriptions. Example:

Inappropriate
[frantic piano playing]

Appropriate
[frantic piano music]



6. For background music, place a music icon in the upper right corner of the screen.



Foreign Language/Dialect/Slang/Phonetics

1. If possible, caption the actual foreign words. If it is not possible to caption the words, use a description; i.e., [speaking French]. Never translate into English.
2. If possible, use accent marks, umlauts, and other indicators.
3. Indicate regional accent at the beginning of the first caption. Example:

Inappropriate
If y'all want me to.

Appropriate
[Southern accent]
If y'all want me to.

4. Keep the flavor of dialect. Example:

Inappropriate
I just sort of held my knees
in water, and pulled him

across my knees
and examined him.

Appropriate
I just sort of held me knees
in water, and pulled him

across me knees
and examined him.

5. Keep the flavor of the speaker's language when necessary to portray a character's personality. This includes captioning profanity and slang. Examples:

Inappropriate

- a. I am not going anywhere.
- b. [cursing]

Appropriate

- a. I ain't going nowhere.
- b. Damn!

5. Use numerals in a listing of numbers if one or more is above ten and these occur in one caption or one sentence. Example:

Steven has 21 books,
11 oranges, and 3 cats.

6. Use numerals when referring to technical and athletic terms. Example:

He scored 3 goals
in today's game!

7. Do not use the “#” symbol, except for speaker identification such as (female #1).

8. When indicating sequence, capitalize the noun and use numerals. Exceptions are the indication of line, note, page, paragraph, size, step, or verse. Examples:

Building 2	page 31
Channel 5	size 12
Chapter III	step 3
Room 438	paragraph 2

Dates

1. Use the numeral plus the lowercase “th,” “st,” or “nd” when a day of the month is mentioned by itself (no month is referred to). Example:

Bob went fishing
on the 9th.

2. Use the numeral alone if the ending is not spoken. Example:

I will meet you
on May 9. Original narration: “nine.”

3. When the month and day are spoken (no year), use the numeral plus the lowercase “th,” “st,” or “nd” if the ending is spoken. Example:

My birthday is
on June 17th. Original narration: “seventeenth.”

4. When the month, day, and year are spoken, use the numeral alone for the day, even if an ending (th, st, or nd) is spoken. Example:

Paul will marry
on July 6, 1996. Original narration: “sixth.”

Periods

1. A decade should be captioned as “the 1980s” (not “the 1980’s”) and “the '50s” (not “the 50’s”).

2. If a decade or century is in noun form, do not use hyphens. Example:
This vase is
from the 17th century.
3. If in adjective form, use a hyphen. Example:
This 19th-century painting was
done by Van Gogh.

Fractions

1. Either spell out or use numerals for fractions, keeping this rule consistent throughout the video. If using numerals, insert a space between a whole number and its fraction. Example:

N numeral

Do you plan
to eat 1 1/2 pizzas?

Spelled out

Do you plan
to eat one and one-half pizzas?

2. Do not mix numerals and spelled-out words within the same sentence. Example:

Inappropriate

Malika is 13
and a half years old.

Appropriate

Malika is
13 1/2 years old.

3. If a fraction is used with "million," "billion," "trillion," etc., spell out the fraction. Example:

The population was
over one-half million.

4. Fractions expressed in figures should not be followed by endings such as *sts*, *ds*, *nds*, or *ths*. Examples:

Inappropriate

- a. 3/10ths
- b. 1/32nd

Appropriate

- a. 3/10
- b. 1/32

Percent

Use numerals and the percent sign to indicate all percentages except at the beginning of a new sentence. Examples:

Middle of sentence

1. Only 6% of the votes were counted.
2. The 18.9% figure was considered incorrect.
3. Smithy's having a 20% to 30% sales event!

Beginning of sentence

1. Fifty-one percent of the people voted "yes."
2. Thirty-three percent was taken off the final markdown.
3. Ten to twenty percent of college students are Latinos.

Dollar Amounts

1. Use the numeral plus "cents" or "¢" for amounts under one dollar. Examples:
I need 15 cents.
I owe you 35¢.
2. Use the dollar sign plus the numeral for dollar amounts under one million. For even dollar amounts of one million and greater, spell out "million," "billion," etc. Examples:
John brought only \$11.
Bob brought \$6.12.
The budget of \$13,000 will be sufficient.
Taxes will be reduced by a total of \$13 million.
He owes \$13,656,000.
3. Use the word "dollar" only once for a range up to ten. Example:
I hoped to find three to four dollars.
4. Use the dollar sign and numerals when captioning a range of currency over ten dollars. Example:
Alice expected a raise of \$6,000 to \$7,000.

Time

1. Indicate time of day with numerals only. Examples:
I awoke at 5:17.
If you wish to attend, you must arrive by 6:25 P.M.
We were expected to report no later than 1400 hours.
I awoke at 4 o'clock.
I awoke at 4 in the morning.

2. Always use numerals with a.m. or p.m. Double zeros are not necessary to indicate minutes of the hour when a whole number is used with a.m. or p.m. Examples:

She leaves at 3:20 p.m. for
the airport.

Our hours are from
9 a.m. to 5 p.m.

Measurement

1. Do not use symbols or abbreviations for units of measurement.
2. Spell out "inches," "feet," "yards," "miles," "ounces," "pounds," "tablespoons," etc. However, if spoken in shortened form, symbols should be used. For example, "I'm five eight" should be captioned as:

I'm 5'8".
3. For whole numbers, use numerals. For example, caption "3 cups of sugar" instead of "three cups of sugar."

FUNDING CREDITS

At the end of each CMP video, the following information should be added in caption form: "Funding for purchase and captioning of this video was provided by the U. S. Department of Education: PH: 1-800-USA-LEARN (V)." No other credits or information should be added. Use the following line break:

Funding for purchase
and captioning of this video

was provided by the
U.S. Department of Education:

PH: 1-800-USA-LEARN (V).

BECOMING AN APPROVED CAPTIONING SERVICE VENDOR

Anyone interested in acting as a CMP captioning service vendor should contact the CMP or the U.S. Department of Education (ED). One of the NAD cooperative agreement tasks is to assist the ED in the evaluation of video captioning.

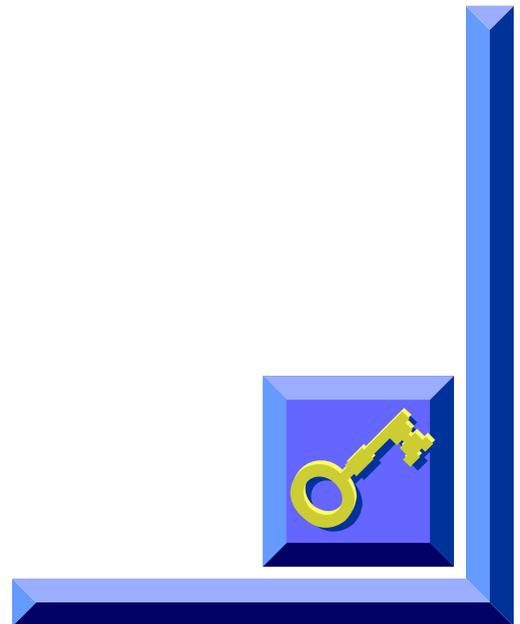
If approved vendors use the ED's name in their advertisements, the language must be as follows:

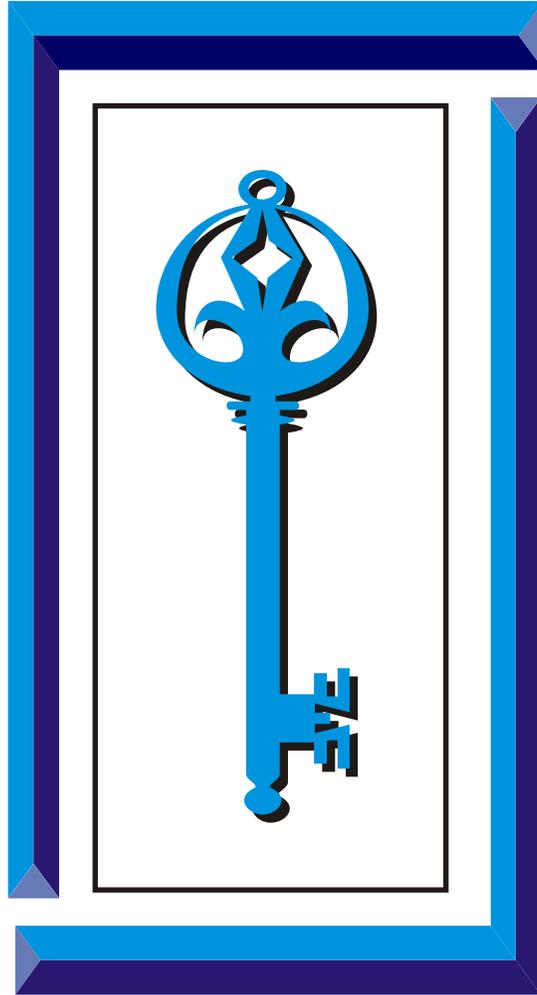
“(Name of Agency) is an approved captioning service vendor for the Captioned Media Program, Office of Special Education Programs, U.S. Department of Education. This does not infer an endorsement by the Department of Education.”

The CMP has numerous captioning and accessibility information materials regarding the CMP program, captioning, and other topics. Contact us at:

Captioned Media Program
National Association of the Deaf
1447 E. Main St.
Spartanburg, SC 29307
(800) 237-6213 V
(800) 237-6819 TTY
(800) 538-5636 FAX
info@captionedmedia.org E-MAIL
www.captionedmedia.org WEB

The ED also welcomes questions and comments and may be contacted at: 1-800-USA-LEARN (V).





Appendices

PROOFREADING MARKS

Capitalize		John <u>doe</u>
Close up		o ne word
Delete or Change	X	take X out the ki ^{cat} X en was
Delete and Close up		Clo X se
Insert	^	insert here or Mr Smith ^ ^ ^
Change to italics		<u>www.cfv.org</u> <u>it</u>
Lowercase	/	J Ø hn Doe
Change to Roman type		<u>The cat was not</u> <u>rom</u>
Space	#	insert a#space ^
Transpose		transpsoe
Note change(s) that need to be made	←	S ⁱ X nce 1870, ←
Make 2 lines	2L	
Insert new time code	2TC	
Exceeds safety zone	E	
Line break	LB	
Move to the specified Line number	L#-#	L7-8
Move two spaces to the right or tab over		I know.  I know.

CAPTIONING RESEARCH RECORD

CAPTIONED MEDIA PROGRAM

Video Title: Battleships Page 1 of 3

Name of Person Completing This Form: Sally Jones

CAPTION NO.	ITEM RESEARCHED	COMMENT/NATURE OF RESEARCH	CORRECTION	SOURCE	VOLUME/PAGE NO.; WWW ADDRESS; MULTIMEDIA TYPE
01:23:15	USS Honolulu	periods	ok	www	http://nps.gov/usar/index.htm
02:46:01	Joe DeMaggio	sp.	DiMaggio	WBD	p. 261
06:11:29	war ships	1 or 2 words	warship	RHD	CD-ROM
09:25:19	best defended base	hyphen	best-defended	GR	¶ 822b
13:15:10	Krampe Ship Building Co.	sp. & cap.	Cramp Shipbuilding Co.	www	http://www.cramp.com/cwest.html
21:33:16	Yomahto	sp.	Yamato	EB	v.6. p. 449
25:12:23	two week's leave	possessive	weeks'	GR	¶ 627
32:58:23	kerrdumph	sp.	kerdumf	SD	p. 640
35:55:05	Western Hemisphere	cap.	ok	RHD	CD-ROM
38:03:17	bluetongue	1 or 2 words	ok	RHD	p. 150
42:45:29	clevis	sp.	ok	RHD	CD-ROM
43:30:15	Hyannisport	sp.	Hyannis Port	www	http://hometownamerican.com
51:05:00	crash of 1929	cap.	Crash of 1929	EB	CD-ROM
52:25:13	Gloire	sp.	sp. --ok	Encarta '98	CD-ROM

Under "Source," use the following abbreviations for these two standard references:

MWO—Merriam-Webster Online
GR—Gregg Reference Manual

Provide abbreviations for other references you use (see examples below):

WBD—Webster's Biographical Dictionary
SD—Slang Dictionary
RHD —Random House Dictionary
CMS—Chicago Manual of Style
AHD—American Heritage Dictionary
EB—Encyclopedia Britannica

NOTES ON RESEARCH CONCERNING CAPTIONING PRESENTATION RATE

Introduction

As Dr. Carl J. Jensema stated in the introduction to the final report for the federally funded research entitled "Caption Speed and Viewer Comprehension of Television Programs" (1999):

"At first glance, the idea of verbatim captioning is very appealing. Allowing a deaf or hard of hearing person to read every word that is spoken on television means that the person has full access. However, it may be possible for spoken television dialogue to go so fast that most people cannot read its verbatim captioning. Creating captions which are delivered too fast to read is counter-productive to the entire purpose of captioning.

"Many captioning policies, including the move towards verbatim captioning, are not based on research. We need research to determine how fast captions should appear on the screen, what presentation rates people prefer and are capable of reading. We need to know how these preferences and capabilities vary with different people and correlate this information with different kinds of captioned programming people watch."

These critically important issues have only partially been addressed. But there is an existing body of research and study that supports the CMP policy and philosophy. Much of this documentation can be reviewed in its entirety at the CMP Web site: www.cfv.org. Notes on these studies follow:

Children

1. In 1980, Edgar Shroyer and Jack Birch reported on the results of their study of 185 randomly selected hearing-impaired students from residential schools. In "Captions and Reading Rates of Hearing-Impaired Students," they indicated that normal extempore speech is measured at 159 words per minute (wpm), and that speech and language on television and films approximated this rate. They found that if speech on television/films was synchronized in content and speed with captions, approximately 84 percent (%) of hearing-impaired students were not able to read it. (That is, 84% of the students in the study possessed reading rates below the 159 wpm of extempore speech.) They noted that other research indicated that the linguistic level of captions would further significantly compounded students' reading rate difficulties. They also found that the mean wpm reading rate of primary students in their study was 123.7.
2. Martha J. Meyer and Yung-bin Benjamin Lee published "Closed-Captioned Prompt Rates: Their Influence on Reading Outcomes" in 1995. They reported placing 140 reading deficient students (from fourth, fifth, and sixth grades) in an experimental study which randomly assigned each to either: (a) an average-paced closed-captioned video; (b) a

slow-paced closed-captioned video; or (c) printed text with no video. Results indicated significantly more learning occurs for those students using captioned video as compared to those utilizing only traditional print materials. Additionally, students assigned to the slow-paced prompt rate retained significantly more information than those viewing the average-paced captioning. (Causing them to conclude that prompt rates should be designed so that children with various reading speeds have enough time to read and process the information.)

3. In 1998 Margaret S. Jelinek Lewis and Dorothy W. Jackson selected elementary school deaf students from a Midwestern residential school as participants in their study entitled "Television Literacy: Comprehension of Program Content Using Closed-Captions for the Deaf." They found that the time constraint of captions further compounded the literacy problem for deaf readers as captions move quickly off the screen. Deaf readers also exhibited a lack of fluent word reading, which adversely affects comprehension; word-reading fluency depended on the ability to recognize (effortlessly and automatically) letters, spelling patterns, and whole words. In addition, students who viewed captions at a slower pace of 78 wpm retained significantly more information than students who viewed captions at an average rate of 116 wpm.
4. Carl Jensema and Ramalinga Sarma Danturthi reported in "Time Spent Viewing Captions on Television Programs" (1999) that they had studied the eye movements of 23 deaf subjects, ages 14 to 61, while they watched captioned television programs. They discovered that the viewers in the study spent about 84% of their television viewing time looking at the program's captions, at the video picture 14% of the time, and off the video 2% of the time. ("Off video" was due to eye blinks and normal eye movement.) Their conclusion was that much exposure to print was "bound to influence reading skills." (Note: The CMP educational and training materials are selected in large part because of their pictorial component, and thus it is imperative that the presentation rate of captions not prohibit opportunity to learn from this component.)
5. In 2000 Carl Jensema reported ("A Study of the Eye Movement Strategies Used In Viewing Captioned Television") that "fascinating" results indicated that deaf children might be totally ignoring captions on television programs until they are about seven years old and then start "utilizing captions bit by bit between the ages of seven and nine years. In other words, they may be ignoring captions until they have the reading skills to understand them, rather than utilizing captions to learn to read." Research was continued (at the Western Pennsylvania School for the Deaf) and reported on in the 2003 "The Relation Between Eye Movement and Reading Captions and Print by School-Age Deaf Children." Conclusions included affirmations that captioned television programs are complex reading material, requiring the reader to obtain information from both a moving picture and words flashed on the screen. Deaf children are supposed to "split his or her attention between the picture and the captions according to some personal formula that maximizes the information gained."

Adults

1. In 1994 a project report from Gallaudet University Technology Assistance Program entitled "Caption Features for Indicating Non-Speech Information: Research Toward Standardization" had the purpose to improve captioning of "non-speech information" (NSI). NSI included identification of speaker, sound effects, music, manner of speaking, audience reaction, and indication of a title (book, film, newspaper, play, etc). A total of 189 deaf and hard of hearing consumers in the study confirmed the importance of consistent presentation of this information. One implication that pertains to presentation rate is that while NSI is crucial in conveying information about plot, humor, mood, or meaning of a spoken passage, it does add more written language for the viewer to process.
2. In 1996, Frank and Sondra Thorn ("Television Captions for Hearing-Impaired People: A Study of Key Factors that Affect Reading Performance") examined how caption presentation rate would affect the reading performance of good readers, selecting thirty-two college graduates with normal hearing and vision for their study (half of whom were ESL). They concluded that TV closed captions for hearing-impaired people may not serve many of the intended users because the captions are too small and too quickly presented to be fully comprehended. They recommended that a second captioning style be simultaneously presented that has a slower rate of presentation and larger text.
3. In 1998, Carl Jensema reported in his study of "Viewer Reaction to Different Reading Speeds" that 578 deaf, hard of hearing, and hearing persons responded that the "OK speed," defined as the rate at which "caption speed is comfortable to me," was found to be about 145 wpm. This rate was very close to the mean rate of 141 wpm actually spoken in television programming (as determined by Jensema in a 1995 study). Most viewers apparently had little trouble with captions until the rate was at least 170 wpm. Infrequent viewers (hearing people) wanted slightly slower captions, while frequent viewers were comfortable with faster captions. Age and sex were not related to caption speed preference; educational level was also of no significance except that those who had attended graduate school indicated a preference for slightly faster captions.
4. In 1999, Dr. Jensema this time reported on research related to "Caption Speed and Viewer Comprehension of Television Programs." He found that caption viewers (1,102 persons in his study) are likely to be able to absorb facts and draw conclusions from captions that are presented as fast as 220 wpm for short periods of time. But he commented: "Video segments in this study were 30 seconds long, far shorter than a normal television program and too short for fatigue to be a factor." With the exception of junior high students, such demographic variables as age, sex, hearing loss, and educational level did not appear to have a meaningful relationship to comprehension.
5. In the 2003 survey results entitled "The State of Closed Captioning Services in the United States," 36% of 203 respondents (deaf, hard of hearing, and ESL) reported that captions moved too fast. The study was conducted by the Annenburg Public Policy Center of the University of Pennsylvania and sponsored by the National Captioning Institute Foundation.