

Research on Universities' practice for captioning on live recorded session

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I. Background

1.1. Regulatory Requirements*

3.1 In accordance with The Public Sector Bodies (Websites and Mobile Applications) (No. 2) Accessibility Regulations 2018, after 23rd September 2020, all pre-recorded time-based media needs to be made accessible by making it perceivable, operable, understandable and robust. For this type of media, this would include providing captions and transcripts.

3.2 Time-based media is defined as “media of one or more of the following types: audio only, video only, audio-video, audio and/or video combined with interaction.”

3.3 The regulations do not apply to pre-recorded time-based media produced before 23 September 2020.

3.4 The regulations also do not apply to live time-based media, however, The EU regulations (Dir 2016/2102) (on which the UK regulations are based) state in s.27 that “Live time-based media that are kept online or republished after the live broadcast should be considered as pre-recorded time-based media without undue delay from the date of the initial broadcast or republishing of the time-based media, not exceeding the time strictly necessary to make time-based media accessible with priority being given to essential information relating to the health, welfare and safety of the public. That necessary period of time should in principle be no longer than 14 days. In justified cases, such as when it is impossible to procure the relevant services in due time, that period might exceptionally be extended to the shortest time necessary to make the content accessible.” Reading these together with the PSBAR 2018 means that any live time-based media produced after 23 September 2020 and kept for longer than 14 days could be considered as ‘pre-recorded time-based media’ and should be treated accordingly.

*** Source:** Heriot-Watt University Guidance on the Captioning of Recorded Teaching and Student Support Resources (<https://www.hw.ac.uk/uk/services/docs/learning-teaching/policies/captioningguidance.pdf>)

1.2 The Legal Requirement vs Guidance

There is some discrepancy between the legislation and the recommendations upon which it is based

Headlines

- All edited pre-recorded video made after 23/09/21 uploaded to our website legally MUST have captions... unless
- If it is a disproportionate burden, universities do not have to comply with the law (an internal assessment must be carried out and documented on the website)
- Un-edited video (from a live stream such as a Virtual Classroom) SHOULD ideally be captioned, but it is not a legal requirement (yet).
- Universities who are displaying good practice are currently providing students with captioned live-stream videos within 14 days of request (based on recommendations, there is no legal requirement to do so).

Sources of Documentation

The legal requirement is taken solely from the legislation here:

[The Public Sector Bodies \(Websites and Mobile Applications\) \(No. 2\) Accessibility Regulations 2018](#)

This legislation is based on the recommendations of:

[Web Content Accessibility Guidelines \(WCAG\) 2.1](#)

...and the recommendations of

[DIRECTIVE \(EU\) 2016/2102 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 26 October 2016 on the accessibility of the websites and mobile applications of public sector bodies](#) most notably (S.27 - Captioning).

Key comparisons

Recommended Standard	Legal Requirement
<p>1.2.2 Captions (Prerecorded)</p> <p>(Level A)</p> <p>Captions are provided for all prerecorded audio content in synchronized media, except when the media is a media alternative for text and is clearly labeled as such.</p>	<p>The PSBAR does not specifically mention Captions</p> <p>However, there is no exemption mentioned for pre-recorded video from the recommended standard. Therefore, all pre-recorded video is required to be captioned ...</p> <p>4.(2) - These Regulations do not apply to the following content of a website or mobile application of a public sector body</p> <p>(b) pre-recorded time-based media published before 23rd September 2020;</p> <p>Also:</p> <p>Disproportionate burden assessment</p> <p>7.—(1) Regulation 6 (<i>public sector bodies must comply with the accessibility requirement</i>) does not require a public sector body to comply with the accessibility requirement if doing so would impose a disproportionate burden on the public sector body.</p> <p>(2) A public sector body must perform an assessment of the extent to which compliance with the accessibility requirement imposes a disproportionate burden.</p> <p>(3) In undertaking such an assessment, a public sector body must take account of relevant circumstances, including—</p> <p>(a) the size, resources and nature of the public sector body; and</p> <p>(b) the estimated costs and benefits for the public sector body in relation to the estimated benefits for persons with disabilities, taking into account the frequency and duration of use of the specific website or mobile application.</p> <p>(4) If, following the assessment, a public sector body determines that compliance with the accessibility requirement would impose a disproportionate burden, it must—</p> <p>(a) explain in its accessibility statement the parts of the accessibility requirement that could not be complied with; and</p> <p>(b) where appropriate, provide accessible alternatives to documents held by that public sector body that are not available on their website or mobile application.</p>
<p>1.2.4 Captions (Live)</p> <p>(Level AA)</p> <p>Captions are provided for all live audio content in synchronized media</p>	<p>4.(2) - These Regulations do not apply to the following content of a website or mobile application of a public sector body</p> <p>(c) live time-based media</p>



In Summary

(UoS does) not need to fix the following types of content because they're exempt from the accessibility regulations:

- pre-recorded audio and video published before 23 September 2020
- live audio and video

Source: <https://www.gov.uk/guidance/accessibility-requirements-for-public-sector-websites-and-apps#history>

However, the guidance on uploading un-captioned un-edited live-stream videos is unclear.

Heriot Watt University, in their policy state that “any live time-based media produced after 23 September 2020 and kept for longer than 14 days could be considered as ‘pre-recorded time-based media’ and should be treated accordingly.”

This is based on the EU Directive (which is not UK law) which states that “Live time-based media that are kept online or republished after the live broadcast should be considered as pre-recorded time-based media without undue delay from the date of the initial broadcast or republishing of the time-based media, not exceeding the time strictly necessary to make time-based media accessible with priority being given to essential information relating to the health, welfare and safety of the public. That necessary period of time should in principle be no longer than 14 days.

In other words, Heriot Watt aim to get ALL their VC recordings embedded with captions within 14 days. This is exemplary practise. HW use Teams for all VC sessions.

1.3 Action Points

- Update key phrases on current UoS [website accessibility page](#) to reflect awareness of situation re. Captioning. Eg, add '*live audio and video*' to the section entitled '*Contents not within the scope of accessibility regulations*'
- Also consider the statement "All videos uploaded after 23 September 2020 will have accurate captions."
- Pressure Bongo (D2L) to introduce live-captioning before the recommendations become law (no deadline on this but regulation is heading in this direction).
- Put a system in place for students with accessibility needs to request captioning (ideally within 14 working days) on uploaded live-stream videos. See: University of Derby for good example.
- Consider whether any of the above constitutes a 'Disproportionate Burden' (current website guidance says: "We don't categorise any of the accessibility issues on www.uos.ac.uk as a disproportionate burden to fix within the meaning of the regulations.")
- Devise a method for adding captioning to live-stream-recorded videos (See guidance below from Benchmarked examples).
- Create guidance tools/guide (LibGuides) for lecturers to enable them to add captions to their videos when students request it.

II. Benchmarking examples

1.The University of Sheffield

Learning management system used: Blackboard

Options it Offers: Captions on pre-recorded video content in Blackboard accessed by using the CC button (closed captioning , such as in Brightspace)

Limitation: captions are not already available when accessing a live teaching session, or watching a recording on Blackboard Collaborate.

New tool Introduced for Captioning for Online Teaching - (Caption.Ed)

To ensure that captions are always available for any learning and teaching video content accessed via the web such as:

- participating in a live teaching session on Blackboard Collaborate
- watching a Google Meet recording
- reviewing a video on Blackboard.

Available on request to provide captions for any live, or pre-recorded learning and teaching content

Service will be made available to students that would benefit from it the most.

Characteristics of the Tool : (Caption.Ed)

- Works on PC's & Mac's
- Easily added to Google Chrome or Microsoft Edge.
- Enables captioning learning and teaching content immediately.
- Offers the option to download a text transcript
- Caption size and background color can be customised

Source:

<https://www.sheffield.ac.uk/apse/digital/digital-accessibility/captionedinfo>

Caption.Ed Download :

<https://chrome.google.com/webstore/detail/captioned/aokjakfeailcmenjjgmbcepkfkcfcgpie>

2.The University of Glasgow

[Updated 27/07/2021]

How they will meet the regulation

- The University has agreed that they will provide automatic transcripts, i.e. machine-generated transcripts, for all video recorded via :
 1. **Echo360** – available in many lecture theatres and can be used on a personal device. Auto-generated transcripts are generated for any recording that is published to a class
 2. **Zoom** – University of Glasgow licensed. Provides auto-generated transcripts generated and provided to students along with the recording
 3. **Microsoft Teams** – Recordings automatically are uploaded to Stream. Auto-generated transcripts are created alongside the video. Students access the video via office 365
- The quality of these transcripts is claimed to be between 75 - 90% accurate.
- Improvement of transcripts needs to be addressed locally.

Learning Platform used: Moodle.org

Functionality of Recording Tools used

	Record video remotely	Record video in teaching spaces	Use on mobile	Edit video	Add to Moodle	Live classes and seminars online	Automated transcription
Echo360	Yes	Yes	No	Yes	Yes	No	Yes
Zoom	Yes	No	Yes	No	Yes	Yes	Yes
Microsoft Teams	Record live meetings	No	Yes	No	No	Yes	Yes (if recording)
Microsoft Stream	Yes (up to 15 minutes)	No	No	No	Yes	No	Yes

Prioritising requirement for a fully corrected transcript

Required – Must have accurate edited captions and transcript available for one or more disabled students. Externally facing high visibility marketing and promotional material should also be in this category.

Recommended – Some editing of the auto transcript, provision being 'good enough'. Staff should spend no more than 15 minutes (as a minimum) per hour of recording correcting transcripts in this category.

Requested – Automated transcripts. Students can request edited transcripts.

Source:<https://www.gla.ac.uk/myglasgow/digitalaccessibility/video/#theregulationsandtheirbenefits,prioritisation,beforeyoustart,makingaccessiblerecordings%E2%80%93adviceforstaff,definitions,choosingarecordingtool>

3.The University of Leeds

[status on 15/03/20]

Digital education systems use ASR (Automatic Speech Recognition) technology to create captions. This is a new technology and is therefore subject to some issues, however, it provides a useful starting point.

Students should be advised that captions will not be 100% accurate and should be used alongside other teaching and learning materials.

Captioning capability in their systems

Digital Education System	Closed caption functionality status on 15/03/20	Notes
Mediasite For information about Mediasite captioning, see IT Service Knowledge Base article.	<p>All new Mediasite recordings/uploads will be processed for automated captioning when published to students (made 'viewable').</p> <p>Closed captions will be added to all Mediasite content, irrespective of the quality of the captions.</p>	<p>Closed captions can be edited but staff are not required to edit.</p> <p>Human captioning is available in Mediasite for students with disability requirements.</p> <p>If you believe there is need for human captions, please complete this form to be reviewed by the Disability Services Team.</p>
Blackboard Collaborate Ultra For more information about Collaborate Ultra captioning, see the Minerva staff guide.	<p>No automated closed captioning</p> <p>No automated live captioning available</p>	<p>Recordings can be downloaded and uploaded to other systems (E.g. Mediasite, Stream) for automated closed captioning.</p> <p>Manual captions can be added to recordings.</p> <p>Closed captions can be edited but staff are not required to edit.</p>
Microsoft Teams meetings For more information about captioning in Microsoft Teams, see the IT Service Knowledge Base article.	<p>Live captioning available.</p> <p>Automated closed captioning provided automatically for all recordings.</p>	<p>Closed captions can be edited but staff are not required to edit.</p>
Microsoft Stream recordings For more information captioning in Microsoft Stream, see the IT Service Knowledge Base article	<p>Automated closed captioning provided automatically for all recordings.</p>	<p>Closed captions can be edited but staff are not required to edit.</p>
Zoom For more information on captioning in Zoom, see the Zoom Help Centre.	<p>Live Captioning available.</p> <p>Automated closed captioning functionality available within the system.</p>	<p>Closed captions can be edited but staff are not required to edit.</p>

Source : <https://digitalpractice.leeds.ac.uk/accessibility-inclusivity/providing-captions-for-online-learning/>

The University of Leeds

Captioning of Recorded Sessions Policy

25. All audio and video recordings will be automatically captioned within the Mediasite system (including scheduled recordings, desktop captures and adhoc/record now), using speech- to-text technology⁹. Only captions which meet a defined quality threshold of at least 80% accuracy will be published to students.

Staff and students need to be aware that captions whilst helpful are not a hundred percent accurate. Students should seek advice from teaching staff where they have concerns about the accuracy of the captions.

Staff can edit the captions within Mediasite prior to, or after, publication of recordings (but are not required to edit inaccuracies in captions, subject to paragraph 27). Where captions do not meet the required quality threshold, they will not be provided unless an individual student requires them as part of a reasonable adjustment. Captions in Mediasite will only be provided in the English language.

26. Auto-captions are available as default on recordings within Microsoft stream (either from Microsoft Teams recordings, or Stream recordings), **and from Office 365 products** as live-captions (including PowerPoint). Captions are available in multiple languages, and can be edited.

27. Where a student with a disability has a requirement for transcripts from educational activities, captions which do not meet the required level of accuracy should be highlighted to staff.

Depending on the system, the captions will either be (i) sent for human captioning by a third-party (Mediasite); (ii) referred to the Disability Services for individual support for the affected student(s) (Microsoft Stream); (iii) produced, as required, from systems where auto-captioning is not available.

28. Speech-to-text technology is not sufficiently advanced to guarantee accuracy. Whilst the University is doing its best by having good technology, it cannot accept responsibility for any inaccuracies. Students should feel free to verify the content of captions with staff.

⁹ Auto-captions are not currently available in Blackboard Collaborate Ultra.

Source: https://www.leeds.ac.uk/secretariat/documents/avr_policy.pdf

Ulster University

[Revised 2021-01-29]

Adding closed auto-captions in Panopto

Once added captions can be edited either within Panopto or the srt file can be downloaded, edited in a text editor and then uploaded back into Panopto.

include a disclaimer when doing this:

“Please note that this video has been produced with automatic closed captions for accessibility purposes. As with any automated speech recognition system there may be some errors in the speech to text conversion process. In most cases these will be minor and won’t affect the overall learning for those who use closed captions, but if any clarity is required or if any errors in closed captions need correcting please do contact your tutor to make them aware”.

Live or open auto-captioning in PowerPoint.

Another option which can improve accuracy, and reduce manual editing is to use live auto-generated captioning in PowerPoint. The same auto-generated tool is accessible in Microsoft Teams meetings, however as of November 2020 these recordings are difficult to download.

Other Experimental Technology:

This section of the guidelines looks at approaches that others have used but which cannot be recommended as institutional approaches due to a number of technical limitations.

Use of YouTube

Some colleagues, in creative disciplines, have uploaded their recorded videos to YouTube to take advantage of alternative speech recognition technology. They are doing this in a private channel so that the videos are not publicly accessible. They then download the caption file and import to Panopto. This approach, whilst improving accuracy for some staff is not recommended as an institutional approach. The workflow is not intuitive and whilst the videos are in a private channel there are a number of digital rights issues with this approach which cannot be controlled once the recording leaves Ulster’s infrastructure.

Google Chrome captions

Google Chrome has experimental live captions built in, so individual users can enable live captions on their local version of Chrome. Some staff have been enabling this in Chrome, when sharing a screen, thus displaying live captions when using Collaborate. This is an interesting approach for a live session however if a recording is to be made the resulting video, like the PowerPoint example above, has captions locked in rather than as a separate file which means the captions cannot be edited/corrected. Transcripts can also not be downloaded.

source : https://www.ulster.ac.uk/data/assets/pdf_file/0009/846567/2021-02-08-Guidelines-on-Captioning.pdf

Heriot-Watt University

Captioning of Recorded Sessions Policy

1 Staff preparing pre-recorded materials for use as part of their course should ensure auto-captions and transcripts are provided. It is desirable that these are human-corrected captions. Where students have an identified need for this, human-corrected captions / transcription will be mandatory

2 Practically, we would advise colleagues to do all pre-recording in MS Stream or Teams, where autocaptioning is automatically produced. Students should be advised that auto-captioning may not be 100% accurate.

3 For 'live' recordings of Microsoft Teams teaching sessions (which will be deemed prerecorded after 14 days), captioning and transcripts will be automatically produced.

- All classes where students have a learning profile which identifies captioning / transcripts as a support need must have human-corrected auto-captions and transcripts provided.
- To support an inclusive learning environment, benefitting all students, it is desirable to have autocaptioning and transcripts provided for all recorded classes. It is desirable that captions / transcripts are human-corrected.

4 For live recordings of Collaborate Ultra teaching sessions (which will be deemed prerecorded after 14 days):

- Collaborate Ultra provides the option to have live captions only through having a captioner (i.e. someone to type the captions. This is a particular skill and may require to be undertaken by someone trained as a palantypist or similar.) Any need for live captioning will be identified through the student's learning profile identified by the Disability Service and provision made accordingly.
- All classes where students have a learning profile which identifies captioning / transcripts as a support need must have corrected auto-captions and transcripts provided. This can be done by ensuring the recording is downloaded and uploaded into MS Steam to be auto-captioned after the session. A link to the MS Stream recording will be provided via the course site on the VLE (Canvas). Corrections to transcripts must be made.
- To support an inclusive learning environment, benefitting all students, it is desirable to have the recording downloaded and uploaded into MS Steam to be auto-captioned after the session. A link to the MS Stream recording will be provided via the course site on the VLE (Canvas). It is desirable that captions / transcripts are human-corrected.

5 Pre-recorded time-based media also includes podcasts. These can be created in a range of media apps. Any podcasts created should be provided along with a transcript.

The University of Derby

Website provides an excellent example of Accessibility Statement.

Sections relevant to captioning of video and live-video.

Taken from: <https://www.derby.ac.uk/about/accessibility/>

How accessible is our website?

We know some parts of this website aren't fully accessible:

- ...
- Some of our older videos don't have captions
- ...

...

"Disproportionate burden

"New videos (produced after 23 September 2020) will have captions and transcripts but, for now, they will not be accompanied with synchronised audio descriptions as standard. This doesn't meet WCAG 2.1 success criterion 1.2.5 (Audio Description (Pre-recorded)). We have assessed the provision of audio description at this time as a disproportionate burden. This is based on a number of factors, including: the large number of videos produced; the changeable nature of the content; and the resource and/or costs attached to production.

"This decision follows a review of audio description suppliers and our ability to create audio description ourselves. We will periodically review the market for audio description services to assess our ability to introduce audio description on our videos at a later date. In the meantime, if the closed captions and extended transcripts currently provided do not meet an individual's accessibility requirements, an audio-described version can be made available by request for a specified video.

"Please complete the [accessibility support form](#), clearly stating for which video the audio description is required. We will aim to produce the audio description file within 15 working days of receiving the request."

...

"Video captions

Some of our older videos don't have accurate edited captions or transcripts. This doesn't meet WCAG 2.1 success criterion 1.2.1 (audio-only and video-only pre-recorded), 1.2.2 (captions pre-recorded), 1.2.3 (audio description or media alternative pre-recorded) and 1.2.5 (audio description pre-recorded). The regulations do not apply to recorded videos published before 23 September 2020. However, while these videos are not subject to the legislation, we have carried out an audit of all our videos and have begun a process of updating captions and adding full transcripts. Any new videos we publish will have edited captions and transcripts.

...

Live video

Our live video streams don't have captions. This doesn't meet WCAG 2.1 success criterion 1.2.4 (captions live). We don't plan to add captions to live video streams because live video is exempt from meeting the accessibility regulations. However, we will add captions when we embed an edited version of the video streams on our website.

Source: <https://www.derby.ac.uk/about/accessibility/>

The University of Bournemouth [Brightspace user]

Use Microsoft Translator (PowerPoint).

FLIE (Centre for Fusion Learning Innovation and Excellent) recommends using Microsoft Translator, built into Powerpoint (October 2020).

“Microsoft Translator is built into PowerPoint in Office 365 (and ‘on’ by default), and so all presentations created or presented in recent versions of Powerpoint (including via the browser version) can include speech-to-text captions. “

Source: Which includes a guide to how to do this..

<https://microsites.bournemouth.ac.uk/flie/2020/10/19/adding-subtitles-to-live-presentations/>