Nectar:

A New Approach to Film Accessibility

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Introduction: our approach to film accessibility

Roaring Girl Productions is part of a wider move to pioneer new approaches to film accessibility, working to make audio description, captioning and sign language interpretation (ACS) an integral part of the production process rather than an access 'add-on'. This is so that people with sensory impairments can participate fully as audience members and filmmakers' work can be accurately and sensitively conveyed.

ACS is rarely included within the production of the core film. Although the number of audio described and captioned films is rapidly increasing, production is rarely addressed before the point of distribution, when the creative production of the film is complete. As a result, the film is generally 'shoe horned' into an existing template that often bears no relation to, and may even undermine, the aesthetic of the film.

Film exists across genre, encompasses every subject, style and emotion. Yet, when it comes to access, there is still a 'one-size-fits-all' approach. Sign language interpreters and captions are usually located in boxes to the right and base of the screen, whilst the main picture is shrunk and pushed aside to accommodate them. Audio description frequently seems just as removed from the overall feel of the production. For the audience, the very methods designed to promote access can detract from the qualitative experience of the production. For the filmmaker, the access conventions available can misrepresent and undermine the vision they have worked so hard to create and communicate.

In response to this, we are experimenting with imaginative and innovative approaches to ACS in our own productions, working to combine art form and function in ways which enhance the experience of both audience and filmmaker. Specifically, we are producing ACS at the time of production (rather than at the distribution stage or undertaking it live at the point of screening or transmission), bringing it into the core of the creative process and experimenting with both aesthetic and technological solutions. This has the potential to create ACS which is:

- High quality
- Technically reliable
- Better able to represent the vision of a specific work.

We are testing this work with audiences, filmmakers, distributors and access facilitators. At the same time as increasing the accessibility of our own productions, our intention is to promote debate on how to develop the audience access further.

We are not setting out to define a 'protocol'. Rather, we want to:

- Generate a dialogue between audiences, filmmakers, distributors and access facilitators
- Inspire others to experiment and push the bounds of ACS so that it works for art form and function
- Motivate others to make innovative use of existing and developing technologies in improving the film experience
- Encourage audiences to demand more of filmmakers and distributors, and for filmmakers and distributors to rise to that challenge.

This document sets out the approach we used in making the film *Nectar*. It describes the three methods of access used in the production - audio description, captioning and sign language interpretation – taking the reader through all stages of production.

Our approach to audio description

Audio description (AD) is a narration which translates the visual information in a film (or play, gallery experience, etc) into audio for blind and visually impaired audiences. A infrared system relays the description track via a wireless headset to individual members of the audience. AD can be live or pre-recorded. This document considers pre-recorded AD, as it is particularly suitable for film rather than live performance, and is slightly less subject to the whims of distributor and exhibitor.

The technology

On film (i.e. celluloid), the pre-recorded AD track is distributed CD-ROM for use on a DTS or Dolby system (the two main digital sound systems) which readily synchs the AD with the film. The AD track is then relayed to individual audience members through the wireless headset. Over 160 UK cinemas now have the technology to screen films with audio description. By the end of 2005, around half of UK cinemas will have the potential to be accessible to provide AD.

However, with digital formats (the primary format for distribution in the low budget independent sector and set to become the primary means of transmission for all film), current technology is far more limited. There is currently no method for synching CD with video, so the film and AD track on CD can become out of sync even within a short film. AD must therefore be recorded onto the same tape as the core film.

Digibeta and Beta SP tapes have four audio channels, whilst High Definition has versions with four or eight, which need to convey all audio information. Two of these are used for the stereo tracks of the core film, leaving two tracks available for AD.

Although these four tracks are theoretically available, in practice most cinemas have players with only two channels. If these are taken up with the stereo tracks, then there are no remaining channels for AD and the only way it can be relayed is for the core film and AD sound tracks to be mixed down onto the same track/s and relayed to the entire audience.

Four-channel players *can* be hired in for approximately £75/day. Where these are available, the audience experience is similar to film, with the core film tracks relayed through the main speakers and the AD relayed through the infrared headset.

Because most cinemas are unlikely to hire or install the necessary kit in the immediate future, we have opted for the route of least compromise for *Nectar*, as follows:

Tracks 1 and 2 are used for the stereo soundtrack of the core film. With a two-channel player, this generally means no AD is available.

Track 3 carries a mono version of the AD soundtrack which is then relayed through the wireless headset whenever a 4-channel player is available.

Track 4 carries a mono mix of both the core film and AD soundtracks. Where only a 2-channel player is available, this track only can be played over the cinema speakers. However, this means that all audience members receive the AD track and that the core film sound quality is compromised.

For home viewing of digital formats, DVD currently appears to offer the most satisfactory solution, as both audio quality and synching can be achieved. The DVD can be programmed so that AD is a clickable option. However, as DVD is currently mainly confined to home viewing, visually impaired audiences miss out on the cinema experience if DVD is the only format to include AD.

The aesthetic

Research into the content of AD shows that individuals seek different levels of detail from descriptions, often related to age, degree of visual impairment and whether or not they have visual experience. Some people will want to engage fully with the AD whereas others use it only as a guide.

National protocol (based on the notion that AD is a neutral describer) is currently becoming more established. However, another, more innovative approach is also being devised which recognises AD as a complex process of mediation. In this approach, AD is less description and more translation.

In audio *translation*, it is recognised that:

- The narrator is working with their own subjective *interpretation* of the film;

a neutral description is not possible.
- They are involved in a process of *translation* between mediums, from the visual into spoken language. It goes beyond the pure description of the visuals to communicate the intention, the rhythm, the emotional pitch, and so on through both the language on the page and the voice delivery of the script.
- They must undertake a process of *editing*, selecting those visuals they judge to be the most important in communicating the key story moments and narrative flow to a visually impaired audience. This involves a process of elimination of unnecessary or distracting detail (not all visual elements have equal weighting in relation to narrative understanding). It also requires an attempt to inhabit the audience's consciousness, going beyond literal description of the visuals to description through which visually impaired audiences can place themselves 'within' the experience of the film.

Such an approach is particularly being developed by Raina Haig, a visually impaired filmmaker who incorporates AD in her own work and who was appointed as AD Consultant on *Nectar*. It is this innovation that I particularly wanted to draw upon in *Nectar*.

The aim is for the listener to "hear and understand [the AD] as part of the *audio flow* of the programme" (Joe Clark). The describer's voice and delivery style need to fit in with the 'tone' of the film, though not try to match it – that is, their voice needs to be distinguishable from all other voices (both characters and interpreter voice-over), without distracting the listener.

The description needs to convey sufficient information. However, it needs to allow for natural pauses in the film and not barrage the listener with wall-to-wall audio.

There are significant advantages in a pre-recorded AD for the medium of film, as it holds potential for more precise voice expression and demanding pacing. The ability to record and select from multiple retakes allows more exact interpretation.

Preparation

The AD script was prepared during the post-production phase, drawing on notes that were made throughout the production process. It was written by the Director, with input from the AD Consultant, and honed until it fit the film. Picture lock must be reached before the final script can be completed to allow for precise timing at the recording stage.

In order to convey the authentic experience of the piece, the writer needs to grapple with a range of complex issues. The following principles guided the script preparation:

1. As far as possible. descriptions are delivered during pauses or quiet

moments, not overlapping the core film audio.
2. If necessary, use an introductory note of up to one minute before the film starts to convey crucial information that cannot be fitted into AD during the film itself: the world of the film (environments, main characters, etc) and any stylistic conventions.
3. Avoid technical film terms (e.g. close up, slow motion) unless they are self-consciously used in the film. Awareness of the camera work and audio description can distract from the experience of the film.
4. Make sure the meaning is clear and not ambiguous.
5. Seek a balance between providing sufficient information to translate the experience, whilst retaining 'breathing space'. Make every word convey meaning.
6. If time limits force you to be selective, first describe what is essential to know, such as actions and details that would confuse or mislead the audience if omitted.
7. Allow mystery and the reveal to happen.
8. Whenever possible, describe actions and details that add to the understanding of personal appearance, setting, atmosphere, and mise-en-scène.
9. Do not specify an exact passage of time unless indisputable visual evidence supports it. E.g. Say "nighttime," not "that night," unless visible evidence demonstrates that it *is* that night.
10. Describe as consistently as possible, using the same character names and terminology throughout.
11. References to ethnicity need to be pertinent, and consistent across all characters.
12. Indicate stage of life by age (e.g. teenage boy, woman in her late twenties). Make sure words like 'young' and 'older' aren't simply from the describer's point of view.
13. Describe any obvious emotional states (e.g., impatient frown, cold smile, frustrated grimace).
14. Read titles and credits wherever possible.

Recording

The studio session took about an hour for the 16-minute film.

Narration took place in a sound proofed booth, with a monitor which played the film on VHS. Headphones relayed the film soundtrack to the narrator. The narrator read from the script, timing delivery to picture and sound. The AD was recorded in stereo.

The narrator's delivery needs to fit into defined spaces in the existing audio of the film, which means the pace varied according to the pacing of the specific sequence in the film and the space available to fit the AD.

We continued recording until an error was made or AD ran too fast or slow for a particular sequence. Where this happened, the VHS was re-cued and recording began again from that sequence.

Post-production

In the mix, attention was given to creating a soundscape that worked strongly to convey information and atmosphere. As well as assisting visually impaired audiences to become immersed in the film experience, it also cut down the amount of information that needed to be relayed through the AD.

The AD was tracklayed and small adjustments made to positioning in relation to the core film audio where needed. The BSL sequences of the film were voiced-over by the sign language interpreter and this voice-over was dropped into the AD track.

In the mix, the levels of the core film were mixed first. The levels and balance of the AD were then adjusted to this mix, so that they worked as a package. This was achieved by riding the faders of the AD so that the AD fitted to the film, matching relative changes in volume.

Through this approach, the intention is to achieve a finished sound where the AD feels like a 'whisper in the ear' that serves the core film soundtrack. The converse, when the AD is the dominant sound track, can feel like a radio play with a central narrator, with the core film soundtrack as illustrative voices and sound effects.

This mix would have been more straight forward and accurate with an atypical technical set-up that enables the director and sound editor to simulate audience conditions, by listening to the core soundtrack through speakers and the AD through headphones.

There is a strong tendency amongst sound editors to adjust the core film audio to the AD, keeping the AD track constant, so this different way of working needs some adjustment time.

The final mix was output as follows:

1. A clean stereo AD track (i.e. separate from the core film audio).
2. A stereo mixed down version, so that the film audio and AD are mixed onto two tracks.

These outputs are delivered as follows:

<u>Cinema screening</u>

For cinema screening of digibeta and beta SP tapes, the complete audio is on four audio tracks, as follows:

Track 1&2 Stereo of core film
Track 3 Mono AD
Track 4 Mono mix of core film & AD.

The means by which an audience accesses the AD depends on whether the cinema operates a player with four channels or two, as described above in 'The Technology'.

For VHS tapes, there are two versions, using the following tracks from the digibeta tape:

Version 1 Tracks 1 and 2 give core film only
Version 2 Track 4 gives mono mix of core film and AD. (The disadvantage is that the audio quality is diminished.)

Which version is screened depends on the makeup or interest of the audience.

DVD

On the DVD, AD is included on the menu as a clickable option. This delivers a fully mixed track of the audio for both the core film and the AD. This was taken from the original sound mix, and is therefore in stereo, rather than from track 4 of the digibeta tape. The DVD has a talking menu, set as default, to announce the film title and give audio descriptions of the menu buttons.

Web

For web streaming, there are two versions of the film, both available for broadband and 56K streaming. The first is without AD, the second with. The viewer then clicks on their preferred option.

Our approach to captioning

Captioning refers to text, usually located at the base of a film, either over the picture or on a separate border, which transcribes speech and annotates sound effects for deaf and hearing impaired audiences. In the UK and Ireland, captioning is often referred to as subtitling. This is often confused with subtitling of foreign language films, which is much more limited (translating foreign language text, but not relaying sound effects, tone of voice or home language). Captioning is the term adopted by the rest of the English-speaking world to distinguish between the two.

As with AD, on film (i.e. celluloid), the captions are distributed on CD-ROM. This is synched with a DTS or Dolby system which projects high quality

captions via a small LCD projector. Over 160 UK cinemas now have the technology to screen films this way on one or more screens. By the end of 2005, this will increase to around half of UK cinemas.

Digital formats must again be treated differently. Because there is no capacity to sync the tape with CD-ROM, the captions must be included with on the tape as part of the core film. In the absence of multi-channel projectors, captions must be provided as open (hard) captions, as with *Nectar*.

With new digital projection, the captions will be contained in the 'wrapped up' digital file supplied to cinemas, whereby all elements (film, soundtrack, AD, captions, subtitles, etc) will need to be in place before a hard disc master is made. (It will not be viable to add elements after the master has been made, so they cannot be added at the distribution stage, as now.) As with a DVD, the various elements will be able to be switched on or off.

The technology

Captions are of two types:

Open, where captions are visible for all sighted audience members. Open captions are of two types. With 'hard' captions, the captions are produced on the film itself (whether celluloid or digital) and appear each time that version of the film is screened. Either one version of the film is distributed, in which case it always screens with captions, or captioned and non-captioned versions are produced, in which case two versions must be distributed.

With 'soft' captions, the captions are distributed on CD-ROM and projected separately onto the film (celluloid) at the time of screening, so are shown at specific screenings only. Because the CD-ROM must be synched to the film, this method is not applicable to digital formats. The new digital projection, described above, improves the technical quality of captions as long as the kit is installed and operated correctly.

Open (hard) captioning, where it appears on all versions of the film (on celluloid, the captions are etched directly onto the print), is likely to create access for more deaf people, as it does not rely on a cinema's commitment (or lack of) to accessibility. For small-scale distribution (such as film festivals), there may be only one screening of a film in a particular location, so it is not possible to offer alternative captioned/non-captioned screenings. Regardless of whether open captions are hard or soft, they have an impact on the visual experience of the film, which can create dilemmas for the filmmaker.

Closed, where they are available as an 'opt in' for specific audience members. Teletext on television is closed captioning. The Rear Window system is a closed captioning technology for cinema use which displays captions on a

personal device so that individuals can opt into captions. Captions are displayed on a LED on the back wall of the cinema and reflected onto a clear panel placed by the user's seat. The user views the film through the panel, so that the captions are effectively superimposed on the picture. This enables deaf audiences to have far greater access, without captioning impacting on the hearing audience's experience of the film. To date this system has only been trialled in the UK and with mixed results. Some of the negative feedback could be down to the fact that the first use of a new technology is frequently a disorientating experience. The UK Film Council is currently funding research into the development of a closed captioning system using some form of personal device so that cinemas with DTS, Dolby or new digital projection can offer captioning within general screenings.

Given the limitations of current technical options and the intention for *Nectar* to achieve maximum access, the film was produced with open (hard) captioning. The captioning was designed and produced as an integral part of the film.

(Note that all versions of the film are subtitled in English during the British Sign Language sequences.)

The aesthetic

The captions were positioned at the base of the screen. The font (Lucida fax) and colour (cream) were selected for clarity, but also in keeping with the feel of the film and the sign language interpreting design. For legibility against the background, text appears with a soft drop shadow in a contrasting colour. The caption colour was sampled from the interpreter's clothing and the drop shadow from her skin tone.

We adopted a convention of mixing on/off at the beginning and end of a block of captions, but cutting between captions within a sequence. The length of mix varied, depending on the mood at that point in the film.

Preparation

A captioning script was prepared, with input from Deaf Consultant Lorna Allsop, from the picture-locked version of the film. The script contains all dialogue, plus other audio indicators as shown below. Ideally, this would have been modified after the sound mix to allow for any sound adjustments that might have taken place.

The script was saved as a Word file for importing into the Avid DS Nitris for online editing.

Post-production

Captioning needed to conform to the 'safe areas' guidelines, which ensure that people viewing under difference circumstances (projection, widescreen or standard television, etc) are able to see the full captions width. Even though the safe area widths vary greatly, the final version needed to look right on under all screening or broadcast circumstances. This led us to create three versions:

1. Captions only – this works to the safe area (SA) for both cinema projection and DVD. The SA is 16:9 Full Height Anamorphic (FHA), Graphics (GFX) protected for 16:9. For DVD viewing, the film must be viewed either on a widescreen television or on a standard television with the DVD output set to 16:9 letterbox (LB).
2. Captions and sign language interpretation - this works to the safe area for both cinema projection and DVD, but also increases the right hand 'margin' on the screen so that captions do not overlap the interpreter. The SA is the same as for the captions only version; they were simply shifted left within the 16:9 GFX SA. The interpreter was framed within the 16:9 'Action' SA, a larger SA than for the GFX.)
3. No captions ('clean') – for broadcast use, so that captions could be added by the broadcaster according whether they are working to terrestrial, satellite or other safe areas guidelines.

The captioning design was guided by the following principles:

1. Describe all relevant sound: sound effects, voices off-screen, music.
2. As far as possible, incorporate line breaks at natural linguistic breaks. For example: Harry Koskie'll be training 'im/ All the new scientific methods
3. A maximum caption length of two lines is recommended by many.

<u>Speaker ID</u>

- Some films position captions to indicate who is speaking (centred captions suggest a speaker in the middle region, while left-oriented and flush-oriented captions suggest speakers at screen left and right, respectively). On the captions only version, we centred all captions, which looked more pleasing and worked because the dialogue was relatively straightforward.
- When the speaker is extremely ambiguous or out of vision, place their name, for example, DIANE: in small capitals, with a colon for extra clarity. Indicate off-screen speakers with italic and/or speaker ID and/or notation: DIANE (on phone).

<u>Miscellaneous speech and sound</u>

- Show tone and manner of voice where needed: [*whispering*], [*American accent*], [*Vincent, Narrating*]
- Consider how to acknowledge dialect and accent in captions
- Use italics for narration, emphasis, titles of artistic works, names of ships, etc
- Show sound effects and other commentary in lower-case italic between

parentheses: (*thunder*).

Timing

As speech is faster than reading, the captioning convention is to edit a speaker's words to retain meaning and tone. This might include paraphrasing. There is conflict between simplifying for legibility/literacy versus editing/censoring content.

I wanted to represent the dialogue in *Nectar* as accurately as possible and so retained the exact words spoken by the characters. This was made easier because the text is relatively simple and sparse.

This decision was also influenced by the fact that the captions will be on screen for all sighted audiences. I wanted to avoid the distraction that can occur for hearing audiences when there is a mismatch between dialogue and caption.

Music

- Caption music by bracketing the start and end of music with staff notes (♪). Include a brief description of the music within the brackets, with the staff notes optional, for example: (♪ *soft jazz* ♪) or (*melancholic beat)*.
- Caption lyrics. Note that these cannot usually be edited because of copyright.
- Tempo is difficult to render, but there is benefit in fine-tuning the points at which captions appear and disappear to suit the speed of the song.

Dynamic captioning

- It is possible to overlay captions. If two characters speak close together and there isn't enough time to show two separate captions, you can set the first block and overlay the second.
- Used selectively, the overlay technique can also help to communicate the dynamic of a character's delivery. For example the dialogue "No" might be followed by a pause before the rest of the phrase is delivered. If so, set the first caption as *No…*, with the remainder of the phrase following a few moments later on the same line, whilst keeping the *No…*. on screen. We used this during the reporter scene, to emphasise Walter's process of thinking and shift in emotion, when he responds to a question: "Oh [pause] Ah", so that the caption appears as follows:

[first caption] Oh… [overlay a few moments later on same line] Ah.

- Overlay technique might also help avoid telling hearing audiences ahead of what they hear or telling everyone ahead of the action. We used hyphenated overlays on the scenes where Gloria is learning to sign, to accentuate the hesitation in her signing. We also used overlays during BSL sequences to give a sense of timing of delivery and as a way of translating BSL grammar to English.

Our approach to sign language interpretation

Sign language is the term for the range of visual-manual languages used by Deaf people throughout the world. British Sign language (BSL) is used by between 50,000 and 70,000 Deaf people in the UK. It has evolved over centuries and is a language in its own right, with different grammar and syntax from English and other spoken languages. It uses both manual and non-manual components: hand shapes and movements, facial expression and shoulder movement.

Almost all sign language interpreting (SLI) in the media takes place in factual programming. With a few exceptions (i.e. films made with a deaf audience in mind), the only places that films are interpreted are at specific targeted events, such as the Disability Film Festival, where live BSLi takes place with the interpreter standing to the right of screen. Few films are made with an in-vision (i.e. pre-recorded) interpreter.

Opinions are divided amongst the Deaf community as to the merits of SLI on film. Some find the presence of an SLI distracting or that the standard positioning of a SLI means they must divide their attention between picture and interpreter. Others, particularly those who do not read English fluently, find that captions do not provide quality film access for them. Deaf people with learning difficulties may be particularly excluded from captions-only films.

The technology

At the moment, the technical options for filmed (as opposed to live) SLI are limited to in-vision interpreting for all sighted audience members or no SLI at all. There may be future developments, as in AD and captioning, which allow individual audience members to opt in to SLI, possibly viewing it through technology such as Rear Window System (see Captioning) or Head-Up Device (see Discussion and Future Developments, below).

The aesthetic

Nectar was shot with an aspect ratio of 16:9 (commonly referred to as ‘widescreen’). The interpreter was placed on the right-third of the screen, superimposed over the picture and sized to around two-thirds screen height.

The interpreter is present for roughly half of the 15-minute film and is mixed out between interpreted sequences.

As far as possible during the shoot, wherever a sequence was known to need SLI, detailed set design was located on the left two-thirds of the screen. This was both so that the interpreter would not block any crucial visual information and so that the background would not be so ‘busy’ that it would

obscure or distract from the SLI. In non-interpreted scenes, the action and detail extended to the right of the screen.

International considerations: Sign language is not an international language; different countries use different languages (American Sign Language, Australian SL, etc). A version of the film was produced with BSL and one with no sign language (but with captioning). This will allow for live SLI to be used for other languages.

Given that the approach to access in the film is fairly radical, there might be audiences who want to see the SLI version even though it is not their native sign language. The take-up of the two versions and audience response will form a part of ongoing research on SLI within film.

Selection of interpreter

One interpreter was used in-vision, interpreting for all characters (and other relevant sound detail). This was planned for both English to BSL and BSL to English (voice-over). The interpreter was mixed out from vision when no interpreting was required.

Conventionally, with BSL to English SLI (voice-over), the interpreter is not in-vision. For *Nectar*, the intention was for all SLI to be in-vision to emphasise that the SLI was for all audiences. For this reason, a hearing interpreter was used, which involved a political compromise. On film, the Deaf community generally favours watching a deaf interpreter. However, the two-way interpreting would have necessitated two interpreters, with one or both being in-vision, and this would have distracted from the core film. To have the BSL to English interpreter off screen could well have caused confusion within film conventions.

However, in post-production, when the SLI was applied according to the original plan it proved distracting. After experimenting, it was decided not to use the BSL to English (voice-over), covering this through subtitles rather than audio. The AD version is the only one which uses the BSL to English (voice-over).

The production's Deaf Consultant worked with the interpreter to prepare and rehearse the SLI script and was present during filming of both the core film and SLI (see Filming, below). Their role was to check the script for accuracy, nuance and overall cultural authenticity.

Two options were considered for the selection of the in-vision interpreter. I wanted to avoid the interpreter being associated by the audience with any specific character, unless that character was old Walter. This meant I considered two options, ultimately choosing the second:

1. Using an interpreter who would be strongly associated with old Walter by the audience. As the film is Walter's telling of his own story, we would therefore have used a white male interpreter in his 80s+.

2. Using an interpreter who would not be immediately associated with any specific character and could therefore represent them all equally. As all the main characters and the vast majority of extras are white and, apart from Gloria, all male, we could therefore use a black female interpreter. (This also had the advantage of bringing a black presence to the film, something which was otherwise lacking because of the historical authenticity of the story.)

The interpreter needed to be expressive – more so than for news/factual – but not dramatic. They needed to have a clear and expressive voice.

The interpreter wore simply-styled clothing – not period, but not too modern either. We chose cream as a single neutral colour to contrast with skin tone and work sympathetically and clearly with the colour themes of the film without being lost against the picture.

Preparation

In pre-production, the sets and storyboards were prepared so that the right of each shot would contain no crucial information and nothing to obscure or distract from the SLI. Shot lists were prepared which confirmed for each shot whether or not we needed to frame for SLI.

When shooting scenes with SLI, we put gaffer tape on monitor to show interpreter area and tried routinely to check that the staging allowed this area to be clear.

In practice, it was far more difficult to maintain this 'safe area' during the intensity of a shoot: sometimes last-minute adjustments were needed to shot composition or framing to cope with the demands of the shoot and it was easy to overlook the SLI-framing. In addition, when it came to the edit, some shots were not used in the predicted order or dialogue was moved.

(In future, I would consider framing for SLI by plotting the core action to the left and centre of the frame, but allowing general action to continue for the full frame. I would apply this to the film as a whole, unless certain scenes or shots indisputably have no SLI.)

It would also be possible to use pre-visualisation tools on the shoot. This would involve relaying shots to a laptop and superimposing a virtual figure (in place of a live interpreter) onto the image, so that framings can be seen as though in the edit suite. An additional crew member would be needed to operate the kit.

During pre-production, the script was sent to the interpreter so that they could begin to prepare the BSL translation. After the core film shoot, an amended script was sent out so that the final translation could be prepared. Picture lock must be achieved before the SLI shoot.

The shooting script was checked for possible periods where the interpreter would be mixed from screen. (This allowed the SLI to be filmed in sections, rather than requiring the interpreter to interpret the full film in a single take.)

Filming SLI

In addition to the interpreter in front of camera, the Deaf Consultant was positioned off-camera, to view the in-vision interpretation for accuracy, nuance and overall cultural authenticity.

The interpreter was filmed against a bluescreen and then keyed onto the existing picture. The interpreter was lit first, followed by the blue screen background, to get a good separation in post-production. A 'clean shot' (i.e. of the blue screen only) is also recommended to make the keying process more accurate.

The interpreter was filmed 16:9 full height anamorphic.

We used the following equipment during filming:

- TV/video monitor to run VHS of film
- VHS of picture locked film with burnt in timecode (BITC)
- Camera monitor for the Deaf Consultant and crew to view the interpreter on bluescreen.

Because the interpreter was doing BSL to English (voice over), the monitor screening the core film was turned to them to give their cue. It would have been useful to have a second monitor turned towards the crew, so that the timing of the interpreter could have been checked more precisely to picture.

Audio was recorded, both for the voice-over elements and to aid the synching of the SLI in the online.

The interpreter was positioned fairly centrally and then reframed during the online.

During BSL interpreted sequences, the SLI looked toward camera. During voice-over sequences, she looked towards picture.

As we were transferring a three-dimensional language to a two-dimensional screen, the interpreter was angled slightly towards the picture. This enabled us to show the *depth* of signs as far as possible and avoided the interpreter blocking their face with hands. The interpreter occasionally needed to adapt

signs or body position slightly to avoid concealing movement on the palm of her hand.

Before shooting, the range of interpreter movement was defined to avoid covering too much of picture or going out of frame.

The interpreter was lit to allow for clarity of facial expression and hands. This needed to bear in mind the potential difficulties of keying individual finger movements onto picture and for the down-grading of picture that would occur on domestic televisions.

Post-production

A SLI design session was held with the online editor to experiment with the various options. The SLI was placed within the 'safe area' for action (16:9 SA).

The SLI was keyed and placed on the right-hand side of the picture at 70% of the original shot size. Although the intention was to frame all interpreted shots to allow space for this, in practice this was difficult to maintain (see 'Preparation', above). As a result, we were concerned that placing the interpreter directly on picture would crowd the action and spoil the aesthetic.

Before the design session, we considered shrinking the picture slightly and feathering the edge to a narrow border to right and base of frame. The interpreter would be placed on the right border, overlapping the picture, and the captions would appear at the base, in a modification of the traditional 'boxed' approach.

However, when we tried placing the interpreter on picture as originally planned, it worked surprisingly well. Although closer to much of the action than planned, the fact that she was within the frame (effectively framed by the picture) integrated her into the overall look.

There one point where this SLI design did not work well was on the initial song, and so it had to be modified. Pre-production advice was that this should not be interpreted, so it was not framed for SLI, with the result that the SLI overlapped old Walter's face. Our least compromise solution was to shrink the interpreter to 52% (so that the SLI's head finished just short of old Walter's mouth, but still left the SLI legible). For the song at the end of the film, the SLI was shrunk to 60%.

We also considered treating the picture in post-production to give the SLI-area a soft edge wipe and defocus the area from left to right. However, on balance, we felt this would spoil the overall image and distance the interpreter from the picture.

The 'in' and 'out' point of SLI sequences and the duration of mixes were judged in conjunction with their impact on the picture, with the result that we sometimes cut before the SLI has reached the 'resting' point that signifies the end of an SLI sequence. (The fact that she is mixed from screen indicates this anyway.) For example, on the shot of Walter isolated in the changing cubicle as the other lads leave, when the SLI was held until 'resting', the cut to the next shot jumped and the atmosphere of the scene was lost. We cut fractionally earlier, so that the full meaning of the sign was still apparent, and the shot of Walter was given time to breathe.

Where the picture action fully incorporated the dialogue, such as "Take your mark…Go!", where the Starter clearly signals the beginning of the race, we removed the SLI.

The final design was implemented during the online session. The Deaf Consultant viewed the complete film to check that the SLI was synched to sound and action.

Distribution

Three versions of the film were produced:

1. For broadcast, a 'clean' version with no AD, captions or SLI. ACS can be added by broadcaster according to their own standards and guidance for safe areas, etc.
2. For cinema projection and DVD, a version with AD and captioning, but no SLI. This version is available for international audiences or where SLI is not wanted (some Deaf film audiences).
3. For cinema projection and DVD, a version with AD, captioning and SLI.

All versions were output in letterbox format to avoid any image distortion when viewing in 4x3.

Where relevant, the design of video sleeves and other packaging, as well as publicity includes that the film is:

- Audio described
- Open captioned (subtitled)
- Sign language interpreted in BSL (BSLi)

In addition, for cinema screening, notes are provided for the projectionist on how to operate the AD (i.e. playing through infrared system, setting audio channels, etc), as well as a reminder to festival organisers that programme notes in Braille or large print and on tape need to be handed out in advance of the screening (rather than a few minutes before).

Package design for all formats, as well as labeling and menu items on the

DVD, has maximum legibility for people with visual impairments.

Observations

Following the production of ACS for *Nectar*, these are my initial observations. This is a personal response to my own experience rather than an in-depth analysis of ACS. I am not seeking to set out a 'protocol' for ACS, but to generate ideas and discussion and spur developing practice on. I imagine that, as the film is trialed with more audiences, my observations will adapt and develop.

1. There are significant advantages to producing ACS as part of a production as opposed to live at the time of screening.

i. It is better able to communicate the director's 'vision' for the film

Where the filmmaker is involved in developing ACS, they can continue to direct throughout this process, so the design can be adapted to communicate the film experience they intended. Keeping ACS within the creative process has the potential to be a more satisfactory experience for both filmmaker and audience.

Producing ACS within the production process enables scripting and delivery to be more complex and precise, and therefore to suit the specific production more satisfactorily. For example, the timing of the audio description narration on *Nectar* varies in pacing at different points of the film and would be virtually impossible to deliver live without error.

Ultimately, the success of ACS is reliant on a change in psyche of filmmakers and distributors, which will need to be led by the policy of filmmaking bodies and by the Disability Discrimination Act 1995. Where it is incorporated from the earliest stages of the production process it becomes part of the creative process, rather than a burden that extends the production process after its natural end.

ii. Economic and administrative advantages

Although there is an initial financial and administrative outlay for recording/filming and post-production work, once this is complete, captions and SLI involve no additional costs, whilst AD is dependent only on the correct specification of projector. In contrast, each screening with live ACS requires three people - to narrate the audio description, type in or trigger soft titles (captions), and to provide BSL/English interpretation - and they need to be present (and paid) at each accessible screening. As well as infrared equipment for AD, soft titling equipment is needed for captions.

Currently, the costs of ACS (albeit infrequently undertaken) are most

commonly borne by the distributor or exhibitor (broadcasts, festival screenings, etc). Moving ACS to the production process creates additional costs for the production which need to become a recognised budget line for funding bodies.

iii. There is less room for error at the point of screening

Where ACS is embedded within the film, distributors and exhibitors do not need to arrange for audio describers, soft titlers and interpreters to be present. Whichever approach is used, they are responsible for any technical arrangements – hire or installation, maintenance and correct usage of equipment.

As the technology develops to include new digital projection, AD and captions will need to be produced and distributed within the original 'wrapped up' film; it will no longer be possible to relay them from a separate CD-ROM or to produce them after the core film is distributed. Digital technology means that the product will not age (currently, captioning deteriorates along with the 35mm print it is etched upon). Including all the elements within the same package means there is less room for error in distribution (CD-ROMs are frequently missing when a film print is delivered). In addition, the technical requirements of digital formats supports the principle of bringing ACS into the core of the film. There is currently no formal plan in place for AD or captioning distribution companies to work to these new technical requirements.

2. 'Closed' versus 'open' ACS make for a qualitatively different film experience for individual audience members

The ultimate aim of ACS is to enable audiences with a range of access needs to be able to experience a film in the way the filmmaker intended and within a mainstream screening.

When ACS is 'open', it impacts on the experience of all audience members, regardless of whether they need it. It can be frustrating or distracting to have described what you are already experiencing through your primary sensory route (e.g. captions of what you can hear or audio description of what you can see), especially when it diverges from your interpretation of it or where the pacing differs (e.g. when a caption pre-empts an aural 'punchline').

This distraction is probably greatest for hearing audiences when an onscreen SLI is present and, whilst familiarity lessens it, there will always be an element of competition for the audience's attention where an additional person is present on screen. Indeed, the presence of open ACS, especially SLI, can actually influence the reading of a piece. In one of my earlier films, *Frida Kahlo's Corset*, the film featured a lone figure operating in isolation; the presence of an interpreter would have altered the dynamic and changed the

meaning of the film.

To prevent ACS impacting on all audiences' experience, it needs to be closed. However, this depends on the right technology being developed. The technology needs to be approachable, reliable and widely available, as well as properly operated and maintained. It will be important that the design does not create a barrier between the user and the film (the perspex screen used in the Rear Window system might account for its mixed reception; there are also reservations amongst some AD users about the headsets). It is vital that the technology is easy for people to opt into, so that people are not inhibited from using it. This includes those without sensory impairments who want to experience ACS and, crucially, those with sensory impairments who are anxious not to be labeled.

Closed SLI would address the divided opinions within the Deaf community as to the merits of SLI on film, as individuals would be able to opt in or out according to their own access needs and preferences.

Closed ACS does carry its own problem. Because it is for a minority audience (albeit a sizable one) and does not impact on the experience of the mainstream audience, proper attention might not be given to the quality of ACS. Closed ACS therefore needs to be developed alongside an approach that brings it into the core of the production process. In addition, funding bodies and legislation need to compel both production and screening.

Until the right technology is in place, the approach I have used on *Nectar* is an uneasy compromise. The current limitations compromise the way the film communicates to people with different sensory needs, including mainstream audiences. Whilst I have chosen the route of open ACS in order to maximize accessibility, given improved technology, I would opt for closed ACS.

3. Producing ACS as part of the film has implications for the production process, in particular post-production.

The post-production phase needs more time and greater flexibility.

If ACS is approached as a template – for example, captions always in the same font, colour and position – then it is a relatively quick process. However, the end result is at best functional and may even undermine what the film seeks to communicate. If a new standard of access is to be achieved, then time is needed for planning and implementation throughout the process.

The visual, audio and ACS elements of a film all impact on each others. For example, if changes are made to picture, this can affect the timing of AD. The timing of SLI and the conventions adopted for mixing in/out will impact on the picture. The post-production schedule needs to be organised for this, including allowing the various elements to be revisited for adjustments, as shown below. (Note, this 'revisiting' is not unprecedented in film, where pre-

mixes are not unusual; the difference is that they tend to happen on bigger budget films.)

Once the offline edit is complete, the ideal ordering of the post-production process would be:

- Prepare draft scripts for ACS
- Tracklay and mix sound on the core film
- ACS script amendments, if needed
  If sound is added or amended this can mean changes are needed to captions or SLI. (For example, we added audio of hearing aid feedback during the mix, too late to incorporate into the SLI script. This revised process would have avoided the problem.) In addition, in a well-designed soundscape, some AD will become redundant as the sound itself will be sufficiently descriptive.

At this point the sound track of the core film is locked, so SLI and captioning can be undertaken.

- Shoot SLI, including recording any voice-over
- Picture edit, including captioning and SLI
- ACS script amendments, if needed
  Any changes to the picture during the online, such as the placing and design of titles, can require AD script modifications.
- Picture lock for the core film, including online additions such as titles, is locked, so AD can be recorded.

- Record AD
- Additional tracklay, including AD and any SLI voice-over
- Final sound mix and captions check
  It is only at the final mix, that some dialogue become clear (for example, it became clear that one of the lads at the swimming pool shouts "Walter" and not "Walt" as was scripted), so final adjustments might be needed to caption text.

4. Many of the decisions about ACS within a film are strongly subjective. This is so for the overall design as well as the details of precisely where captions are placed or for how long they are held, etc. Often, judgement is required on what is the least compromise.

For example, the powerful opening shot of the film, which shows Walter swimming in a swath of green open water, with the title of the film superimposed, was to have been captioned: (*crowd cheering…urging on)*. When we tried this, the shot lost all its dramatic power. We experimented with removing the caption and decided that the clear picture, with or without sound, conveyed more meaning than the cluttered, captioned version. On this same shot, we also moved the SLI a few frames later to keep this picture clear.

Whilst my initial interest was to examine how the film can define the style of ACS, it became clear that ACS can also impact on creative aspects of the core film. For example, the desire to reduce AD wordage can lead to more thoughtful sound design, creating a better experience for the wider audience too. This can only happen if ACS is integral to the creative process.

5. Most of the aesthetic compromises in ACS on *Nectar* are because the right technology does not yet exist. Research is certainly needed on the best ways forward.

Whilst the simplest way to synch AD and captions with a film is by using 35mm film with AD and captions on CD-ROM, the cost of film is prohibitive for most low-budget productions. Given this, and the fact that digital technologies are increasingly set to dominate, solutions for digital media are essential. The simplest solution for digital formats appears to lie in multi-channel projectors and infrared equipment. However, this will only take off for digital formats once the more expensive multi-channel projectors are installed.

As digital distribution and projection becomes standard, the technology will exist for relaying AD and captions to a high technical standard. An announcement from the Film Council's that they are creating a Digital Screen Network (DSN) in the UK gives considerable cause for optimism. Under the DSN, state-of-the-art digital projectors are being installed in 209 cinemas across the UK[1], with completion scheduled for spring 2007.

The installation of these 12-channel players is potentially the breakthrough that is needed for AD and captioning. All of these projectors have both AD and captioning projection built in, although only 50% of the cinemas in the network currently have infrared facilities for relaying AD to the audience. It does, however, seem unfortunate that the Film Council did not require the remaining 50% to install this as a condition of their DSN funding. The potential of this technology will only be realised to the full if filmmakers and distributors make a commitment to add ACS to all their output.

Despite this progress, the new digital technology does not address how to achieve closed captioning, so cinemas will continue to have to select particular screenings for captioning, with the result that many screenings will remain inaccessible. The Film Council is funding research into personal devices for closed captioning and the results of this may be crucial is we are to achieve equal and quality access to captions. Research into technologies for AD is limited and for SLI appears to be virtually non-existent.

For closed captioning and SLI, one interesting technology that could offer a

[1] In 2003, the UK had 678 cinemas with 3318 screens, according to the UK Film Council Statistical Yearbook.

way forward as it develops is the Heads-Up Device (HUD). HUD is a means of projecting information directly into an individual's visual field. It follows the person's gaze or the direction in which they point their head. The display is largely transparent and the information is projected with its focus at infinity which means the wearer does not need to refocus their eyes when changing attention between the HUD and the external environment. It is possible to project captions and SLI onto a display (a visor or glasses), so that the wearer views the film through them and the captioning/SLI is displayed superimposed on their view of the core film. As the technology becomes ubiquitous, more compact and more sophisticated, this might become a viable solution.

Next phase

The next phase of my personal research into the design of ACS is to trial *Nectar* with audiences at forthcoming festivals and events, including London Disability Film Festival, Equata's mini-disability film festival and VisionSign. London Disability Film Festival will also test AD technology by using a four-channel projector at the National Film Theatre.

An extract from the film will be available for streaming on the Roaring Girl Productions website and feedback on the ACS will be invited.

Roaring Girl Productions is producing a three-part documentary to accompany *Nectar* on DVD and this will include a description of the use of ACS as a way of disseminating our experience and triggering debate.

In addition, we will begin to investigate technical possibilities, such as HUD.

In future creative projects we will continue to experiment with ACS, drawing on our own observations and other people's feedback.

Your comments

We welcome your feedback on ACS within *Nectar*, as well as your responses to this documents. Please contact us at info@roaring-girl.com.

Sources

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