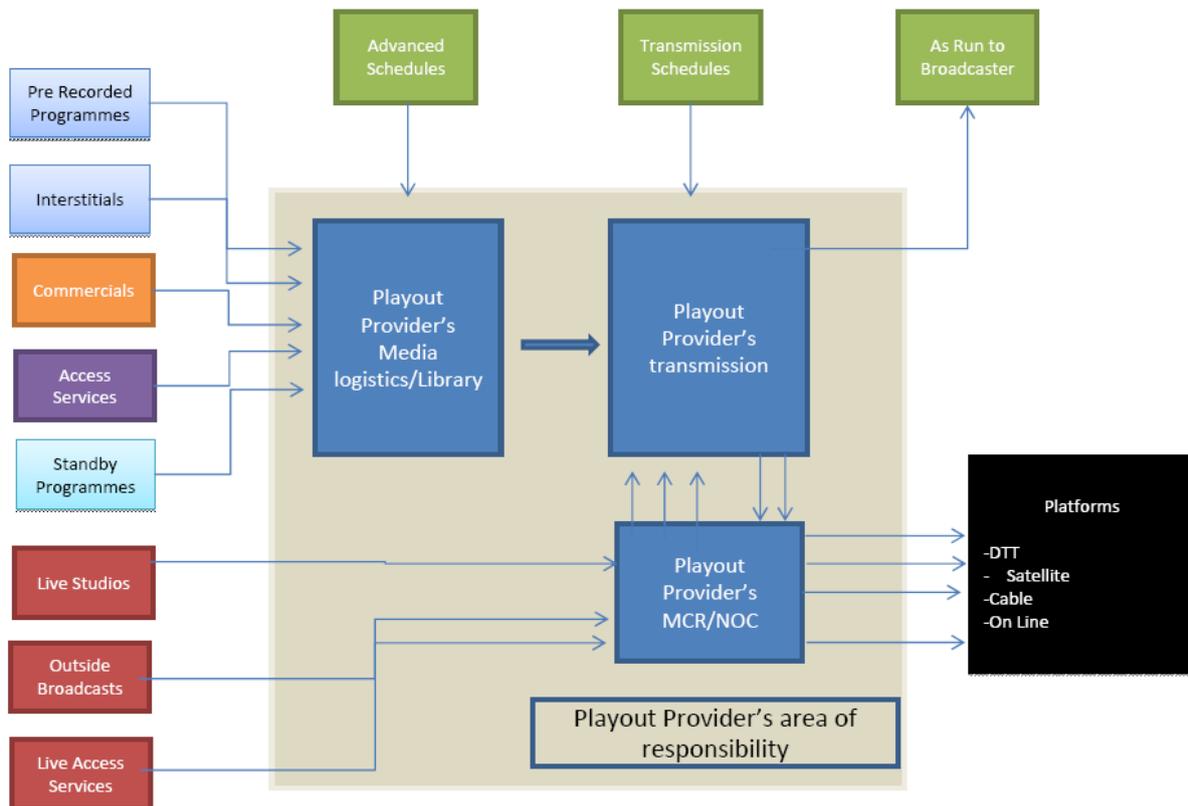


**Annex 4, Part A**  
**An introduction to the Broadcast Payout Process**

Playout service providers are contracted by their clients (Broadcasters) to transmit a schedule of content in the required sequence to various platforms. The information identifying the precise nature of the content, and where and when it is to be transmitted, is contained within a schedule that is supplied by the broadcaster.

What follows is a general description of how the broadcast process works from schedule creation to transmission and the relationship and responsibilities of the Broadcaster and Playout service provider. This is a generic model that assumes an outsourced playout model. The same structure would apply where playout is sourced in-house but, of course, references to a third party playout provider would be obsolete. As this is a generic model, it is important to note that, in practice, each Broadcaster may have a slightly different variation. The general principles are, however, the same and apply to all UK Public service broadcasters (BBC, ITV, CH4, and CH5) as well as the majority of all UK multichannel and international channels played out from the UK

An overview diagram of the playout process is below:



**1. Schedules**

Schedules start to be drawn up many months before the day of transmission and are 'released' in various iterations as the day of transmission draws nearer. The first of these iterations may only include broad bill time information (ie. the times published in Newspapers - 19.30 Coronation Street, 20.00 Football etc.). The final transmission schedule will, however, have every second and sometimes frame (1/25<sup>th</sup> of a second) accounted for, (i.e.

19.29.25 Coronation Street, 20.00.15 Football) with additional elements added (such as promotions and commercials) so that all the time is fully accounted for.

These schedules are printed off for playout transmission staff on the day of transmission and an electronic version (playlist) is also created. This playlist drives the transmission automation system. The richer and more accurate the playlist, the fewer interventions or adjustments the transmission control room staff need to make.

Each item in a schedule is usually referred to as an 'event' in automation terms. Broadly speaking, the higher the number of different events in a schedule the more complex it is and the more sophisticated the automation systems need to be.

## **2. Content**

All content is scheduled by the broadcaster and downloaded in the playlist provided by the broadcaster to the playout provider. Some commercial broadcasters may deliver two schedules a day during the week and a complete 24 hour schedule for weekends and bank holidays.

All content is delivered to the playout provider as either file or tape. The former is increasingly common and means that broadcasters and production companies do not need to deliver physical assets. Copies of a programme can be easily generated and delivered electronically rather than physically delivered. The playout provider can also streamline its internal processes that are needed for tape delivery.

Where content is still delivered on tape, it is transferred (ingested) into a file format by the playout provider and then stored with the other files on servers before transmission. Regardless of the format in which content is provided, the transmission process is the same.

Content can be categorised into five main areas; programming, commercials, interstitials, graphics and access services.

Each of these are described below.

### **Programming**

Programming is either live or pre-recorded. They are made by the Broadcaster or are commissioned by the broadcaster from a production company. Some programmes are made for other broadcasters and bought. The latter are often referred to as "acquired programming" and commonly are programmes made for the US networks (e.g. Homeland, CSI, The Killing). Pre-recorded programmes are delivered ready for transmission to the playout provider. Historically these have been tape but the industry is moving to digital file delivery as described above.

The broadcaster may have checked the content and the durations of the programme prior to delivery or they may ask the playout provider or another service provider to handle either all, or part, of that process. The playout provider will, in any event, usually carry out some additional checks (production number at the start of the programme, duration of the whole programme or parts) to ensure they have the right content and the durations are correct. The actual window between when a programme arrives and is transmitted can have a significant impact on the accuracy of the transmission schedules already finalised and the level of

subsequent adjustments or interventions that transmission staff may need to carry out. Minor adjustments to the playlist are a feature of all channels. The extent such adjustments are needed is determined by a combination of: the quality of the schedule originally delivered by the broadcaster, the extent to which content has been delivered to the playout provider, and the nature of the schedule itself.

Live programming comes from a source outside of the transmission area. It can be a studio within the same building, a studio in a different location or an outside broadcast such as a football game. In these circumstances the production of the programme is controlled by a team at the specific locale who either work for the production company contracted by the broadcaster or work directly for the broadcaster (i.e. they are not “playout” staff). They will have been briefed by the broadcaster as to their start and finish times and, if on a commercial channel, the approximate times the commercial breaks will need to be transmitted and their duration. These times are then confirmed to the local production team by the playout provider’s transmission team before the programme starts.

The connectivity from the Studio or outside broadcast to the playout provider is organised by the Broadcaster and the production team. Details of which circuits or satellite feeds to be used will be supplied to the Playout provider by either the broadcaster or production team.

## **Commercials**

The amount of commercial time available per hour and across the day is regulated. The average amount of commercial minutage a broadcaster can transmit across an hour is 9 minutes. However they can vary the minutage each hour provided that no more than 12 minutes are transmitted in any one hour. For Public Service Broadcasters there are different limits especially around what is regarded as Peak viewing time (18.00 – 23.00)

The broadcaster’s sales teams or appointed sales house sells the commercial airtime. Depending on the type of channel and its sales strategy this may be finalised only hours before the schedule is sent to the playout provider for transmission. It then needs to be loaded onto the automation system. Commonly, the individual commercials are scheduled in a separate sales scheduling system which then merges the commercial breaks into the main schedule. This is managed by the broadcaster prior to delivering the schedules to the playout provider.

The commercials themselves are delivered by file to the playout provider. The advertising agencies mainly use 3 companies to manage this service and most playout providers have a centralised commercial library for all their clients which stores files of all their current commercials which may be aired. All commercials are cleared by an industry body called Clearcast before transmission. It is the Broadcaster’s responsibility to ensure that clearance has been obtained.

On the commercial channels there may also be sponsorship bumpers that are placed either side of the start and end of a programme part. These are slightly different from commercials and do not contribute to the total advertising limits each day and have separate rules around the messaging contained within them. These can also be made by advertising agencies and delivered by file.

Many commercial broadcasters providing channels within the UK or to an international market will have different commercials played simultaneously in different regions or territories. The number of these varies and is scalable within the automation system (see transmission). For example, ITV operates 18 commercial regions, CH4-6, Ch5-5, NBCU-2.

### **Interstitials**

These are all the non-commercial or non-programming events between the programmes or within commercial breaks. They include idents (station branding) before programmes with live or pre-recorded announcements, promotions for programmes or an “end of part bumper” that separates programming from commercials that has not been built into the programming itself (i.e. feature films).

### **Graphics**

These tend to be items that are superimposed over the main video content. Often referred to as secondary events, they include channel identifiers (Logos) in the top left or right hand of the screen and the technology is used to ‘squeeze’ the end credits on programmes to promote other programmes.

There are a variety of different methods for delivering graphics to playout. One of the most common is for the visual look to be created as a template that is stored within the graphics device at the playout provider. The specific text that then needs to be inserted into the template is either incorporated within the broadcaster’s scheduling system and then incorporated into the playlist or is delivered by the broadcaster as a separate file that the playout provider then loads onto the graphic device.

### **Access Services**

Other content classed as secondary events are subtitles, audio description sound tracks and in some cases Visual Signing. These are access services that are matched to a specific programme or version of a programme and are run simultaneously by the automation system. The access service content is generally provided by a third party supplier or the playout provider under a separate contract with the Broadcaster. Some subtitling is done live for content that cannot be prepared in advance (i.e. late delivered or live programming).

The requirement to carry access services is regulated by Ofcom and the level is affected by the age of the channel, its viewing share and the nature of the content.

In the UK the ability to see subtitles is controlled by the viewer but for many international channels they are transmitted in vision as part of the main video. The programme itself may be made in another language and the only means of understanding it in a particular territory would be via subtitles in that language. International Broadcasters may therefore run the same programme across different services at the same time.

### **3. Transmission**

Once the schedules and playlists have been delivered to the playout provider they are loaded onto the playout provider’s automation system. The automation system then ‘pulls’ the content it needs from the ‘library’ server to the transmission servers. It is at this point that any errors or anomalies are indicated. Primarily the transmission team will be looking for any

missing material such as programmes, promotions or commercials that have not yet been delivered.

Live programming is delivered to the playout centre by means of dedicated circuits or satellite feeds. Commonly these are first checked at the playout provider's Master Control Room (MCR) or a Network Operations Centre (NOC). These areas usually additionally monitor and technically check all circuits or services that come in and out of the playout facility. Once satisfied that all is correct they will confirm with the transmission area on which internal circuits the feeds will appear.

It is not unusual for schedules to be issued with the knowledge that some of the content is not available at the playout site and with the understanding that it will arrive later or close to transmission. Late arriving content is a common eventuality across all types of channels throughout the industry.

The broadcasters scheduling and commercial teams usually highlight late arriving content prior to the playlist download and will advise on expected delivery timescales and sometimes also the actions to be taken if it doesn't arrive.

On the commercial channels the playout provider's transmission team also double-check that the limits on the amount of advertising per hour are adhered to and note any potential areas where there could be difficulties (i.e. live programming).

A playlist where all the content has been pre delivered, all the timings correct and where there is no live programming, might need very little further attention. It could be loaded onto the automation that will play it as scheduled without any intervention. Channels that are able to operate like this benefit from requiring fewer transmission staff at the time of playout with a transmission controller (the individual who oversees the automation and monitors the output) being able to look after several channels at a time.

The quality of schedules across the industry can vary irrespective of the channel.

A properly prepared schedule without any live content can therefore be left to run event after event without the need for any intervention by the transmission controller.

Schedules with live programmes or content that is not yet delivered may have nominal durations within the schedule. This means that the next event, whether it is a commercial within the programme, or a promotion immediately following the end of a programme, will need to be manually triggered by the transmission controller rather than the automation system.

### **Transmission controller (TC)**

As already explained, the person directly monitoring the output of the channel and overseeing the automation is the Transmission Controller. They are part of the playout provider's transmission team and are responsible for dealing with any immediate issues that arise with the schedule. They ultimately try to ensure there is continuity of service to the viewer and the planned schedule or Broadcaster required changes are implemented. Consequently they might be expected to deal with the issues described in more detail in the following paragraphs.

## **Programme timings**

Late delivered programme may have only nominal times within the schedule. The TC would enter in the exact times into the automation playlist and adjust the schedule accordingly to make it fit. This may involve the removal or scheduling of additional promotions as well as reducing or extending idents. The ripple effect across the schedule can be quite extensive especially if commercial breaks are impacted.

The TCs are given guidance in advance over the level of decision making they can make. Outside these limits, they usually refer to a Broadcaster's scheduling team during office hours, Duty Management Officer (DMO), or equivalent outside of normal business hours. Each Broadcaster tends to operate differently in respect of the level of referral.

## **Live Programming**

The TC liaises with the live programme production team from the production company or Broadcaster. He will monitor and remind the production team if commercial breaks need to be taken at specific times. Although live programmes have been given a specific time to finish, the nature of live television, especially events such as sport, means it is not always possible to meet this precise moment in time. The production team may request that the programme be extended or even finish early. The broadcaster has usually considered these options beforehand and will have given guidance as to the level of flexibility a programme can have and how the schedule can subsequently be adjusted. If scenarios arise outside of this planning the TC will refer to the Broadcaster for guidance as to what to do. For certain live programming events (e.g. football, X factor,) the broadcaster may anyway have someone present at the service provider's playout site or be closely following and in liaison with the TC remotely.

It should be noted that there is a considerable amount of live programming every day that is transmitted as scheduled without changes to the schedule being required.

## **Standbys**

For all live programming, Broadcasters tend to identify in advance the programming that they will run if there is a loss of connectivity to the studio or outside broadcast or the event can't be covered. This might be a repeat of a previous programme or event. For commercial channels there is often the need for the Broadcaster to issue a completely alternative schedule and playlist for a period of time to the playout provider. This is because the durations and content of the commercial breaks may need to change if the programming does. The scale of the changes may be such that the TC would not have sufficient time to manually make all the changes in the automation system

Standbys are also nominated against other programming in the schedule that may have a higher risk of being changed at the last minute or is known to be a very late delivery. The change to the schedule is normally made by the TC in the automation system, but the decision to run a standby is usually referred to the Broadcaster.

## **Commercial /Interstitial/Graphics**

The Broadcaster may request that any of these items may be changed once the schedule/playlist has been delivered. Advertisers may not have had some particular copy

cleared or delivered a commercial in time. The broadcasters will then ask the TC to change the commercial which they will do by going into the automation playlist. Promotions and graphic material can also be changed manually if necessary. If the scale of the changes is significant, then some broadcasters will send a new version of the schedule playlist incorporating the changes.

### **Other changes**

All Broadcasters (whether domestic or international) may make changes to their schedules in response to news events. This can range from the scheduling of News flashes, additional news programming or by deciding not to transmit particular promotions, commercials and even programming because it is deemed no longer appropriate for the climate at that time.

The UK Public service Broadcasters are particularly sensitive to this and are more likely to have a high level of awareness and established processes to adjust their schedules. Other Broadcasters who do not provide news services will make changes to their schedules based around the nature of a news story, its relationship to their scheduled content and the expectations of their audience.

The decision to change content lies with the individual broadcaster but if the current downloaded schedule needs amending, these changes will be made manually by the TC.

### **Regionality**

As already indicated, it is possible to run commercials simultaneously to different regions or territories and this is possible dependent on the automation system and the Broadcasters' scheduling system. It is also possible to configure the automation to playout different interstitials or even programming simultaneously.

Channel 4, Channel 5 and ITV main channels all have the same automation provider but with slightly different configurations. ITV also transmit different regional news programmes at the same time. Channels 4 and 5 run six and five commercial regions respectively.

The BBC has a different approach. The Local news regions effectively opt away from the BBC 1 main feed. This opt out is controlled in the regions themselves and not at the playout centre. The BBC also has separate playout centres that they own and operate in Northern Ireland, Scotland and Wales for their Nations services.

### **Other service disruptions and notifications**

Apart from content changes driven by the broadcaster, there are also inevitable disruptions caused by technical and sometimes operational failure. The level of technical resilience in the playout transmission chain is usually influenced by the Broadcaster's requirements for availability and willingness to fund any additional technology.

It is usually the responsibility of the TC to take the appropriate corrective action where required. This may require very quick decision making to minimise or correct the impact of an issue. TCs on all services have to deal with these situations and will have guidance from the broadcaster as how/when they should notify the broadcaster and involve them in resolving the subsequent impacts to the schedule. This ranges from immediately contacting

the broadcaster to just noting it in a daily transmission log that is sent to the broadcaster after transmission. This log details any issues that impacted the planned schedule.

#### **4. Post transmission**

Once the schedule has been transmitted the automation creates an 'As Run' log. This shows exactly what event was transmitted and at what time. This is reconciled by the broadcaster against the original schedule to identify any discrepancies not already highlighted to them. For commercial broadcasters this log is used as confirmation to advertisers that their commercials were transmitted as booked.

**[confidential] (Broadcast Consultant)<sup>1</sup>**  
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