



Subtitle Payout

Introduction

Subtitle transmission (the process of inserting the subtitle data into the broadcast signal) can be carried out in a number of ways:

- Payout of a subtitle file under timecode control and, in most cases, station automation control.
- Ingest of video material that has had **open** subtitles **burnt-in**, or **Teletext** subtitle data inserted and recorded in the VBI of the video signal on a master tape or in a video server.
- Transcoding from one subtitle data type to another in real time during payout. This technique is also known as pass-through subtitling.

Scope

This White Paper concentrates on the payout scenario. The ingest and transcoded options are covered in other White Papers in this series.

The payout of subtitle files should not be confused with *live subtitling* (a technique where the subtitles are typed as the video is transmitted) and generally it involves a degree of automation and synchronisation with channel time code. For more details on live subtitling see the Live Subtitling White Paper.

Payout

A payout subtitle system is based on subtitle files that are separate from the video and audio material. While the video material is stored on a master tape or in a video server the subtitle files are stored on a separate subtitle server.

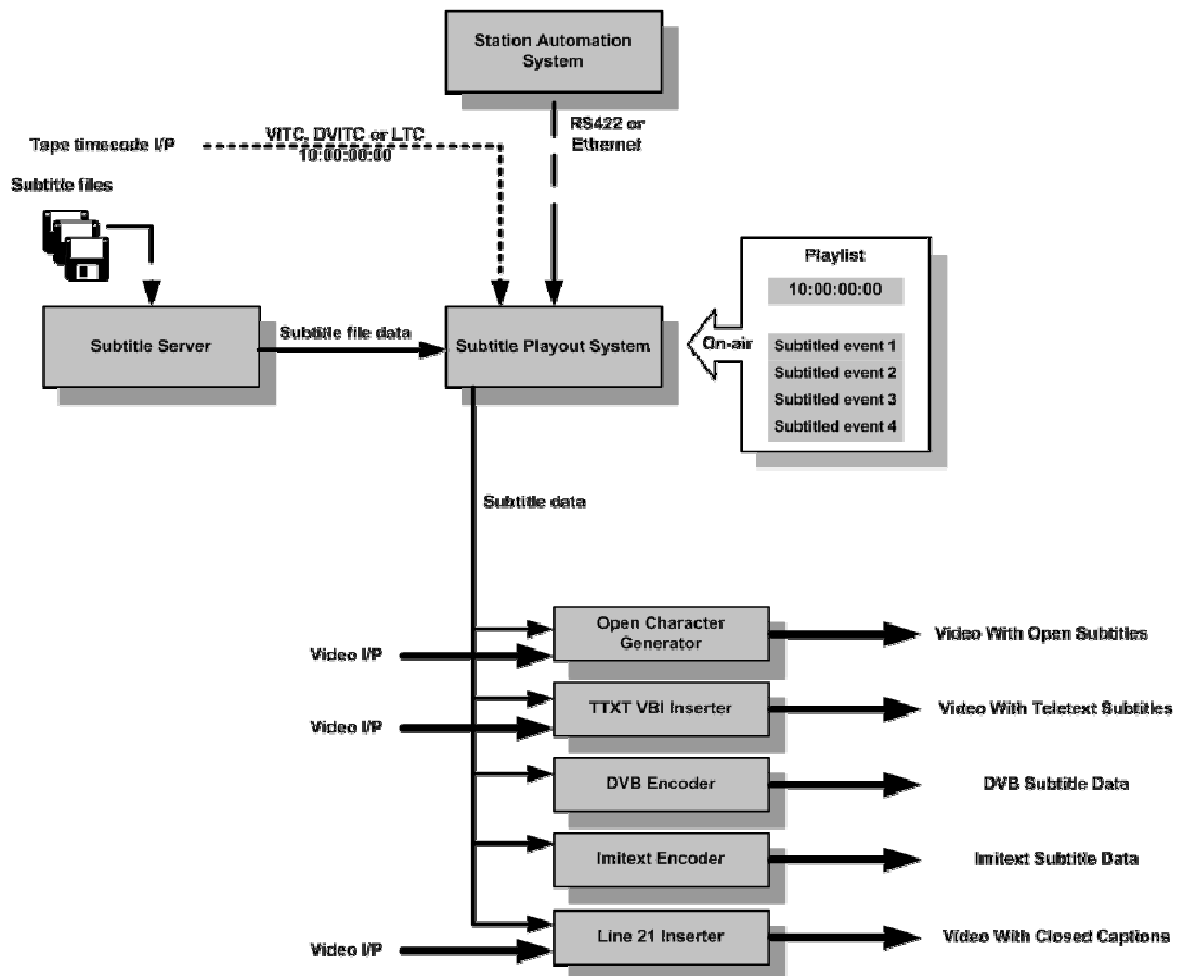
The files are only linked to the video media by a common asset number, normally via the file name. The individual subtitles are synchronized via the original tape time code. This will have been used at the time the subtitle file was authored and it is vital that it remains unchanged at transmission time.

Because the video media and the subtitle file are only combined at the time of payout, the subtitle payout system needs to have the correct file loaded and to know the tape time code. This is achieved by having a station automation input and a matching tape (or server) time code input for each channel.

Automation systems vary but in most cases a playlist will be available that shows a number of upcoming events and this allows the subtitle system to preload the matching subtitle files and to raise an alarm if a file is not present.



When a *subtitled event* is put *on-air* by the station automation the channel time code for that event is fed to the transmission system and the subtitle file is played out to the attached output devices such as character generators, Teletext VBI inserters, DVB encoders etc.





Advantages of playout subtitles

- The time available to prepare the subtitle files is maximized.
- Subtitle files can be changed up until a few seconds before air time. This is vital in a live or news environment.
- No master tapes are required so media asset management is simpler.
- Only subtitle files need to be delivered from the subtitle suppliers and these are small enough to be emailed.
- No master quality media needs to leave the broadcaster's site so enhancing security.

Disadvantages of playout subtitles

- The subtitles are not part of the master video so a mismatch between video and subtitle file could occur.
- Equipment is required to play out subtitles on each channel.