



Pre-recorded or Ingested Subtitles

Introduction

When it comes to transmitting subtitles as part of a broadcast network there are two main approaches;

Either the video is combined with the subtitles in advance of transmission time on tape or in a video server. This method is referred to as ingesting.

Or the subtitles are held as a subtitle file and only associated with the video at the time of transmission. This method is referred to as playout.

Scope

This White Paper explains the usage of subtitling at ingest, how it fits in to a transmission and some advantages and disadvantages. For post production (tape to tape) preparation workflow see the Open Subtitling White Paper.

Details

With ingest subtitling there has to be a method of adding the subtitles to a standard video storage system. There are only two styles of subtitling that are suitable for ingesting.

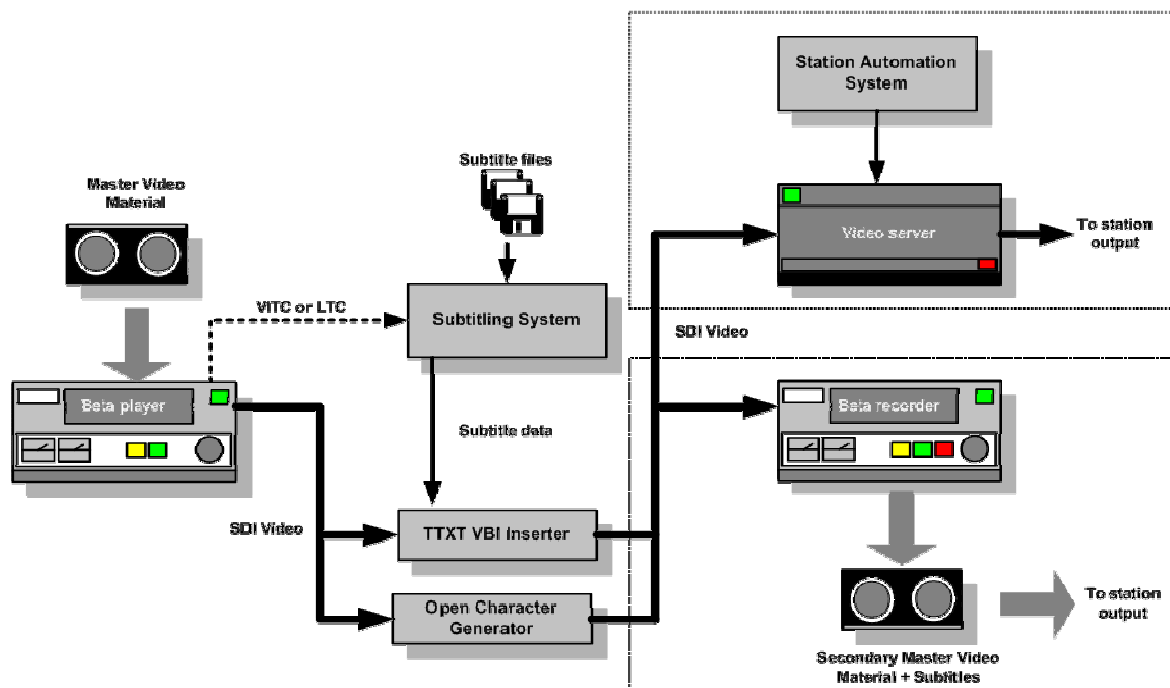
- Open Subtitles. Where the subtitle is added directly and permanently into the picture area then it will forever be associated with that video and can be stored using any method compatible with the video type.
- VBI based Subtitles: Teletext or closed captions (Line 21) are stored in the VBI area of the video. Professional tape recorders and some video servers will store and reproduce the VBI. (VHS will not record Teletext but it will support closed captions)

Any other subtitle method such as DVB or Imtext is not suitable for ingest into video servers.



Ingest process

The source video material (master) is fed to an open subtitle character generator or Teletext VBI inserter whose output is then recorded to tape or in to a video server. This secondary master material is then used when a subtitled version of the video material is required for transmission.



Advantages of Pre-recorded Subtitles

- The subtitles are part of the master video
- No additional equipment is required to play out subtitles once the subtitled master has been produced

Disadvantages of Pre-recorded Subtitles

- The subtitles have to be prepared well in advance of transmission to allow time for ingest or mastering.
- Once committed to tape, subtitles cannot be edited so any corrections or changes require the whole video to be re-ingested.
- Master tapes have to be transported and modified.
- Expensive broadcast quality VTRs are required to produce subtitled master tapes.