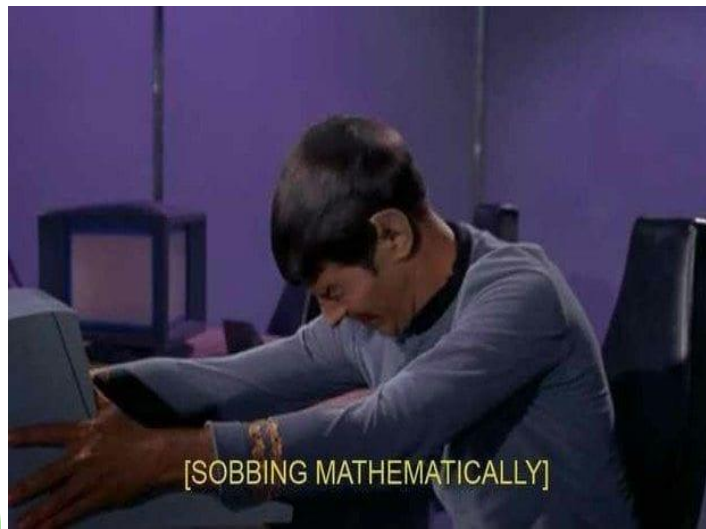


Closed Captions, AFD, Bar

Aaron Boxer

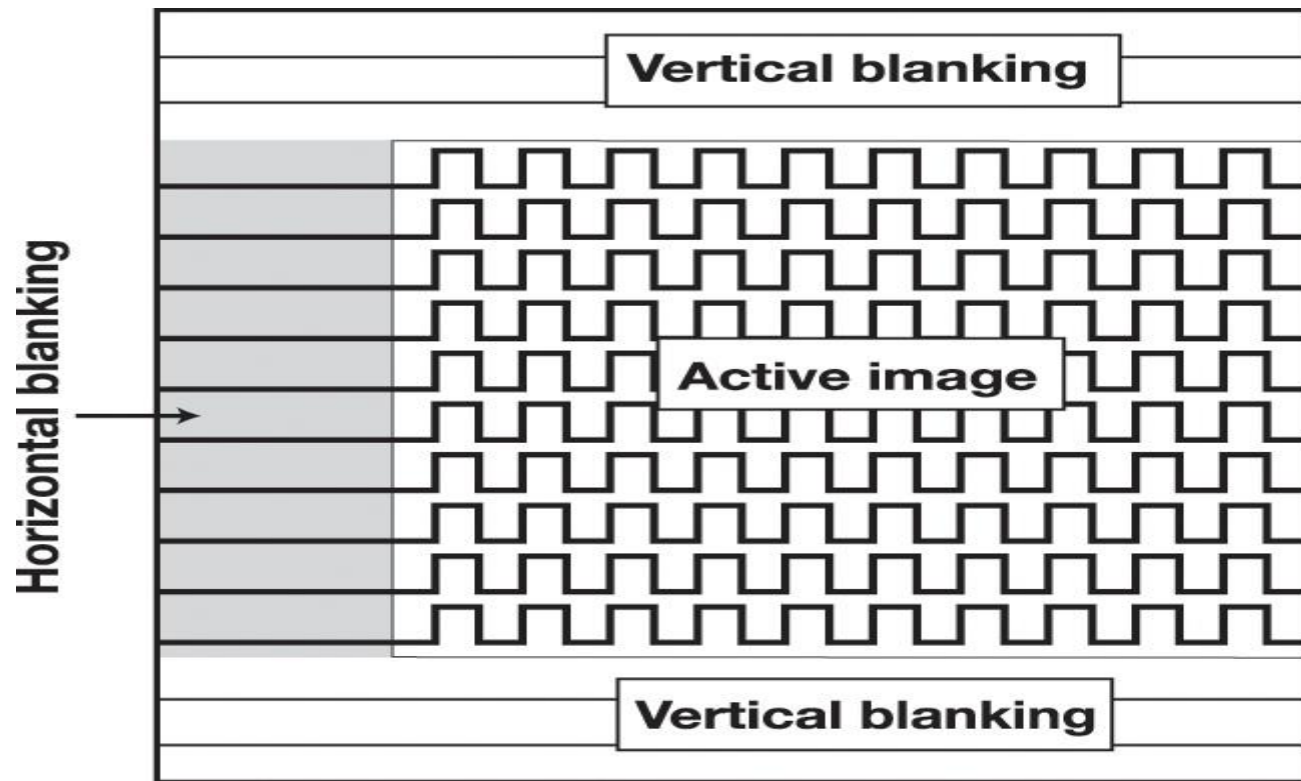
Closed Captions



COLLABORA

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Closed Captions



Closed Captions

CEA 608

- .Original analog standard
- .Byte triplets : text and rendering commands
- .Specified area on screen reserved for captions

Closed Captions

CEA 708

- Digital standard (ATSC)
- More fonts, more commands
- more triplets allowed in packet

Closed Captions

Gstreamer 1.16

- extract 608 and 708
- render of 708
- Decklink, MPEG and H264
- added as meta to video frame GstVideoCaptionMeta

Closed Captions

Gstreamer 1.18

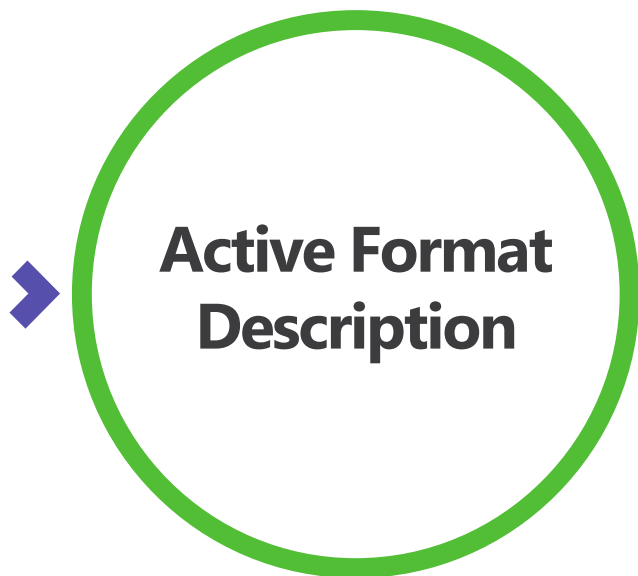
- centralize parsing
- add support for H265
- add support for some cea 608 variants
- improve Decklink caption support

Closed Captions

Future Work

- **cea708decoder** needs some love
- auto plugging





16:9 top			
14:9 top			
>16:9			
Full			
4:3			
16:9			
14:9			
4:3 (14:9)			
16:9 (14:9)			
16:9 (4:3)			

Active Format Description (AFD)

- Avoiding the dread “postage stamp”

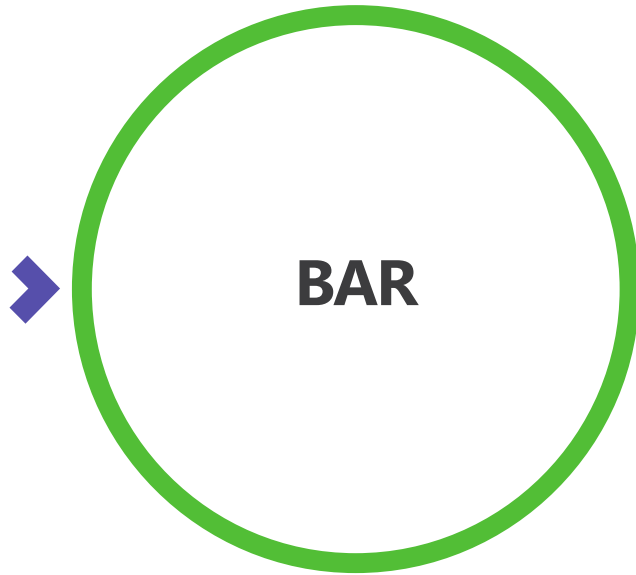


Active Format Description (AFD)

- Content aspect ratio differs from display
- Accurate aspect ratio switching
- Won 2012 technical Emmy
-

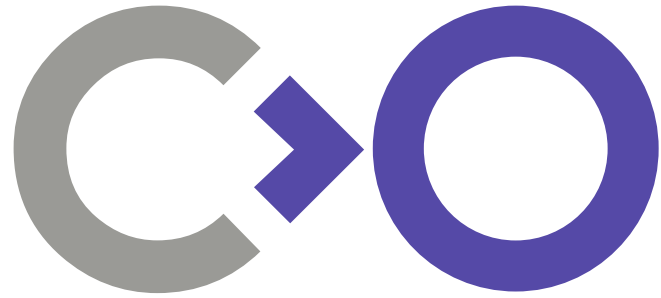
Active Format Description (AFD)

- **Gstreamer 1.18** support via **GstVideoAFDMeta**
- MPEG, H264 and H265 are supported



Bar Data

- .When AFD is not good enough
- .14 bits for width and height of black bars
- .Either pillar box or letter box
- .**Gstreamer 1.18** support via **GstVideoBarMeta**
- .MPEG, H264 and H265 are supported



Thank you!



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