



# Elevating the game

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# Image : UHD HDR



# Power of Sound

- Tool for creators
- Strong **emotional** power
- **Immersion** in a universe: Reinforces, extends, surrounds the picture...
- Creates **realism**



# Power of Sound



***"Sound is 50% of the movie experience"***

*– George Lucas*

*"Long ago we realized that sound was your "special friend" because sound does at least 50% of the job !"*

*– Francis Ford Coppola*



# What is a “good sound” ?

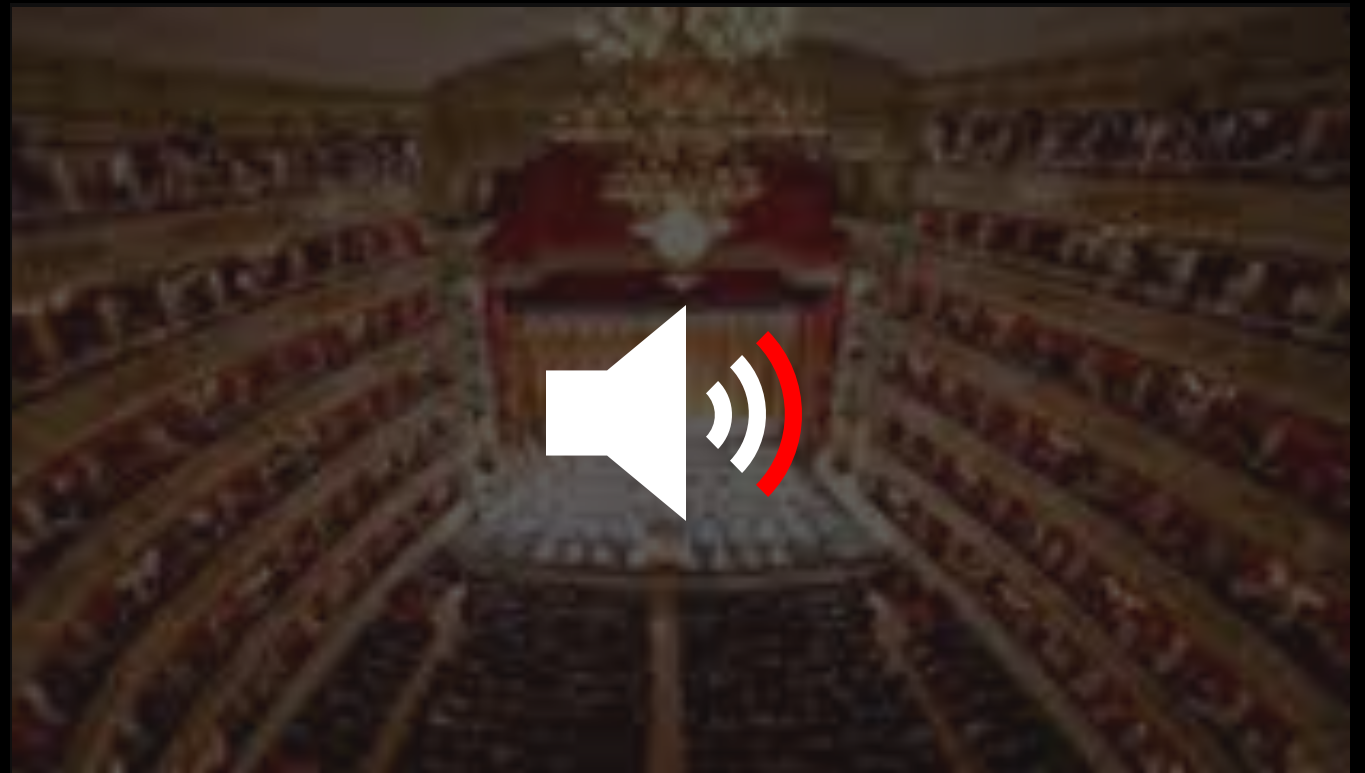
Hear everything...

... At the right level !

Immersive :

More natural & Richer

More impact!



?



# Dolby Atmos from Movies to Live

Offer consumers a premium, multidimensional spatial sound experience in entertainment, adding layers beyond traditional surround sound, revealing more depth, clarity and details.

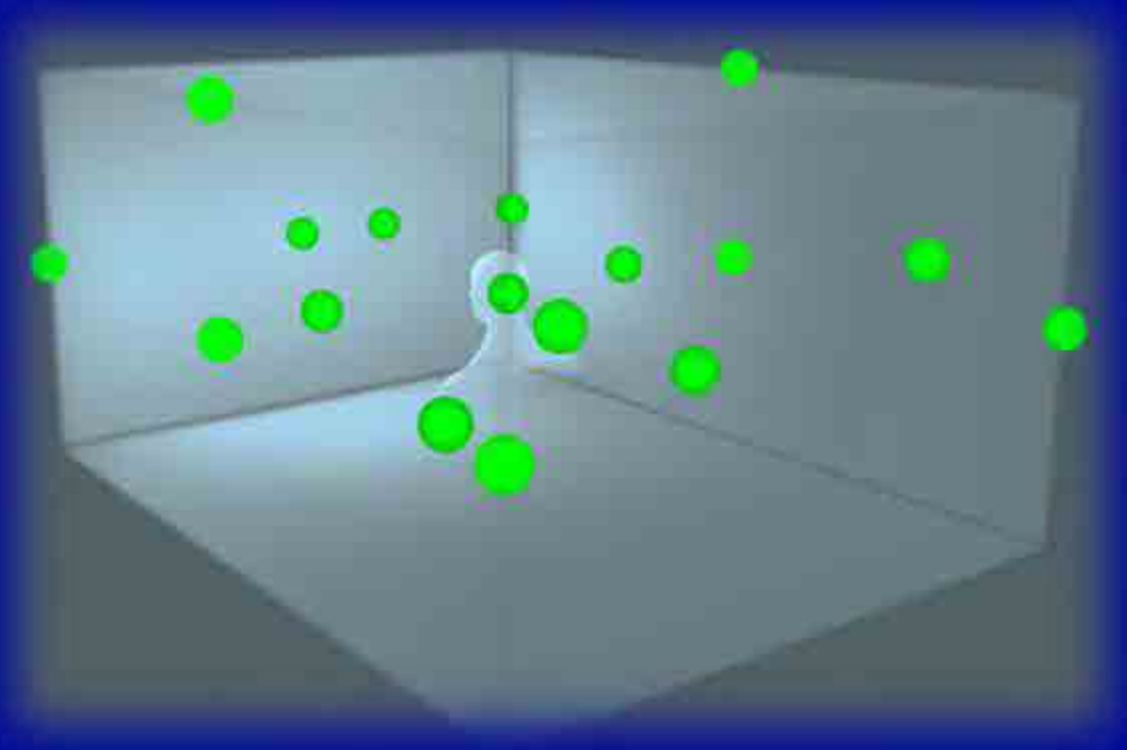




# Dolby Atmos from Movies to Live

## Overhead speakers

Deliver a true 360° audio immersion

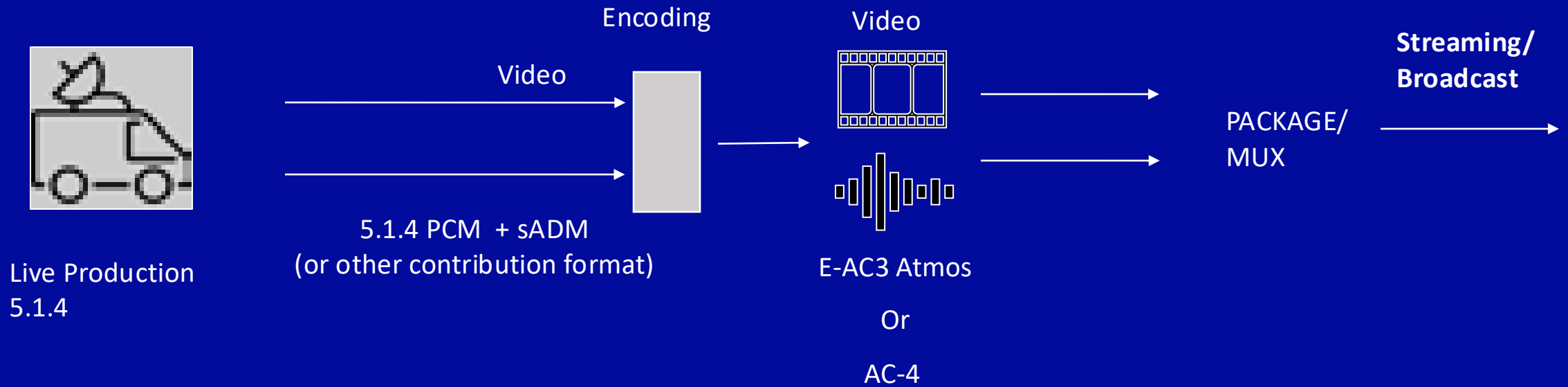


## Audio Objects

Place Audio at any point in the room, **free of any speaker constraints**

**Up to 128 audio objects**

# Dolby Atmos from Movies to Live



# Use case France Television



# Use case France Television

Ambiance produced in 5.1.4 immersive audio from  
OBS (**M & E**)

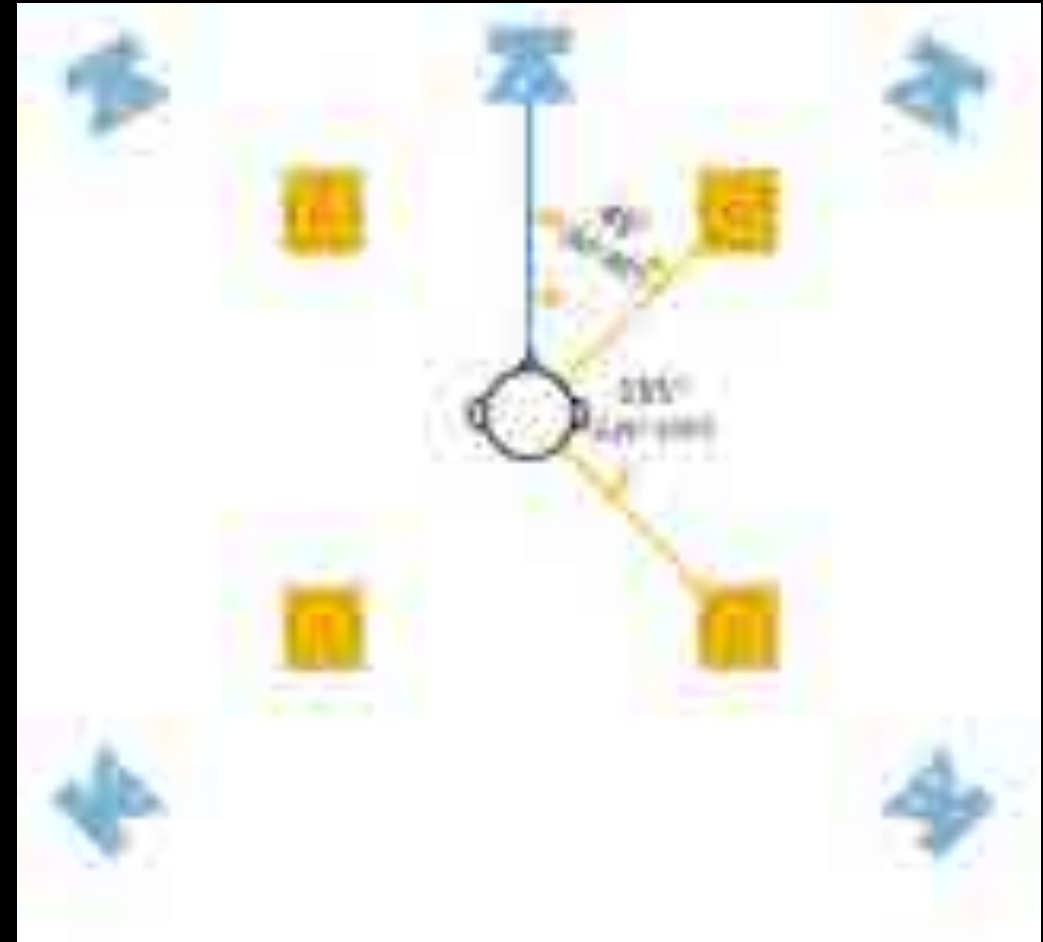
Commentary from France Television (**D**)

Live Set captured in 5.1.4 by France TV at Trocadero

## **M&E + D**

16 PCM tracks in 2110-30

Serial-ADM metadata in 2110-41



# Serial-ADM

ADM : Broadcast Wave file with <128 tracks + ADM metadata. Dolby Atmos Master.

File-based format only.



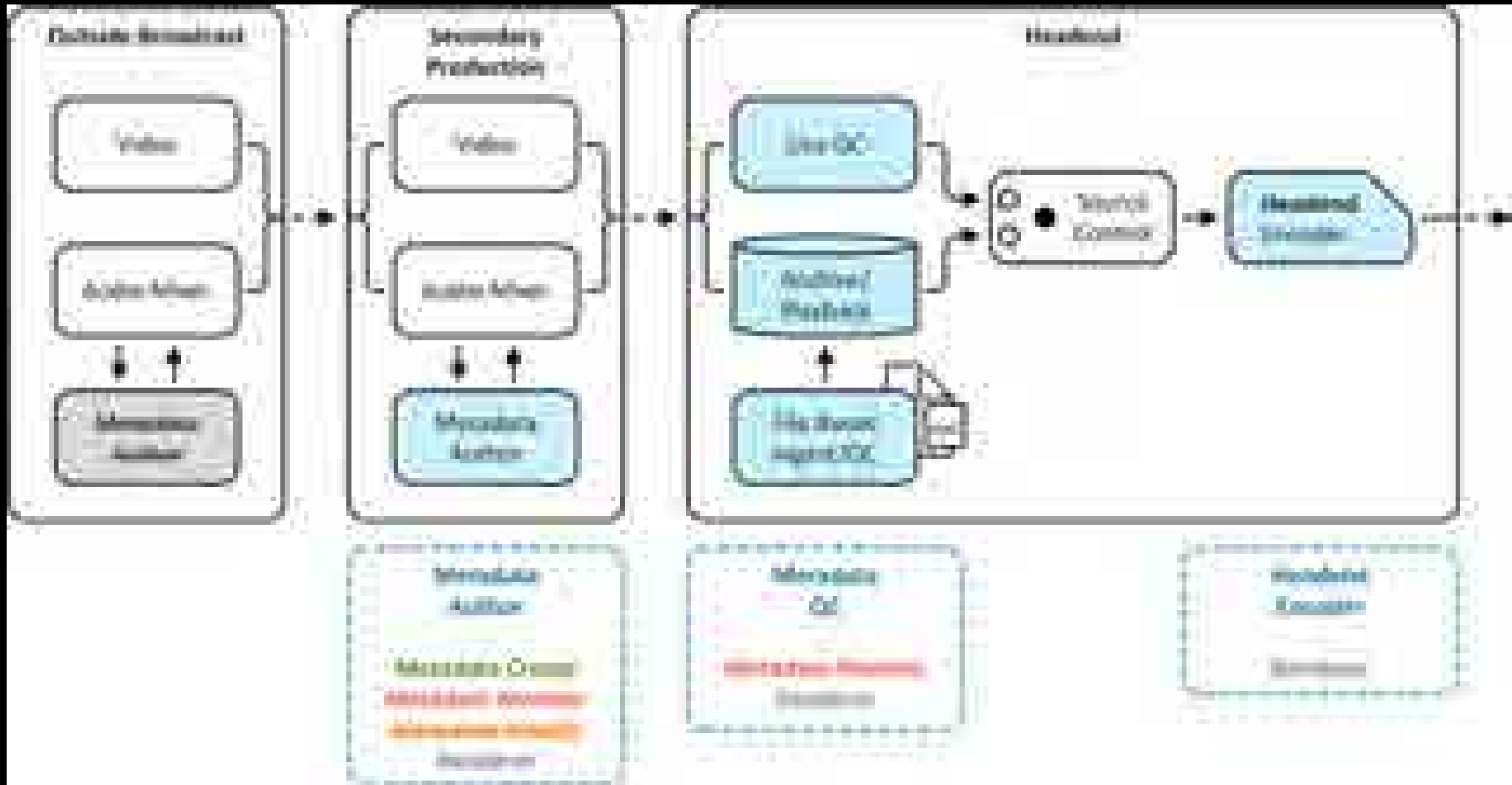
Need something for linear : serialised ADM

Specified in Rec ITU-R BS.2125, which describes how the ADM XML document is placed into a serial frame-based structure.

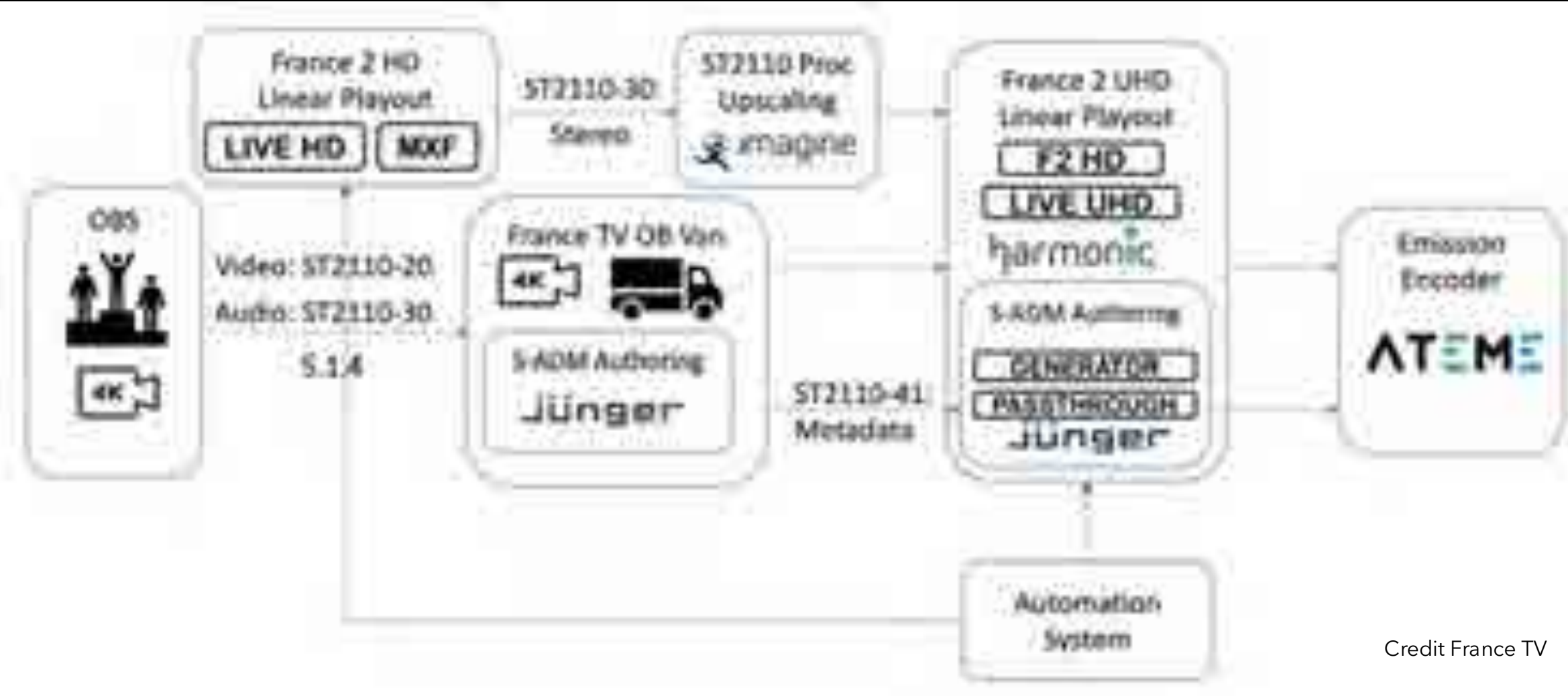
Europe driven standard (EBU).

Describing the content of the audio tracks, configures the encoder.

# S-ADM workflow



# France TV workflow





# Dolby AC-4

On-air in France (January) and Spain (February) on UHD terrestrial

Preferred NGA format in terms of specs adoption and deployment

Deployed in UHD TVs across Europe

Flexible, adaptable, accessible.

# Dolby AC-4 for immersive and personalised audio experiences



Dialogue  
Enhancement



Audio  
Description



Immersive Audio  
Dolby Atmos



Personalisation  
for customised  
experiences

## **Dolby AC-4 NGA is the *how*.**

It is a codec used for packaging audio information into data packages that can then be delivered, by streaming or broadcast, to enabled devices.

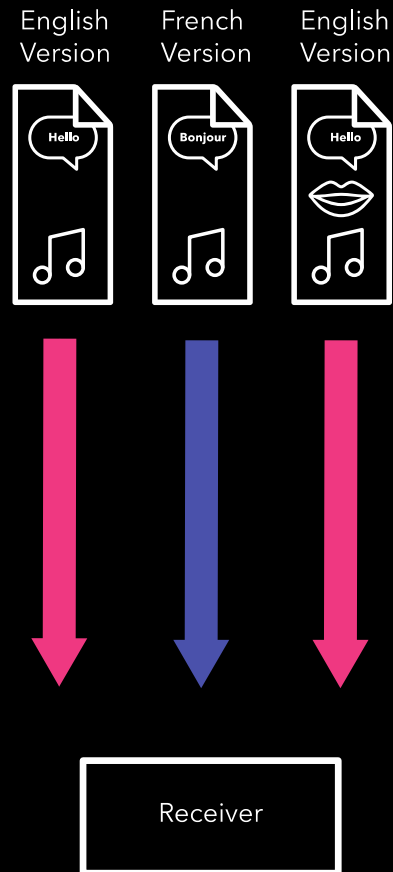
## **Dolby Atmos is the *what*.**

It is the format that allows for the creation of an immersive 3D audio experience that puts consumers in the action.



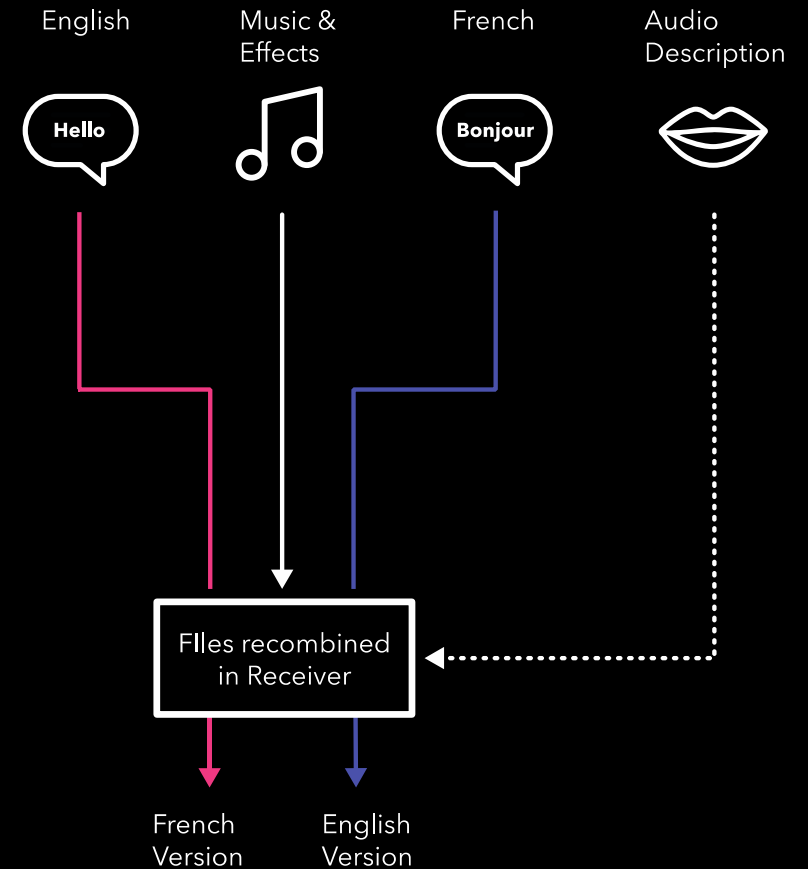
**Dolby AC-4**

## Current delivery



One audio stream is required per version. The audio description version is usually experienced in stereo. Each version requires on full delivery file creating duplicate deliveries of individual elements.

## AC-4 stream



The AC-4 stream delivers each audio element separately to the receiver.

The receiver then composes the version selected by the viewer.

Viewers in need of audio description can benefit from an immersive experience in Dolby Atmos. With each element delivered once and separately, the new AC-4 codec saves bandwidth and open up to many possibilities.

# A summer of sports in Dolby



>100 M Households  
with Dolby Atmos

