



TRACE – NodeJS, JQuery, Bash scripts and Ffmpeg –  
Emmanuel ALDEGUER, IBC 2016, 09/10/16  
ealdeguer@trace.tv



# What is TRACE

8 Pay TV linear Music channels



160

countries

<sup>2</sup> 38 satellites

1 sports entertainment channel



1 FM radio station



Very soon 1 SVOD Offer



## How to optimize our workflow:

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- **Emmanuel ALDEGUER, CTO, working there since 2009.**
- **5 people in the broadcast team, 3 Engineers.**
- **70 servers to monitor and maintain provided by +20 different constructors. Half of them virtualized (Vmware)**
- **Hundreds of clients over each time zone :  
Daytime doesn't mean anything to us.**
- **15 playlists, 21 feeds, one broadcast operator,  
no one on site at night**

HOW TO PROCEED ?

# Trace Central – Example of Briefmaker

- Production interface
- Graphic visualisation of the processes
- Coded with Python, JQuery, Bootstrap, MongoDB, Apache
- Current Project Managers : Emmanuel ALDEGUER ([éaldeguer@trace.tv](mailto:éaldeguer@trace.tv)) and Rodolphe HURET ([rhuret@trace.tv](mailto:rhuret@trace.tv))

The screenshot shows the TRACE CENTRAL web interface. At the top, there is a navigation bar with links for 'CENTRAL', 'Trace Website', 'Portal', 'Tasks History', and 'You're logged in'. Below the navigation bar, there are two notification boxes: a green 'Success' box stating 'You have one Task approved' and a red 'Error' box stating 'You're not connected to the database'. The main heading is 'BRIEF MAKER v0.1' with the subtitle 'A web-based interface to create your briefs.'. Below the heading is a horizontal menu with tabs: 'First Steps', 'General', 'Pictures and Graphics', 'Videos', 'Audios', 'Event Date', 'City/Venue', and 'Submit Task'. The 'First Steps' tab is active, and the page content is titled 'First Steps' with the subtitle 'First Steps in creating your Brief'. The form includes a 'Brief Name' field with the value 'TEST', a 'save' button, and a 'Program Type' dropdown menu with 'Agenda' selected. There are green circular indicators next to the 'save' button and the 'Program Type' dropdown.

# FFMPEG and JQuery

- Usage of ffmpeg bash scripts within a JQuery/PHP interface to convert various video files format and bitrate to TRACE' s Ready to Broadcast standards : MXF XDCAM 1080i50
- User friendly
- Combined to Central's MySQL DB run with Apache web server.
- Task listing and video format of the source stored.
- Current Project Manager : Jérémy DUPEU ([jdupeu@trace.tv](mailto:jdupeu@trace.tv) )

The screenshot shows the TRACE website interface. At the top, there is a navigation bar with 'CENTRAL', 'Trace Website', 'Portal', 'Tasks History', and 'You're logged in'. Below this is a sub-navigation bar with 'URL Field', 'Name Field', 'Format Field', 'Submit Task', and 'Details'. The main content area is titled 'Please enter here the videoclip name' and contains a text input field with 'TEST' entered. Below this is a section titled 'Format Field' with the instruction 'Please select the format for your video'. This section contains three rows of options, each with a radio button, a label, and an error message:

Option	Status	Error Message
The best resolution available for video is: 720p	Selected (radio button)	Error : No HD Version available.
The audio bitrate available is: 128k	Selected (radio button)	Error : No Audio available.
Censored version ? Yes	Selected (radio button)	Error : You must specify if the video needs to be censored.

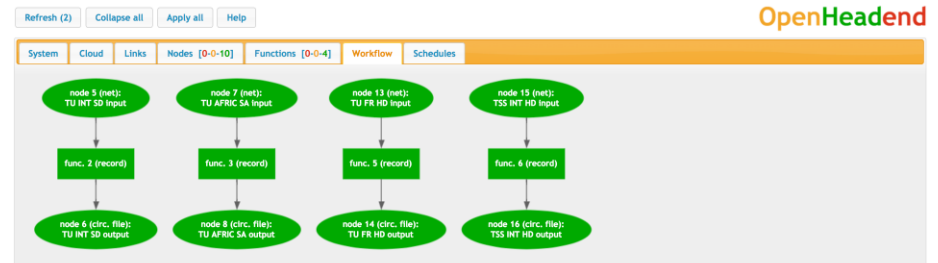
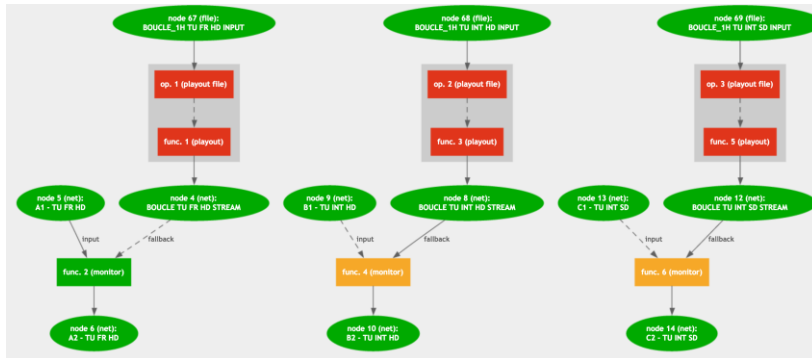
# NodeJS, VOD, Metadata workflows

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- Usage of NodeJS, to accelerate web service deployment
- Usage of NPM packets Express, xlsx-to-json, Bodyparser, Multer, Pug (Jade)
- Extract datas from Google Sheets environment as json pushed to Arkena's API OSM environment
- Current Project Manager : Emmanuel ALDEGUER (ealdeguer@trace.tv)

# Open Head End

- Usage of OHE products in Trace's broadcast environment
- Feeds 24h/24 7d/7 recording and sample extraction
- IP Change-Over System to be implemented very soon
- Internal IPTV Network
- Current Project Manager : Romain LAISNE ([rlaisne@trace.tv](mailto:rlaisne@trace.tv))



# Let's summerize

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- Redmine : <http://www.redmine.org>
- FFMPEG : <http://www.ffmpeg.org>
- NodeJS : <https://nodejs.org/en/>
- Trace Central : <http://www.jquery.com> and <http://www.bootswatch.com/united> and <http://www.mongodb.org>
- OpenHeadEnd : <http://www.openheadend.tv>