

# LYRAE Use Case 1

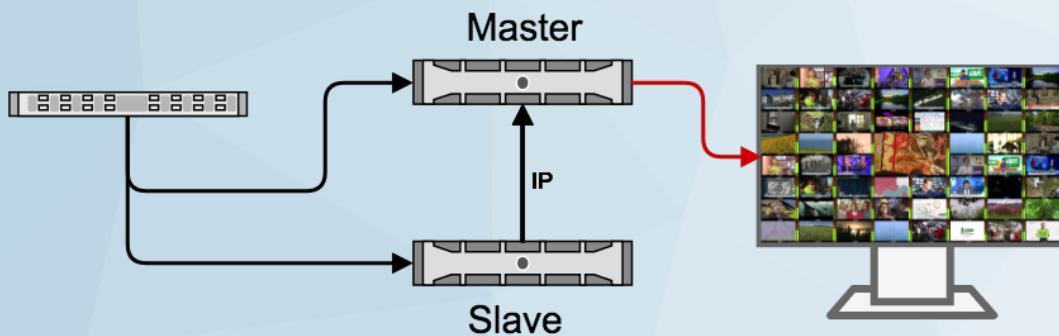
Displaying a large number of channels thanks to the distributed architecture

## Requirement :

Design of a Master Control Room (MCR) for monitoring a large number of channels. Due to the limited space, it is necessary to optimise the number of monitors and the number of thumbnails displayed on each of them.

## Implementation :

In order to allow dense multiviewer screens, LYRAE is able to share the decoding and scaling processes over various servers. As an example, it is possible to use one master server and one slave server, each receiving 15 to 20 contribution HD H.264 services at 20Mbps for a total of 30-40 services on a single screen.



## Customer Reference :

The largest cable operator in Japan : When they needed to relocate their 2 main head-ends, they decided to switch all their infrastructure to IP and change their SDI based monitoring system to LYRAE for monitoring their IP streams.

The system for each of the 2 sites is composed of 12 displays each driven by 2 powerful servers so a total of 24 servers running LYRAE and monitoring more than 250 channels (for each site).

LYRAE's capacity to generate multiviewer screens of more than 35 high bitrate HD H.264 services thanks to its distributed architecture was a key factor in the customer's decision to select LYRAE.

### Requirements :

Design of a Master Control Room (MCR) for monitoring a large number of channels. The multiviewers are an important piece of the overall monitoring of the head-end equipments and therefor needs to be deeply integrated with the network management system. Furthermore, the analysis of the input streams and the resulting alarms need to be integrated to the head-end's redundancy system

### Implementation :

LYRAE provides multiple interfaces allowing integration at several levels.

In this specific case, the first integration point is the automated generation of LYRAE's XML configuration files from the network management system in order to change the composition of any of the multiviewer screens in real time with total flexibility. The second integration point is required to get the alarm informations to the network management system. For this, LYRAE can communicate over IP and communicate the status of each channels in real time to the external system.

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The customer's network management system integrates with LYRAE at several levels. It can generate LYRAE configuration files and receive alarms from LYRAE making it the central piece of the monitoring of their inbound and outbound channels.

In addition, the alarms generated by LYRAE and sent to the Network Management System are used as triggers in the redundancy switching system.



# LYRAE Use Case 3

Monitoring on a 4K display

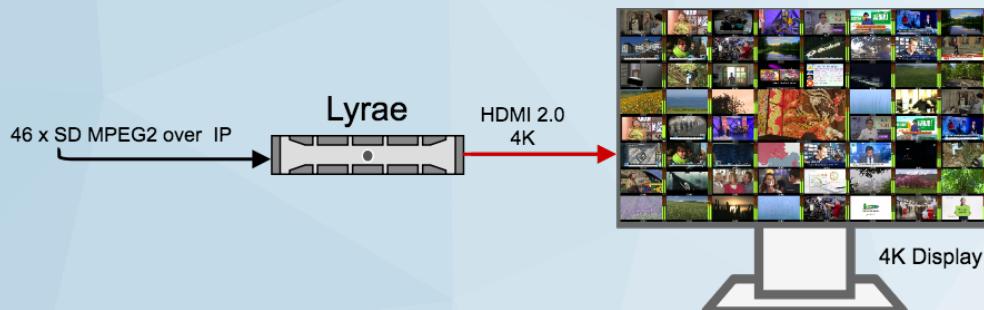


## Requirement :

Monitoring a many SD streams in a compact setup but without compromising on image quality

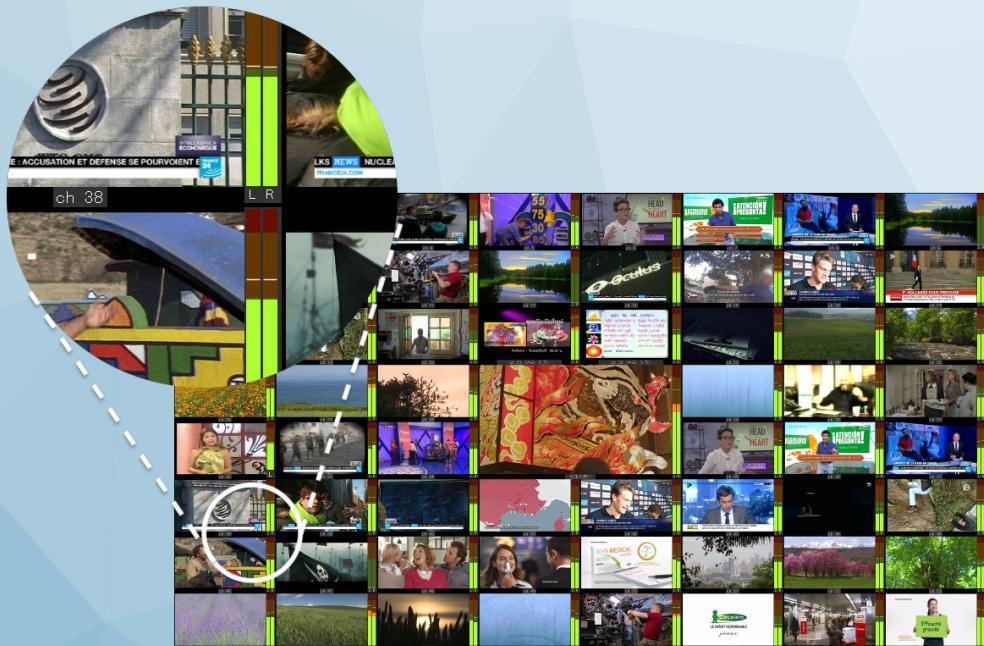
## Implementation :

Thanks to LYRAE's ability to output a 4K resolution multiviewer screen, it is possible to monitor a large number of SD services with little if any degradation of the image quality. For a  $7 \times 7$  thumbnails mosaic, each service being displayed with a 548x308 resolution, the scaling from the original SD (720 x 576) has a relatively low impact and the 4K resolution on the output allows for a high fidelity reproduction.



## Customer Reference :

A concrete exemple is the japanese national TV network that uses LYRAE for each Olympic Games in order to monitor the IP streams received from OBS (Olympic Broadcasting Services). For the Rio Olympics, there were 49 SD-Mpeg2 channels displayed on a single 70" display.



# LYRAE Use Case 4

## RF Signals Monitoring

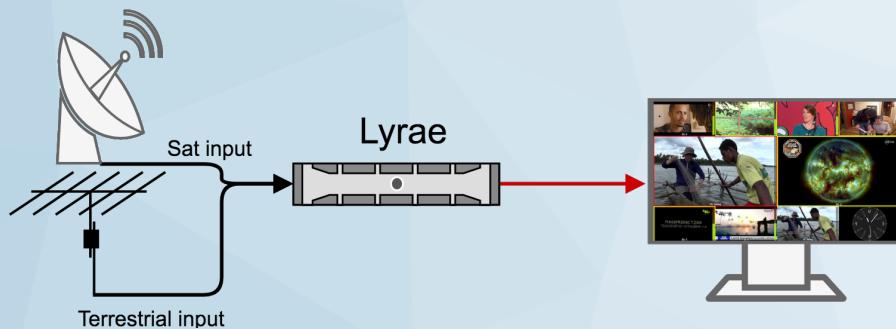


### Requirements :

Monitoring the satellite or terrestrial feedback signals.

### Implementation :

Using reception PCIe boards, LYRAE has the ability to receive directly modulated signals (as long as they are not encrypted) which makes for simple and compact setups requiring no IRD or demodulators upstream.



### Customer Reference :

ABS-CBN in the Philippines uses LYRAE in order to monitor its services directly from the terrestrial ISDB-T signal. The support of receiver cards for terrestrial signals (DekTec's DTA-2131) by LYRAE was the key to create this simple and affordable yet powerful system.

# LYRAE Use Case 5

Multi-head display for more than 1 screen



## Requirement :

Using two monitors for the monitoring of video services and being able to choose freely which service is displayed on which monitor in order to have HD channels on one screen and SD channels on the other.

## Implementation :

In LYRAE's configuration, the separation of the sources from the multiviewer's definition means that any service from any source can be freely assigned to any thumbnail on the output. There is no constraint for duplicating services on each output screens and there is no need to receive a stream twice for displaying some of its services on one screen and some on another. This allows for example to separate services no by input but by resolution with all SD channels on one screen and all HD on the other screen.

