



M6 Group

Slavisa Gruborovic – Solutions Architect
Solutions Engineering
Evertz Microsystems



IP SHOWCASE THEATRE AT IBC2019 : 13-17 SEPT 2019



Technology & Applications

End to End IP Solution

- Advanced Orchestration
- Monitoring and Analytic Tools
- Interoperability, Standards Based (SMPTE ST-2110)
- Dedicated Virtualized Solutions



IP SHOWCASE THEATRE AT IBC2019 : 13-17 SEPT 2019



Standards and Challenges

- Enable efficient workflows
- Interoperability
- Troubleshooting/Diagnostics
- CONFIDENCE!



IP SHOWCASE THEATRE AT IBC2019 : 13-17 SEPT 2019

3



Open Specifications

Advanced Media Workflow Association

Open Specifications to discovery, register, and control IP devices

APIs for control / orchestration systems

IS-04

- Registration and Discovery of 3rd party devices
- Open API
- V1.2 Approved as Spec

IS-05

- Connection Management
- V1.0 approved as spec



IP SHOWCASE THEATRE AT IBC2019 : 13-17 SEPT 2019

4



M6, France

AGENDA:

- Project Background / Goal
- Solution
- Future / Next Steps?
- Questions



IP SHOWCASE THEATRE AT IBC2019 : 13-17 SEPT 2019

5



M6, France

AGENDA:

- Project Background / Goal
- Solution
- Future / Next Steps?
- Questions



IP SHOWCASE THEATRE AT IBC2019 : 13-17 SEPT 2019

6



Project Background / Goal

- Upgrade of their two sites
 - Main Site was put in production in 2008
 - Modernize its infrastructure
 - Choosing the latest and greatest technology
- Project in two (2) Phases
 - Phase 1: Main Site at 46 Dulud (2018 / 2019)
 - Phase 2: Backup Site at 89 Charles de Gaulle (2019 / 2020)



IP SHOWCASE THEATRE AT IBC2019 : 13-17 SEPT 2019

7



M6, France

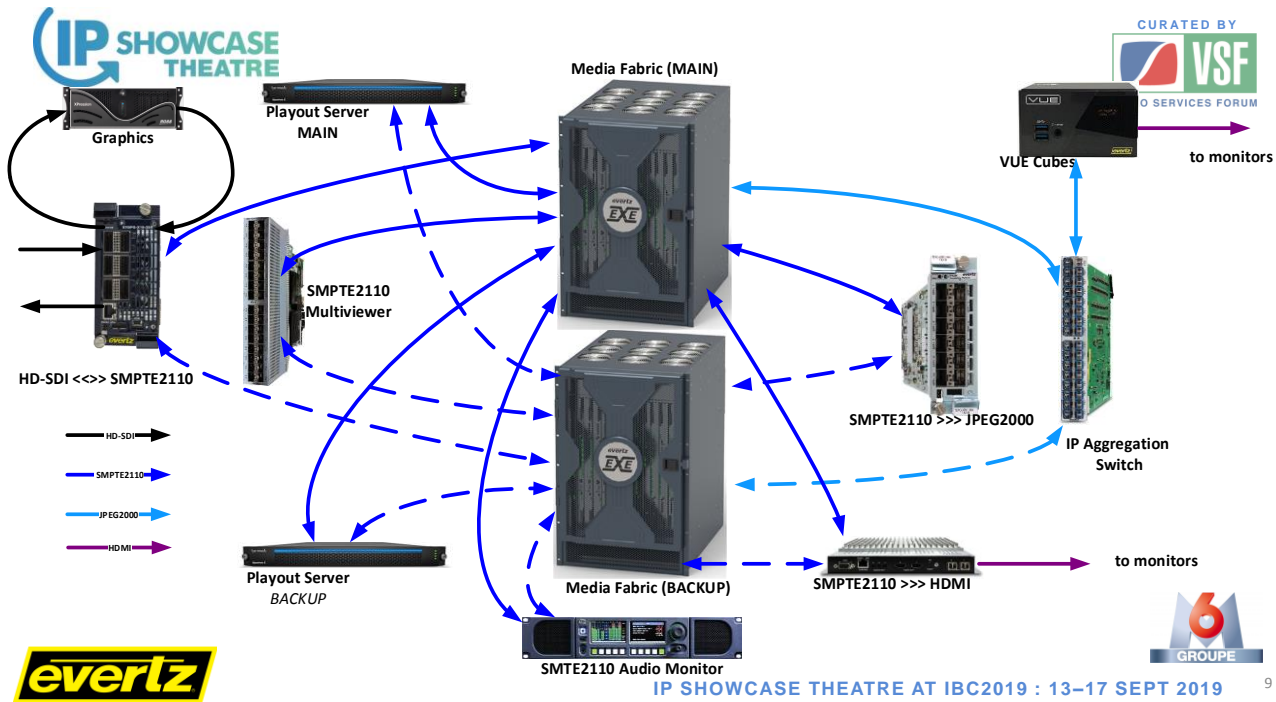
AGENDA:

- Project Background / Goal
- **Solution**
- Future / Next Steps?
- Questions



IP SHOWCASE THEATRE AT IBC2019 : 13-17 SEPT 2019

8



Solution

- Modernized Master Control Room (MCR)
- Advanced Playout Infrastructure
- SMPTE 2110 Software-Defined Video Networking (SDVN) solution
- TWO (2) channels currently on (July 2019)
- Provided solution exploits the benefits of SMPTE2110 technology and optimizes various delivery management workflows.





Solution

- The solution is based on a pair of main and redundant Evertz' EXEs (IP based switching fabrics)
- High capacity switching fabrics that provide non-blocking and low-latency switching of uncompressed SDI video over IP based on SMPTE 2110 encapsulation.



IP SHOWCASE THEATRE AT IBC2019 : 13-17 SEPT 2019 11



M6 Group Interoperability

- SDI Signals encapsulated to Uncompressed SMPTE2110
- The M6 system had four (4) 3rd party devices
 - Tektronix PRISM
 - HARMONIC Spectrum play out server
 - Ross XPression
 - TSL PAM IP

Harmonic Payout controlled via NMOS (by MAGNUM).

Tektronix PRISM controlled via API (by MAGNUM).

Ross XPression connected with SDI encap/de-encap via IP Gateways.

TSL connected through NAT.



IP SHOWCASE THEATRE AT IBC2019 : 13-17 SEPT 2019 12

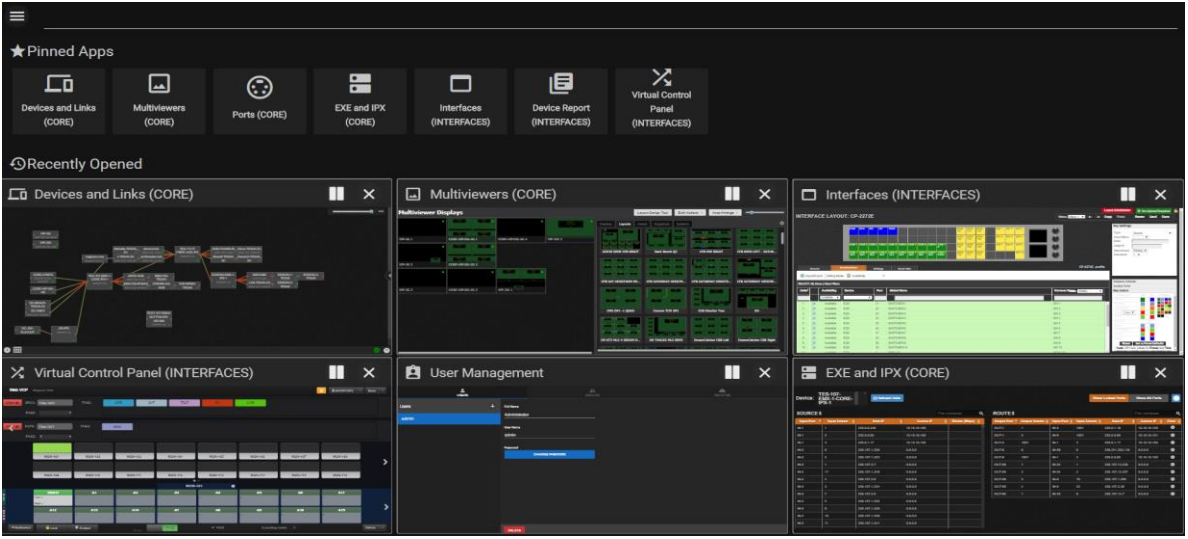


Solution

- M6 requires full control of all SMPTE2110 signals
 - Software Defined Orchestration Based on Evertz MAGNUM
 - Intuitive and user-friendly VUE touch screen interfaces with auto-response to outages



IP SHOWCASE THEATRE AT IBC2019 : 13-17 SEPT 2019 13



IP SHOWCASE THEATRE AT IBC2019 : 13-17 SEPT 2019 14



Visibility

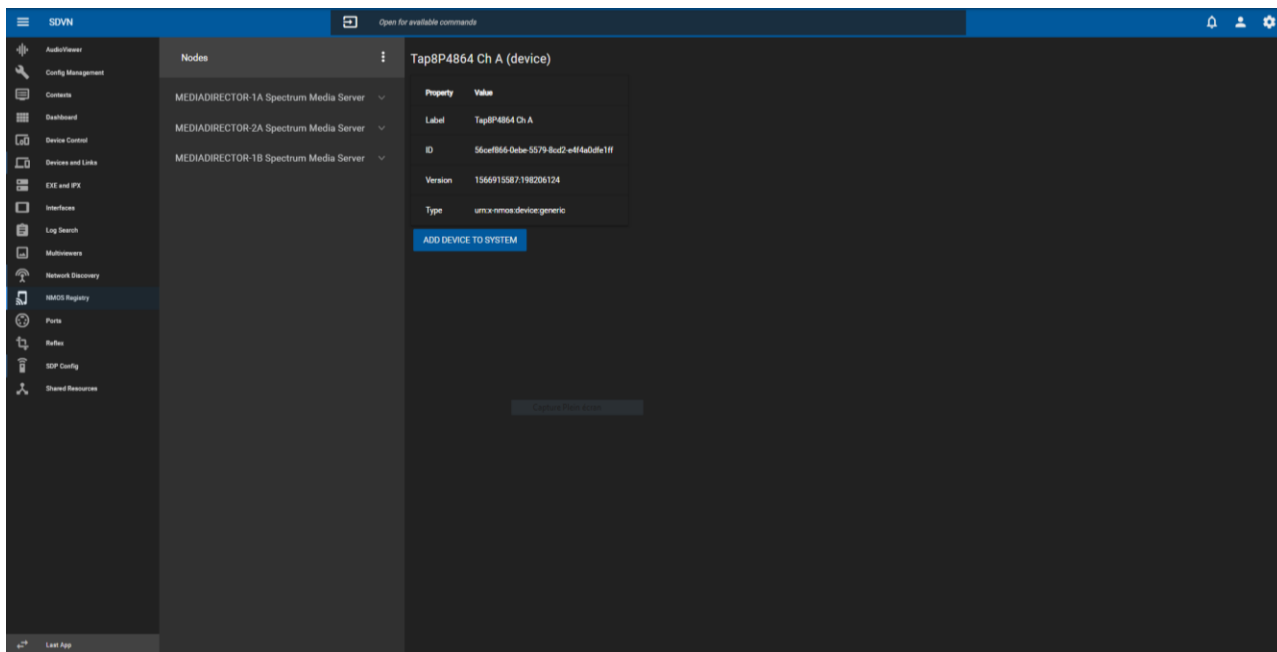
- Information such as source paths, link bandwidth/status, and device information is quickly accessed via a web interface and visualized providing additional context and details for the management and operation of the system

Configurability

- Centralized management and configuration through tailored web interfaces that provide user specific dashboards which contain only the required applications and widgets for that user



IP SHOWCASE THEATRE AT IBC2019 : 13-17 SEPT 2019 15



IP SHOWCASE THEATRE AT IBC2019 : 13-17 SEPT 2019 16

NMOS Registry (SYSTEM)

Nodes **Coveloz Raptor (device)**

- Coveloz Raptor ^
- Devices ^
- Coveloz Raptor ^
- Sources v
- Senders v
- Receivers v
- Coveloz Raptor v

Property	Value
Label	Coveloz Raptor
ID	80f90221-a5c4-4fd9-a614-6abf954f6a62
Version	47:973828880
Type	urn:x-nmos:device:generic

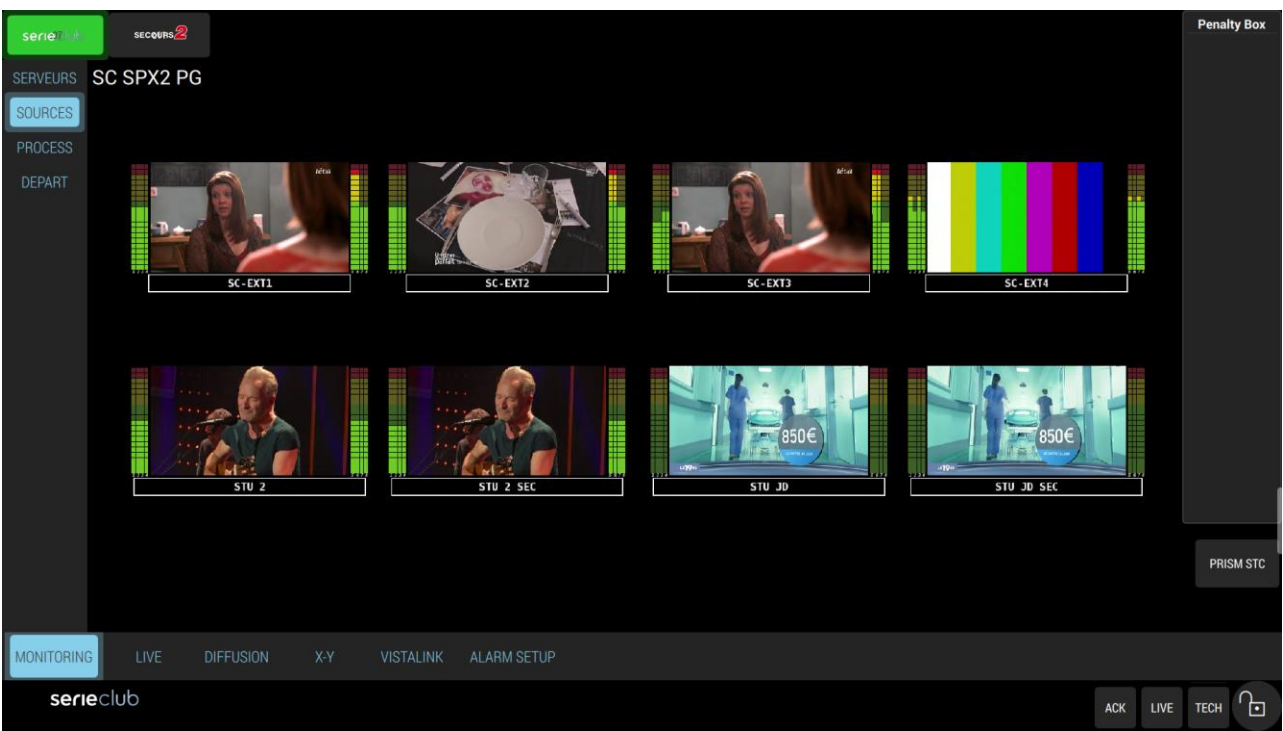
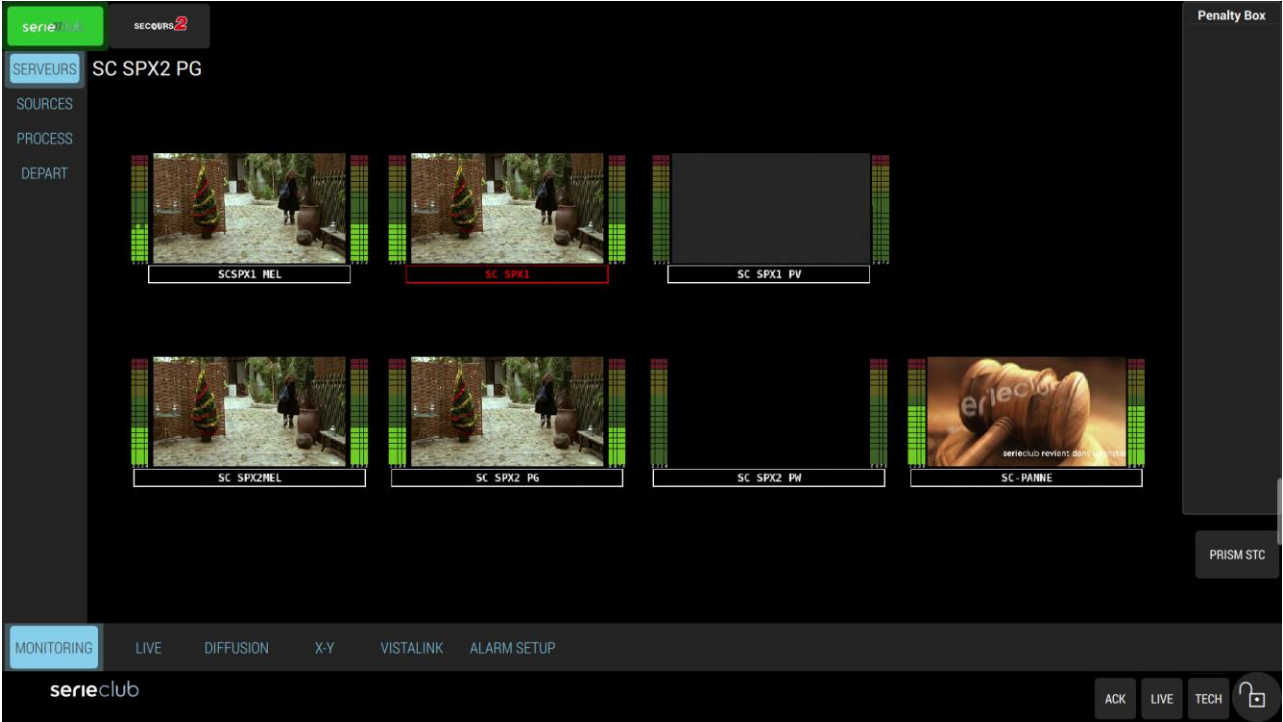
ADD DEVICE TO SYSTEM

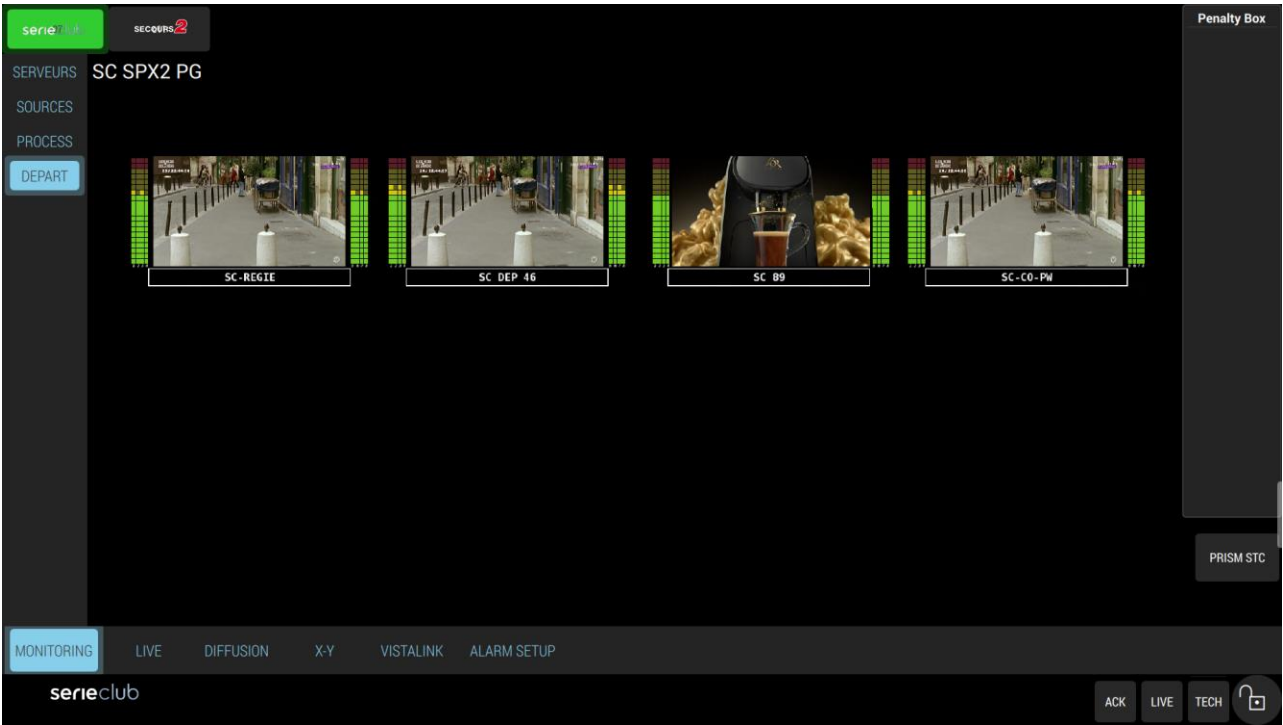
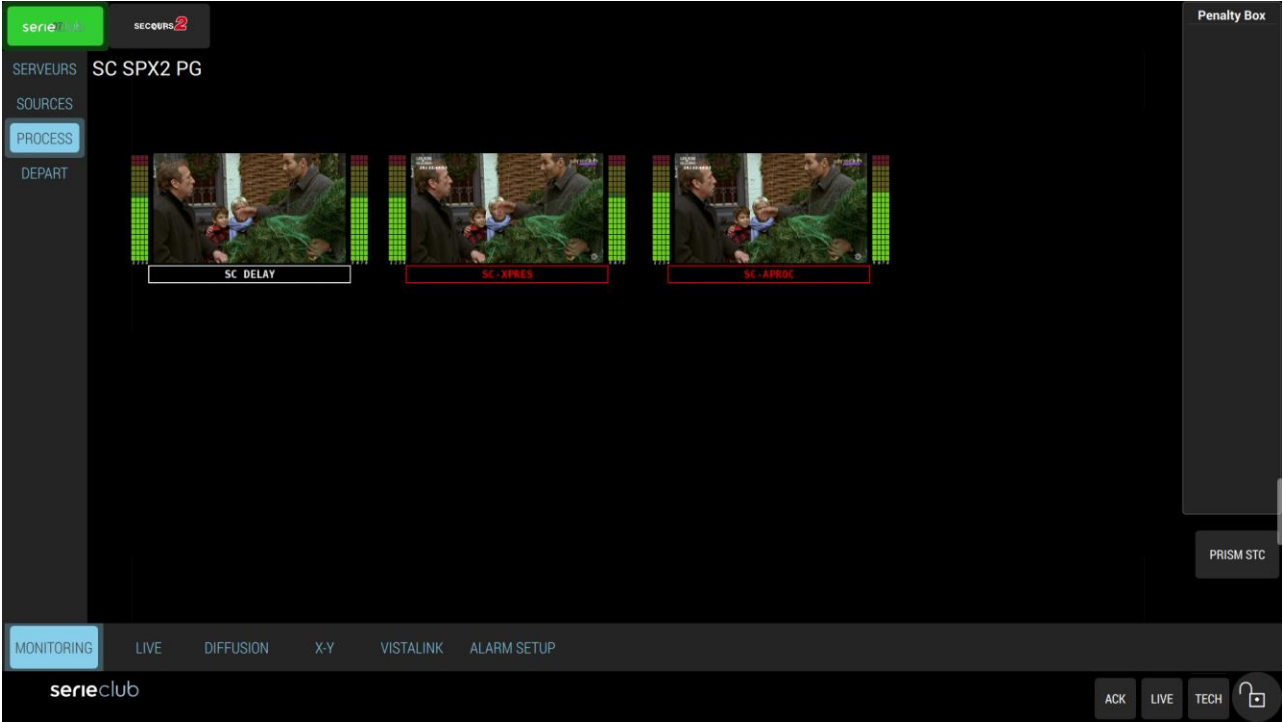


Network Discovery (SYSTEM)

Device Name	Device Port	Router Name	Router Port	Pending Actions
570IPG-3G18-SFPP12 00-02-c5-1d-8a-a0	ENET-2 00-02-c5-1d-8a-a1	IPX	ENET-21	Add Device Add Link APPLY
570IPG-RX	ENET-2	IPX	ENET-31	Delete Link Add Link APPLY







serieclub **SECQURS 2** Penalty Box

Spectrum 1

LOCK 1 SC-EXT1 TE-DEPHD SC-EXT2 W9-DEPHD SC-EXT3 TE-DEPHD SC-EXT4 A-SERTE STU 2 STU 2 SEC STU JD STU JD SEC

LOCK 2 SC-EXT1 TE-DEPHD SC-EXT2 W9-DEPHD SC-EXT3 TE-DEPHD SC-EXT4 A-SERTE STU 2 STU 2 SEC STU JD STU JD SEC

Spectrum 2

LOCK 3 SC-EXT1 TE-DEPHD SC-EXT2 W9-DEPHD SC-EXT3 TE-DEPHD SC-EXT4 A-SERTE STU 2 STU 2 SEC STU JD STU JD SEC

LOCK 4 SC-EXT1 TE-DEPHD SC-EXT2 W9-DEPHD SC-EXT3 TE-DEPHD SC-EXT4 A-SERTE STU 2 STU 2 SEC STU JD STU JD SEC

MONITORING **LIVE** DIFFUSION X-Y VISTALINK ALARM SETUP

serieclub ACK LIVE TECH

serieclub **SECQURS 2** Penalty Box

SC-SPX1 SC DELAY SC-APROF **PVW**

IP

SC-SPX1 SDI

SC-SPX2 SDI

SC-SPX2 PG SC-XPRES

SC-PAINNE SDI

MONITORING LIVE **DIFFUSION** X-Y VISTALINK ALARM SETUP

serieclub ACK LIVE TECH

serieclub SECOURS² Penalty Box

SOURCES

Filter...

METED	METED SECOURS	SECOURS 2 AUDIO PROCESS	SECOURS 2 CO PWV	SECOURS 2 DELAY BYPASS	SECOURS 2 DEPART	SECOURS 2 EXT 1	SECOURS 2 EXT 2
SECOURS 2 EXT 3	SECOURS 2 EXT 4	SECOURS 2 PANNE	SECOURS 2 SPX1 A SUB	SECOURS 2 SPX1 B SUB	SECOURS 2 SPX2 A SUB	SECOURS 2 SPX2 B SUB	SECOURS 2 XPRESSION
SERIE-CLUB 89	SERIE-CLUB AUDIO PROCESS	SERIE CLUB CO PWV	SERIE CLUB DELAY BYPASS	SERIE CLUB DEPART	SERIE CLUB DEPART 46	SERIE CLUB EXT 1	SERIE CLUB EXT 2
SERIE-CLUB EXT 3	SERIE-CLUB EXT 4	SERIE CLUB PANNE	SERIE CLUB RETOUR CSAT	SERIE CLUB SPX1 A SUB	SERIE CLUB SPX1 B SUB	SERIE CLUB SPX2 A SUB	SERIE CLUB SPX2 B SUB

DONE

DESTINATIONS

Filter...

PAM IP CA2	PAM IP LIVE	PAM IP SERIE-CLUB/SECOURS 2	PRISM LAD	PRISM STC	SECOURS 2 AUDIO PROCESS SECOURS 2 DELAY BYPASS	SECOURS 2 DELAY BYPASS	SECOURS 2 IN A CO SECOURS 2 AUDIO PROCESS
SECOURS 2 SPX1 A SUB STUDIO 2	SECOURS 2 SPX1 B SUB SECOURS 2 EXT 3	SECOURS 2 SPX2 A SUB STUDIO JD	SECOURS 2 SPX2 B SUB SECOURS 2 EXT 4	SECOURS 2 XPRESSION	SERIE CLUB AUDIO PROCESS SERIE CLUB XPRESSION	SERIE CLUB DELAY BYPASS	SERIE CLUB IN A CO SERIE CLUB AUDIO PROCESS

DONE

MONITORING LIVE DIFFUSION **X-Y** VISTALINK ALARM SETUP

serieclub ACK LIVE TECH

T
A
K
E

serieclub SECOURS² Penalty Box

Ack	Cor	Duration	Alarm Desc/Severity	Device	Time	Date	Cor Time	Cor Date
<input checked="" type="checkbox"/>		00:00:01	VideoIn/VideoOut-2 Frozen	7800R4XB-ACS-18-28-04	May 07, 2019 18:28:05	May 07, 2019		
<input checked="" type="checkbox"/>		00:00:05	Video Frozen Freeze on input 18	SERIE CLUB SPX 17.55-30	May 07, 2019 17:55:35	May 07, 2019		

MONITORING LIVE DIFFUSION X-Y **VISTALINK** ALARM SETUP

serieclub ACK LIVE TECH



M6, France

AGENDA:

- Project Background
- Solution
- **Future / Next Steps?**
- Questions



IP SHOWCASE THEATRE AT IBC2019 : 13-17 SEPT 2019 27



Future / Next Steps???

1. Channel-by-channel deployments during 2019
2. Two (2) channels currently deployed.
3. Two (2) more channels scheduled for on-air September 24th
4. Rest of remaining channels to be deployed and go on-air throughout 2019.
5. Continuous collaboration between vendors and end-user.
6. Phase #2 design and deployment 2019/2020.



IP SHOWCASE THEATRE AT IBC2019 : 13-17 SEPT 2019 28



Thank you

Slavisa Gruborovic
sgruborovic@evertz.com
Evertz Microsystems

Thank you to our Media Partners



IP SHOWCASE THEATRE AT IBC2019 : 13-17 SEPT 2019 ²⁹