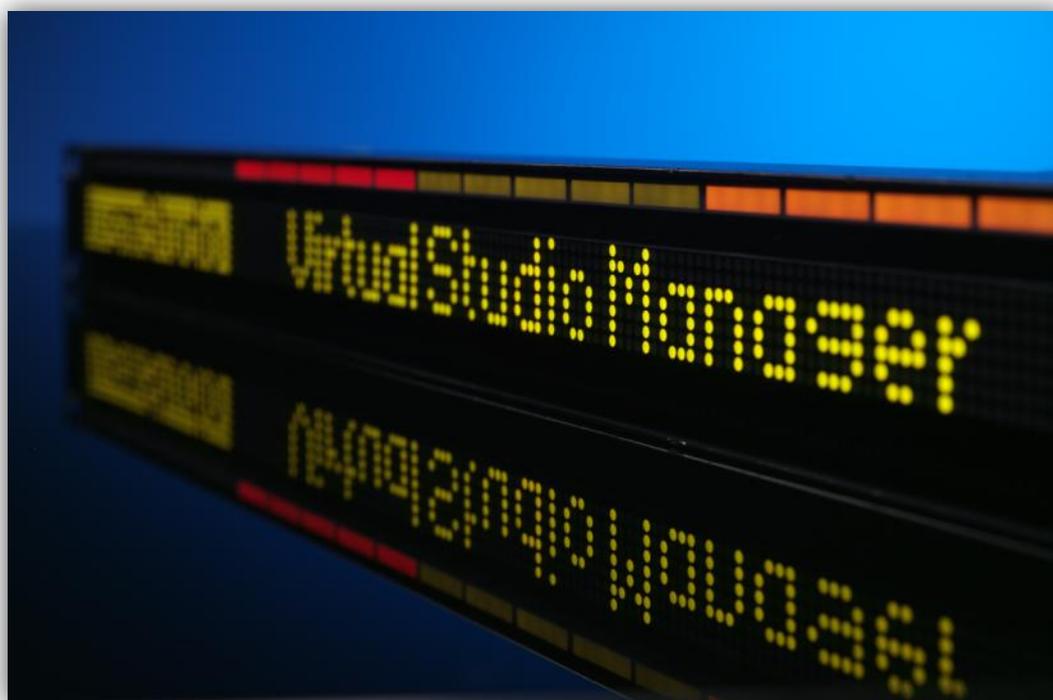


VSM for mobile applications



VSM for mobile applications

The VSM system is a stand-alone control solution for broadcast applications.

VSM provides access from multiple places to connected devices while providing easy management and individual workflow support. Many security and safety features render VSM most valuable for mission-critical applications.

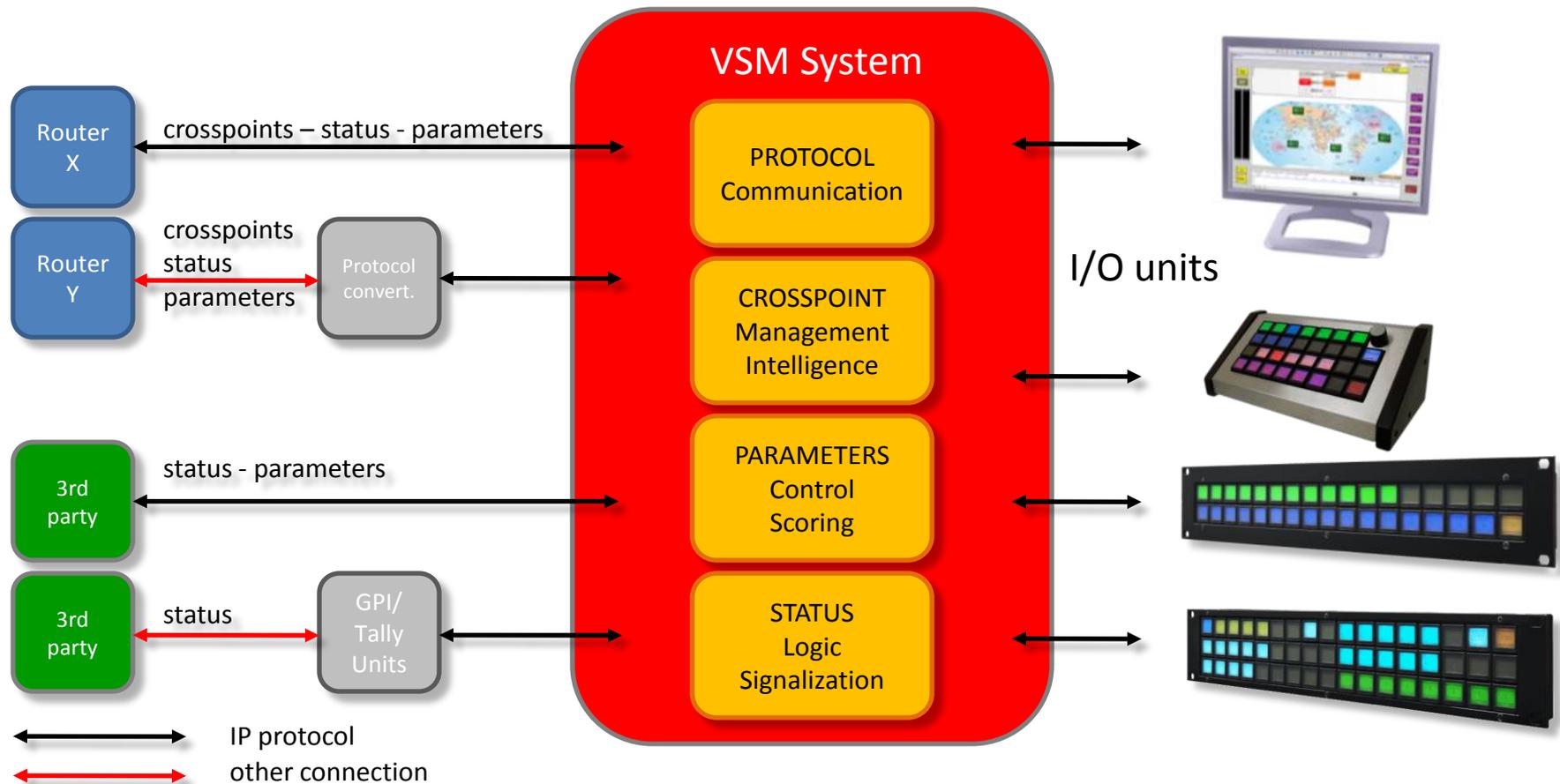


General system topology

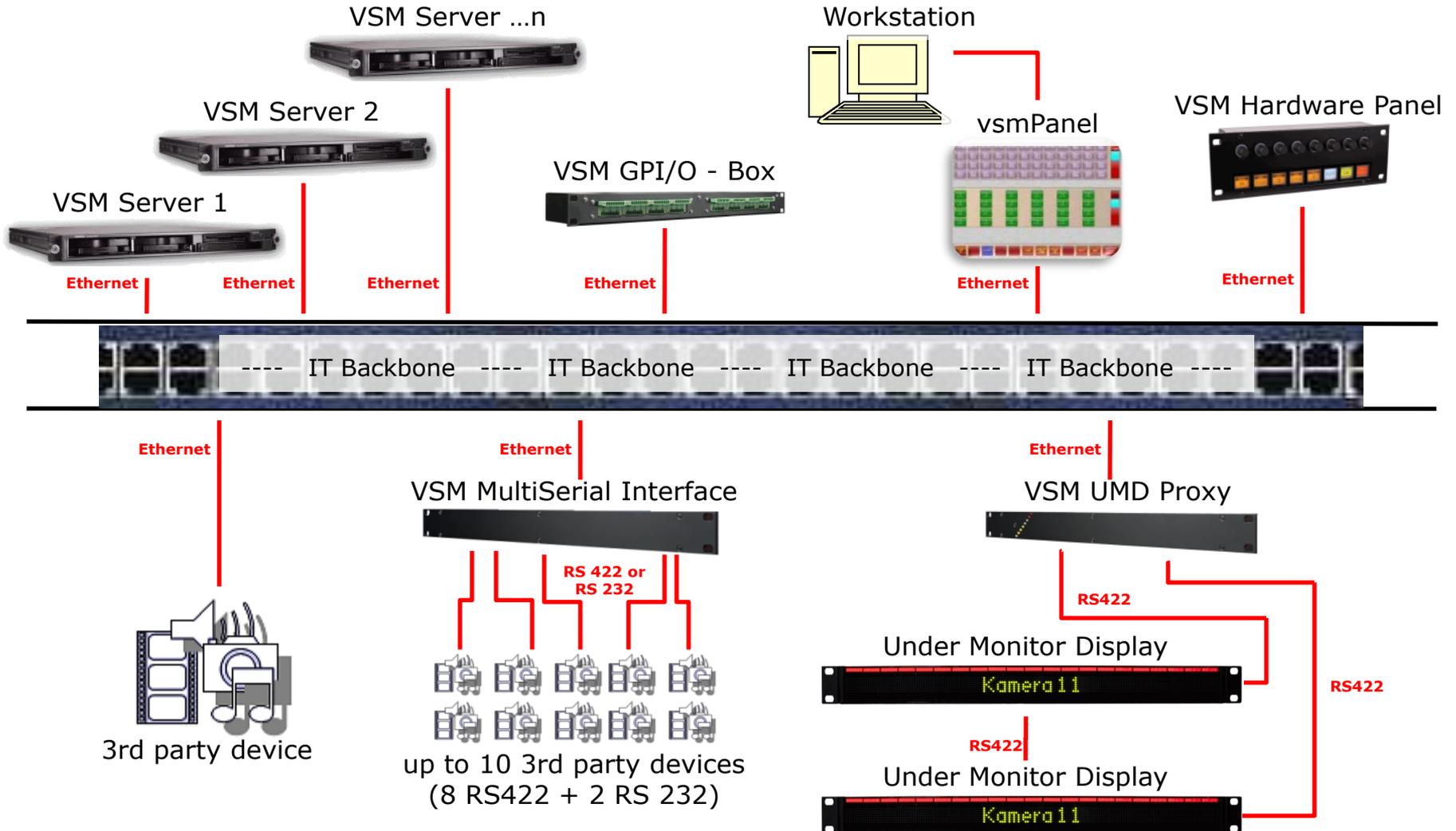
For mobile projects, easy and effective operation is more than important. The following pages will present the innovative way of operating with VSM in times of HD, Surround and constantly changing demands.

VSM - Central control engine

Flexible broadcast control – Easy user operation – Multi-brand support



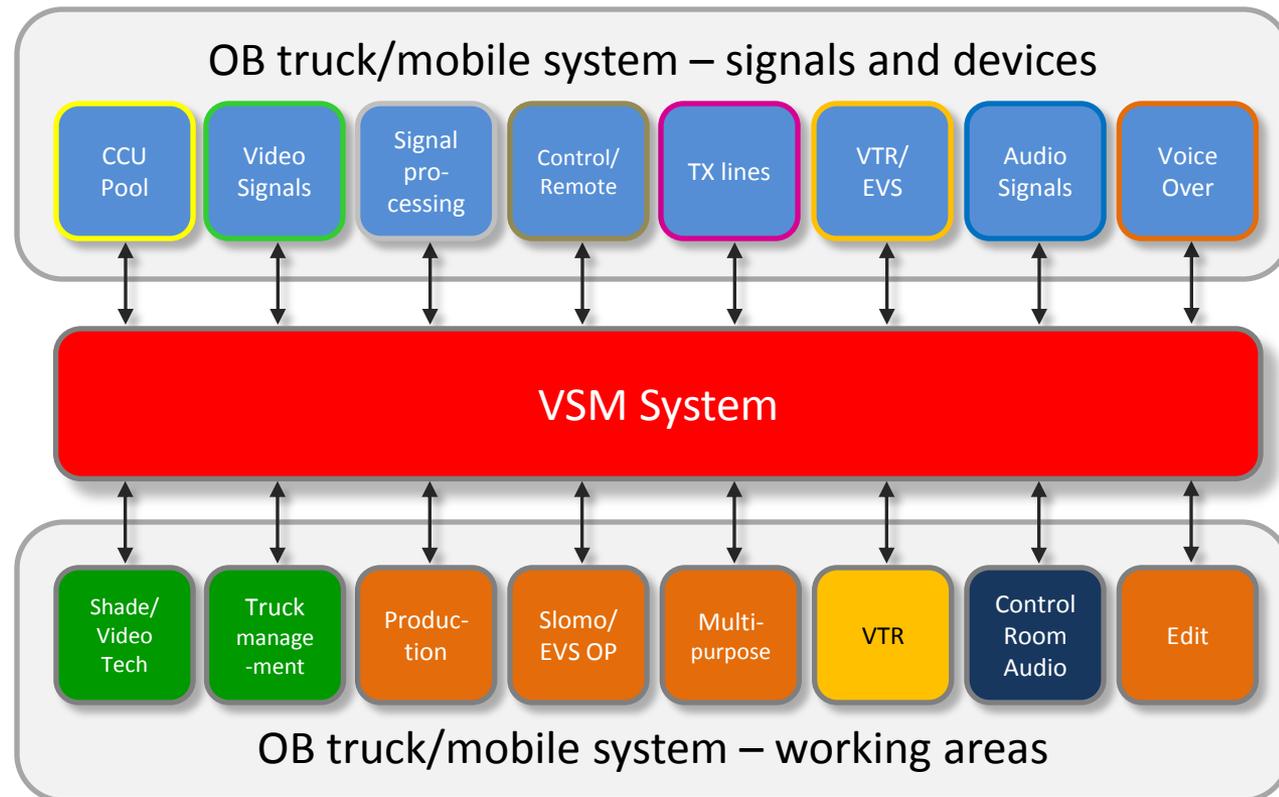
VSM - System components



Overview

Central mobile system management

- **Signals**
- **Routers**
- **Mixers**
- **Tally**
- **Logic control/GPI**
- **TX line control**
- **Dynamic device assignment**
- **Snapshot management**
- **Parameter control**

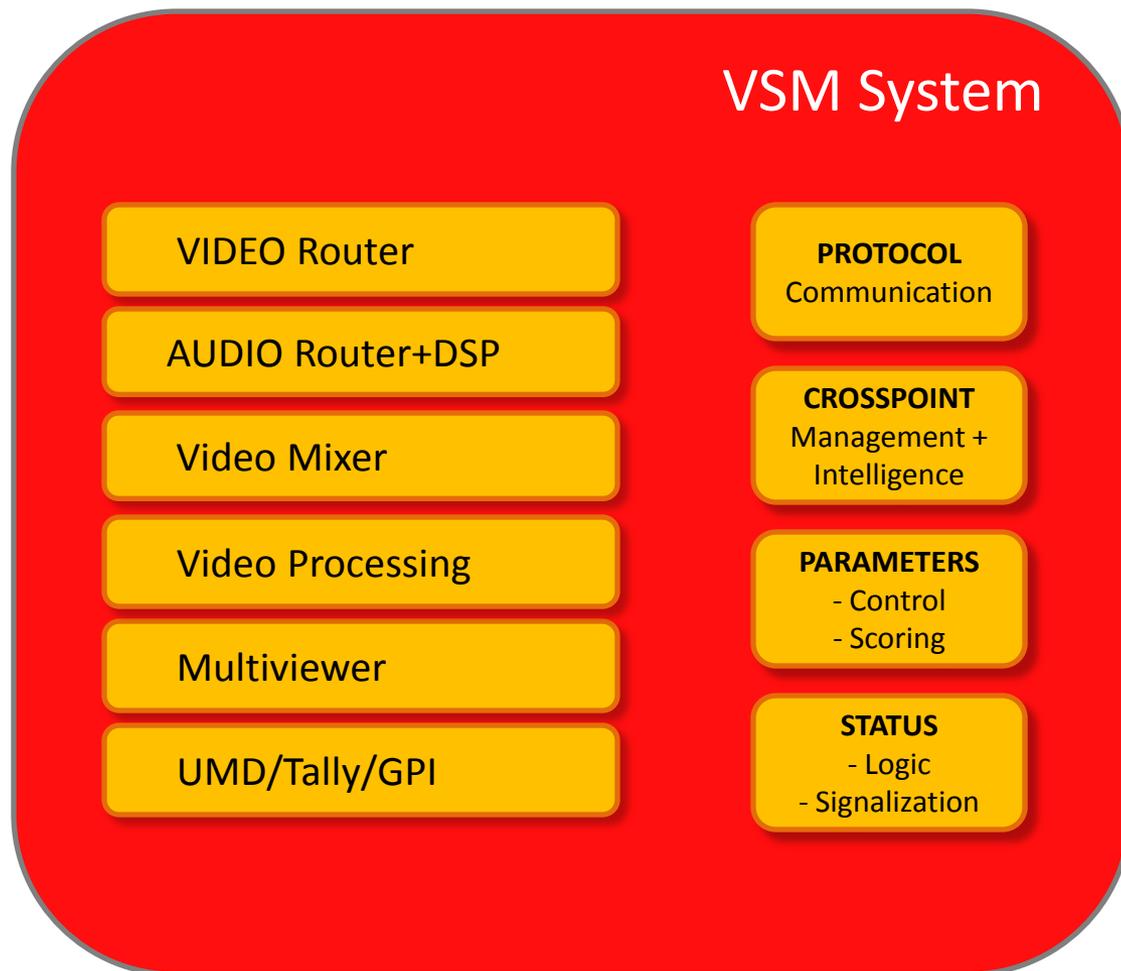


Example

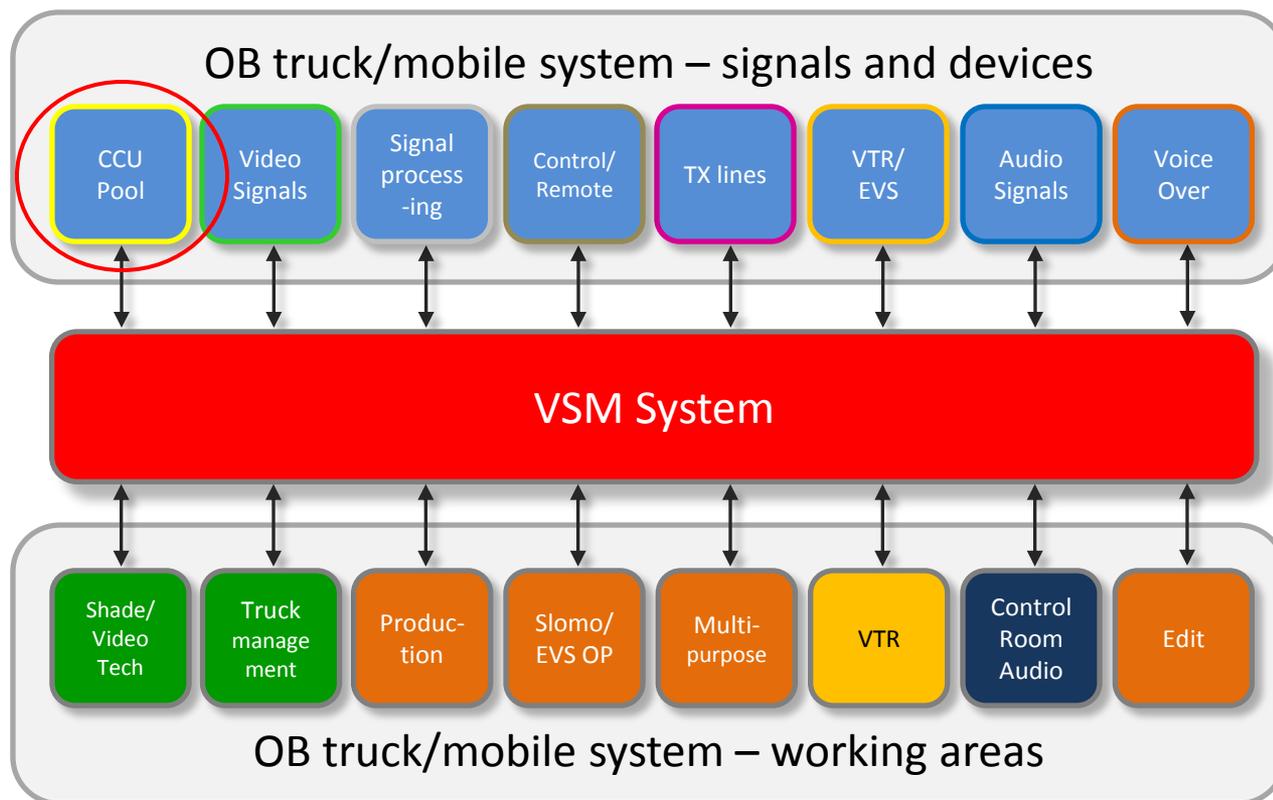
VSM – The core system

Multi router intelligence

- **Router control**
 - Multi layer management
- **Real time status**
 - Current status indication
- **Multi Device Intelligence**
 - Labels, Tally, logic, GPI
- **Under Monitor Displays**
 - Multi label support
- **Parameter control**
 - Multi function support
 - Current status indication



VSM for mobile applications



VSM for mobile applications

CCU control

•Tally

- Multi-layer Tally control

• Dynamic RCP assign

- Snapshot controllable

• Dynamic Joystick override

- Signal toggling for Shaders managed by the VSM

• All signal assignment recallable

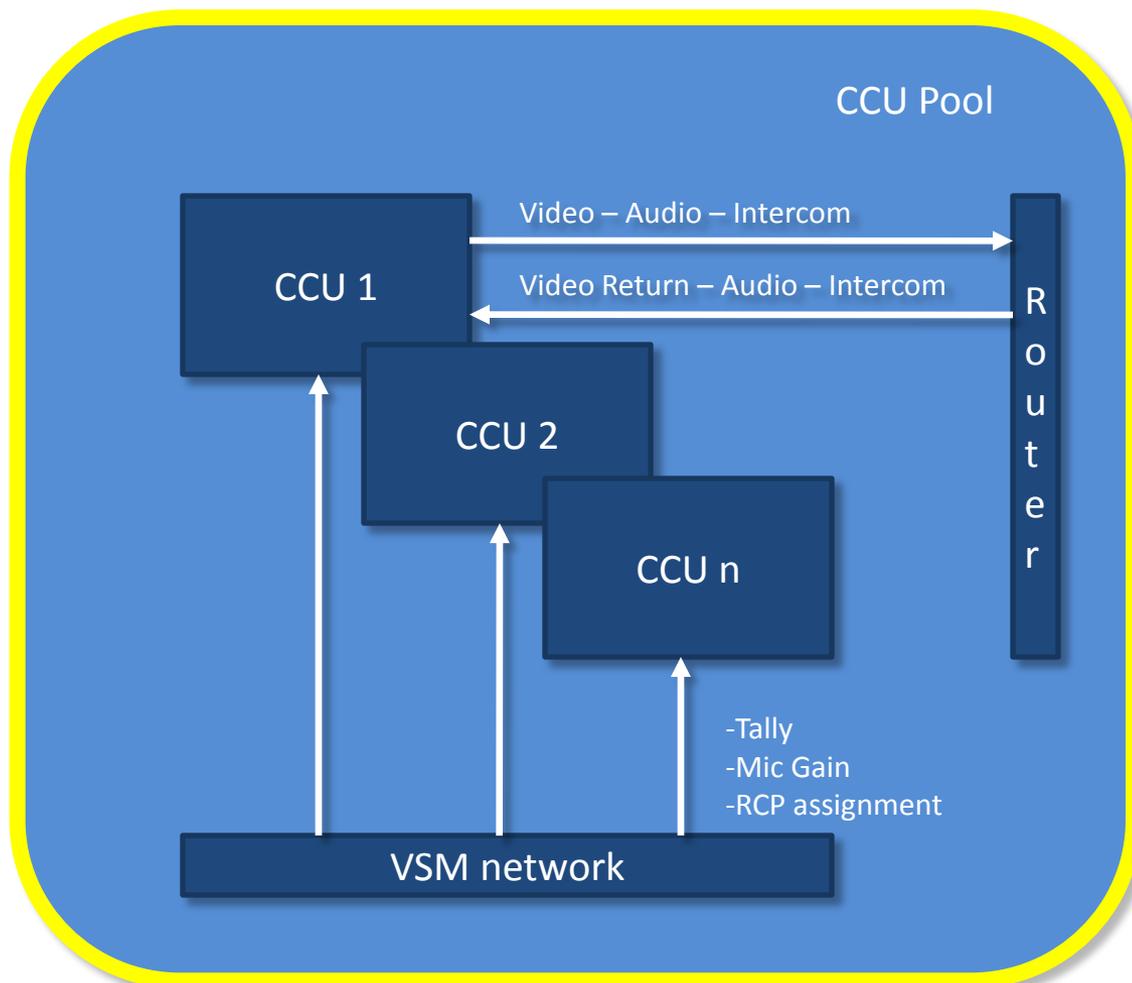
- Easy resource assignment thanks to flexible snapshot control eg. to share CCUs for 2 different video feeds.

• Audio: Mic gain control

- Over protocol or GPI for all brands

• Automatic Intercom routing

- Automatic assignment to multiple camera intercom circuits depending on e.g. Tally assignment or video routing



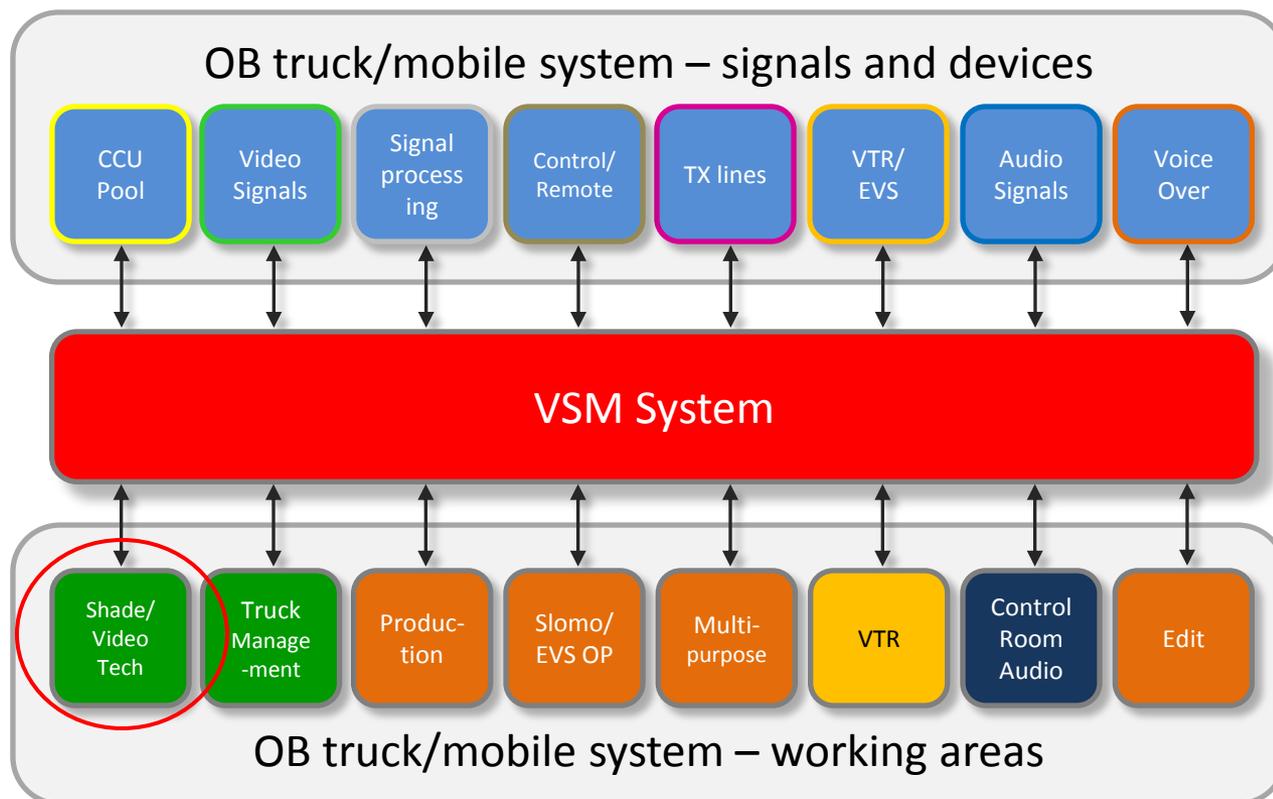
Example

VSM for mobile applications



CCU management

VSM for mobile applications



VSM for mobile applications

Video engineering - operation

•RCP to WFM assignment

- Intelligent routing for every shader position
- Joystick override dependency assignment

•Dynamic Joystick override/Toggle

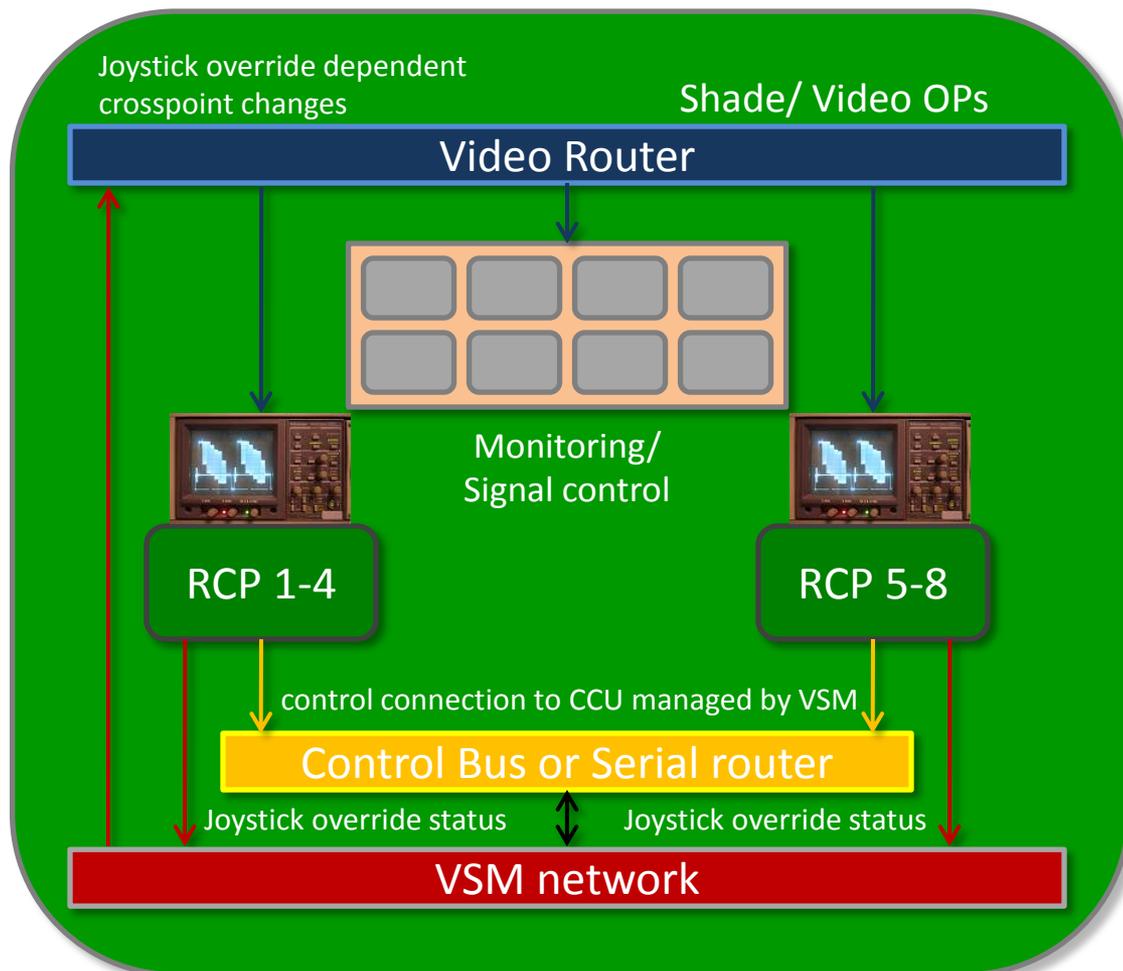
- Easy workspace configuration by operator
- Easy takeover for workload splitting

•Dynamic CCU replacement

- Easy trouble shooting by intelligent routing management
- Intelligent Tally auto-follow

•Easy tally assignment

- Up to 32 tally busses for special applications
- Protectable manual tally trigger (concert/recording situation)

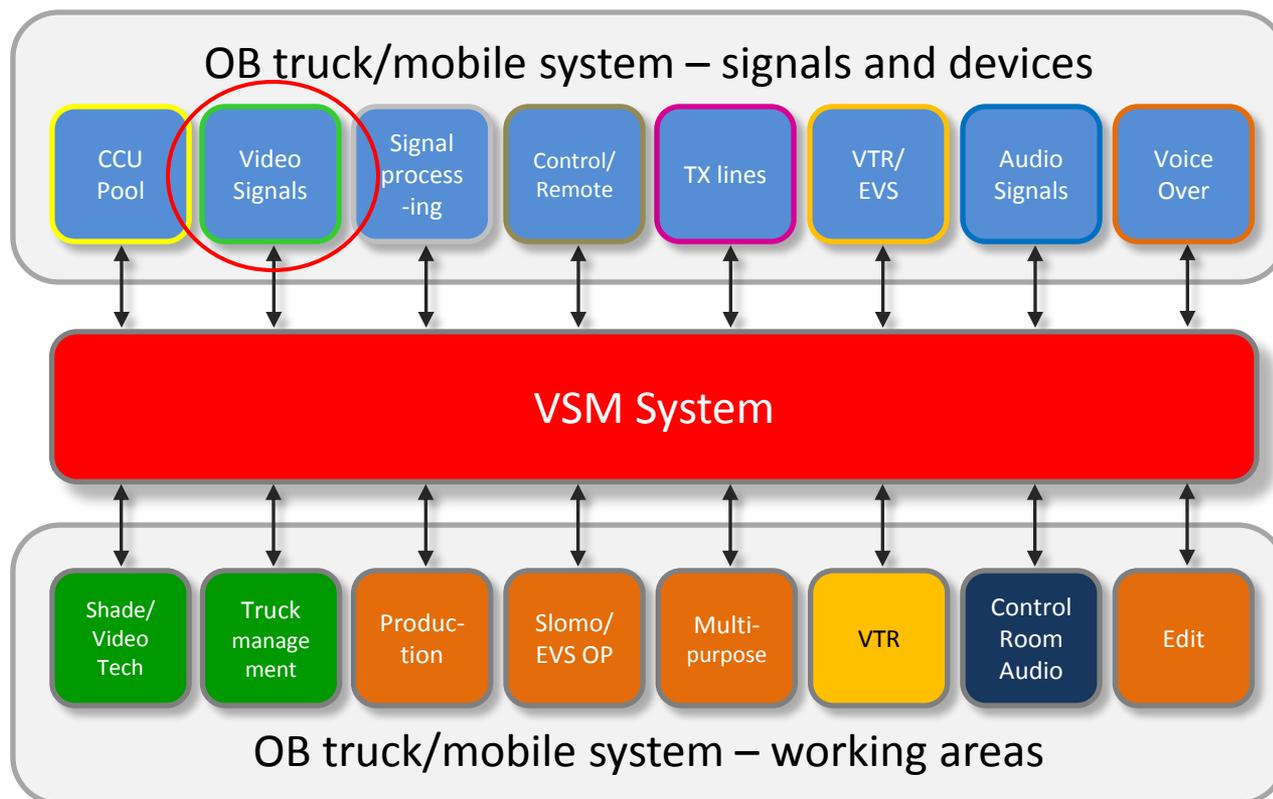


Example

VSM for mobile applications



VSM for mobile applications



VSM for mobile applications

Video signal management

• Real time routing control

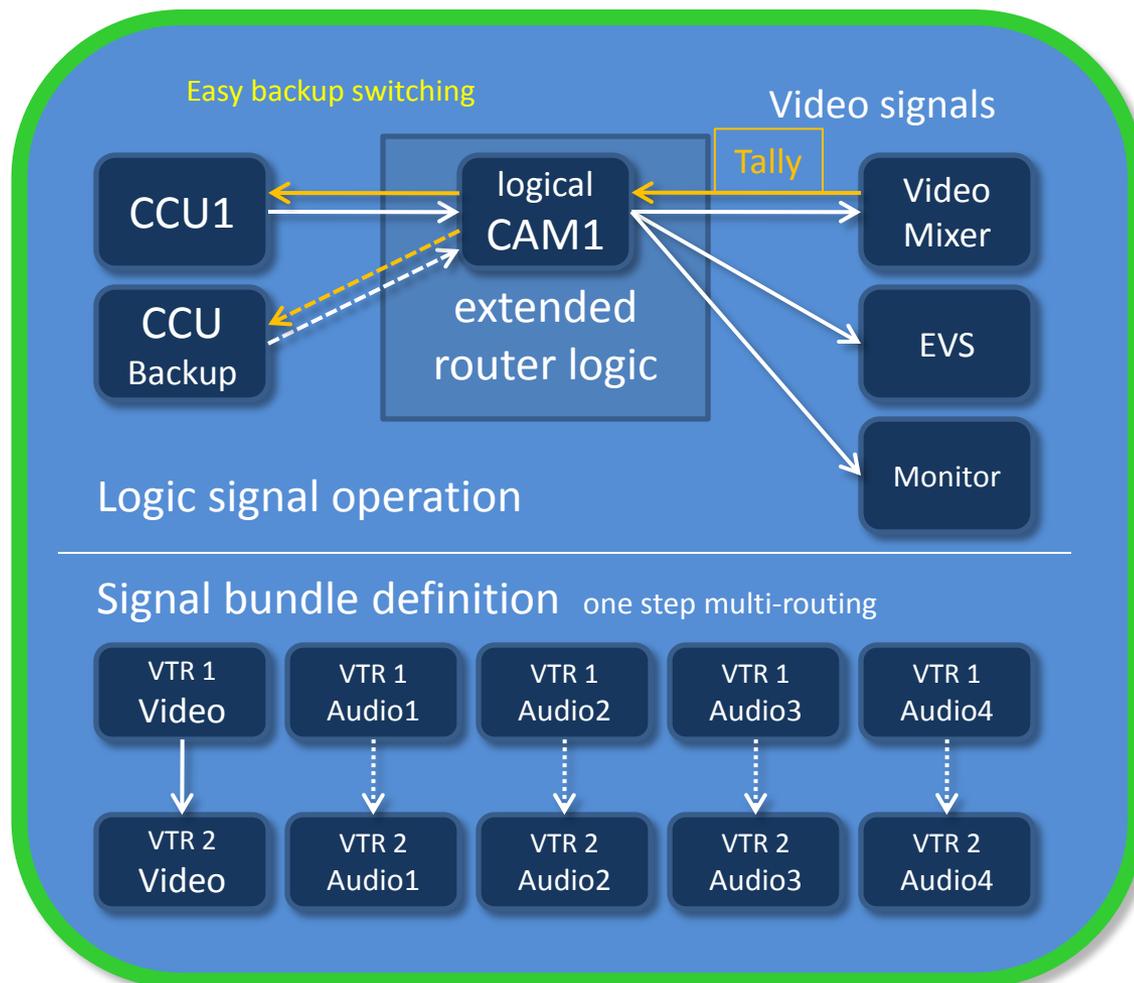
- Always-on crosspoint information
- Label and routing consistency on every panel and position

• Logical signal management

- Additional logic signals simplify operation
- E.g. logical „Camera“-signals are sourced by physical CCU signals
- Logic signal chains replace former router re-entries incl. all Tally states

• Unlimited signal dependency management

- E.g. 2 camera signals are handled like one (HD/SD)
- Additional audio relation
- Automatic processor assignment on source selection (aspect ratio, synchronizer, converter)

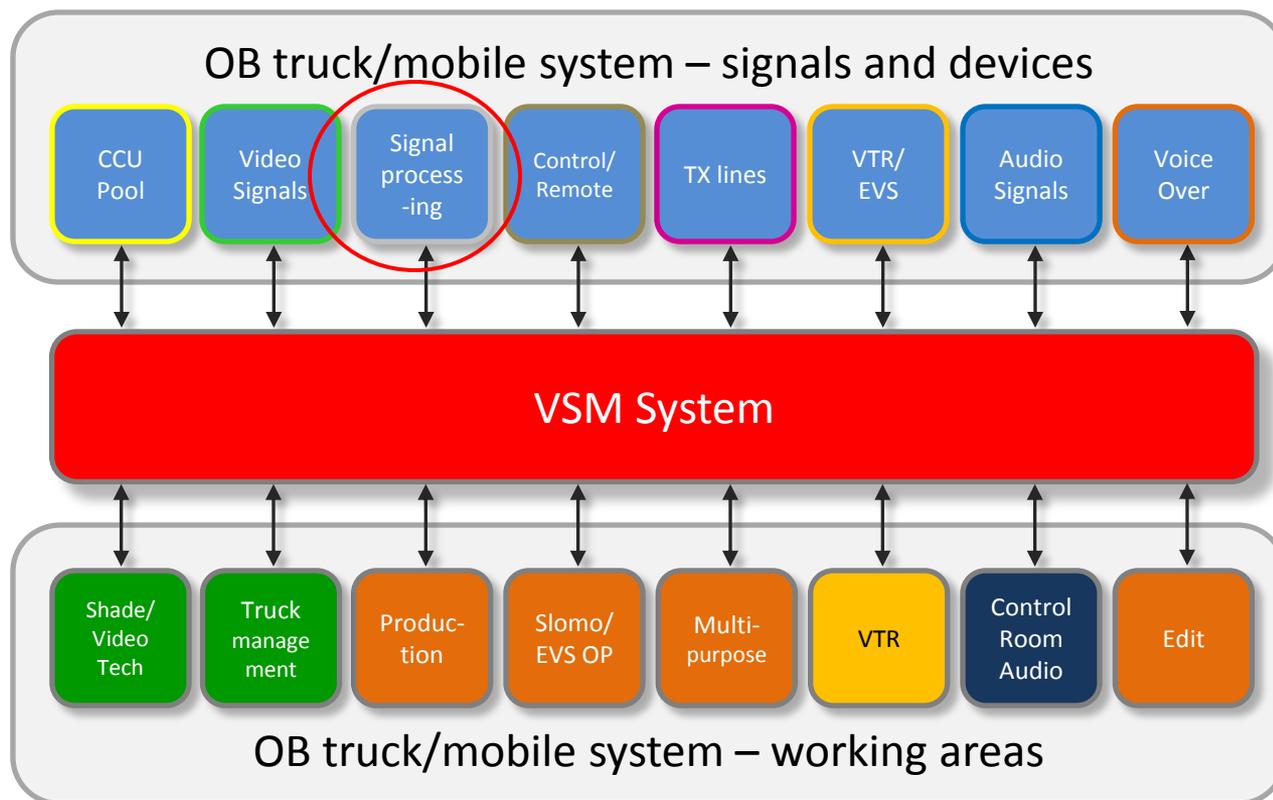


Example

VSM for mobile applications



VSM for mobile applications



VSM for mobile applications

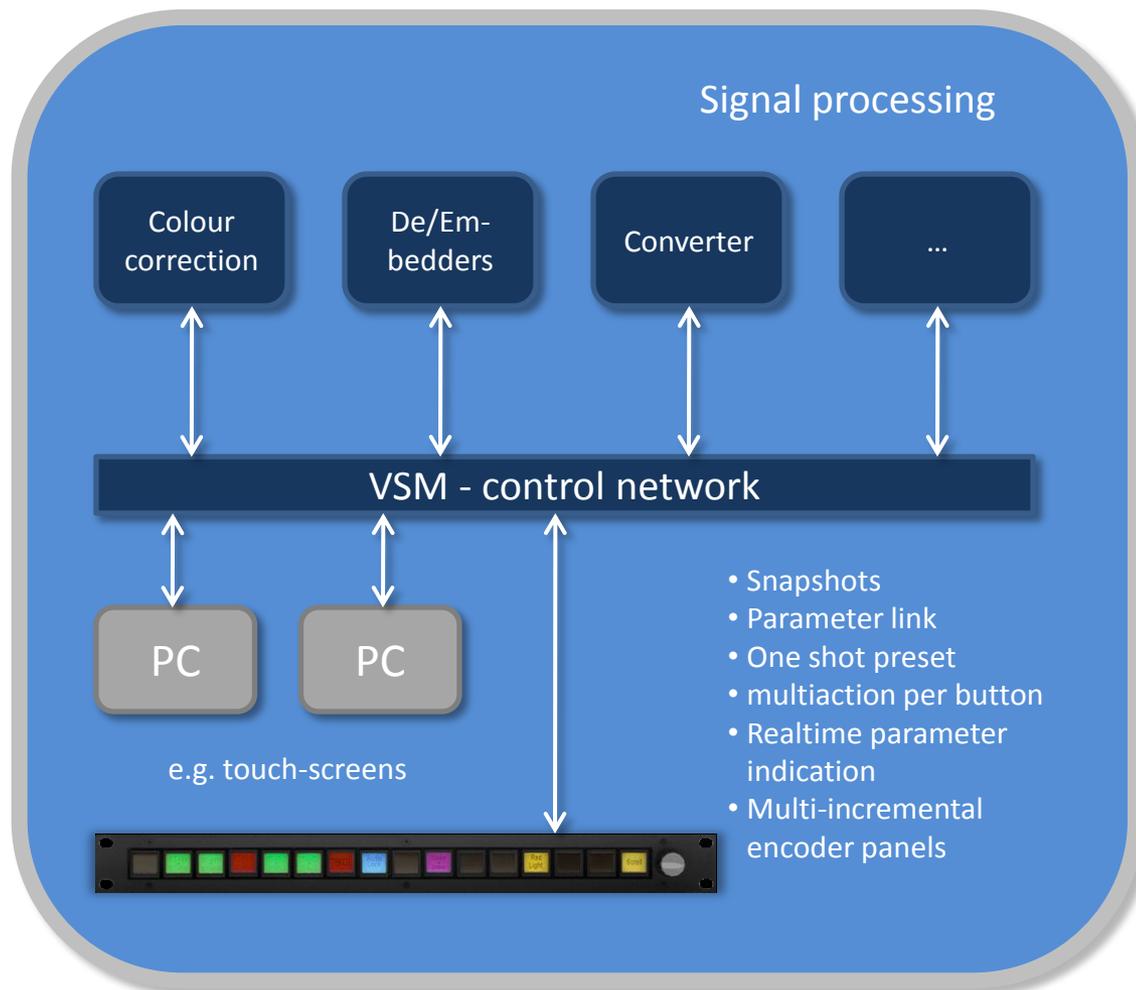
Single frontend operation

•Parameter management

- Third party support for all major brands of broadcast devices
- Easy definition of control of parameters, presets, live operation
- Parameters are storable in snapshot stores for easy event recall
- Automatic routing dependency
- Support of e.g. video processing and audio systems

•Status dependent operation

- Boolean logic for automatic processing or multi-action by keystroke (e.g. global parameter reset or gain preset for Mic levels on CCU)



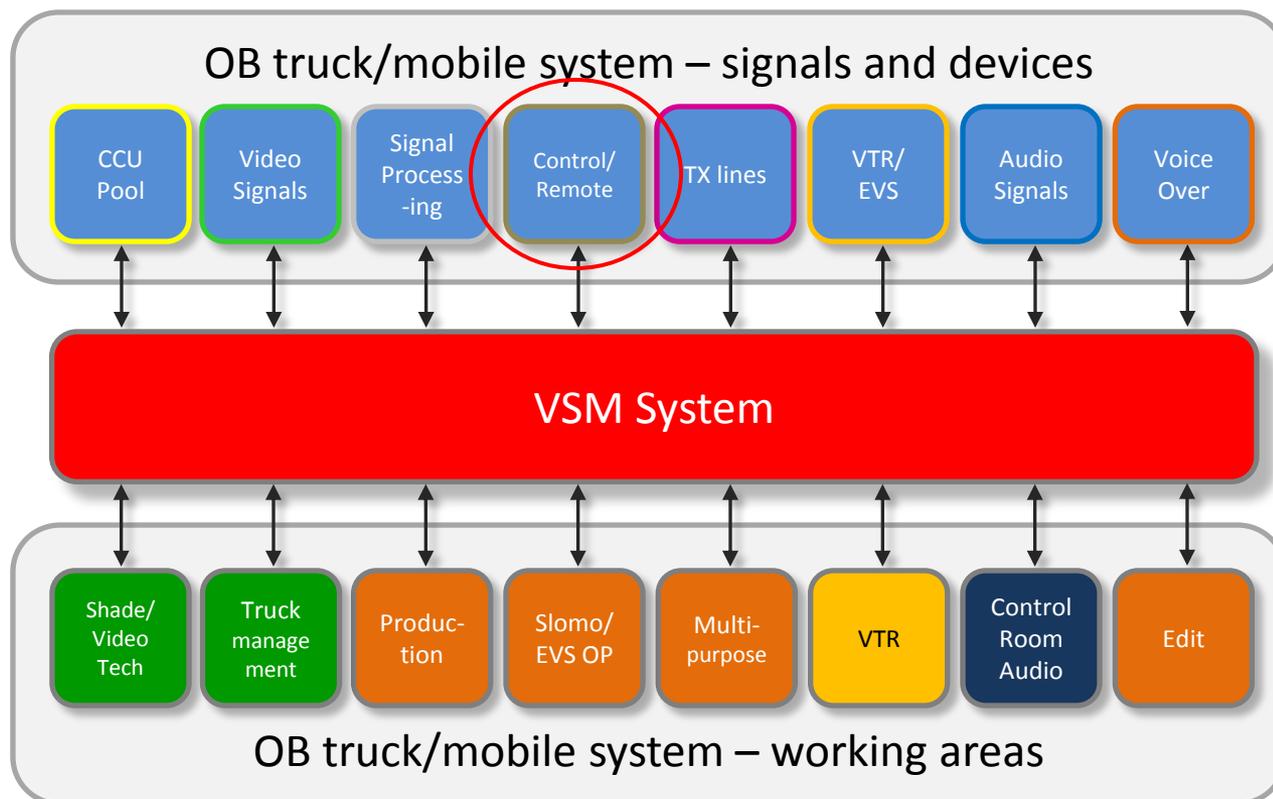
- Snapshots
- Parameter link
- One shot preset
- multi-action per button
- Realtime parameter indication
- Multi-incremental encoder panels

Example

VSM for mobile applications



VSM for mobile applications



VSM for mobile applications

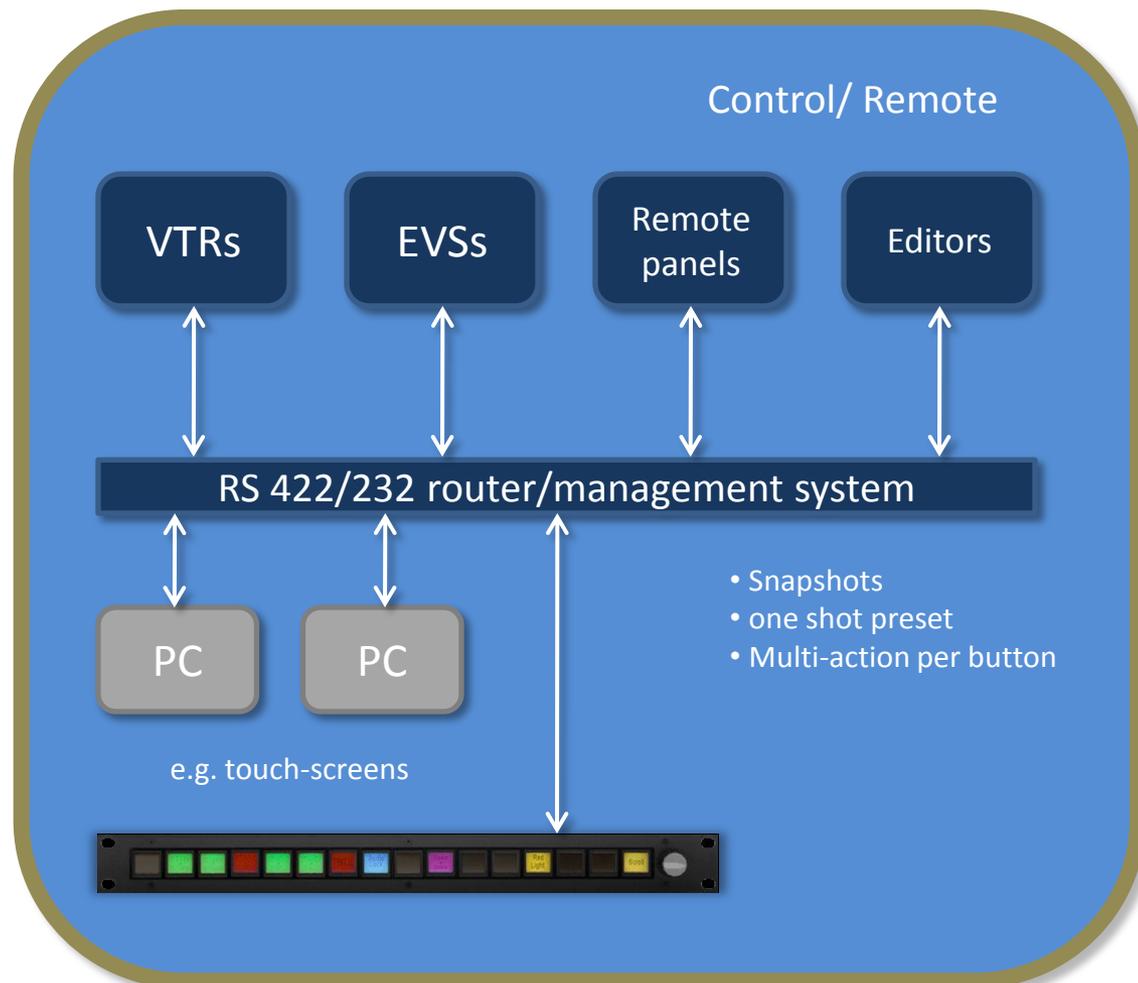
Remote control

•Remote connection management

- Central control for RS 422/232 connections
- Managable trough snapshots for easy recall operation

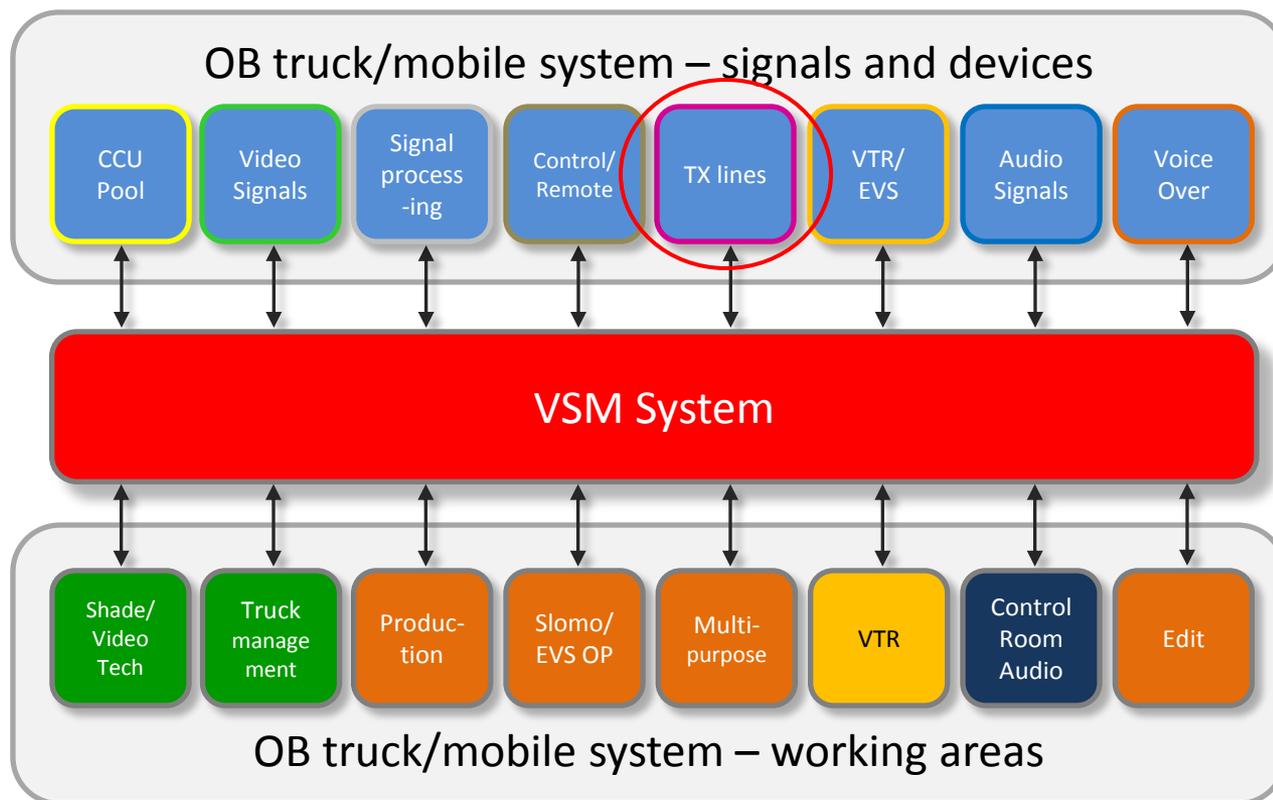
•Dynamic device assignment

- Remote control to device assignment



Example

VSM for mobile applications



VSM for mobile applications

Highest broadcast safety support

•Audio/video signal linking

- Easy testsignal /synctest /live switching
- Easy isolated switching

•Easy hardware or backup routing

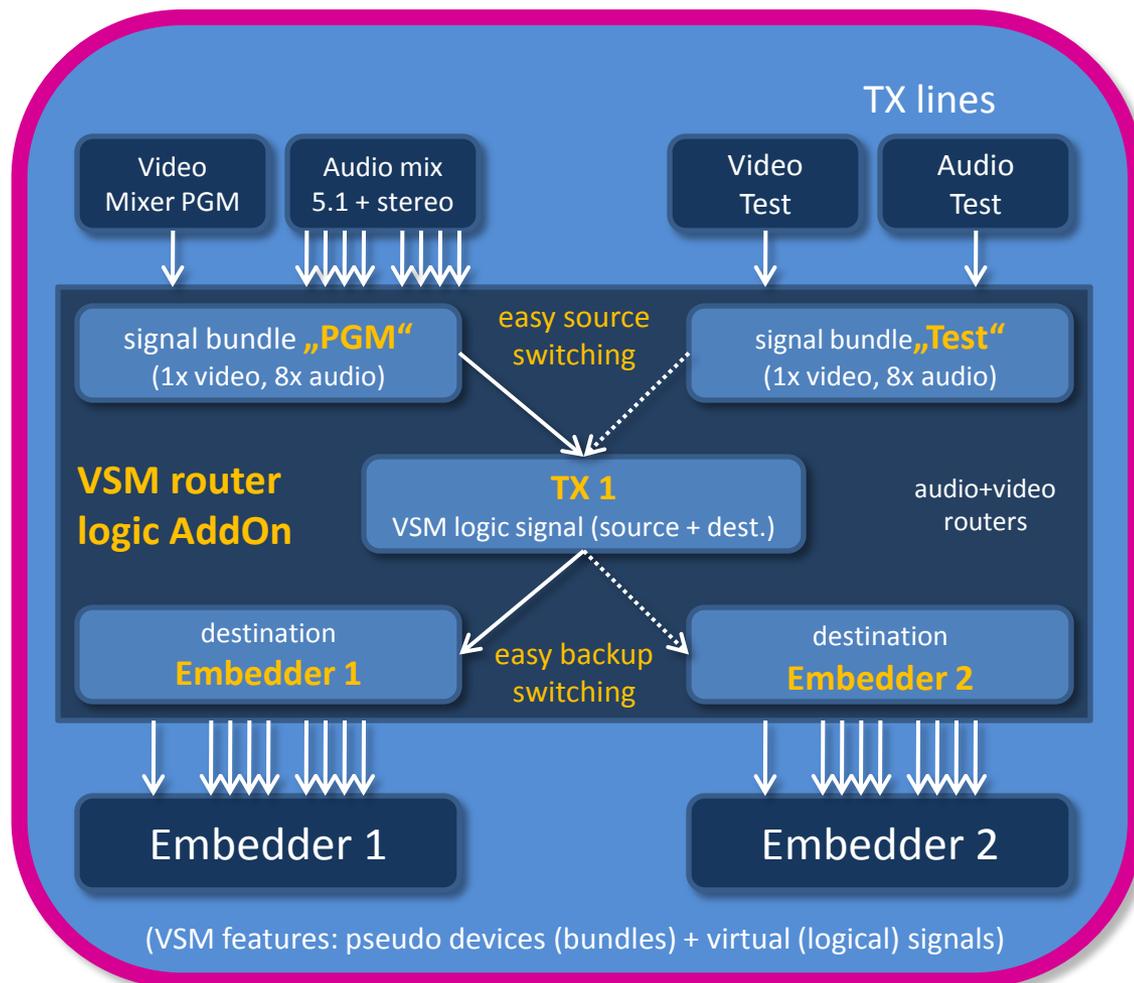
- Backup devices can replace faulty unit by quick operation (e.g. embedders)

•System-wide signalization

- TX lines can use Tally bus for internal signal and routing tracking (signalling on the source-side is available to show actual On-Air state)

•Time-dependent switching

- For high safety demands
- Still manually controllable



Example

VSM for mobile applications

Operation „Easy“

•Audio/video signal linking

- Easy testsignal /synctest /live switching
- Easy isolated switching

•Easy hardware or backup routing

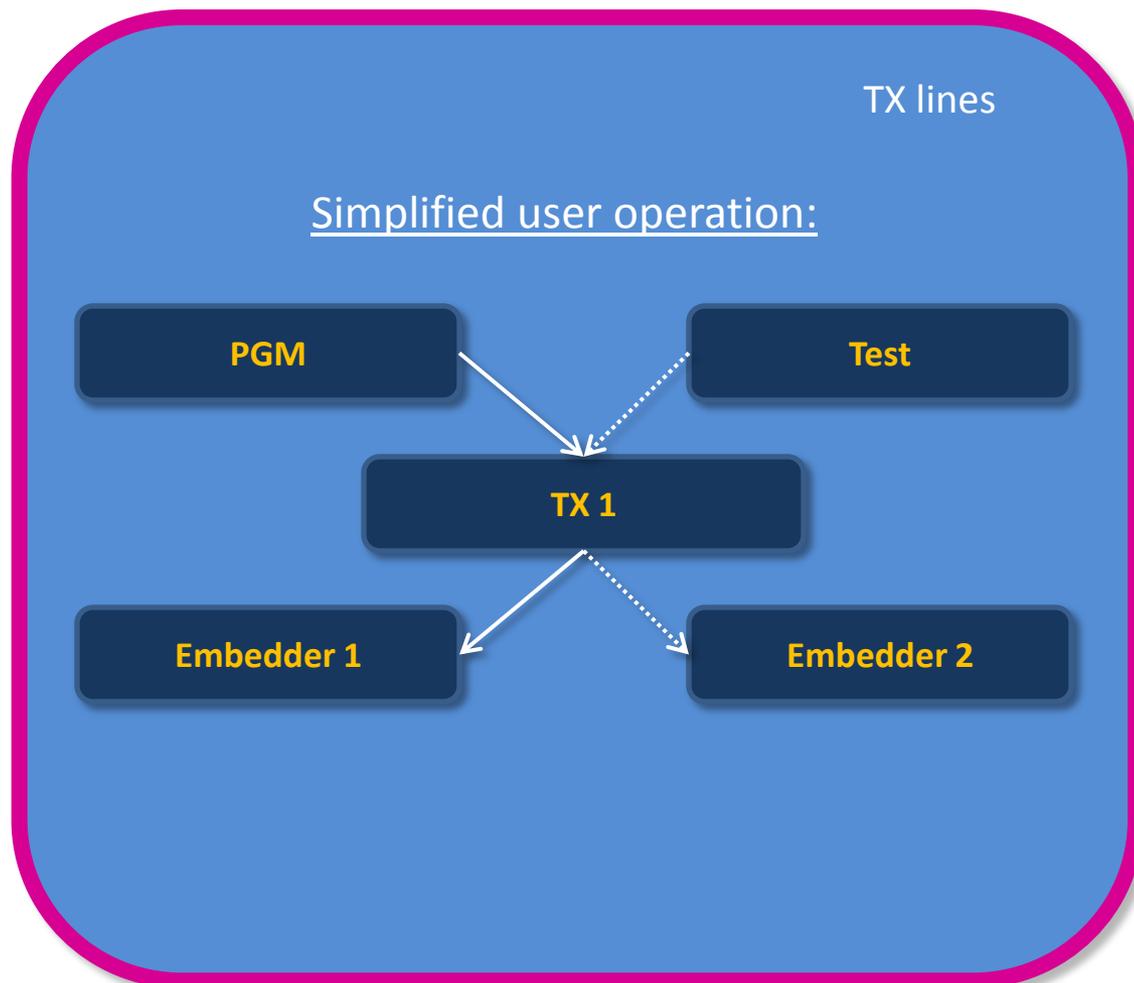
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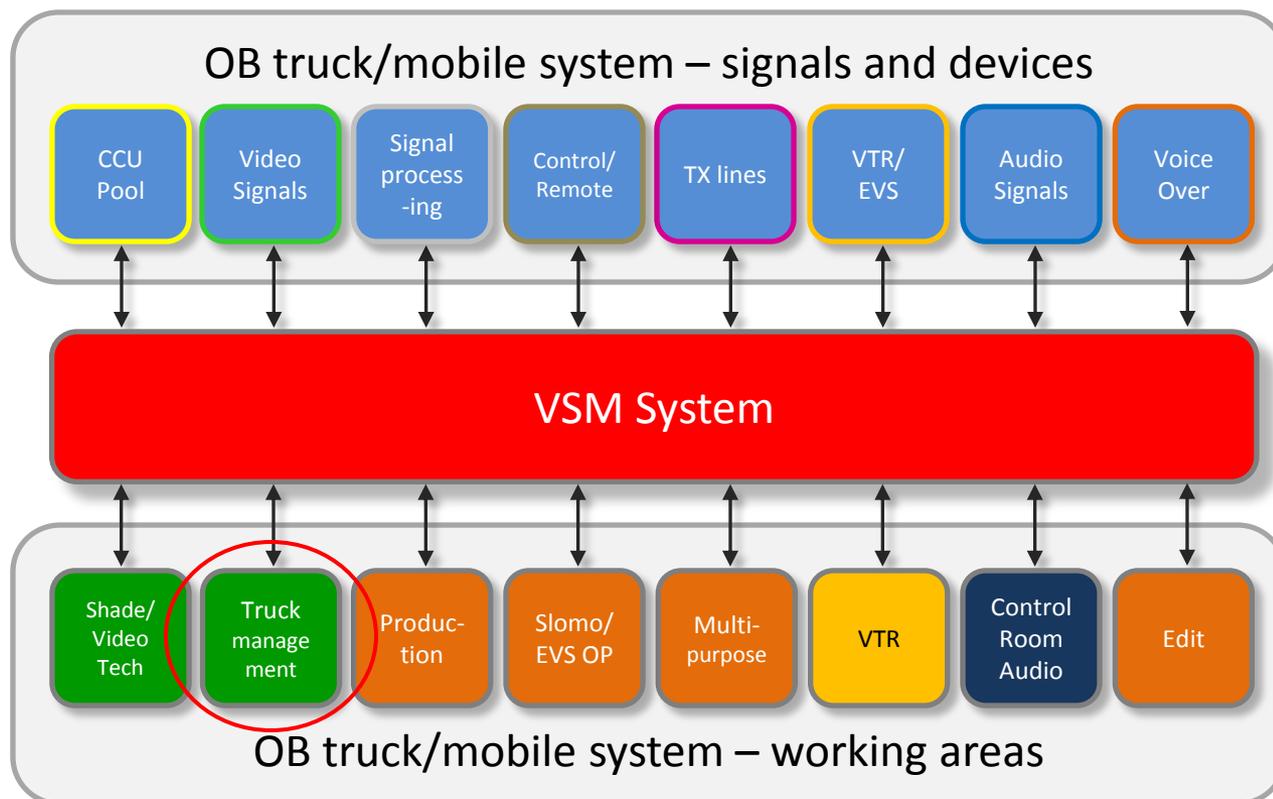


Example

VSM for mobile applications



VSM for mobile applications



VSM for mobile applications

Central control

•Signal control

- Global crosspoint indication
- Global label management

•Device assignment

- Intelligent device routing

•Setup management

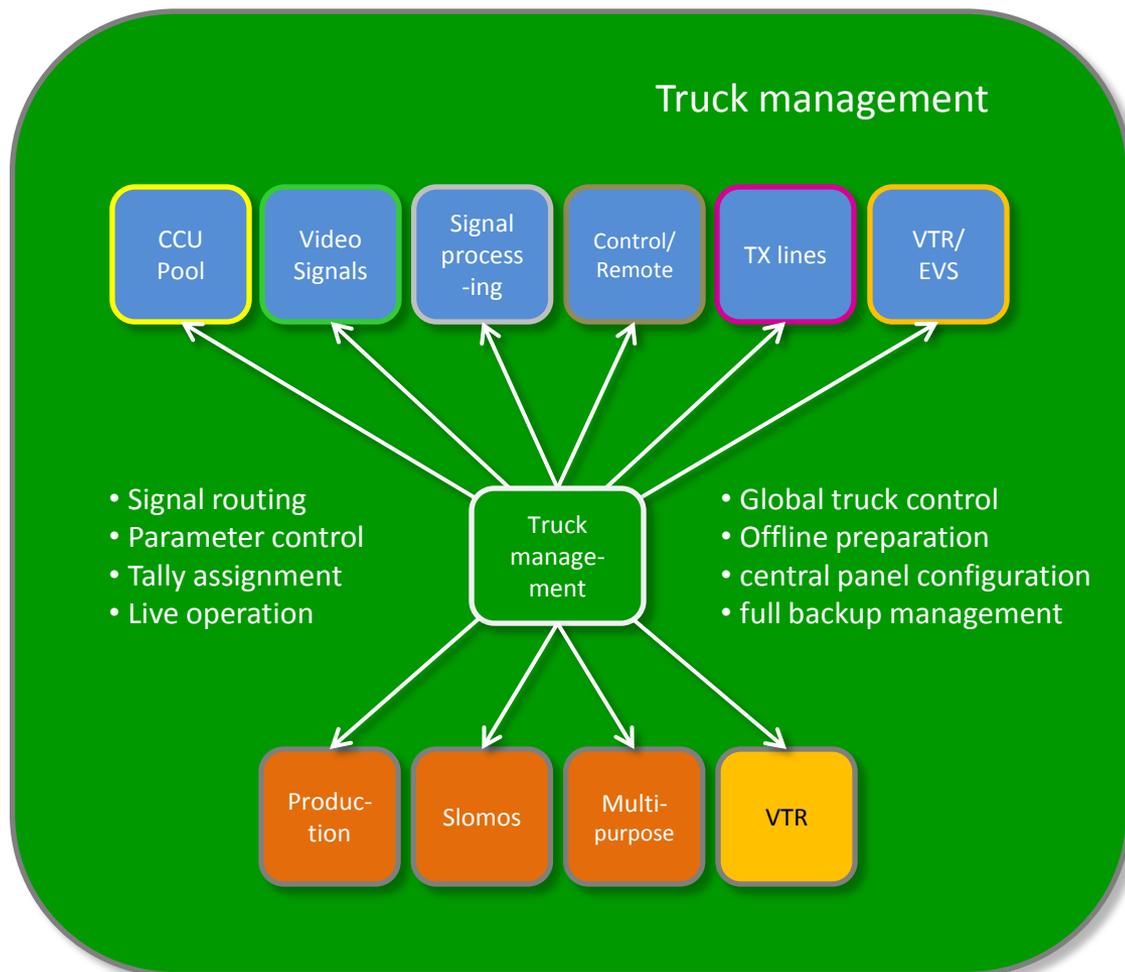
- Easy snapshot operation
- Flexible snapshot definition
- On the fly multi-routing preparation for multiple changes at the same time
- Snapshot preview and record mode

•Multi Tally

- 32 Tally busses for various tasks
- Easy Tally assignment to external GPI

•Logic states control

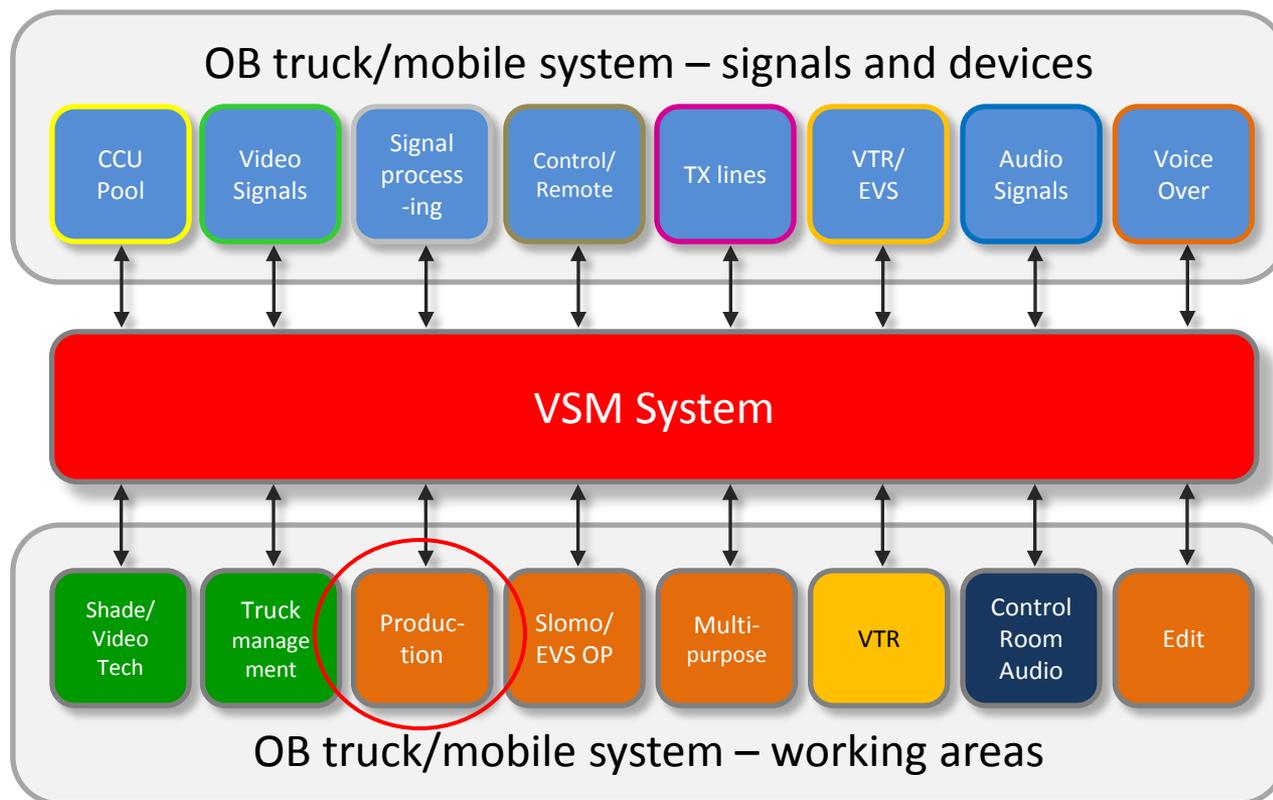
- GPI and Boolean Logic



VSM for mobile applications



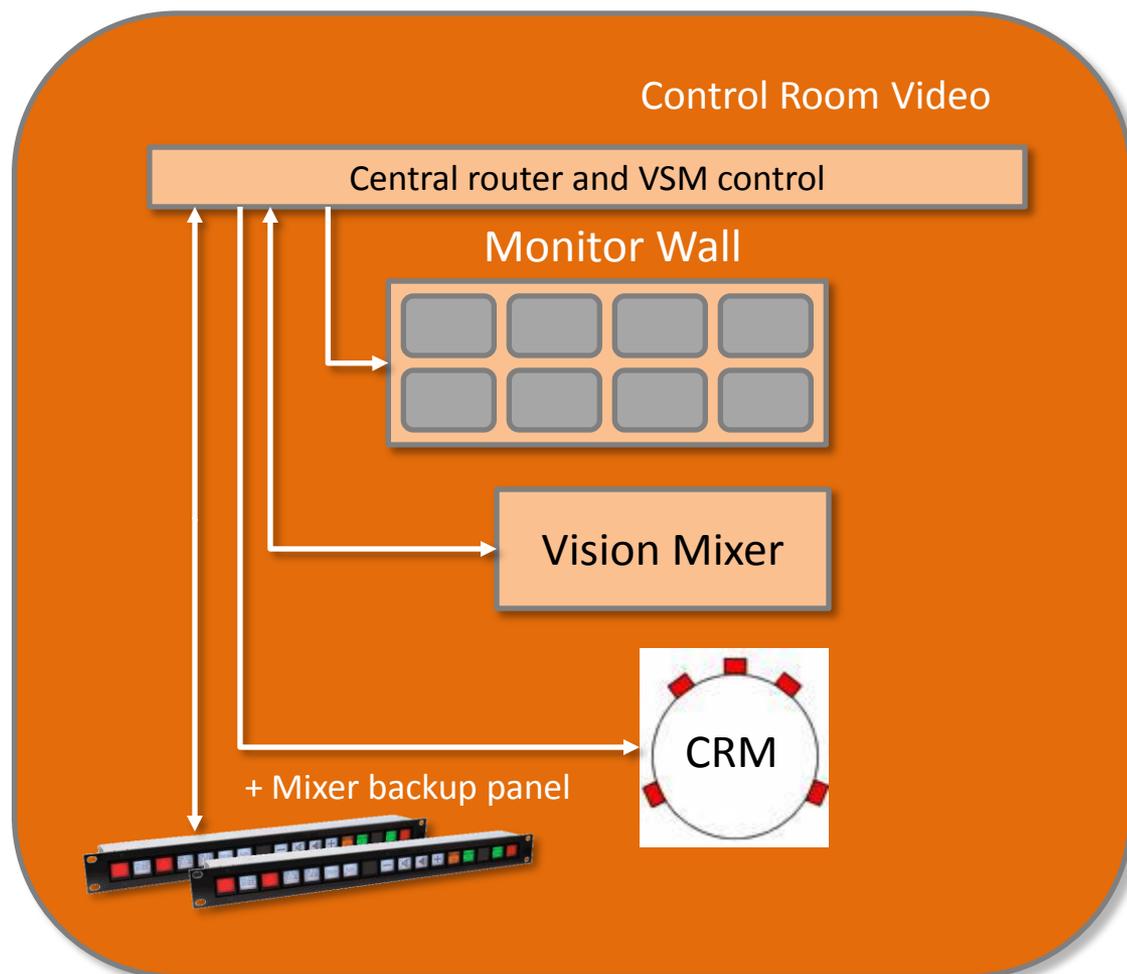
VSM for mobile applications



VSM for mobile applications

Operator-friendly working conditions

- **Easy setup management**
 - Snapshot controllable video wall and Vision mixer input setting
- **Mixer backup operation**
 - Backup panel with local take-over and synchronous mixer layout
- **Individual but dynamic label control**
 - Second label operation for monitoring (e.g. names)
- **Control room monitoring**
 - On multi-purpose control panel
 - Source selection
 - Volume control (Volume, Mute, Source, Mode)
- **Extensive Tally indication**
 - Up to 3 different Tally colours with UMDs

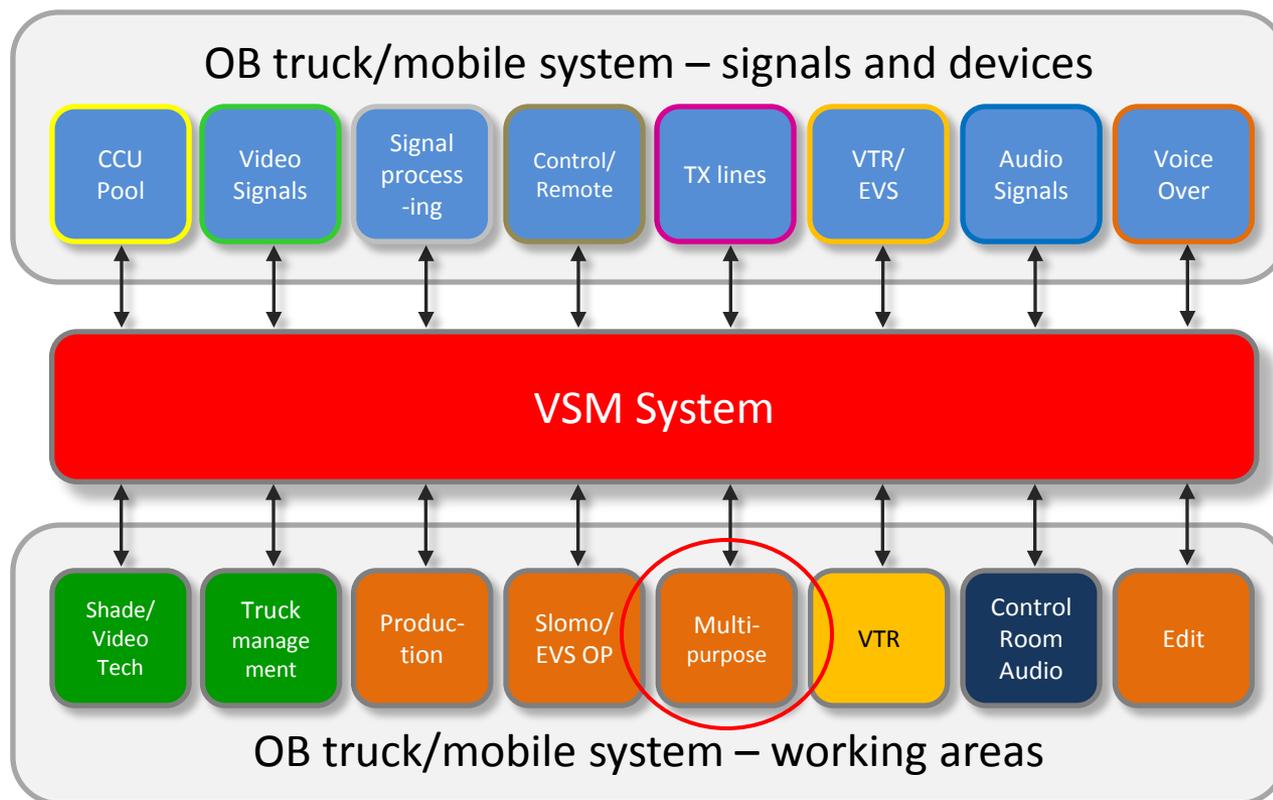


Example

VSM for mobile applications



VSM for mobile applications



VSM for mobile applications

Production AddOn s

•Router control

- Iso feed recording panel for Editors

•Monitoring

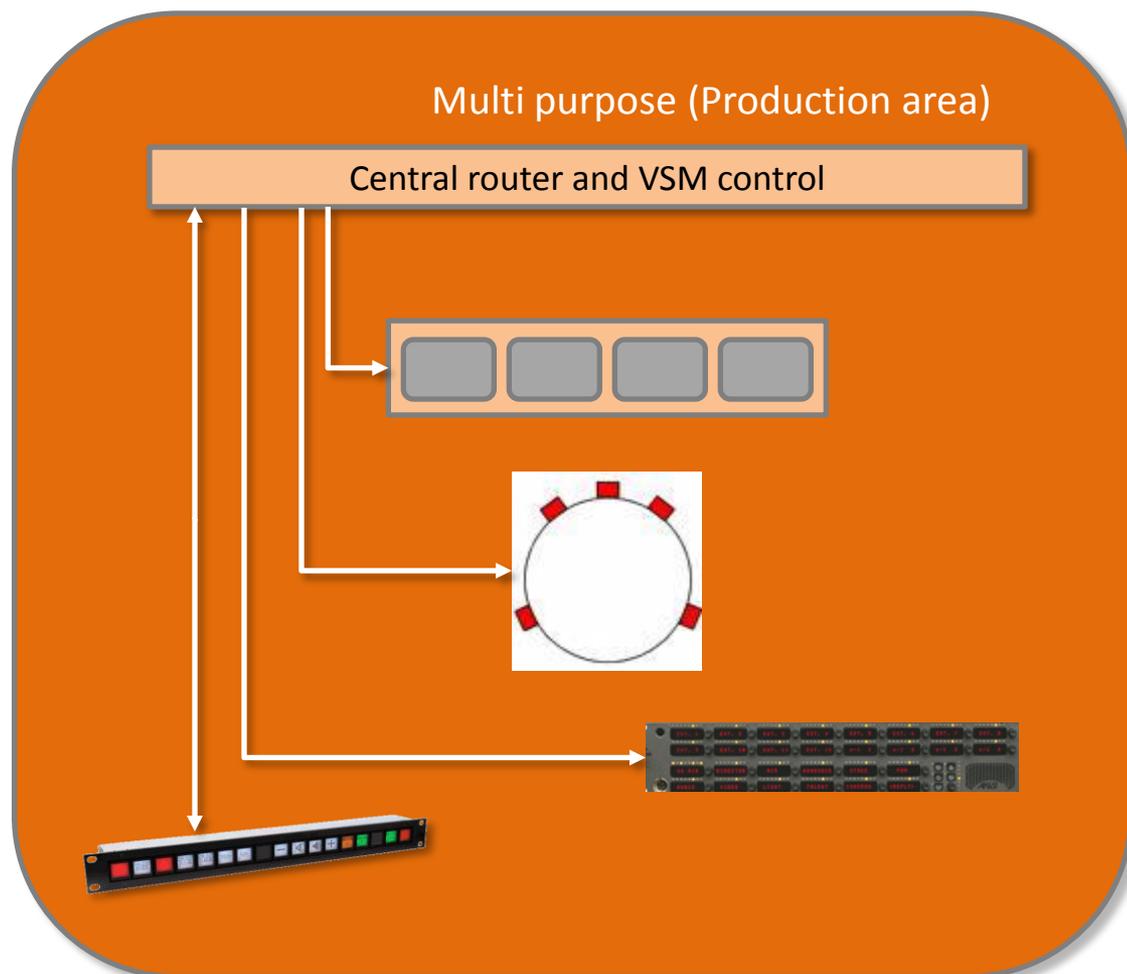
- Individual preview control
- Control room monitoring (Volume, Mute, Source, Mode)
- Headphone control by remote DSP control of audio router for individual prelisten

•Intercom operation

- Extended intercom functionality (e.g. group management, 4-wire assignment, conference control)

•GPI/Tally control

- Signalization management (Multi-purpose buttons)
- GPI triggers for playbacks
- Red light control
- External control management (lights, effects, show control, video walls)

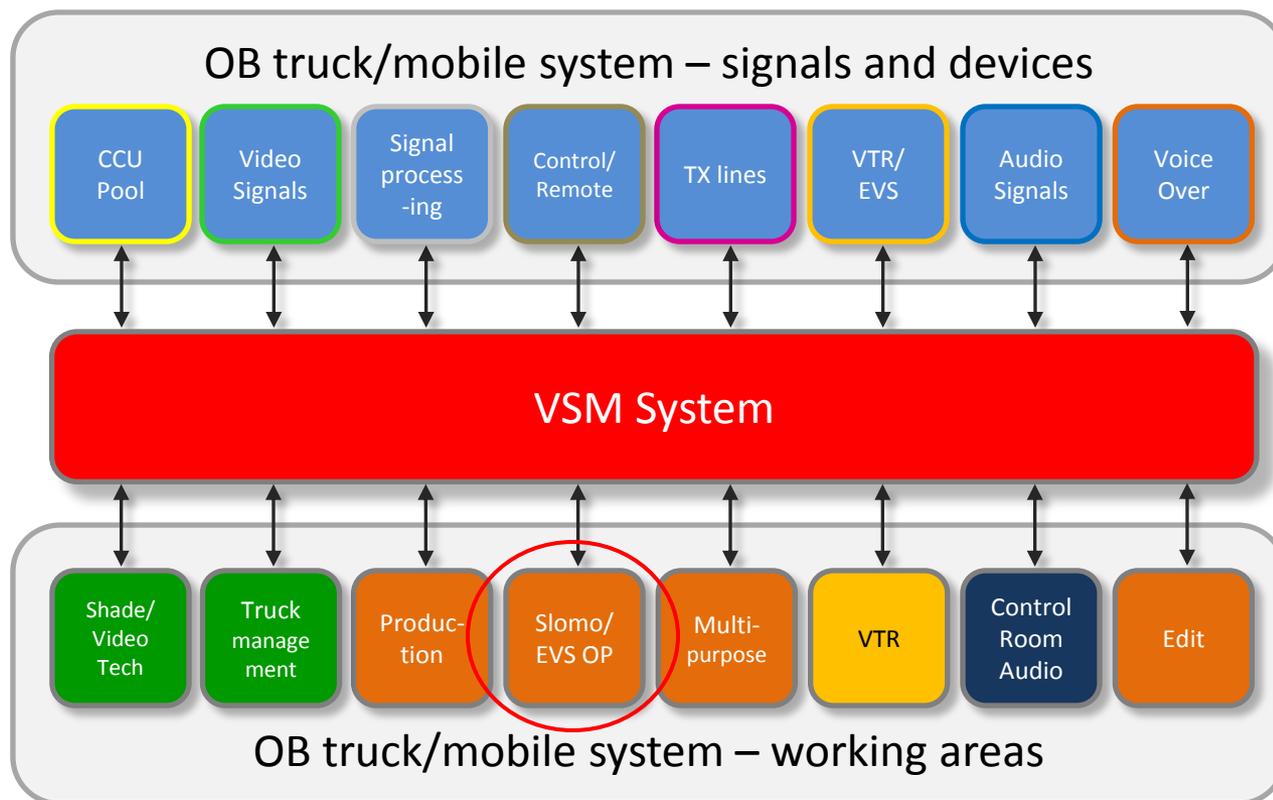


Example

VSM for mobile applications



VSM for mobile applications



VSM for mobile applications

Easy multi-action operations

• Signal management

- Audio/Video routing in one step
- Easy dependency split for Video and Audio only operation
- Free definition for audio routing or dependency (mono, dual mono, stereo, 5.1, DolbyE)

• Easy snapshot operation

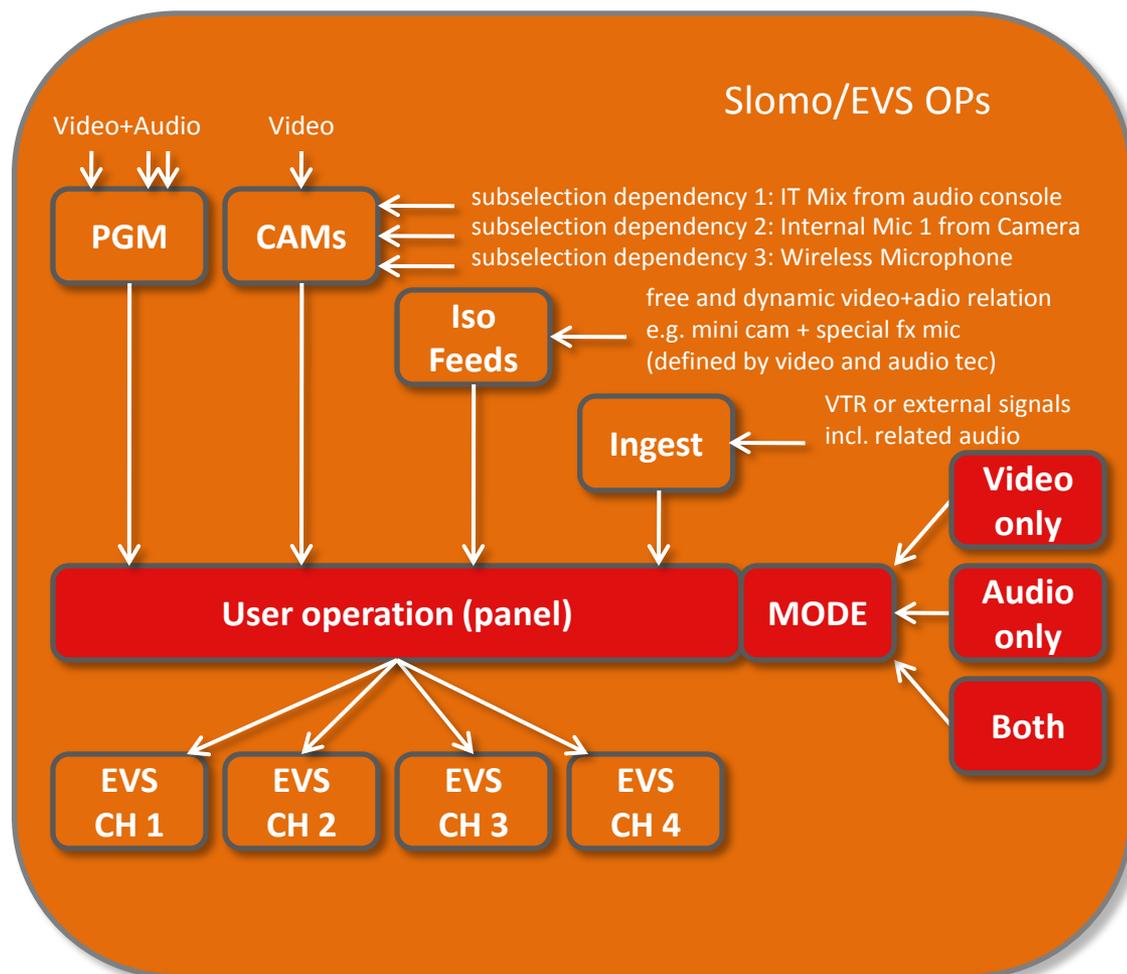
- Easy local snapshot operation freely definabel for channel/machine, audio /video (Load/Save/Both)
- Predefined or freely definable snapshot operation available on user panel

• User panel layout

- Easy local layout change supported by variable functions and buttons

• Monitoring

- Convenient audio signal monitoring from operator panel

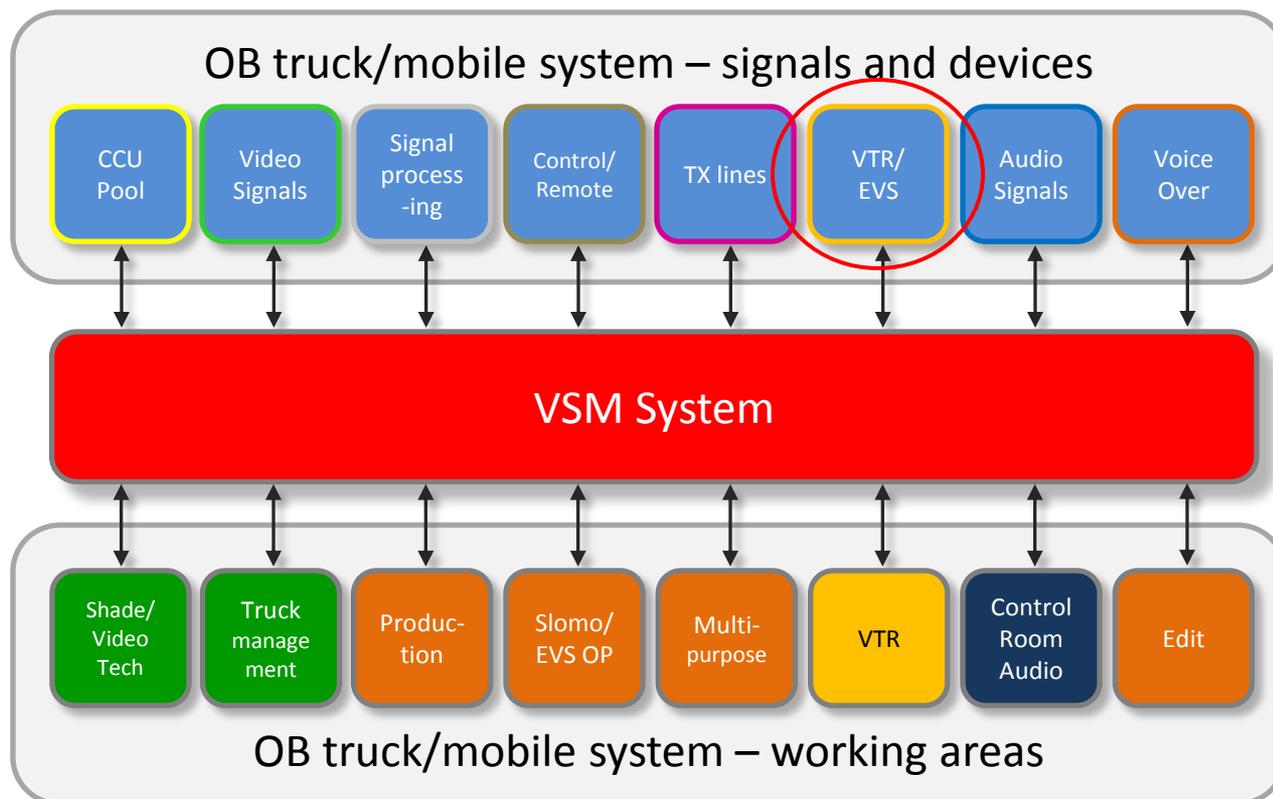


Example

VSM for mobile applications



VSM for mobile applications



VSM for mobile applications

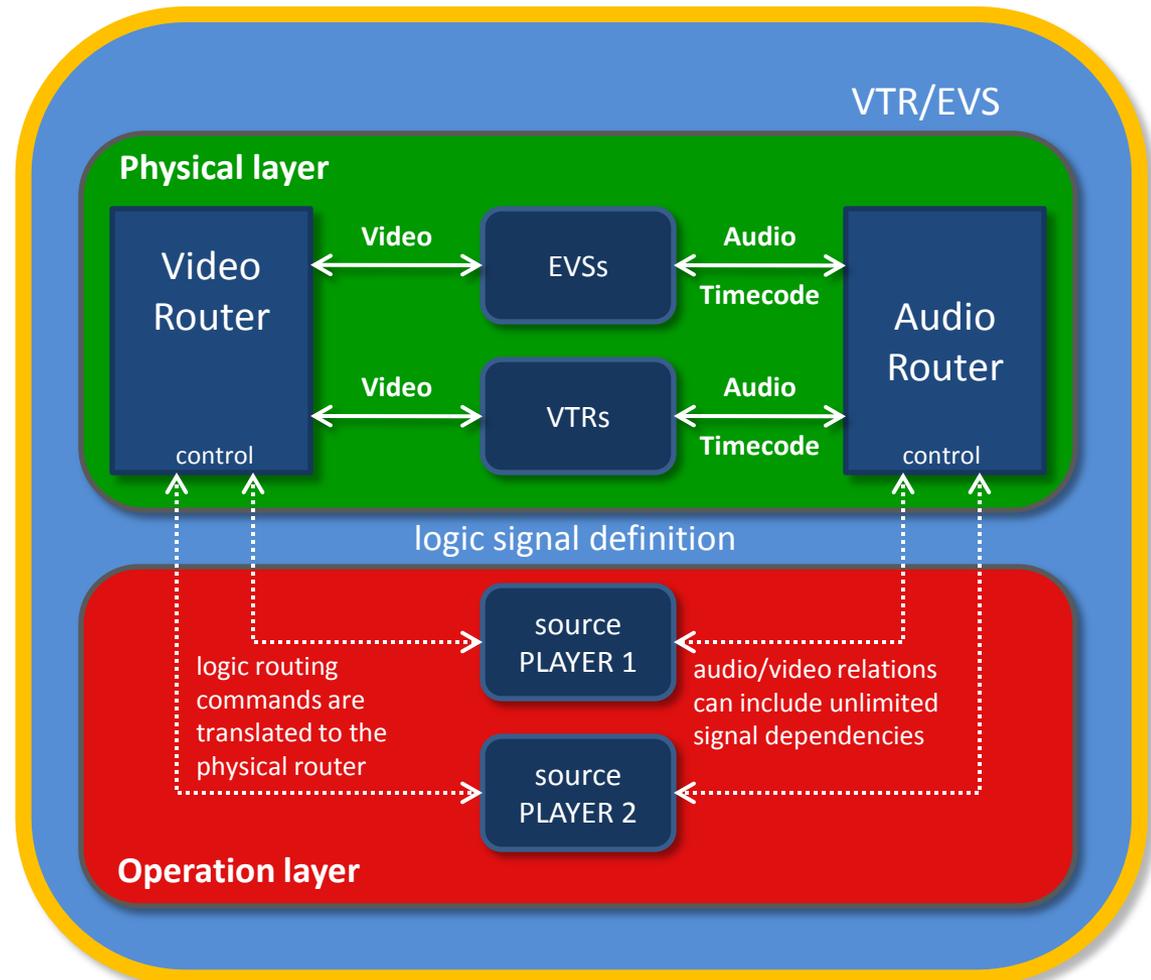
VTR and EVS machines

•Machine pool management

- Logical device management make physical hardware assignment easy (e.g. logic Player 1 signal routing to audio/video mixer can be fed by every VTR or EVS)
- Timer dependent device assignment possible

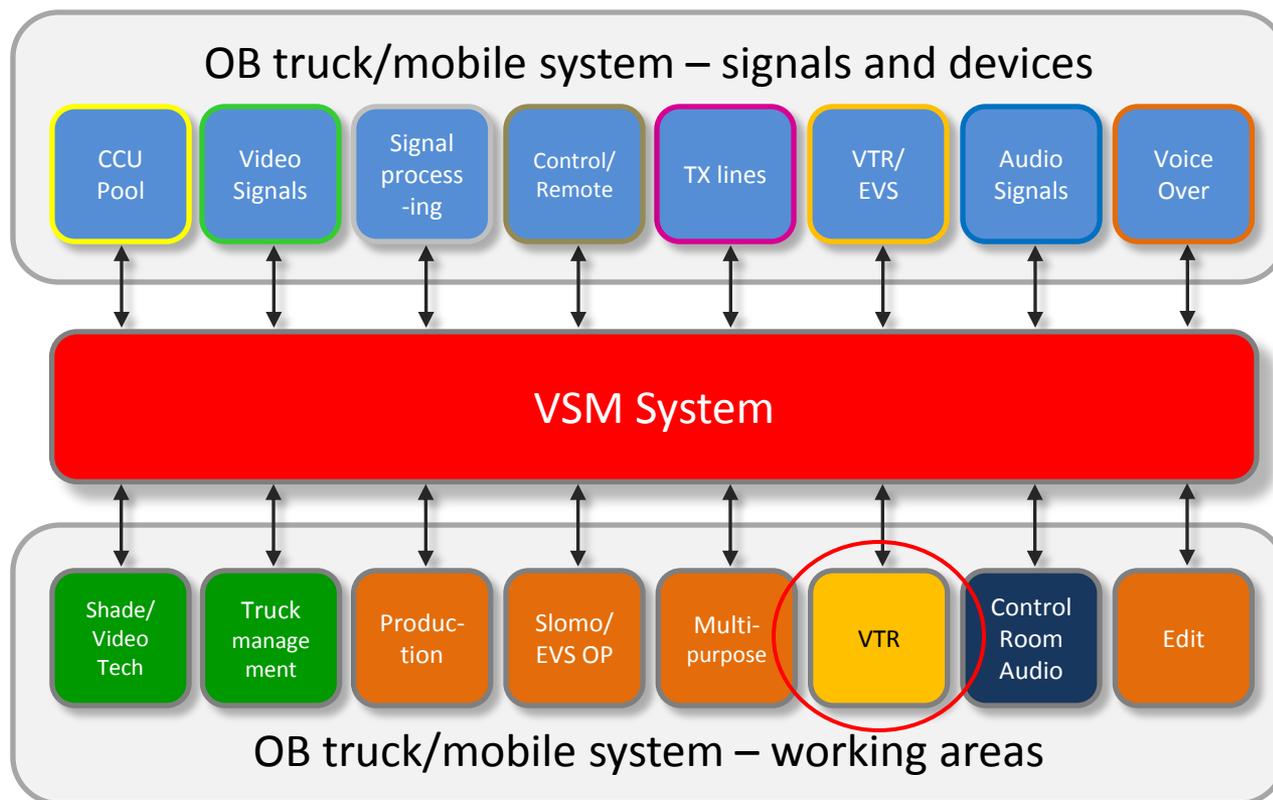
•Signal control

- Crosspoint dependent signalization: Depending on Input routing a GPI or signalization can be activated (e.g. default routing active)
- Automatic silence indication if supported by audio router
- Presets for multi layer routing (video, audio, TC)



Example

VSM for mobile applications



VSM for mobile applications

VTR operation

• Individual workflow surface

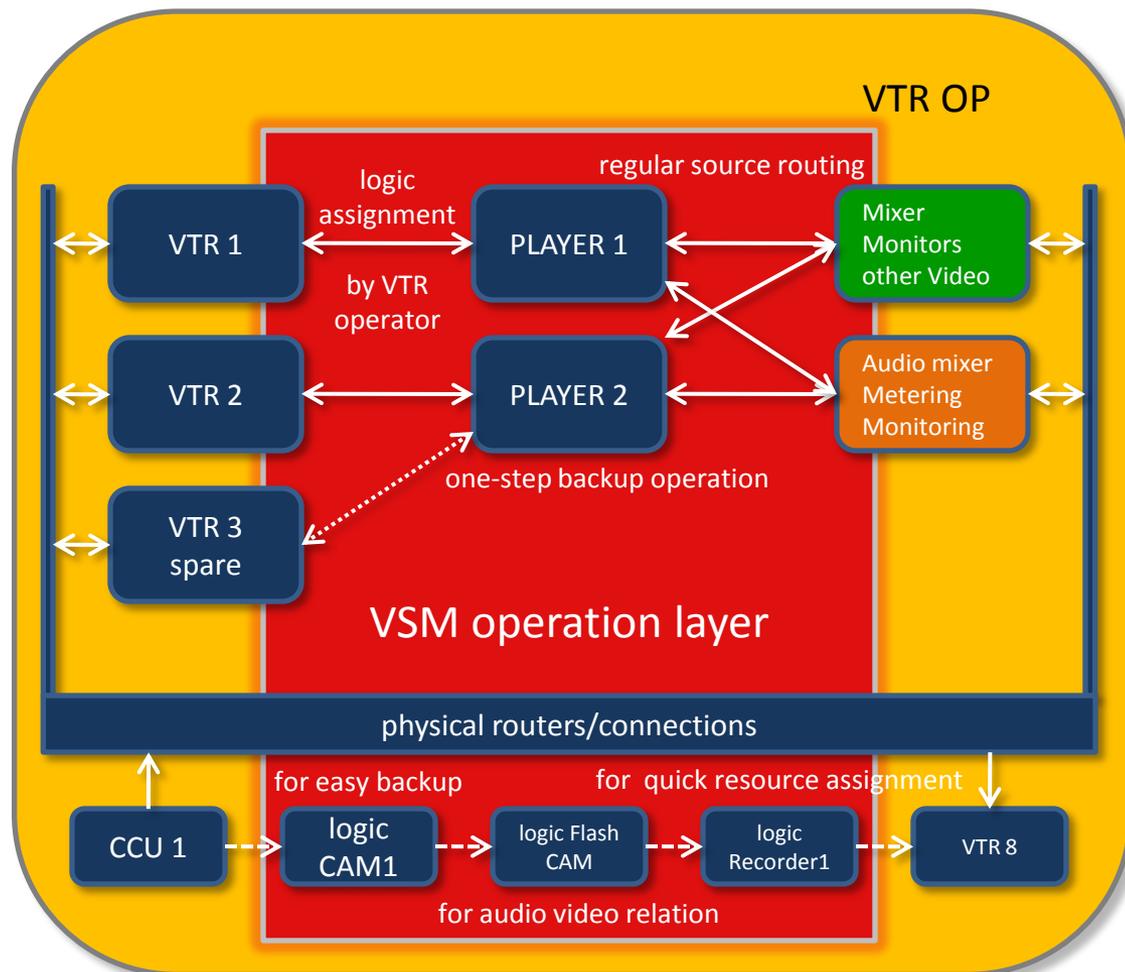
- Dynamic user panel layout definable
- Local snapshot controllable operation (Load/Save/Both)

• Global device assignment

- Device change can be managed from user panel. (e.g. use another machine in case of a stuck tape)

• Signal control

- Convenient routing for audio/video signals
- Logical Output dependencies replace re-entries
- Intelligent signal follow management
- Full signal chain tracking to the original source
- Parameter access to isolated audio feeds feasible
- Full „In-use“ signalization support

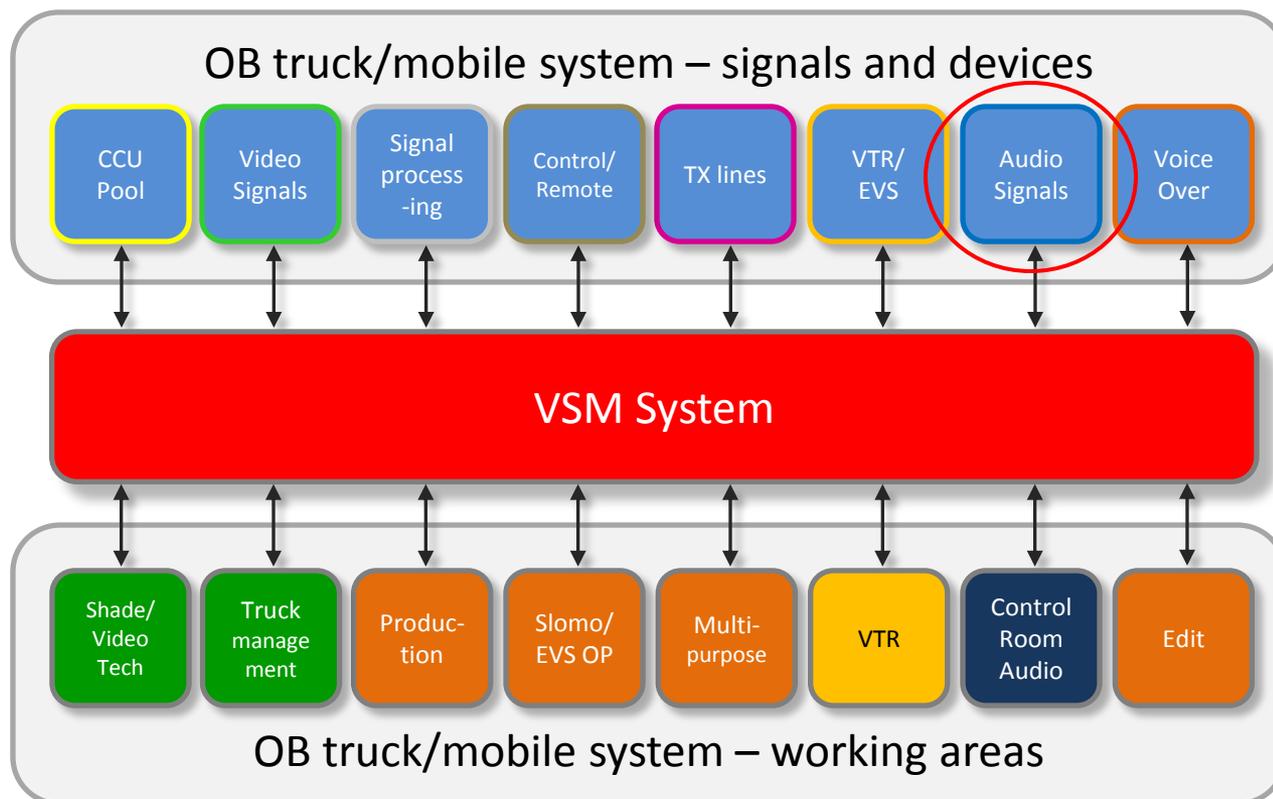


Example

VSM for mobile applications



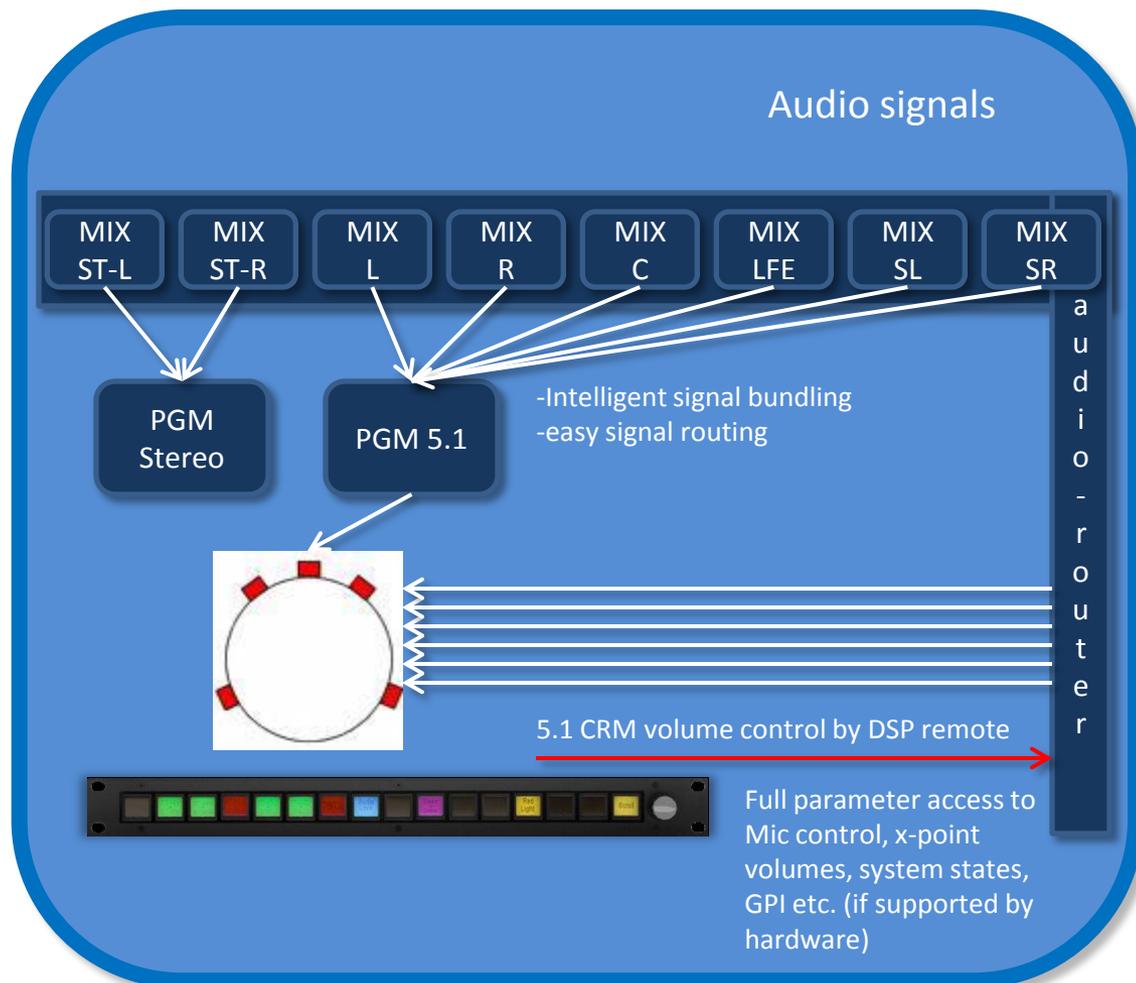
VSM for mobile applications



VSM for mobile applications

Easy complex signal management

- **Decentral signal management**
 - Signal routing independent and parallel to audio-console systems
 - Signal bundling for intelligent system wide operation (mono, stereo, 5.1) including routing logic (e.g. mono signal to stereo input...)
- **Parameter control**
 - Access to physical or DSP parameters inside the audio system over protocol (e.g. Gain, 48V, Delay...)
- **Audio metering over protocol**
 - Audio meters can be indicated on softpanels (up to 48)
- **Tiny snapshot management**
 - Snapshot definitions independent from audio console
 - Backup signal presets
- **Intelligent Control Room monitoring**
 - Level control inside audio router with incremental encoder on user panel
 - Seamless Multichannel handling

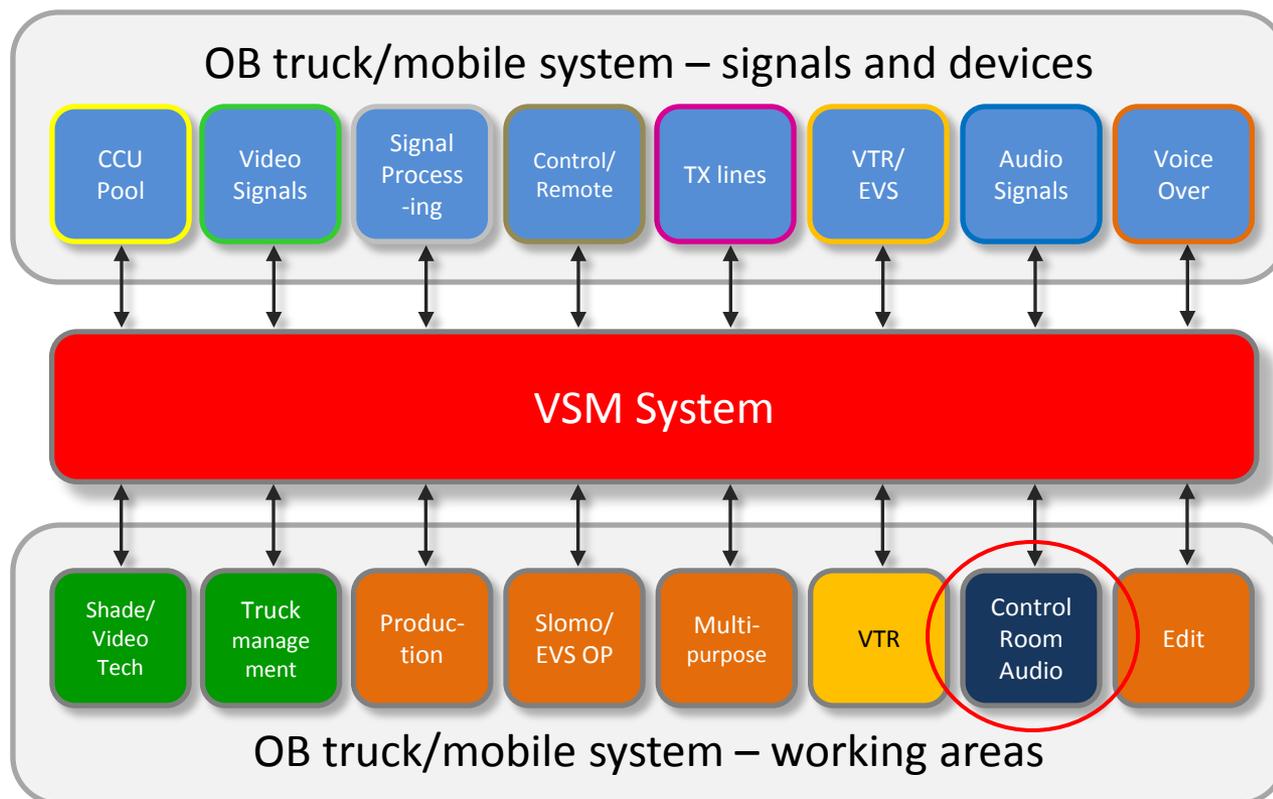


Example

VSM for mobile applications



VSM for mobile applications



VSM for mobile applications

•Audio mixer

- CCU to Audio-follow-Video matching
- External GPI/Trigger management
- Logic routing (e.g. camera Mic from logic camera instead of static CCU)

• Signal control

- Routing and signal chain control
- Metering over protocol
- Delay management
- Audio/Video rule definition
- Parameter control from user panel

•Video Monitoring

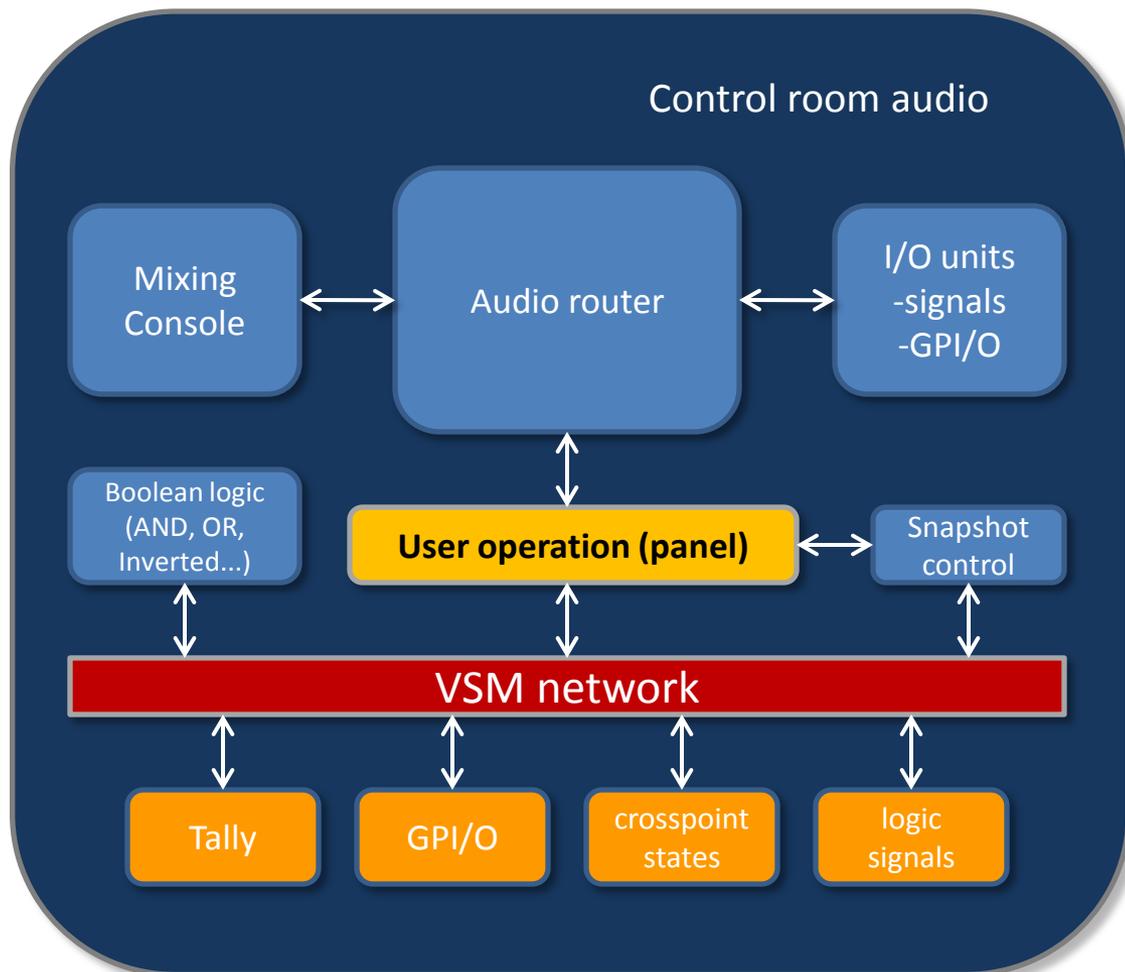
- Video routing
- Multiviewer management (incl. Tally and labels)

• Special Intercom apps

- Partial intercom management (gains, IFBs, groups, calls...)

• Independent snapshot control

- Parameter and crosspoint store (e.g. CCU gains – also relatively to logic paths)
- Workspace related snapshots (e.g. Backup console, submix, FX routing, VTR)

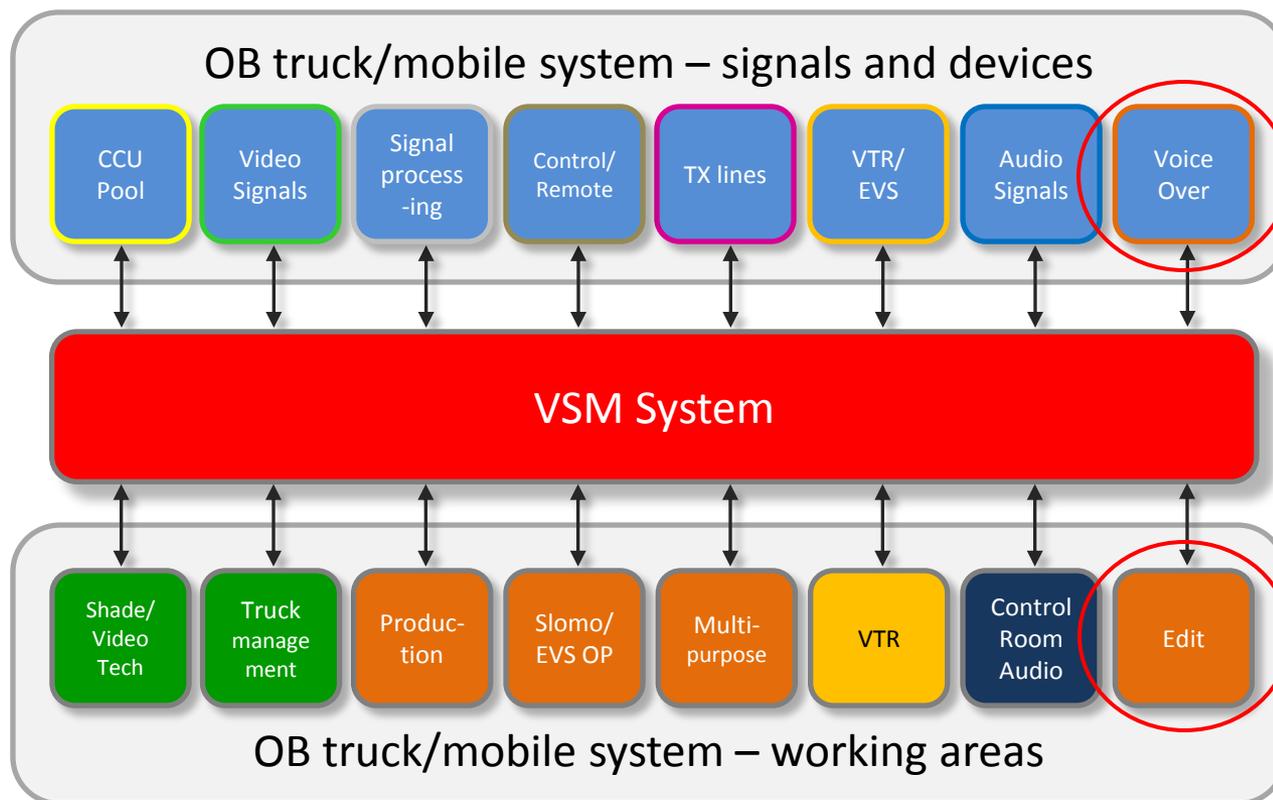


Example

VSM for mobile applications



VSM for mobile applications



VSM for mobile applications

Simple integration

•Routing

- Source selection for monitoring (e.g. mix minus, own voice, ext. source, director) - protectable or changeable from e.g. audio control or edit

•Cough button

•Talkback button

•Off-Air button

- E.g. direct mute in console channel

•On-Air indication over panel



Example

VSM for mobile applications

Fast workflow

•Signal access

- Easy one stop routing of logical feeds
(e.g. PGM feed → e.g. bundle of Videomixer ME1 and Audio Surroundmaster)

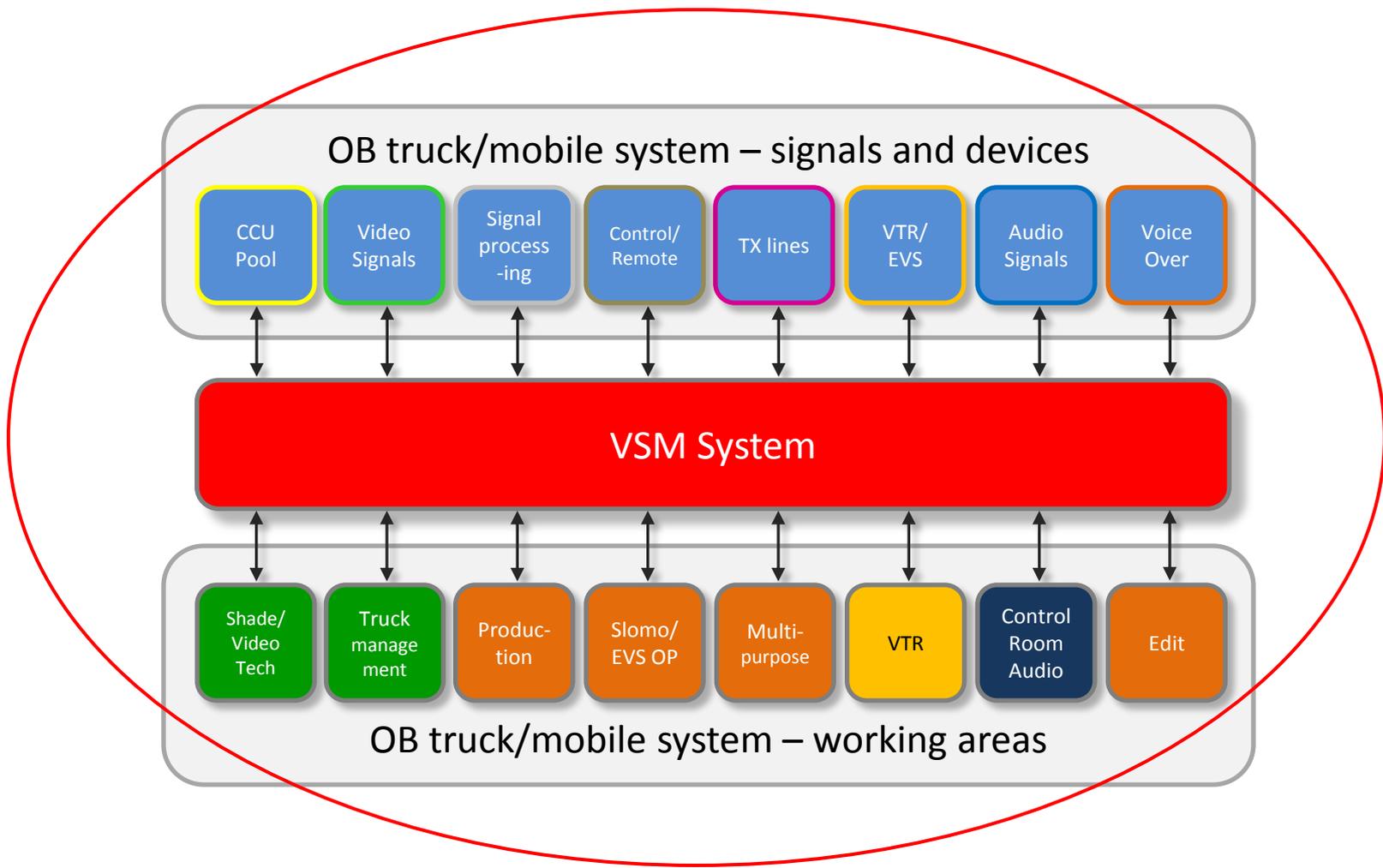
•Local workspace management

- Machine routing
- Audio assignment
- Control room monitoring incl. speaker management

Edit

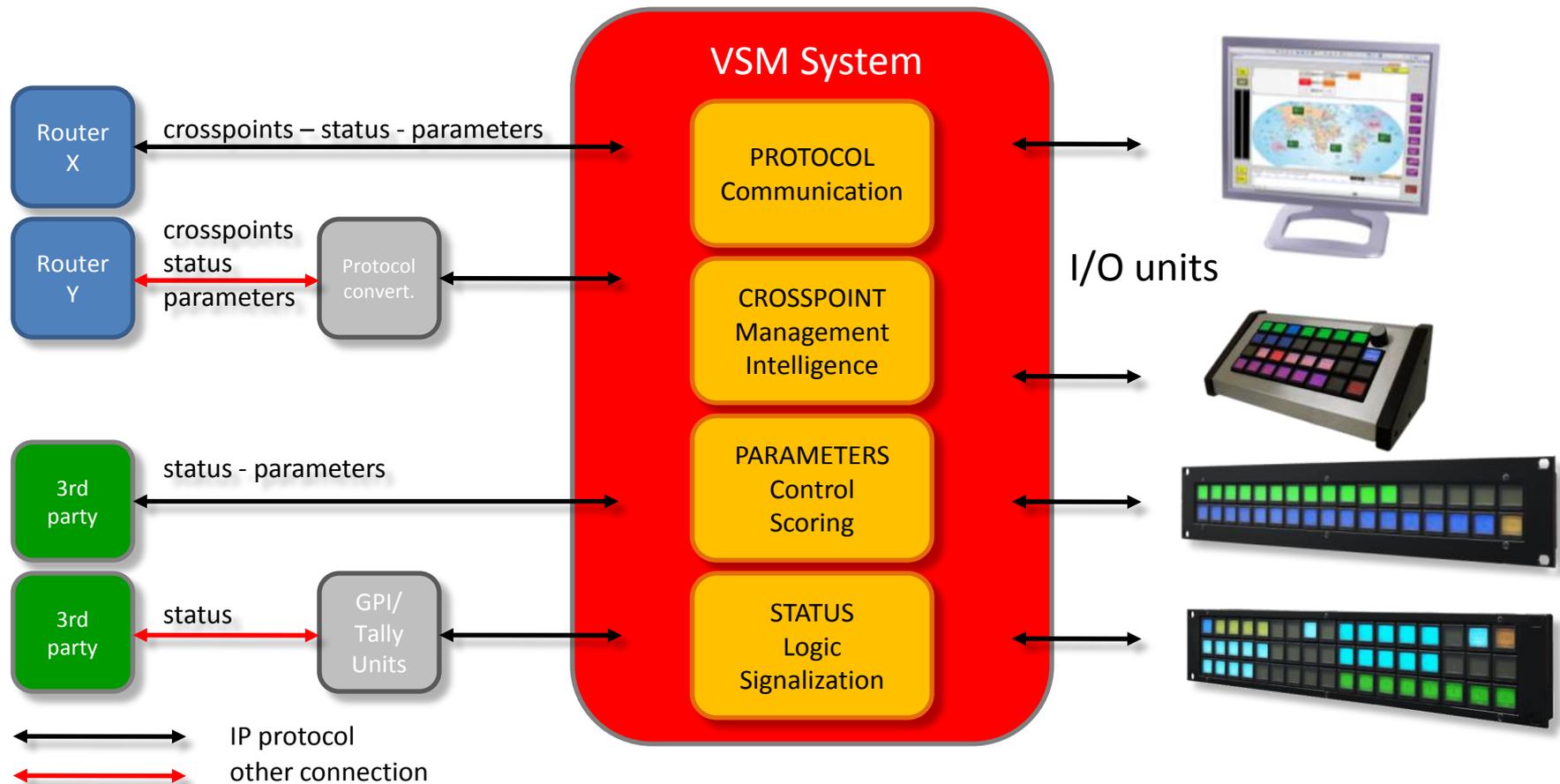


Example



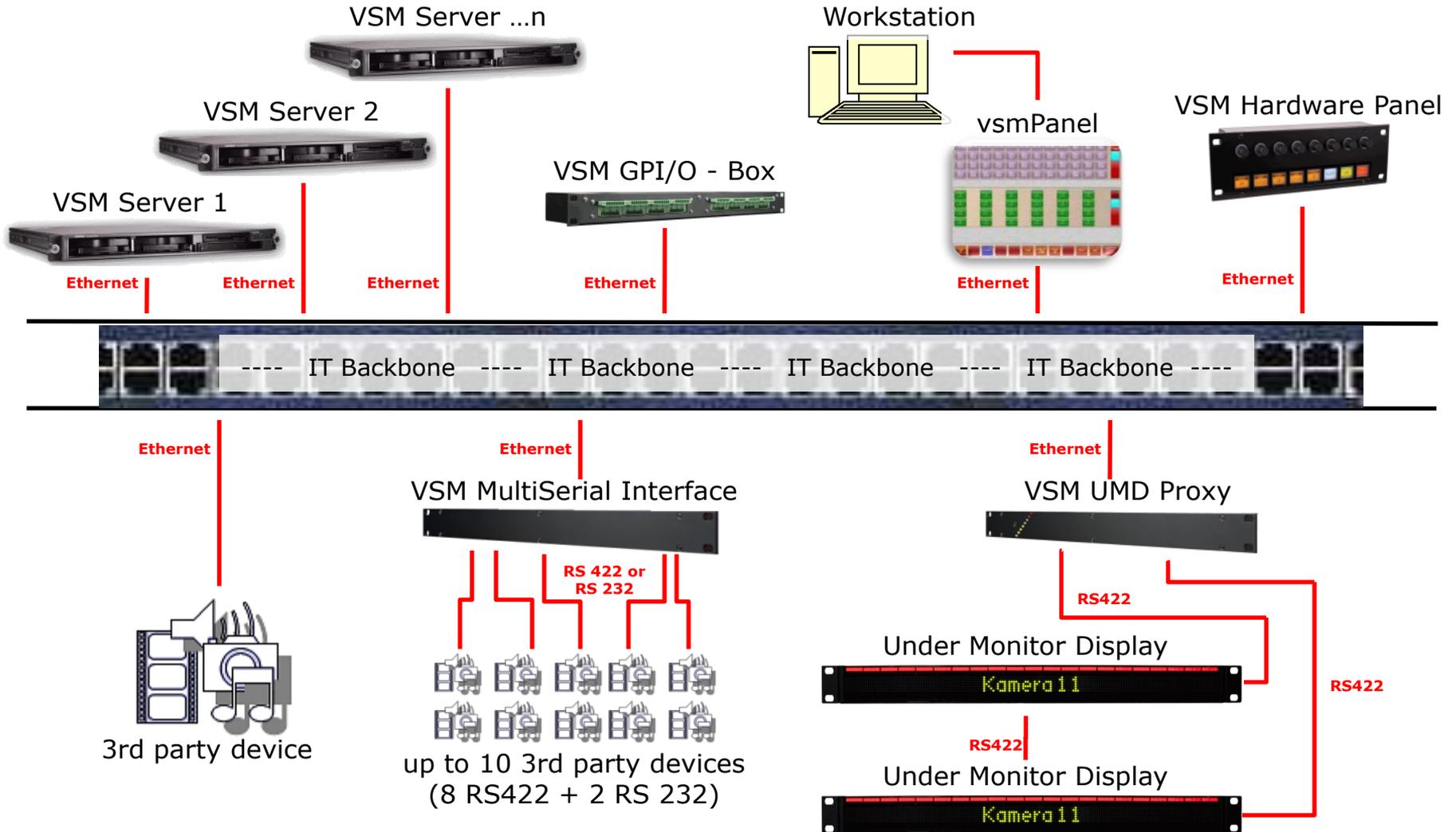
VSM - Central control engine

Flexible broadcast control – Easy user operation – Multi-brand support



- **Routers**
Audio, Video, TC, Data
- **Mixers**
Video, Audio
- **Multiviewers**
- **UMDs**
Multi brand support
- **Intercom**
- **KVM matrix**
- **Broadcast peripherals**
e.g. Video processors
e.g. Delays
e.g. DeEmbedders
e.g. Automation systems
- **GPI**
Logic, external trigger
- **Scheduling**
Timer controlled routing, Event trigger support
- **Alarming**
Alarms, silence detection

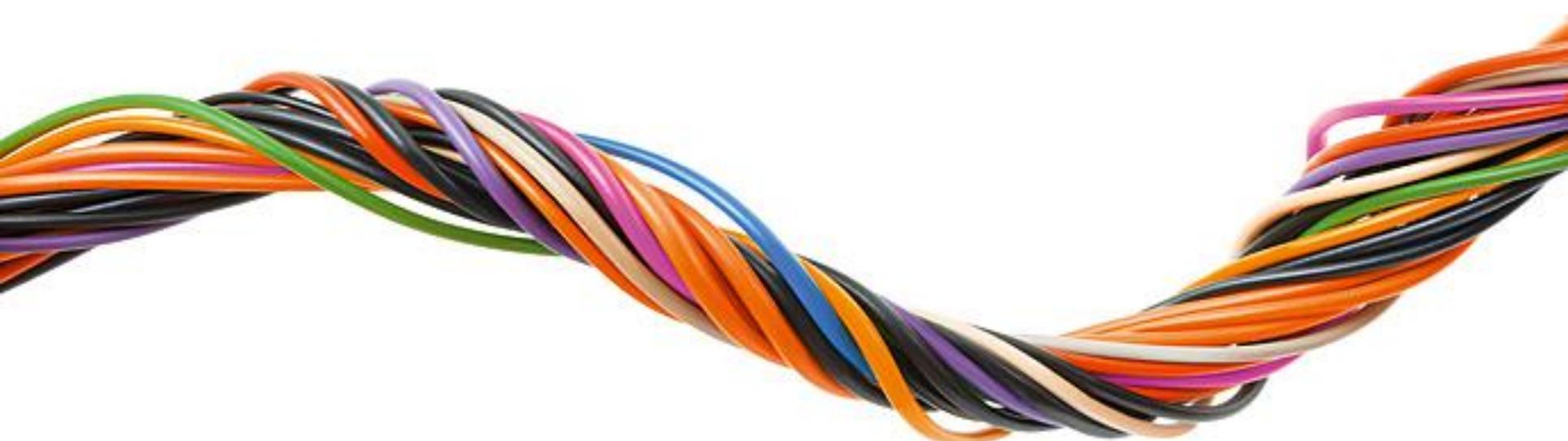
VSM - System components



VSM – What makes it special

Features and functions of VSM

- Manufacturer **independent** – all major broadcast brands supported
- **Free** protocol implementation
- **Modular** system design
- Full **redundancy** concept without master/ slave
- **No** system **limitation** – more demands, more servers
- **Unlimited users** – load balancing system design
- **Open infrastructure** – IP-based topology yet serial compatible
- Various user interfaces – hard and software based
- **Global Tally** – Full Tally support event when tielines are involved
- **Global GPI – Boolean logic** for multi purpose dependencies
- **Individual** workflow solutions
- **Intelligent labelling** management
(e. g. device related for UMD, Mixer, Multiviewer, Panel...)



...more at www.vsm-control.com