ROSS legislative solutions
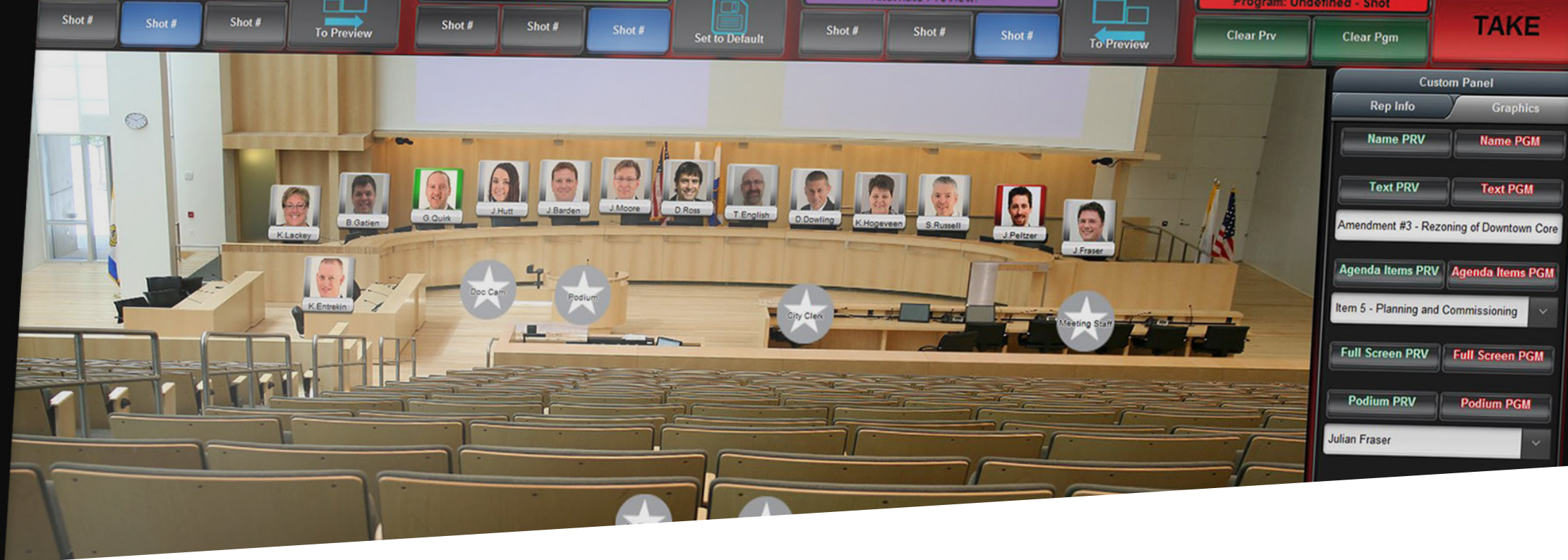
A Lightning Control System

Dynamic Assembly Solutions for an Evolving Industry

ROSS®

Production Technology Experts

Fast & Powerful Smart Production

Broadcast technology is increasingly being used by governments to make legislative proceedings more accessible to constituents. Being a full-time legislator and a part-time broadcaster on a tight budget can seem like a daunting task, but it does not have to be.

Ross Video delivers smart production solutions for non-traditional broadcasters across several markets including legislatures so clients get expert broadcasts without having to be broadcast experts.

With the Ross Lightning Control System™ (LCS), a single operator is able to manage and broadcast assembly proceedings quickly and easily.

ROSS LIGHTNING CONTROL SYSTEM (LCS):
- Easy to Setup
- Easy to Integrate
- Easy to Operate
- Easy to Afford

Your Assembly. Your Broadcast.

FOCUS ON PRODUCTION
Ross LCS lets you focus on your production instead of the technology without a detailed knowledge of production switching or character generation. With only 30 minutes of training, you will be able to manage your assembly broadcast.

When a speaker is selected, up to three cameras focus on the desired target, each having 3 quick recall shots. If one of those cameras is already on air, an alternate camera is provided. The operator picks the camera and shot that best frames the speaker and presses the TAKE button. The system takes care of transitioning the switcher to the chosen camera source and dynamically updates the lower third name graphic with the selected representative's information.

ADAPT TO CHANGES
Change is constant in government. Whether it is an election that brings in new representatives, switching up seating arrangements, updating a representative's picture, or adding in a new person on the fly, Ross LCS is able to accommodate these adjustments in a matter of moments without costly service contracts or fees.

STAY ON AIR
Ross Video offers a single point-of-contact for all of its solutions, including LCS, with 24/7/365 technical support.
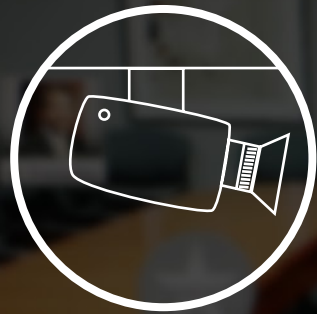
| Key Benefits

EASY TO USE

Intuitive touch screen for selecting representatives, cameras, and shots. Single button takes everything to air, including graphics associated with specific speaker(s) or meeting information.

TECHNOLOGY SIMPLIFIED

Only 30 minutes of training is needed to be able to broadcast effectively. No detailed technical knowledge required.

DEVICE CONTROL

One stop device control including Ross CamBot robotic heads and PIVOTCam PTZ cameras, Sony BRC series cameras, or Panasonic HE series PTZ cameras. Solution also integrates with microphone systems to provide video follow audio set ups.
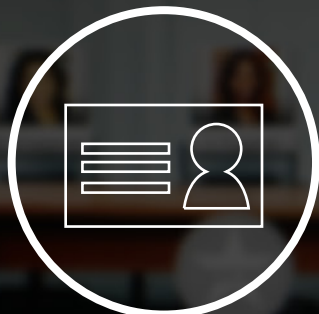
DYNAMIC GRAPHICS

Display pertinent speaker, meeting, and agenda information with dynamic updates using Ross XPression for global template changes.

REPRESENTATIVE ASSIGNMENT

Change seat assignments with a quick drop down list that also updates associated graphics and speaker information.

SPEAKER CONFIRMATION

Double check speaker identity and details with camera feed shown in multiviewer. Capture new thumbnail pictures at the press of a button.

BROADCAST QUALITY

Ross LCS leverages company's 40+ years experience with broadcast technology. Get expert broadcasts without having to be a broadcast expert.
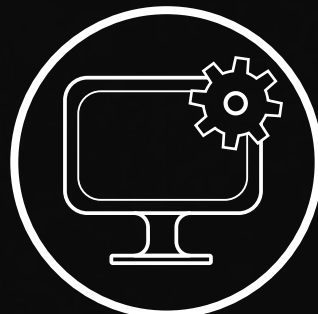
ONGOING DEVELOPMENT

Benefit from Ross' strong commitment to R&D, with customers being a top roadmap priority.
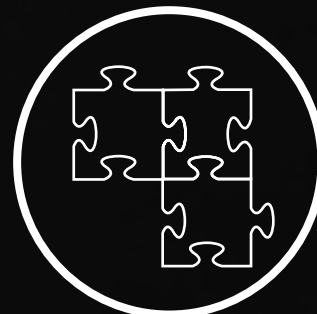
INTEGRATED SOLUTION

Ross LCS is developed, tested, and supported as an integrated solution. If 1 component is upgraded, Ross tests entire solution.

ROSS SUPPORT

Having a single company to contact if there is an issue, and 24/7/365 technical support coverage reduces downtime of the system.

Lightning Control System User Interface

Ross Lightning was originally created to meet the needs of legislatures seeking to make their proceedings more accessible via broadcast video. It is also viable for other productions, such as house of worship, corporate, news and live events.

TAILORED TO YOUR FACILITY
Load your room background and position representatives relative to where they are actually seated

INTUITIVE GRAPHICAL USER INTERFACE
Just touch a representative and the cameras move to prepare the next shot

SINGLE OPERATOR
One person can manage the entire meeting after about 30 minutes of training

MULTIPLE CAMERA OPTIONS
Three cameras with three shots each are available to best capture the next speaker

ON AIR SAFETY
Protects cameras from being moved while on the air

SIMPLIFIED OPERATION
Single button to automatically control switcher and character generator – no understanding of underlying technology required

VISUAL CONFIRMATION
See a picture of the person and compare that to who is on preview to confirm accuracy of saved information, and edit details if needed

DYNAMIC GRAPHICS
Call any graphic templates directly from XPression including lower third name, full slate, bill information, or any other graphic at the press of a button – info is dynamically fed from the LCS to the character generator which can be previewed before put on air

CUSTOM PANEL FLEXIBILITY
Link a custom Ross DashBoard panel to LCS for an unparalleled unified system control. Ex: Control in-room monitors, activate picture-in-picture, etc.

MODERN
Lightning leverages an intuitive touch screen interface that has a background picture of the room for easy understanding. Place icons, with pictures, on the screen and assign which cameras and shots you want recalled when it is selected. Updates for things like seating arrangements are accomplished in seconds. Basic operational training can be done in as few as 30 minutes.

FAST
A single operator manages multiple devices in the room at the press of a button. Cameras focus on a selected speaker and are brought on air with the Carbonite production switcher. Dynamic graphics are displayed, such as lower third nameplates or agenda items, and on the fly updates can be typed in and displayed directly.

POWERFUL
Each assembly has unique ways that things are done or equipment they want to control. As Lightning is built on the Ross DashBoard platform, custom controls can be programmed in to augment Lightning to manage these instances, including additional devices or custom workflows.

LIGHTNING
THE MODERN, FAST AND POWERFUL PRODUCTION SOLUTION

Lightning Control System Workflow & Tools

ADD & UPDATE PARTICIPANT DETAILS
Simple interface to add meeting participants and details like party affiliations. Custom fields accessible by XPression for graphical display and dynamic global template updates.

KNOW THE SPEAKER
Double check speaker identification and details with camera feed shown in multiviewer. Capture new thumbnail picture at press of a button.

MAP CAMERA POSITIONS TO ROOM
Background image of chamber or room lets you map icons - chair, flag, audience, other - to camera positions. Update positions with simple drop down menu.

INTEGRATE & CUSTOMIZE WITH DASHBOARD
Link custom Ross DashBoard panel to LCS for unparalleled unified system control. Control Carbonite's AUX output, turn Picture-in-Picture option on/off, and program device API to turn room lights on/off.
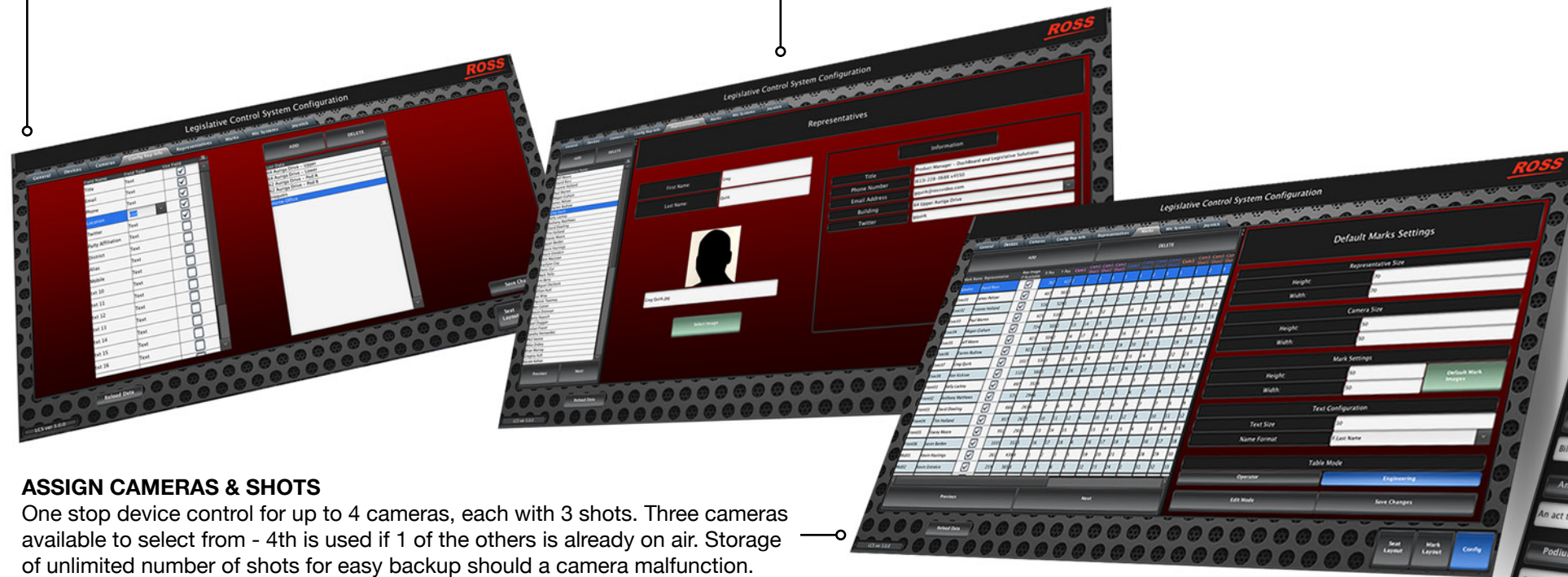
ASSIGN CAMERAS & SHOTS
One stop device control for up to 4 cameras, each with 3 shots. Three cameras available to select from - 4th is used if 1 of the others is already on air. Storage of unlimited number of shots for easy backup should a camera malfunction.

CONTROL YOUR GRAPHICS
Call graphic templates directly from XPression including lower third name, full slate, bill information, or any other graphic at press of a button.

Lightning Control System Benefits

- **Complete It Fast:**
  - Quickly manage an entire meeting without requiring extensive training; even with a single person
  - Control multiple devices at the press of a button (cameras, switcher, graphics)
  - Assign representative to a seat in moments

Designed to Bring Visibility

IMPROVE ATTRIBUTION
Display speaker name, picture, and details to ensure correct attribution of statements. Any errors are easily visible and dynamically resolved.

REALIZE OPEN GOVERNMENT
Make legislative proceedings more accessible to constituents for more transparency into decision making that impacts community.

DISPLAY VOTE OUTCOMES
Connect results from voting system via XPression or Carbonite to visually display outcomes quickly and easily and see which representative voted for/against. Access any XPression template, create drop down list of agenda items, and use free text fields.

INCREASE CONSTITUENT ENGAGEMENT
Campaigners know value of video and social engagement on voter turnout. Apply same principles within assembly to drive constituent engagement and participation.

Images courtesy of the City of San Antonio

72.3% **NEVADA** voter participation

76.1% **UTAH** voter participation

63.6% **NORTH CAROLINA** voter participation

"
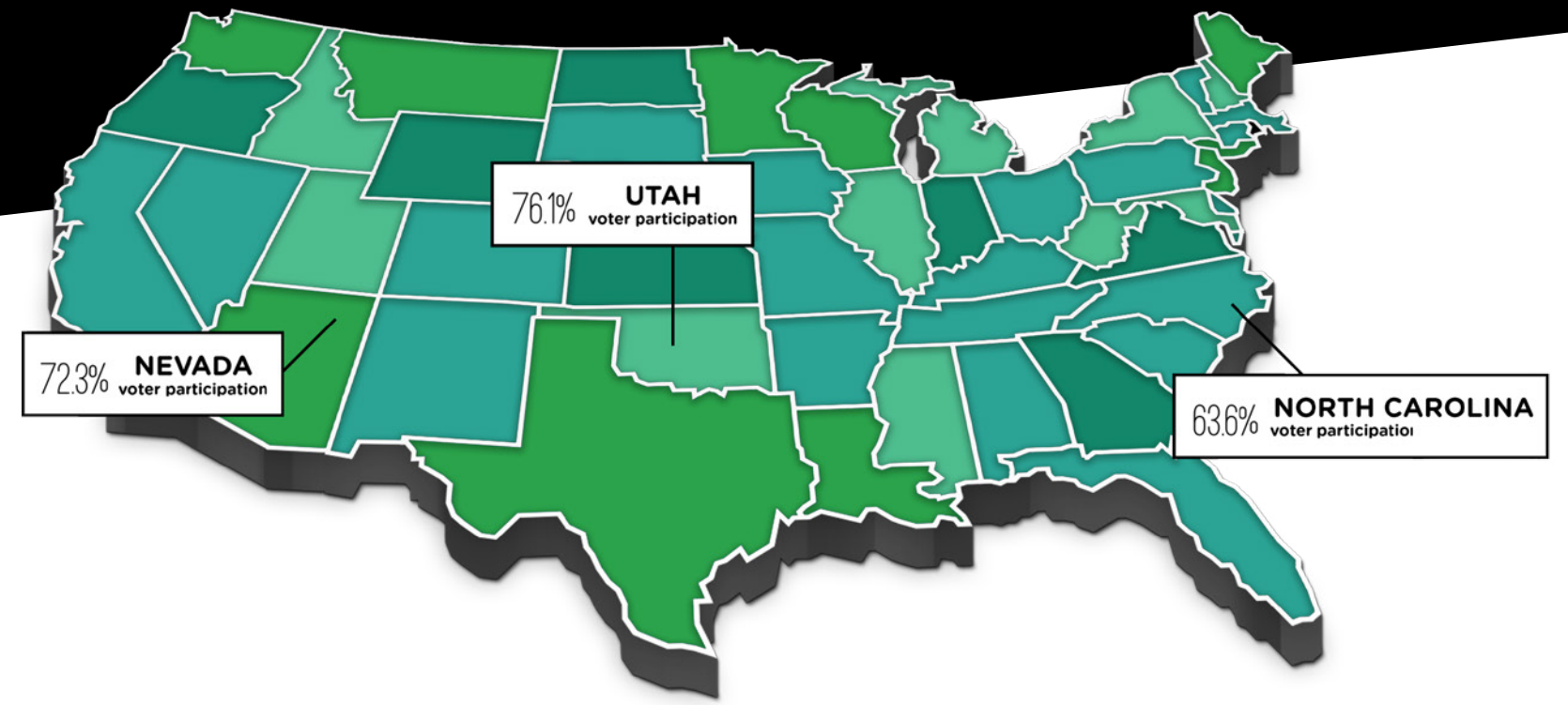
Previously we had 4 to 6 operators… each with a dedicated task... with (Ross) LCS we are able to broadcast professional quality meetings with 1 or 2 operators, allowing us to have shorter shifts, reducing operator fatigue, and being able to do other aspects of our jobs

Cliff Brannon
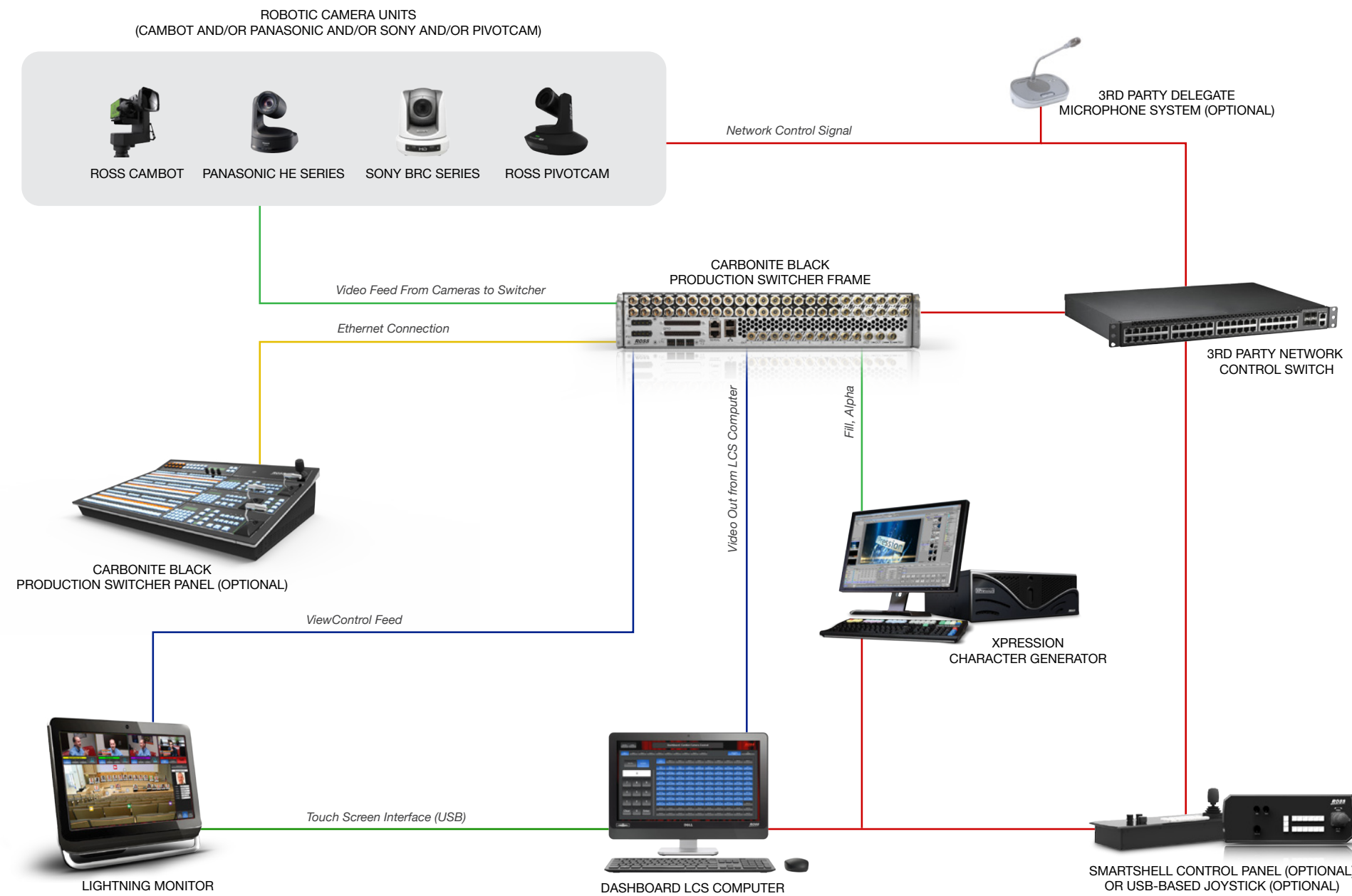AV Production Supervisor - City of Antonio, Texas

"

Image courtesy of the City of San Antonio

Lightning System Diagram

NOTE: System layout and interconnections may vary on a case by case basis. Please contact your Ross Video representative to evaluate your specific needs.

ROBOTIC CAMERA UNITS
(CAMBOT AND/OR PANASONIC AND/OR SONY AND/OR PIVOTCAM)

ROSS CAMBOT   PANASONIC HE SERIES   SONY BRC SERIES   ROSS PIVOTCAM

3RD PARTY DELEGATE
MICROPHONE SYSTEM (OPTIONAL)

Network Control Signal

CARBONITE BLACK
PRODUCTION SWITCHER FRAME

Video Feed From Cameras to Switcher

Ethernet Connection

3RD PARTY NETWORK
CONTROL SWITCH

CARBONITE BLACK
PRODUCTION SWITCHER PANEL (OPTIONAL)

Video Out from LCS Computer

Fill, Alpha

XPRESSION
CHARACTER GENERATOR

ViewControl Feed

Touch Screen Interface (USB)

LIGHTNING MONITOR

DASHBOARD LCS COMPUTER

SMARTSHELL CONTROL PANEL (OPTIONAL)
OR USB-BASED JOYSTICK (OPTIONAL)

LCS Smart Production Configurations

Ross LCS is a flexible solution that leverages other products within the Ross family. Both custom and standard legislative configurations - MODERN, FAST, POWERFUL - are available as outlined on the right.

Ross Smart Products

Carbonite Black Solo

Carbonite Black

XPression

DashBoard ViewControl
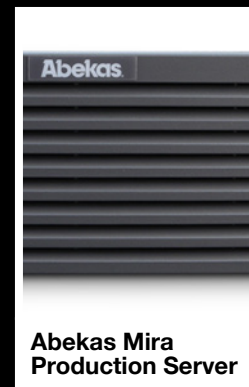
CamBot Robotics Head

PIVOTCam

Acid Cam

SmartShell Control Panel

Abekas Mira Production Server

Ultrix Router

Inception

MODERN

For smaller assemblies or meeting rooms with a limited number of cameras, Ross offers this cost effective solution. Designed for single operator control, Modern LCS leverages a Ross Carbonite Solo production switcher (frame only) which has 6 SDI and 3 HDMI inputs. Ross XPression Live CG (included with any Carbonite frame) is an offline, non-animated character generator. With Modern LCS, dynamic graphics updates are available by sending updated images to the Solo still store and displaying them on preview or program output. Combined with 4 or more Ross PIVOTCam PTZ cameras, Modern LCS is a fully functional solution controlled via an intuitive touch screen interface. Ross DashBoard ViewControl encompasses live video feeds of preview and program directly from the interface.

FAST

For mid-size meeting rooms with more desired sources, Fast LCS pairs an 18-input multimedia Ross Carbonite Black production switcher with XPression Prime and DataLinq. Carbonite permits additional sources to be accessible and has 2 multiviewers - one for LCS with DashBoard ViewControl to display preview and program video feeds within the interface, the second to display all video inputs on a monitor wall. Ross XPression Prime with DataLinq delivers animated, real-time graphics. In adition to virtual joystick control, Fast LCS includes a physical joystick for added camera control as desired.

POWERFUL

Assemblies with larger facilities typically opt for the larger 24-input multimedia Ross Carbonite Black production switcher with a physical 2 ME panel that offers more production quality options. Ross XPression Studio dual channel with DataLinq is often used for graphics. Two channels of XPression graphics gives you the option of either having real-time graphics for both preview and program, or using one channel to control the graphics and the other for something else without losing ability to show preview graphics. Ross CamBot robotic heads permit a Ross AcidCam box camera and lens to be mounted for use of higher quality cameras with longer zoom capabilities.

Optional Equipment

SONY® OR PANASONIC® PAN, TILT, ZOOM (PTZ) CAMERA

For smaller chambers that do not require a longer zoom you can choose to use Sony® BRC-series or Panasonic® HE-series pan, tilt, zoom (PTZ) cameras rather than the Ross PIVOTCam as all are fully integrated into the LCS. These cameras are widely popular and are relied on to deliver high definition video at a reasonable price.

ROSS SMARTSHELL CONTROL PANEL OR ROSS USB JOYSTICK

While there is a virtual joystick as part of the LCS, many operators prefer tactile interaction with a physical joystick. The Ross SmartShell control Panel or Ross USB Joystick is used to move any camera that works with the Lightning Control System. The SmartShell Control Panel automatically follows LCS so that the camera on preview is immediately ready for adjustment.

ROSS ABEKAS MIRA PRODUCTION SERVER

It is now the norm to record all meetings, whether for broadcasting at a later time or to compile highlights packages. Ross Abekas Mira Production Server is the perfect tool for recording multiple cameras simultaneously into a single server. Mira can be operated through its intuitive and elegant graphical user interface, or from Ross DashBoard, including directly from the LCS interface.

ROSS ULTRIX ROUTER

Many assemblies have multiple sources they need to route throughout their facility. Ross Ultrix is a compact, but incredibly powerful routing video switcher platform. The unique design permits users to software license additional capabilities such as advanced audio processing, integrated multi-viewers, and 12 Gb/s signal-switching. No special hardware is required for any of these features. While these feature sets are typically associated with large and costly systems which cause users to make critical design choices upfront, Ross Ultrix brings such high-end features to all sizes of systems.

ROSS INCEPTION

Inception is a collaborative planning and content creation tool. Ross Inception can interface with broadcast devices to organize graphics or write scripts for a teleprompter. Inception is also a social media and web management tool. Create posts for a variety of web and social media platforms that can be published manually or triggered to publish as part of a broadcast. Engage your audience by monitoring hashtags or launching poll questions on social media and feeding the results directly into onscreen graphics. Ross Inception is available in three editions to suit a variety of needs, including Inception News, Inception Live and Inception Social.

Legislative Assembly Success Story

Client Capitol Television
Providence, Rhode Island

Goal Increase transparency of legislative proceedings and engage more constituents on more issues, while being budget conscious.

Rhode Island General Assembly is the state legislature for the U.S. state of Rhode Island. The Assembly is composed of the lower House of Representatives with 75 members, and the Upper Senate with 38 members.

CHALLENGE:

Antiquated infrastructure with limited live broadcast capacity adversely impacting government transparency, constituent visibility, and efficient use of resources:

- 20 year old analog broadcast equipment
- 9 cameras being moved manually between X rooms
- Simultaneous live broadcasts limited to 3, a fraction of the sessions in progress at any given time

SOLUTION:
Capitol Television, on behalf of Rhode Island General Assembly, selected an end-to-end HD production solution from Ross Video with:

- CamBot robotic cameras
- NK series routers
- openGear terminal equipment
- Carbonite production switchers
- BlackStorm video servers
- XPression motion graphics

...all powered by the Ross Lightning Control System.

"We looked at a number of different vendors, but Ross Video's demo blew the competition away," says Derek Hayes, general manager for Capitol Television. "We liked the fact that **Ross** could provide an **all-in-one-solution that was easy to use and where we had no worries about one piece of equipment "talking" to another.** The **integrated workflow**, the ability to do a split screen and bring in graphics, everything, was so **straightforward."**

Ross LCS has a touchscreen user interface that can be tailored to the specific configuration of any legislature. Carbonite switchers have all the power needed to switch among the legislative chambers' different cameras, and production control is unified into the touchscreen enabling clean, attractive, network-quality production by a single operator. By integrating with microphone or the delegate system, the best camera angle and relevant graphical overlay are automatically selected and placed on the switcher's "preset" bus. The operator can then trim the camera, if necessary, and "take" the new angle and graphics.

"About half of our staff didn't have any TV experience, but the power and simplicity of the Ross solution made it easy for them to quickly become productive. Now, we can cover up to seven different Assembly proceedings at the same time, and stream them live to the web."

Derek Hayes, General Manager
Rhode Island General Assembly

VALUE:

Increased live broadcast capacity for improved government transparency.
Capitol TV can now cover up to seven different Assembly proceedings at the same time and stream them live to the web. "The Ross solution enables us to create seven live programs, which we stream to cable TV, the Internet and video on demand. This has significantly improved transparency and met our goal of televising more Assembly debates, committee hearings, press conferences and other events," says Hayes. "We have around 350,000 cable subscribers in the State and have had as many as 80,000 people from around the U.S. watching our live stream of some debates. Also, we went on air on time and on budget. All in all, this has been a big success all round."

More efficient use of time and resource.
Live production is much more efficient and post-production has been eliminated. The fact that the system can be run by a single operator, if necessary, makes it easier and more cost effective to cover even those long Assembly sittings and committee hearings, during which many people testify, that can sometimes go on until the next morning "The Ross solution has delivered everything it promised and more," finishes Hayes. "It's easy to make changes, the CamBots are brilliant, and the training and customer support were stellar, but we've only just started to find out what this solution can do. We can't wait to explore the solution further, find out more and be more creative. We're very happy we decided to go with Ross Video."

ROSS VIDEO
Production Technology Experts

MOTION GRAPHICS

XPRESSION | Studio, BlueBox, Prime, Go!, Designer, Developer, Quad
XPRESSION CLIPS
XPRESSION TESSERA
XPRESSION MAPS
XPRESSION TELESTRATE
XPRESSION TOUCH FACTORY
XPRESSION BRAND IT
XPRESSION TICK IT

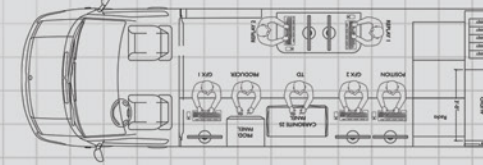## CREATIVE SERVICES

ROCKET SURGERY | Graphics Creation

STUDIO IN A BOX

GRAPHITE | All-in-One Live Production Vehicle

OPENTRUCK

OPENTRUCK | Flight Case through 40-foot Truck Designs

PRODUCTION SERVICES

ROSS MOBILE PRODUCTIONS

ASSET MANAGEMENT

STREAMLINE

CAMERAS

ACID CAMERA | H200-UCHR, Z50-UCHR
PIVOTCAM | PIVOTCam-20

CHROMA KEYING

ULTRACHROME HR

CARBONITE BLACK

Carbonite Black Chassis with UltraChroma HR Software

NEWS & SOCIAL MEDIA

INCEPTION NEWS | Academic, Express, Standard, Enterprise
INCEPTION LIVE
INCEPTION SOCIAL
INCEPTION.CLOUD
HORIZON

CONTROL SYSTEMS

OVERDRIVE | Express, Prime, Premium
DASHBOARD
LIGHTNING CONTROL SYSTEM

INFRASTRUCTURE

ULTRIX ROUTER | 16x16-72x72
NK ROUTER | 16x4 -144x144
OPENGEAR | Modular Signal Processing
MASTER CONTROL | MC1 openGear Card, MC1 Panel
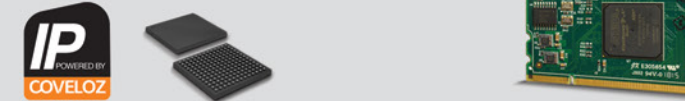**NIELSEN** | Watermarks Encoder

STUDIO VIDEO-OVER-IP | AIMS-compliant Gateways & Control
GEARLITE | Point of Use Signal Processing
AUDIO MONITORING | MB 651, MB-652
MASTER SYNC & REFERENCE | SRG-2200, SRG-4400, ACO-4400

IP TECHNOLOGY

OEM PRODUCTS | Market Ready Modules & System-on-Chip

IP POWERED BY COVELOZ

VIDEO SERVERS, REPLAY & DELAY

ABEKAS MIRA | Replay Systems
ABEKAS TRIA | Production Servers
ABEKAS AIRCLEANER | Live Events Delay

ROBOTICS

FURIO SE LIVE | Live Head, SE Dolly and SE Lift; PanBar and Joystick Controls
FURIO SE STUDIO | VR100, VR600 Heads; SE Lift and SE Dolly; SE BlackBird
CAMBOT | 520PT, 600PT, 700PT Heads; 600 PTZ; 600XY & 700XY Free-Roaming Peds
SMARTSHELL | Robotic Camera Control System

VIRTUAL & AUGMENTED REALITY

TRACKLESS VIRTUAL
UX VIRTUAL TRACKING SYSTEM
FRONTIER

PRODUCTION SWITCHERS

ACUITY | Panel: A1s, A2m, A2x, A3m, A3, A4 Frame: 4RU, 8RU
CARBONITE BLACK | Panel: C1, C1s, C2, C2s, C3s, C3x Frame: 2RU
CARBONITE BLACK PLUS
CARBONITE BLACK PLUS 12G
CARBONITE BLACK SOLO

ROSS legislative solutions

A Lightning Control System

Ross Video has a complete range of technical services available to ensure that your Lightning installation is a success.

Operational Training can be provided at Ross Video, on-site or on the web. Experienced Ross operators will teach your staff to get the most out of your new system, and enhance your productions.

Commissioning is a service to help get your Legislative system properly configured, connected and installed. This service is performed by factory trained Ross technical staff.

Technical Training can be provided at Ross Video, on-site or over the web. Technical training will teach your engineering staff the technical details of the system you have purchased. System configuration, interfaces, databases, and routine maintenance procedures are some of the topics covered.

Lightning comes standard with a 1 year comprehensive warranty. **Extended Warranties** on hardware and software maintenance are available for an annual fee.

Technical advice is available on-line, by telephone, or email to Ross Video – **Included for the life of your system.**

Contact Us

North America: 1-844-652-0645
Global: +800 1005 0100
Email: solutions@rossvideo.com

Technical Support
Emergency: +1 613 349-0006
Email: techsupport@rossvideo.com

www.**rossvideo**.com

ROSS VIDEO
PRODUCTION TECHNOLOGY EXPERTS

SOLUTIONS
Broadcast & Production
Augmented Reality & Virtual Sets
Sport & Live Events
Legislative
Mobile Production
House of Worship
Education
Corporate

PRODUCTS
Production Switchers
Motion Graphics & Clip Servers
Replay & Production Servers
Robotic & Camera Systems
Control Systems
Routing Infrastructure
Signal Processing Infrastructure
News, Live & Social Production Management
Media Asset Management

SERVICES
Creative Services
Mobile Production

LCS-002-BR

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Production Technology Experts