

UNIFIED

Systems

Unified AV Systems
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Quote# Q45669
 Date 12/7/2015
 Expires 3/6/2016
 Title Live Streaming system, BUDGET ESTIMATE
 Ship Method
 Payment Terms Net 30
 Invoicing Terms Upon Completion
 Sales Rep Allen Lamb
 alamb@unifiedav.com

Bill To
 Janet Pierson
 Town of Huntersville
 PO Box 664
 Huntersville NC 28070

Ship To
 Janet Pierson
 Town of Huntersville
 101 Huntersville-Concord Rd.
 Huntersville NC 28070

Quantity	Item	Description	Price	Amount
		Budget Estimate: Adding streaming and archiving system to Council Chambers. Town of Huntersville IT team would need to provide connection to your network and create a link on your website. Camera to be mounted for comprehensive look at the participants, Camera can be controlled via web browser for Pan, Tilt & Zoom.		
1	EXTRON 60-440-01	MDA 3A, Audio Distribution Amp	158.00	158.00
1	EXTRON 60-997-01	Two Output HDMI Distribution Amplifier	488.00	488.00
1	NCAST PR-HD-EXTREME-R	Presentation Recorder HD Extreme Records up to 1080p at 25fps, records and streams 720p at 30fps, a week of storage.	5,183.00	5,183.00
1	VADDIO 999-9940-000	RoboSHOT 12 HDMI High-Definition PTZ Conferencing Camera featuring: • 12X Optical Zoom Lens • Exmor 1/2.8-Type 2.34 Megapixel (1080p/60 native) highspeed, low noise CMOS image sensor • HDMI or DVI-D Output (YCbCr and sRGB color space) • 73° Wide Horizontal Field of View • Tri-Synchronous Motion (simultaneous 3-axis motion) • Built-in web server for configuration, control and remote management	2,978.00	2,978.00
1	MISC-CABLES.	Plenum Cables, Connectors, Wall plates & Misc. Installation Hardware	851.00	851.00
1	PURLNK HCE II-TX/RX	HDMI Over Catx Transmitter/Receiver	277.00	277.00
1	Labor Group Summary	Labor Summary to Include: • On-Site Installation • Project Management • Design Engineering and Signal Flow Diagrams • As-built Drawings (CAD) and Documentation • System Testing and Commissioning • Basic End User Training		3,199.00
1	90DSA	90 Day Installation Warranty Includes Parts and Labor	0.00	0.00
1	Freight	Shipping and Handling will be prepaid and added to your invoice. Estimated:	142.00	142.00

Quotation is Valid for 90 Days. Products are covered under the Manufacturer's warranty.
 Applicable Freight(FOB Origin), permit fees, state and local taxes will be added to invoice unless otherwise noted above.

Order Cancellation may be subject to a Restocking Charge. Down payments are due upon contract award. All other invoices are due NET 30, unless otherwise noted above.

For credit card transactions over \$2,000 a 2% processing fee will be added to the total payment.

This proposal (including drawings, specifications, and designs) is the proprietary property of Unified AV Systems, shall not be disclosed outside the Client to whom it is addressed, and shall not be duplicated, used, or disclosed in whole or in part for any purpose other than to evaluate this proposal.

Approved:

Signature

Order Approval and Confirmation of attached Terms and Conditions

Subtotal 13,276.00
7.25% 730.58
Total \$14,006.58

Dynamic Window Layouts

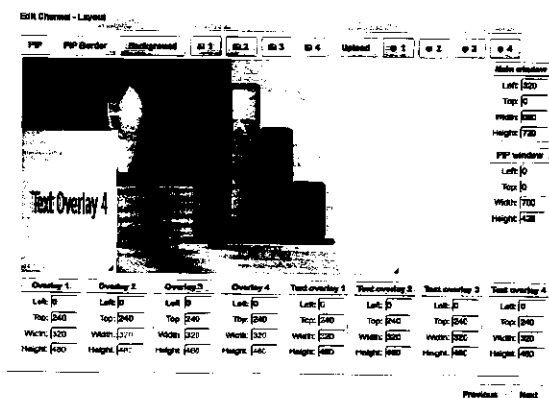
Changing Presenter and Content windows during a recording

NCast's Presentation Recorders and Telepresenters allow great flexibility in layout of the Content (Main or VGA) window and the Presenter (PIP or Video) window along with graphical overlays. This Tech Tip will discuss static and dynamic window layout with details on how to implement dynamic window layouts using the serial command set.

Static Window Layouts

Static window layouts are configured when the Channels of a Presentation Recorder or Telepresenter are edited. A Channel in our architecture is like a preset or a template that contains all the startup parameters and information needed for a streaming or recording session.

The Channel layouts may be altered from the factory defaults during a Channel Edit operation. There is an easy-to-use drag-n-drop editor to move windows around and to add customized graphic or text overlays.



When a Channel session is started the layout defined by that Channel is initialized (the Main and PIP windows are set to some defined set of coordinates on the screen) and these positions are maintained throughout the streaming or recording session.

The defined window hierarchy (which windows will be most visible) is as follows:

- Background image (Lowest visibility, blocked by all other windows)
- Main window (Usually the content or presentation window)
- PIP window (Blocks the Main or Content window, usually is the podium video)
- Graphical overlays 1-4 (Overlay 1 has the lowest visibility of the group)
- Text overlays (Blocks all other windows. Text overlay 1 has the lowest visibility)

These window arrangements are considered "static" as the only way to move a window on the screen (other than use of the Swap command) is to stop a Channel and start a new one with a different arrangement.

There are many occasions where users would like more flexibility and would like to rearrange the windows during a streaming/recording session. Fortunately this is easy to accomplish using the serial command set. Dynamic window layouts solve the problem.

NCast

Excellence in Capture and Streaming™

www.ncast.com

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Dynamic Window Layouts

A common recording situation occurs at the end of a presentation when the speaker has finished with his/her prepared slides and a Q&A segment begins. The recorder operator would like to remove the content window from the stream/recording and use the video camera feed (previously the PIP window) to fill in the wide-screen space available.

Windows re-arrangements such as this can be easily accomplished through use of the serial command set. See the *Presentation Recorder Serial Interface Specification* manual for complete details. The frame size may not be changed during a recording (i.e. one cannot switch from a 1280x720 recording frame to 640x360 frame). All windows are placed/located within the underlying frame.

Swap

There is a swap command (SW) which exchanges the Main and PIP feeds. The coordinates and placement of the Main and PIP windows are not altered by this command.

Graphical Overlay On/Off

Graphical overlays covering up a dead content window (sometimes in conjunction with use of the Swap command) will eliminate unwanted content from the recording. See the OG0 command and the OG1,n to OG4,n commands.

Text Overlay On/Off

Text overlay windows may also be used to cover dead content. See the OT0 command and the OT1,n to OT4,n commands.

PIP On/Off

The PIP window may be added or removed. See the p0 and p1 commands.

Window Setting - Main

The command W,x,y,w,h will set the Main window to position (x,y) with w=width and h=height.

Window Setting - PIP

The command w,x,y,w,h will set the PIP window to position (x,y) with w=width and h=height. The PIP window will cover the Main window.

Window Setting - Alternate Versions

There are alternate forms of the W and w commands to reposition the windows. For example, it is possible to move a window to the "bottom-right corner".

Window Inputs

The feeds to the Main and PIP windows (which input connector is used) may be changed at any time using the Gn and Vn commands.

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Example – Podium Left Layout

Sets the Main window to position (320,0) with a width x height of 960x720. The position (0,0) is the upper left corner of the frame. Sets the PIP window to position (0,0) with a width x height of 320x240. Turns off all graphical overlays and then turns Graphical Overlay 1 on. Enables the PIP window. The semicolons shown in these examples are command separators (line-feeds or <lf> codes) and are not actually sent over the serial link.

```
W,320,0,960,720;w,0,0,320,240;OG0;OG1,1;p1;
```

Example – Podium Right Layout

Sets the Main window to position (0,0) with a width x height of 960x720. The position (0,0) is the upper left corner of the frame. Sets the PIP window to position (960,0) with a width x height of 320x240. Turns off all graphical overlays and then turns Graphical Overlay 3 on. Enables the PIP window.

```
W,0,0,960,720;w,960,0,320,240;OG0;OG3,1;p1;
```

Example – Presentation Only

Sets the Main window (the presentation or VGA feed) to position (0,0) with a width x height of 1280x720. All overlay graphics are turned off. The PIP window is disabled.

```
W,0,0,1280,720;OG0;p0;
```

Example – Presenter Only

Sets the PIP window (the presenter or podium video camera) to position (0,0) with a width x height of 1280x720. This will completely obscure any Main window content. All overlay graphics are turned off. The PIP window is enabled.

```
w,0,0,1280,720;OG0;p1;
```

Support

For questions or help in resolving any problems email “support@ncast.com” or better yet, create a support ticket on our website. Downloading and attaching the .zip files of the logs from each unit will be most helpful to tech support in resolving any issues.

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Presentation Server – Protocols and Port Usage Installation Notes

Information for the IT Staff and Firewall Administrators

PROTOCOLS AND PORT NUMBERS FOR THE PRESENTATION SERVER

The Presentation Server uses these protocols and ports:

SSH Protocol

SSH is used to access the server remotely for maintenance updates and diagnostic work. The default port number is used, and it is always TCP port 22.

HTTP Protocol

The Presentation Server uses HTTP protocol to present the Media Gallery, Administrative Pages, and to allow connection from Presentation Recorders. These pages are delivered via TCP port 80 and/or TCP port 8080.

The Server connects to outside repositories via HTTP to download updated software packages and security fixes.

HTTPS Protocol

The Server can be configured to provide SSL secure access to the Administrative Pages and the Media Gallery. In this scenario TCP port 443 is used.

RTMP Streaming Video (for Desktops/Flash Players)

The Presentation Server accepts RTMP traffic on TCP port 1935 from Presentation Recorders engaged in live streaming. Also, RTMP clients (typically Flash players) connect to TCP port 1935 for rendering video on a web page.

HLS (HTTP Live Streaming / HTTP Streaming) – for iPhones, iPads

HTTP Live Streaming is served on TCP port 80.

RTSP Streaming

For RTSP Streaming (Android based devices) TCP port number 554 is used. However, with RTSP streaming there is also UDP traffic, and if you are using RTSP as the source of live streaming, it is recommended to open/forward all UDP ports to the server or at least those in range from of 6970-9999 for incoming traffic. Outgoing port numbers for UDP traffic are specified by the receiving device, so it is recommended to open all UDP ports for outgoing traffic.

NTP (Network Time Protocol)

To keep accurate time, the Server contacts external time servers using UDP on port 123.