A Unique Approach to a Versatile AV System

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UW Health
Clinical Simulation Program
Transforming clinical education
Disclosures

Mark Johanneck and has no financial relationships with entities producing healthcare and/or simulation-related goods and services.
Session Goals

1. Understand University of Wisconsin Clinical Simulation Program (UWCSP) Planning Process
2. Identify Key Components of UWCSP AV System
3. Generate New Ideas for How to Build a Flexible AV system
Decisions, Decisions???
Identify and Survey Users

Clinical Simulation Program

- Medical School
- Practicing Nurses
- Anesthesiology
- Surgery
- Pediatrics
- Emergency Medicine
### Which AV Capabilities Matter the Most

<table>
<thead>
<tr>
<th>Feature</th>
<th>Must-Have</th>
<th>Nice-to-Have</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operate and interact from control room</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Capture and playback locally for debriefing</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Live streaming locally</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Live streaming via web access</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Expandability</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Capture data from simulators and equipment</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>High definition cameras</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Tools for analysis and assessment</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Video/data storage and security</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Manikin connection variations for wall plate</td>
<td>✓</td>
<td></td>
</tr>
</tbody>
</table>
Finding the Right Balance
Dream Big vs. Reality

Budget

- Already have
- Must have
- Planning for the future
- Nice to have
AV System

Shure Wireless Mics
AKG Ceiling Mics
Marshall VS-570 HD Camera
Composite Video
IP Video

Jupiter Composite Input Node
Jupiter DVI Output Node
Marshall VS-102 H.264 Encoder
IP Video

Control Rooms and Sim Rooms
LG Displays

Simulator, Anesthesia, EMR (Epic), Misc VGA Feeds
Power and flexibility in video recording

This video is intended to demonstrate the power and flexibility that our unique AV system allows us while video recording. The combination of Jupiter's PixelNet® hardware and software, Marshall encoders and CAE Healthcare’s Learning Space™ data capture system allow us the ability to create multiple views from multiple sources in a single video recording and allows us to make changes on the fly without interrupting the recording.

All information in this video is simulated and does not include any actual patient data.

Power and flexibility in video recording
Learning Space and Jupiter

**Learning Space**
- Streaming AV from 5 sources per room
- Assessment and annotation of learner performance
- Ability to track participants

**Jupiter**
- Local feeds to control and simulation rooms
- Video windowing capabilities
- View and record data presented to learner in real time
Benefits of Our Design

- Jupiter is highly scalable as a video/audio router.
- Hybrid system allows for maximum flexibility for local display and recording.
- Allows for modular upgrades as technology changes.
Lessons Learned

- Make sure all the components work together as promised
- Regular scheduled reviews with AV consultants
- Don’t block view with monitors
- Audio/Headphone jacks
- Wider angle cameras
Thank You!

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- Simulation Specialist

http://www.med.wisc.edu/simulation
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CAE Healthcare
Welcome
University of Wisconsin Madison - Clinical Teaching and Assessment Center & LW Health Clinical Simulation Program

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Forgot your password? | Legacy login
About CAE Learningspace