



Deploying Room Control Systems

- Rick Robinson, Principal Consultant

I recently was asked by a client, why do I need an AV Control System? I responded to him that it should not be considered an AV control system, but a room control system. It seems that there is a miscommunication by us as Technical consultants and Design/Build AV firms as to the use and importance of these type systems and pigeon-hole them in an AV setting only. The system provides the control of the room, not just AV.

A room controller consists of a main control system that will take in various signals such as, audio, video, DMX512 for lighting control, contact closures, RS232, Infrared, network, Bluetooth and WiFi and based on programming may control, route and provide information for the user. Its intent is to greatly simplify operations of a very technical system for a non-technical user.

When deployed in a multi-location, multi-conference space, the system may either be configured as room by room systems or more economically, a single system serving several rooms. A central system may control many rooms individually or allow for routing of audio and video to several locations simultaneously. Each room may have its own touchscreen control or wall control panel and only have control of that room or, one room may control many other rooms, all based on the configuration and programming of the systems.

For theater and worship spaces it becomes valuable in that the systems can control and route audio, sound system and vocal monitor controls, video, intercom, paging, control theatrical lighting, draperies, Lobby chime, black box theater controls and stage manager controls. Also used are preset recalls for audio and theatrical lighting positions for moving head, color and gobo presets.

The room control systems allow for a truly agnostic video environment. Whether the video sources is

VGA, HDMI, DVI, SDI, HD-SDI, CATV or NTSC, with the appropriate interfaces all may be converted or routed and controlled from single source. All (or most) conference rooms are utilizing a “bring your own wireless device” (BYOD) technology that allows for the user to connect his/her smart phone or pad or wireless laptop to the video display and audio system wirelessly. It no longer matters if the source is Apple, Windows or Android... all work with these type systems with connectivity being through the in-house WiFi system via the in-house wireless access point/s.



Security is found through encrypted in-house WAPs or network security as well as programming passwords for authorized users so they main gain access to the room control systems.

Economic savings are realized

1. Occupancy sensors working through the control system will activate or deactivate the entire room. This includes all room lighting, drapes, air temperature and AV equipment power. These are all potential functions that come with the systems. They may only be activated through programming and the appropriate interfacing. However, it saves overhead by turning off the room lights and turning off projectors and video displays when not in use. This is a huge savings and saves from loss of costly projection bulbs and extends the life of the displays.
2. Set-up time is much shorter. With the use of the room control system, the user does not have to take time to find cables, connectors, and figure out how to turn on systems, eliminates multiple remote controls, and eliminates what input to the



video display should be chosen, no need to figure out how to get sound out of the video systems.

3. No additional or dedicated computer in the room. There is no need to purchase a computer for the conference room. Use whatever you bring.
4. As an option, there is a network based room scheduler where employees may see the availability of a conference room and schedule it from anywhere on the network, or, if there is access to the Owner's network through the internet then a meeting room may be reserved anywhere, anytime.
5. Maintenance is minimal and very low cost.

We, Media Design Group have designed room controllers that serve many functions. How about to set-up and control a video conferencing system or camera system for a courtroom? We've designed systems that control camera switching (including pan/tilt/zoom) of multiple cameras in a room to cover 32 board members, 6 cameras for a culinary arts school x 4 classrooms and route to any or all classrooms, automated camera tracking for lecture halls.

We've design lecture halls and theaters where the sound, video and lighting positions for moving lights automatically relocate by merely plugging in a microphone at a particular location. And we've design meeting room systems whereby the user walks in the room, the room senses who the person is and the conference room controller configures the room to that individuals specific needs and tastes for sound levels, video, lighting levels, drape setting and temperature... no login, no control panel required for the initial configuration.

The important part of the system design is that it should be designed by an experienced consultant/designer that understand human function and needs at its most basic level. These needs are communicated and coordinated with the

programmer. After the system is installed, testing, testing and more testing with the user must be accomplished before releasing the project to the Owner to assure the programming is intuitive and simple.

Bottom Line:

Room Control Systems are designed to simplify operation of technical systems, interface with most any device, and save time and resources. It is designed to help the very non-technical user to utilize a very highly technical system without having technical knowledge. They let you focus on business and not technology.

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Rick Robinson is a Technology Design Consultant with 25 years' experience, whose firm provides low voltage technical systems design for sound, acoustics, video, video broadcast, voice, data and security. The firm works with Architects, MEP's, Owners, Church, Theater and Corporations across the U.S. They are known for solving complex needs through common sense designs.