CONTROL CONCEPTS

Configurable Solution Development

Achieving Standardization through Custom Configurable Solutions

One way to achieve system standardization is through a custom configurable solution in which different room variations become part of a master programmed solution. This “master solution” can be configured to meet the needs of various room types providing they stay within the model.

Developing a configurable solution requires discipline, upfront investment, and visionary thinking. However, when adequate time is spent on planning and creating a configurable solution, positive outcomes can be achieved throughout the entire lifecycle of the system. Furthermore, a configurable solution helps clients avoid reinventing the wheel on projects, spending unnecessary time and money on technology, and battling inconsistent performance.

Understanding the End User

The process of developing a configurable solution begins with the end user. An investment must be made to fully understand the end user’s needs, technology comfort level, previous AV experiences as well as organizational culture. A comprehensive end-user understanding helps to sculpt system functionality that supports usage and expectations, allowing the technology to contribute to users’ effectiveness while providing a level of comfort and convenience.

The custom configurable approach provides ease of support, maintenance, modifications, and upgradeability. Furthermore, it provides a customized solution that is specific to the user and aligned with the way their organization or enterprise conducts business and utilizes technology.

Following the initial consultation, Control Concepts creates a customized project proposal outlining a three-phased approach for developing a configurable solution for the client’s collection of systems, or entire enterprise.

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In addition to a forward-thinking strategy, the solution builds around a control processor, specific user interface devices, and a master system design that encompasses all equipment within a system. System functionality is dynamically configured to create the tailored solution that accommodates the needs of every individual space.

Writing and maintaining one consistent code base that supports multiple unique solutions saves time and money through reduced deployment and maintenance costs, easy system variation accommodation, provisions for defined upgrade path, and ensured consistency.

When technology partners collaborate well, a control system solutions provider can become the constant throughout all projects, systems, and locations across an organization. To maximize efficiency, a control system solutions provider not only contributes to defining the standards, but also provides the resource needed to implement and maintain the consistent, reliable experience users need.

The Three-Phased Configurable Solution Project

The process of developing a configurable solution comprises a detailed and planned approach. Prior to beginning the three-phased project, we work with potential clients to gather ideas based on typical systems, including existing or proposed equipment and design. Clients then participate in a consultation with Control Concepts. During this session, we conduct a needs analysis and other pertinent details to help define system standardization.

Following the initial consultation, Control Concepts creates a customized project proposal outlining a three-phased approach for developing a configurable solution for the client's collection of systems, or entire enterprise. Below is a general overview of a three-phased configurable solution project.

Phase 1: Developing a Scope of Work

In this initial phase, we define system functionality and outline the design of the "master" system. Components of this phase include design of the graphic user interface, definition of system operation, outline of the configurable components, and determination of configuration methods and maintenance that best suit needs. This first phase is completed with a scope document and Control Functionality Specification that defines a typical system and roadmap for the configurable solution.

We work to provide support from inception through the lifetime of the systems.

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Phase 2: Development and Implementation
In the second phase, we use the approved Control Functionality Specification and scope document to program the configurable system, test, and install it into a pilot room for initial turn-over and acceptance. A predetermined period is allowed for use and comment. Upon review of user feedback, reasonable preference changes and adjustments may be made to the system as it is prepared for final turn over and acceptance.

Phase 3: Deployment, Support, and Maintenance
After acceptance of the system, the project enters the deployment, support, and maintenance phase. As part of this, we create an annual agreement which includes support for integrators or technology managers expanding use of the "master" program in other systems as well as technical and troubleshooting support to test all variations of the "master" system.

Also included are modifications of the "master" system over time including adjusting functionality, substituting approved hardware components, and providing future enhancements. We work to provide support from inception through the lifetime of the systems. The agreement established in the third phase makes that relationship possible.

Architecture Guide

- Define a pool of preferred equipment which includes device type, make, and model
- Design the master system, the largest system the configurable solution supports, even if it is not built at the outset of the project
- Define the components or controls that could vary in the system, including:
  - Quantity of computer inputs
  - Quantity and type of media playback devices
  - Quantity of displays
  - Modes of operation
  - Audio conferencing – Yes/No
  - Video conferencing – Yes/No
  - Recording – Yes/No
  - Environmental control options
  - Lighting – Yes/No
  - Shades – Yes/No
  - Screens – Yes/No
  - Naming of room-specific features
  - Room name
  - Phone number
  - Lighting presets
  - Cable TV preset names or values
  - Audio or video conference speed dial presets
  - Room specific settings
  - Device communication address
- Select a matrix switcher size that can accommodate a fully populated Master System with the potential for growth
- Assign default switcher inputs and outputs to all sources and destinations in the Master System
- Select a control processor and point of control that also supports the fully populated Master System
- Assign default control ports to all devices in the Master System
- Specify standard device addressing/communication parameters

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- Develop a consistent, modular, configurable, and easily scalable graphical user interface to accommodate all configurable variations
- Define default and advanced functionality options that are consistent throughout all systems
  - Single or multi-display routing
  - Volume controls
  - Approach to audio and video conference dialing
  - Password access
  - Web-based control
  - Remote monitoring
  - Reporting includes a management method for selecting system options and configurations
  - Tech page setup
- Define a configuration method
  - Data file references
  - IP address references
  - Room name or number
  - Web page field configuration
  - Desktop configurator application

Please contact us at **projects@controlconcepts.net** to learn more about how we can work with you to develop customized solutions that address your organization's systems needs and enhance ROI.