

Constant Technologies, Inc.

# Graphical User Interfaces for Mission Critical Control Systems



## Introduction

Have you ever tried to use a television that has multiple remote controls? It can be frustrating trying to figure out the myriad of controls to get to the source you want to watch. While a home television system pales in comparison to a mission critical video wall, the same kind of frustration can arise with inefficient controls. Operators in a 24/7 environment need quick access to data, and often every second counts.

For this reason, one could consider the control system one of the most important elements of a video wall system. These controls provide centralized management of operations center displays, processors, AV switchers, conferencing equipment, cable television receivers, and more. They can also control systems not related to the video wall, such as lighting, shades, and privacy glass.

## Control system programming

Programming is an essential component of these control systems. At Constant, our highly-skilled programming department combines the disparate parts of a mission critical installation into a seamless, easy-to-operate system. When it comes to programming the control panel, we configure every element so that the behavior of the device matches what the users need in the room.

Part of what makes or breaks the user-friendliness of a system is the Graphical User Interface (GUI). “In a command-and-control environment, a well-thought out and designed GUI is one of the most important factors of a custom-engineered solution,” said Danny Sasseville, Vice President of Project Engineering at Constant.

## User friendly GUI design

An intuitive interface means operators need little additional training to understand how to quickly push sources to where viewers need them. Programming can include preset configurations, allowing operators to complete a series of actions with a single command. This can prove beneficial when operators must quickly configure the display wall application arrangement for a tour, training exercise or escalation of events in the operations center.

“The GUI should have intuitive design so that the users feel comfortable finding their way through the controls of their environment,” said Sasseville. “This is especially important in mission critical environments where the users need to react quickly to a situation. Having too many controls or a messy layout in the user interface can frustrate the users, rendering the system unusable.”

## Custom designed GUIs

Part of Constant’s programming solutions include custom designed GUIs for the control system. While these are not built for each project from the ground up— they use a



tried and tested base code built through insights from prior collaborations — the individual devices and functions as well as graphics and logos are completely tailored to the client’s needs and preferences. The functionality needed for one operations center may be completely different than for another.

Just as Constant approaches each operations center build with the goal of tailoring to a client’s needs, we also build out the GUI for control systems with the same goal. “Our command center builds are custom designed and engineered to meet the end users’ requirements and so is each GUI, which is custom tailored to fit their unique environment,” said Sasseville. “A one size fits all approach in GUI design is not conducive to command and control.”

To learn more about graphical user interfaces and Constant’s command center solutions, contact us today. We offer free design and budget consultations to help you visualize your operations center project.

## About Constant

Constant Technologies, Inc. is a premier mission critical systems integrator providing customized audiovisual integration of large scale operations center video walls and control center console furniture worldwide. With over three decades of experience, Constant’s team has the knowledge and clearance to work with sensitive environments in both the public and private sectors and has implemented turnkey solutions all over the world.

Constant designs, installs and services projects of all scopes and sizes to create solutions with the highest levels of security, aesthetics and functionality in mind. Some of Constant’s installations include: EOC builds, Network Operations Center design, Fusion Centers, Security Operations Centers, Control Room Design, Social Media Command Centers, and other command and control environments.

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