

Nebula

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iRule

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Glossary

Manager

The manager account is your Home destination for all projects, spaces and controlled spaces. The manager is a single sign-in area that includes all of your installations.

Project

A project is a Kramer control installation. Each project should include as much granular detail as possible. Daytime hours, building layout, floor layout and controllable spaces.

Controlled Space

This is an area of your project that has controllable hardware. Every controllable project will require a brain.

- A project can have a single controlled space, or it could have an indefinite amount of controlled spaces. For instance, an office building could have 100 controlled spaces for conference rooms, common areas and specific offices
- A controlled space can include a site, building, floor and/or room

Space Types

- Site
 - A site could be the physical address of your Kramer control project. Companies with multiple site would have a single project, with different locations being identified as separate sites
- Building
 - Physical building within a site that has a controlled space
 - Sites and campuses typically have multiple buildings that need to be differentiated.
- Floor
 - Physical floor within a building
- Room
 - A physical room within a building. Typically, this will be your controlled space

When you reach the controlled space you should have identified the site/campus, building and floor.

Example:

- Project
 - iRule
- Building
 - Madison
- Floor
 - 2nd floor
- Room
 - Studio conference room

Business Hours

Business hours identify the days of the week the business is open and the time during the day the office is open. Business hours are used to help identify usage data for your controlled spaces as well as Scheduling of events.

Image Manager

- A way for the Project Architect to add images that will be specific for this particular project.
- An example would be a client's logo or custom backgrounds for that particular project.

Image States

- Default
 - This is the image you see when you view your interface initially. When nothing is being pressed, and nothing has been selected you will see the default image
- Pressed
 - This is a unique image that typically shows a highlighted ring around your default image indicating that you are currently holding that button
- Selected
 - After pressing a button, some buttons will have a selected state indicating this was the last button pressed. Typically, this image will look similar to default but with an adjustment indicating a difference
- Disabled
 - This is an image that can be used when an image is to be shown as disabled.
 - An example of this would be a greyed out image that the end-user should not touch.

Launch Icon

Panes

- Manager
 - Project
 - This is a detailed list of all your Kramer Control projects. You can expand each project to view sites, buildings, floors and spaces. This is where you view your entire Project Tree.
 - Main
 - Contains editable information for your project, site, building, floor and/or space
 - Info
 - This is an itemized list on the right side of your Manager showing the created date, last modified date and project hierarchy
- Builder
 - Main canvas
 - Center window in builder that allows the designer to customize the user interface for each controlled space

Builder

Web page that provides an area for the designer to create a UI for the project.

UI

User interface. This is the user facing handset that is built to allow for controlling equipment found in the controlled space and/or the entire project

Handset

Device used by the end-user to control equipment in controlled space. Handset could be built in Portrait (phone) or Landscape (tablet) orientations.

Panels

Container within a handset used to separate multiple activities or device type commands

Pages

Interface designed to control a specific activity. Controls would include number pads, cursor pads and all other commands necessary to control the equipment in the space and/or project

Buttons

Sizable area within a page that is used to execute a single command, a navigation element and/or a macro.

- Buttons can be either image or text based

Images

Images added to a page could be a button or a background image. Not all images will be buttons

Slider

A horizontal or vertical slider is used to execute a command based on programmed range within the device driver. An example would be a volume slider that executes commands based on a 0 – 100 range. The bottom or a vertical slider or the left side or a horizontal slider would be 0 and the opposite side would be 100.

List Box

UI design element that provides feedback and control within a single view.

Button Interaction

More than just a single press. Based on how the designer intends on the best use for control. Examples below:

- Press
 - Most common. A single press of a button can execute a single command, macro and/or navigation
- Long press

- Continued press of a button can execute a different command. Pressing and holding a button for more than a 3 count will execute a different set of commands from a single press of the button
- Push
 - Typically grouped with release
 - Performs a single command, macro and/or navigation on the pressing of a button
- Release
 - Typically grouped with push
 - Performs a single command, macro and/or navigation on the pressing of a button

Example of a push/release command would be controlling a shade or screen. On press the shade/screen is moved and on release the movement stops

Navigation

Method used within UI to move from one panel/page to another panel/page within the handset

Macros

Macros are a group of executable commands that are custom designed to perform a single task. System-On macros would include Power on commands for each piece of equipment in the controlled space.

Events

Events are occurrences where you need commands to execute based on other actions such as time, or the state of a device. There are 3 such events listed below:

- State Change Trigger

Using the state of a device you can differentiate elements within the setup.

 - You can adjust a macro/single command, image, text, and/or navigation based on the state of a device
- Relative time trigger

This trigger is used when you need commands to execute at a unique interval.

 - An example would be digital signage that needs to change content every 30 minutes

- Absolute time trigger

This trigger is used when you need to execute commands at a specific time of day. You can execute commands at sunrise, sunset or a specific time of day such as 8am or 8pm

Device Driver

The device driver encompasses the control commands/states for the equipment being controlled within the space. The device driver contains commands for IR, Network, RS232 (serial) and relay.

System Device

This device is included in all controlled spaces. The commands and states of the system device include date, time, weather and system status

Styles

TBD

Keyboard Shortcuts

Shortcuts used while designing in the builder.

- Copy
 - Command/control + c
- Paste
 - Command/control + v
- Undo
 - Command/control + z
- Redo
 - Command/control + y
- Nudge
 - Cursor keys
- Nudge more
 - Shift + Cursor keys
- Multi Select
 - Command/control left mouse click
- Grow
 - +

- Shrink
 - -
- Grow more
 - Shift + '+'
- Shrink more
 - Shift + '-'

Application

A download from the Application store (App store iOS, Play Store – Google, etc.) of your handset. Provides the client with an interface on a handset of their choosing to control the space within the programmed project

Provisioning

This is how we transfer the programming from the builder to the application. This transfers all handset, panel and page programming to the brain from the builder area.

Brain

Central 'Brain' processor for the control system. The Brain contains all necessary device drivers, images and gateway routing to provide the client with control over his/her space.

Gateways

Gateways are used to execute commands from the user interface, to the controlled hardware within the space. There are different gateways:

- Network gateway
 - Used to communicate commands directly through the network without need for additional hardware.
 - Can be TCP, UDP or HTTP gateway with port/method manipulation
- FC-xx
 - Kramer control hardware used to communicate IR, RS232 (serial), relay or GPIO commands
- SL xx
 - Brain hardware used to communicate IR, RS232 (serial), relay or GPIO commands

Wizard

Wizards are used to walk the designer through a process. Different processes will have different wizards. Examples below

Project wizard

Provides designer with steps of assigning a project name, description and location

Space wizard

Provides designer with steps of creating a space type within a project

Device wizard

Provides the designer with steps necessary to import controlled devices into controlled space

Event wizard

Provides the designer with steps necessary to create a new event based on states or time

Gateway wizard

Provides the designer with steps needed to assign devices to the installed brain

Nebula Manager

Overview

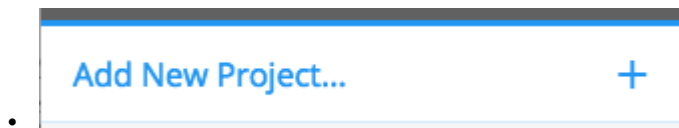
The Manager is your single sign-in area that is used to create, edit and view all of your Projects. Each project will include a name, physical location, business hours unique to the project location, as well as a hierarchical structure of project. You will also be able to identify when the project was created, as well as whom and when the project was last edited.

Below you will find specific details on the Manager beginning with the overall layout that you will find within the webpage.

Manager Interface Layout

Left Window Pane

The left pane of the Nebula manager shows the full list of Nebula projects that have been architected. Projects are architected based on real world environments. Within a project we identify spaces, including – [sites, buildings, floors and/or rooms](#) For more information on space types, follow the link above.



Click on the '+' sign next to the Add New Project line to begin the Project architecting process by launching the New Project wizard.

Search

Previously created projects and/or spaces can be searched for by clicking on the magnifying glass icon in the top left corner of your browser window. When typing the name of the project and/or space, you will see a dropdown appear of the project and/or space that matches the search criteria. Clicking on the name of the project and/or space will navigate you to the project and/or space in the left window pane, and change the center window pane to the edit screen of the project and/or space.

Center/Canvas Pane

- This is your editing pane. The options below are some of the content that can be adjusted within your center pane.
 - Project name
 - Project location
 - Business days/hours
 - Space name
 - [Space Type](#)

You will also notice in the toolbar of the canvas pane a launch icon and three vertical dots. This menu dropdown is different for each level of the Nebula project.

Menu options for Projects and Spaces

Projects are designed with the intent on replicating the real world environment. The project is identified by business location and within each project you will identify your spaces. Spaces include the name of the building where the brain hardware is installed, the floor of the building where the hardware is located and finally the room on the floor where the hardware is being used.

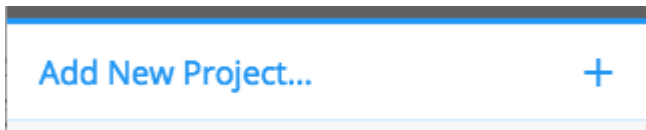
- Project Menu
 - Add space
 - This option expects the architect to design this project to match the real world scenario. Creating as much granular content will allow the architect to see more detailed reports in the dashboard pertaining to this project
 - Building
 - Floors of building
 - Room on the floor of building
 - This provides the architect with his first choice in designing his Nebula project. Spaces are identified as sites, buildings, floors or rooms. More detailed definitions with examples can be found [here](#)
 - Duplicate project
 - Have two of the same or two very similar projects? You can duplicate your work instead of redesigning the entire layout from scratch. [More information on duplicating can be found here](#)
 - Delete project
 - If you have a project that is no longer in use and you would like to remove the project from your manager, choose this option to delete the project and all spaces that exist within this project

- Image Libraries
 - Each Nebula project can include a unique set of image libraries. You can upload project specific images such as company logos or company graphics that will be used during the architecting process.
 - More information on image libraries can be found [here](#)
- Space Menu
 - The three vertical dots indicate a dropdown with multiple options
 - Launch builder
 - This redirects you to the Nebula builder to begin designing the controls for the hardware installed within this space
 - Adding a user interface to a space indicates that this space is a controllable space that includes a brain with controllable hardware installed
 - Add space
 - Adds more granular definition to your Nebula project.
 - [Space types](#)
 - More granular space is used for reports that can be found within the Dashboard
 - Delete space
 - If you have a space that is no longer in use and needs to be removed from the project choose this option to delete the remove the previously created space
 - Copy and paste one too many spaces? You can delete unused/unwanted spaces by selecting this option

Right Pane/ Info Pane

- The right info pane will show when this space was created and the last time someone modified this space.
 - The user is identified by the username of the individual that made the latest changes
- The info pane also includes a hierarchy of the project.
 - The hierarchy includes the real world design of the project.
 - Name of Building
 - Floor where the brain hardware is being used
 - Name of the room where the brain hardware is being used

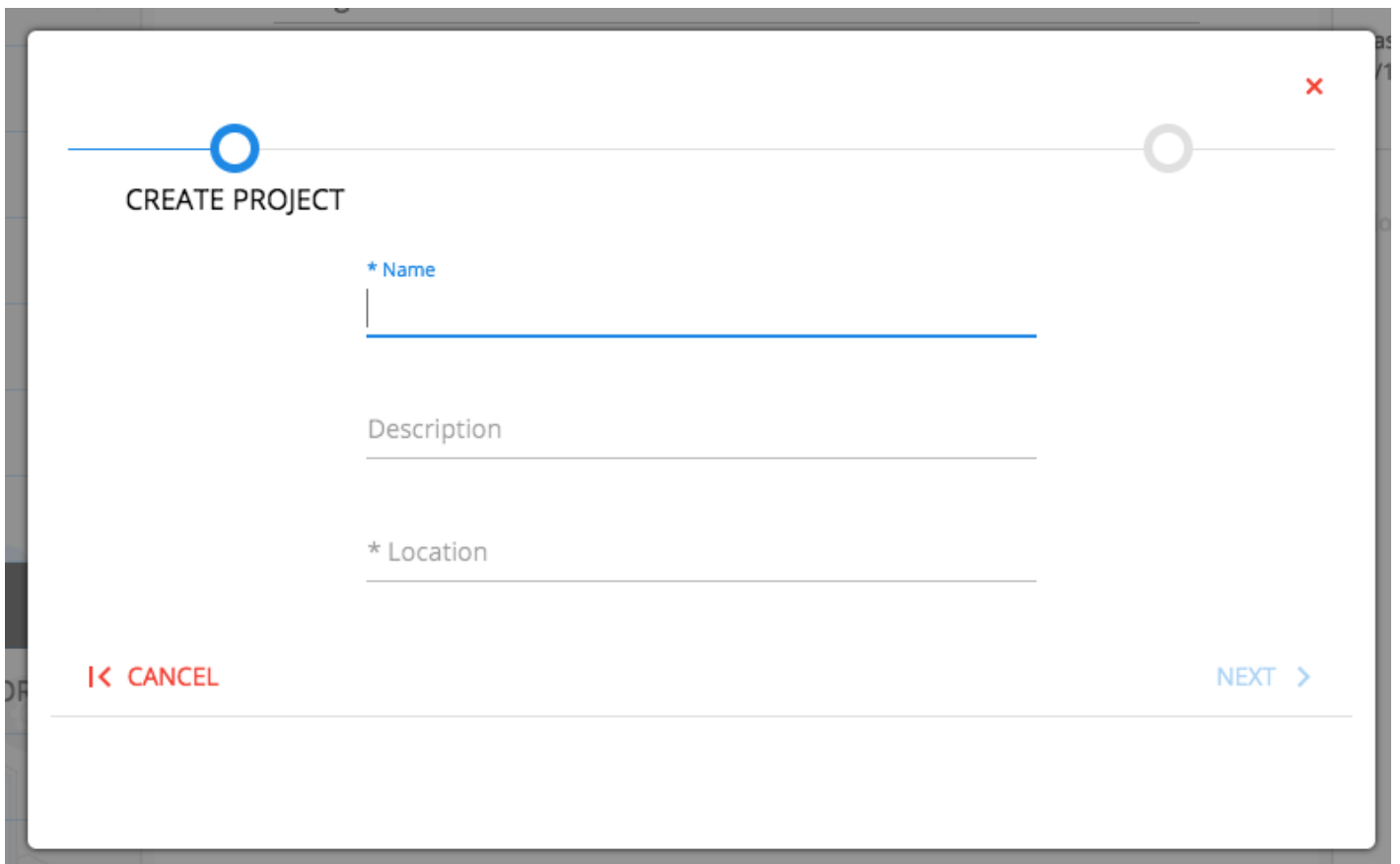
Creating New Project



Sold a new project? The next step is to login to your Nebula manager and begin creating the setup for the new installation.

Process

1. Go to insert url here
2. Shift focus to left window pane
3. Click on + sign next to Add New Project
 - Once the '+' is clicked a new popup window will appear in your browser. The popup is the Project Wizard

A screenshot of a "CREATE PROJECT" form. The form has a title bar with a blue circle on the left and a red 'X' on the right. The title "CREATE PROJECT" is centered at the top. Below the title, there are three input fields: "Name" (marked with a blue asterisk), "Description", and "Location" (marked with a blue asterisk). At the bottom left, there is a red "CANCEL" button with a left arrow, and at the bottom right, there is a blue "NEXT" button with a right arrow.

CREATE PROJECT

* Name

Description

* Location

◀ CANCEL

NEXT >

Project details

‘*’ This asterisk indicates a required field.

1. Enter name of project
 - The name of the project should be unique for ease of searching for the project for editing purposes.
 - The name of the project can be edited later within the center pane of the manager
2. Enter project description
 - The project description is not a requirement. However, entering a description of the project will help remember the installation. Use this field as a reminder for nuances that came about with the project installation
3. Enter project location
 - The project location is vital in setting up timed events such as sunrise and sunset based events. An inaccurate location will cause the scheduled events to occur at the wrong time.

[Follow this link for more information on project details](#)

Project Details

Overview

When creating a new project you will want to provide as much detail as possible. During the creation process we will ask for the hours of operation for this project as well as the project location. These details will improve our reporting within the Nebula Dashboard.

Project Name

The project name appears within the left pane. When adding your project name make sure this is a unique identifier for your project. This name can be searched for later using the project search feature. An example of a project name would be the name of the company that purchased the project.

Project Location

The project location is a text field, that doubles as a search field using Google Maps. Why are we asking for location? Location is used for event scheduling, data reporting and for granular information relevant to the architect. Scheduling timed events for sunrise and sunset will require an accurate description of the company location.

Project Description

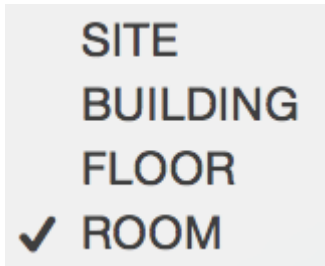
This is the only non-required field found in the New Project wizard. The project description is used by the architect to include unique identifiers about the project. This could include, but is not limited to company nicknames, installation nuances or installation dates.

Project recommendations

1. Once the project wizard is finished, add the business hours to the project
 - Indicate the office starting hours and closing hours
 - Business days begin with Sunday. The first S in the list indicates Sunday while the second S is used for Saturday
 - Room usage reports will base the in-usage time compared to the business hours of the project
2. When creating your project, we recommend creating unique projects for companies with multiple locations
 - For the most accurate reporting, create a new project for a new company location if the secondary location is in a different time zone than the first. Our internal clock operates on a 24

hour scale. Having two buildings with different business hours within the same project, will create incorrect reporting values.

Space Types



Overview

Projects come in all shapes and sizes. Some projects consist of a single controlled space, while others could include upwards of 100 controlled spaces/rooms. The Nebula manager wants the architect to design his project with as much granular detail as possible. The layout of the project will use space types based on the definitions below:

Within this thread, we will build a hierarchical project using a University as an example.

Projects

When creating a project, this Project name is the name of the company that purchased the project. We recommend when creating new projects to create unique projects for buildings of companies that have physical locations in multiple time zones. This process will create the best possible reporting for the building locations for the project.

Site

This would be the brick and mortar location of the project installation.

- Examples of a site: Using our University example, the satellite campuses would be unique sites.

Building

Sites will often have multiple buildings. We are asking which building within the site the project is being installed. Within your project, you will create the various buildings as new spaces to match the real world environment where your project is being installed

- Using the above example of a University, the student dorms, lecture halls, auditoriums would all be separate buildings that exist within the site

Floor

Within a building there is often multiple floors. In order to match the real world installation, create a new space and identify the different floors where projects are installed. Within the Manager we are trying to recreate the installation digitally in case new projects are added or new engineers are sent on site to work on existing projects. This hierarchy can be used to remind the team where the brain hardware is installed.

- Using our University example, the lecture hall has 4 floors. We would create 4 floor spaces within our lecture hall building.

Room

Within a floor, there is often multiple rooms. Each room within the building, on the first floor, should be identified within your project.

- Continuing the University example, Room 101 would be created within Floor 1 of our Lecture Hall building. Room 201 would be created underneath the Floor 2 of our Lecture hall building.

Controlled Spaces

A controlled space is an area of the project that has brain hardware installed. Any space type can be a controlled space. The architect of the project can build a site remote that has control of all buildings within the site and/or the architect can build a controlled space for each room within the project. Much of the design will come down to expectations of the end user. Do they want an interface within each room? Do they require a maintenance interface that can easily identify and troubleshoot why a room is not operating properly? These questions should be asked and identified before beginning the programming.

Launch and Menu Options

Overview



This image shows the icon found in the center window pane of the Manager. These icons appear within the center pane at all times. When selecting a different space type within your project, different menu options will appear. Also, the Launch icon (shown on the left of the image) will only appear within space, this will not be found within the top project layer.

Launch

The icon in the left of the above image is used to launch into the builder for the controlled space. [Clicking on the launch icon will redirect you to the builder where you will begin, or continue, to create your user interface.](#)

Menu Options

Project Menu

Add Space

Duplicate Project

Delete Project

Manage Images...

- Add Space
 - This will prompt a wizard to add a new space within your project.
 - [More information on spaces found here](#)
- Duplicate Project
 - This will copy all content from this project and create an exact replica for use in another project.

- After copying a new project will appear with a name that includes (2) at the end
 - [More information found on project duplication here](#)
- Delete Project
 - This option will remove the selected project from your list of projects.
 - This is a permanent choice, once a project is deleted it **cannot** be restored
- Manage Images
 - This prompts a popup that allows the designer to import his/her own graphics into this project
 - [More information on managing images can be found here](#)

Space Menu

Add Space

Duplicate Space

Delete Space

- Add Space
 - This will prompt a wizard to add a new space within your project.
 - [More information on spaces found here](#)
- Duplicate Space
 - This will copy all content from this project and create an exact replica for use in another project.
 - After copying a new project will appear with a name that includes (2) at the end
 - [More information found on project duplication here](#)
- Delete Space
 - This option will remove the selected space from your list of spaces within a project.
 - This is a permanent choice, once a space is deleted it **cannot** be restored

Project Duplication

Overview

Project and space duplication is a feature designed to enhance the programming time for Nebula architects. Duplicating projects or spaces will use your prior work within a new setup. There is no need to redesign an entire layout if the installed hardware is the same and the only changes that need to be made are the Project name and business hours. Using the duplication feature will greatly decrease the overall programming effort. Duplication is a great tool for installers that are consistently providing clients with the same hardware with each installation.

Process

Duplicating projects

Do you have two projects that are 100% alike? Maybe not 100%, but 75% or 50%? Instead of redesigning the entire project, you can duplicate the project. Duplicating the project will copy all the previous settings and configurations of the project. The editing process will include adjusting previous settings and removing any unused features that were previously built.

By following the process below you can duplicate all settings from a prior project

1. Locate the existing project in the left pane
 - Search for the name of the project using the search tool atop the left pane
2. Move your cursor to the center pane of the existing project
3. Click on the three vertical dot menu
4. Select duplicate project
 - This will automatically create new project in your left pane with a (1) at the end of the previous project name
5. Move cursor back to left pane and select the duplicated project
6. Rename project
 - Edit necessary items
 - Business hours
 - Location
 - Delete unnecessary projects spaces
 - Sites, buildings, floors, spaces, rooms etc.
7. Add additional needed spaces to finish setup

8. Save

Duplicating Spaces

Do you have identical spaces within a project? If so, you can duplicate the space within a project to keep from reprogramming the entire space.

Duplicating a space keeps all information from the space in tact. That would include:

- Sites
- Buildings
- Floors
- Rooms
- Controlled spaces
- Controlled devices
- Gateways
- Macros
- Events

Changes to duplicated spaces can be made. Duplicating a space does not keep that space from being editable.

1. Locate your space
2. Expand project locate the previously created space
3. Use the three vertical dot menu icon to open menu options
4. Click on duplicate space
5. Locate newly named space within your project
6. Name will include (1) with the same entitled name as prior space
7. Rename new space
8. Make edits to space as necessary
9. Save

Managing Image Libraries

Overview

Within the Nebula manager, each project can have a unique set of images. Business logos would be an example of an image that would be uploaded to to one particular project. Uploading a unique set of images to a particular project keeps your other projects from being flooded with unused images. You could also upload your own theme. You could include backgrounds, navigation, cursor images to each project as a way of providing a completely customized experience for the end user. Follow the steps below to upload your graphics to a project.

Process

This process takes place within the Manager. Make sure to login to the Manager portal before following the steps below

1. Within the left pane, click on the project that requires the images
2. Within the center pane, click on the three vertical dots to bring up a menu
3. Choose the option to Manage Images
 - This opens a new popup window where we can add images

Adding/Removing Images

Within this new popup:

- Previously imported image libraries can be removed
- New Image libraries can be uploaded

Adding new images

1. Within popup, click on the blue + sign in the left pane to add a new library
 - The new library will default to the bottom of the library list within the left pane
2. Give the library a unique name
 - Scroll to the bottom of the left pane, then click on the new library that was created
 - To enter a name, change focus to the bottom of the center pane properties section
 - Type the new library name
3. Within center pane, click on the Add New Images icon

- A new popup window appears above the center pane
 1. From within the new popup, Click on the choose file option
 - This prompts an explorer window to be opened where you can locate the image folder or single image that will be uploaded to the project
 2. Select the images from the explorer window to be uploaded.
 - You can multi select large numbers of images to be uploaded all at once
 - After selecting files, the explorer window closes leaving the small popup
 3. Verify the number of files to be uploaded
 - Next to the choose files button, there will be a number indicating the amount of images to be uploaded
 4. Click on OK to upload images
- Within the small popup, there is an option to separate images. Image separation is a feature that allows you to upload each image state of a button as a new image. Each image can contain four different states, separating those images upon upload will create four separately selectable images from the image library.
- When uploading images with multiple states, include within the name of the image file stored on the machine : -p for pressed, -s for selected, and no extension is necessary for the default image.
 - Example file naming structure
 - button_a.psd
 - Uploading a file name as such will upload this image as default
 - button_a-p.psd
 - Uploading the second image such a name will group the image with the default above and be used as the pressed state

Removing existing libraries

- Within the manage image library popup, click on the no longer necessary image library from the left pane
 - To remove the entire image library, click on the trash can icon atop the left pane
 - To remove a single image, click on the image in the center pane
 - Then click on the trash can icon atop the center pane
 - To remove a state of an image, click on the image in the center pane
 - Then click the X next to the item to be deleted within the right pane

To exit the Manage Image library popup choose one of the options below

- Press the escape key on your keyboard
- Click on an area outside of the popup window

Nebula Builder

Overview

The Builder is where we design our user interface. This includes adding unique backgrounds, scheduled events, and macro execution. The Builder is where the architect creates the layout that the end user will interact with. Designing an interface that is both visually appealing and easy to navigate will be found in the following tutorials. Below you will find information on the builder layout. By clicking on the headings, you will be redirected to a step by step thread on the specific topic.

Builder Interface

Left Window Pane

- [UI](#)
 - User Interface
 - The user interface is the layout that is viewed your end user. The creation of the user interface is handled within the builder.
 - The user interface will include (But not limited to)
 - Backgrounds
 - Device controls such as
 - Cursor commands
 - Scene controls
 - Lighting sliders
- [Macros](#)
 - Macros are a group of commands that execute to change the state of your system
 - An example of a macro would be turning a system on to an Apple TV device
 - Power On of the display (TV, Projector)
 - Select source on switcher (could be using display as switcher or another device)
 - Power On of the Audio device (sound could be going through display or another device)
 - Execute Menu command on AppleTV to wake up the unit
 - The above macro is executed within a single button press by the end user. This is the first step in creating a universal remote
- [Events](#)
 - There are three separate event types that will be covered in more detail in the link above.
 - State based events
 - These are events that execute when defined states are met within the system.

- Examples of a state based event
 - When System State = On, execute Light On Command in Zone 1
- Relative time
 - Relative time events occur in intervals. If you have a device that requires a wake up, we can execute the wake command every 30 minutes
- Absolute Time
 - These events occur on a pre determined time. Time can vary (see below)
 - Sunrise or Sunset times can be used to execute light on or light off commands
 - If you want the system to turn off at 11pm daily, then schedule an absolute time event to perform your system off macro daily at 11pm
- [Gateways](#)
 - Gateways are covered more in depth by clicking on the link in the title
 - Gateways are the method in which our user interface communicates with the controlled hardware
 - Gateway can be (but not limited to)
 - Brain hardware
 - Telnet or HTTP connections

Center/Canvas Pane

- The center pane is your design pane. Any and all editing is done within this center pane. The user interface, macros, events and gateways are all configured within this window.
- Within the center pane we will design the user interface which includes
 - [Adding backgrounds](#)
 - [Adding buttons](#)
 - [Adding navigational elements](#)
- The center pane also includes the [properties section](#) where we edit:
 - Font style
 - Font colors
 - Background colors
 - Images
 - and much more

Right Pane

- [Devices tab](#)
 - The devices tab is where we search and import our device drivers. Each device driver contains
 - Capabilities

- A capability is an executable command. Think Power On, Input 1, Power Off for example.
 - States
 - States are used to track information on the device. Think Power State = On, Off, Standby, Powering down for example
- All devices will include capabilities and states. We will use those capabilities and states within the user interface to build our macros and events.
- If you have multiple spaces within a project you will also have the possibility to import a device reference.
 - Device references are devices used within another space, but can still be used within the currently in design space.
 - An example of a device reference would be a video matrix switcher. The matrix switcher is house in space a, but affects space b-d.
 - Instead of importing the same device four times (once in each space) you will use the reference device in each space
 - This removes the necessity of assigning four devices to a single gateway. This would be one piece of hardware connecting to a single gateway but referenced in multiple spaces
- Images tab
 - Within the images tab you will find the previously imported images that will be used for backgrounds and buttons. Each image can contain multiple states
 - Default image
 - The default image is that appears on the initial load of the user interface. This is the image that is static on the interface until affected by pressing of the button, or an event
 - Pressed image
 - The pressed image is viewed while the button is being pressed. Typically the pressed image has some kind of hue surrounding the image to indicate a change in state.
 - Selected image
 - The selected image is typically shown after pressing the button on screen. The selected state of an image would indicate to the user that this was the last pressed button within the user interface
 - Disabled State
 - The disabled state removes the button from a selectable state. For example you have a toggle command that is no longer executable once the system is powered on, you would change the state of the image to disabled so the end user can no longer interact with this button.

Creating User Interface

After creating your project and designing the project layout to include a controlled space, you will launch into the builder. Within the builder we will design our user interface that our end users will use to control their spaces.

Within this thread you will find steps on creating your first user interface.

User Interface Wizard

- Make sure that you have created a project and a controlled space within the Manager before following the steps below.
 - If you have not yet created a controlled space [click here](#)
- 1. Once inside the builder shift your focus to the left window pane
- 2. Click on the UI tab
- 3. Click on the three vertical dots to open the interface menu
- 4. Choose the option for creating a new interface
 - After choosing the option to create a new interface, a popup window will appear center of your screen. The steps below discuss what you will see within this popup

Wizard steps

1. Enter a name for the user interface
 - This could be the name of the handset, name of the room, but this name should be unique to the project
 - Select interface type
 - This question is asking for the type of device that will be used as the remote.
 - Interface types include (but are not limited to)
 - iOS Devices
 - iPhones and/or iPads
 - Android devices
 - Phones or Tablets
 - Web browsers
 - Any web browser can navigate to the brain interface for control
2. The next step is to select handset type
 - Choose the handset by searching for the model of your handset.
 - Select the handset type that matches your device

3. Click Create

- After creating the new interface, you will find the new user interface in your left window pane
- At any time within the wizard you can use the cancel option to close the popup window and return to the builder
- If you make an incorrect choice in a prior window, you can use the back button to return to the previous screen

Wizard Completion

- Once finished with the interface wizard, the wizard will close and you will be returned to the builder webpage
- On return to the builder page, you will see within the UI tab of the left window pane 3 new elements that have been created based on your selections in the wizard
 - Name of your interface
 - Home panel
 - A panel includes pages that can be viewed within your handset. Panels will be covered in more detail if you [click here](#)
 - Home page
 - This will be used as your landing page when opening your interface on your handset. The home page typically will include macro buttons to turn your system on or off, as well as select the activity of which you choose

Adding Panels and Pages

Overview

Unless the controlled space is a single device, or a single lighting control remote, chances are that multiple panels and pages will be needed in the setup. Follow the steps below to create multiple panels and pages after creating a new interface.

Process

Adding panel

1. [Make sure to create an interface](#)
2. Click on the UI tab in the left pane
3. Click on the name of the interface
4. Click on the three vertical dots
5. Choose the option to add panel
 - Adding a panel will also add a page within the new panel

Add Pages to existing panel

1. [Make sure to create an interface](#)
2. Click on the UI tab in the left pane
3. Click on the name of the panel that requires the additional page
4. Click on the three vertical dots
5. Choose the option to add page

[After creating additional panels and pages, navigation elements will be required to get from the Home panel/page to the newly created panels/pages.](#)

Navigation

Overview

Navigation within the ui is necessary when you want the end user to access a prior page or a separate control page for devices. One example would be that you have a Home page with macros for turning on a system to an AppleTV device. Once the macro executes you will want to navigate the client to a control page for the AppleTV. The control page would include cursor commands for navigating the AppleTV menus. Follow the steps below to navigate between pages within the ui.

Process

1. [Make sure new pages have been created](#)
2. Within left pane, click on existing page that will include the navigation button
3. Within center pane, double click on the button that requires navigation
4. Within actions portion of the center pane, click on the + sign
5. Choose the option to add navigation
6. Refer to properties window

Editing navigation type

- To a Specific page
 - This action navigates the interface to a pre defined page. This would be the option to select based on the above example of executing a macro then navigating to the control page of the AppleTV
 1. Define panel
 - From the dropdown list, select the panel of the new destination
 2. Define page
 - From the dropdown list, select the page within the panel of the new destination
- Back
 - This action, take the user back to the previously used area of the interface. In the above example, you would add a back button to the AppleTV page. The back button would then return the user to the Home page with macros.

Shortcut

By locating the new page within the left pane, you can drag and drop the page name to the button within the center pane. This will automatically define the panel and page of the navigation within the user interface. This shortcut will create a navigation link to a specific page without having to followup the steps above.

Devices

Overview

Devices are the backbone of a successful project installation. Importing the correct device driver and using the proper capabilities will ensure a successful installation. Within this thread you will find the correct ways to search for a device and how to choose between using a capability versus a state. Follow the steps below to import your devices.

Process

Importing Devices

Make sure you have created a project within your Manager before following the steps below

1. Launch into the builder from the center pane of your project
2. Change focus to the right pane
3. Select the devices tab
4. Click on the three vertical dots
5. Select the option to add device
 - Adding device reference will be covered later in this thread

Searching devices

After selecting the option to add a device a new window will appear. Within this popup window you begin searching for the proper controlled device. Follow the steps below to import your first device

- Enter manufacturer
 - We are asking to identify the manufacturer of the hardware you are controlling. This would include searching Apple for an AppleTV device, Lutron for lighting and Sharp for displays or blu ray players.
- The property fields listed below will also appear within the popup. This will identify which device is the correct device to import
 - Models
 - This is the list of specific models that support the scripted protocol. Example of models you will find
 - All Models

- This means that the protocol is generic for all devices created by this manufacturer. Unless you find a device with a single model number, the all model device will be the correct device to import.
- Specific model
 - If you see a specific model listed, that means a generic protocol was not used to create this device. If you see a single device model number listed that matches your equipment, import this device
- Type
 - The type of device corresponds to the equipment you are controlling. Manufacturers such as Sharp and LG create a wide range of equipment from blu ray players to televisions and projectors.
 - Make sure to import the proper type of device that matches the equipment you are controlling
- Interface type
 - The interface type identifies the control method for your equipment. Some devices will support multiple control methods such as IR, RS232 and TCP/UDP.
 - The command structure is different for each method. Make sure to import the correct device based on the intended hardware installation.
- Version
 - This shows the history of the driver. If a driver has been edited you will see the version history appear as 1.0.1 or 1.0.2, etc.
 - Selecting the newest version is always the best approach. Unless told otherwise by a note or our support team, import the newest driver.
- To import, click on the device within the list
 - Once you have selected a device, the popup window will disappear and you can return to editing your user interface.
 - To import another device, click on the menu option to add device and you will see the popup window return

Device Reference

A device reference refers to a device that is used across multiple spaces. Within the manager you will nest multiple spaces within a project. At any time you can import a device that was used within another space (as long as the spaces exist within the same project)

Examples of typical device references

- Matrix Switchers
 - Used for distributing audio and video to multiple locations. Each space could be a separate output of the video/audio switcher.

- Lighting
 - Distributed lighting can be referenced back to a single hub. Each space relies on the hub to communicate

Why use a device reference?

- The examples above talk about a single unit that is communicating across multiple spaces. Therefore, it is unnecessary to import multiple devices within the builder when you are truly only controlling a single unit. This eliminates the need to create separate gateways for a single device. The gateway configuration is done within the controlled space where the referenced device lives.

Capabilities and States

Every device driver contains two things: Capabilities and States. A capability is any executable command that exist to control your equipment. States are status elements of your equipment; examples of states would include Power, Source, Bulb hours, Volume level. Within the rest of this thread we will discuss the two items in more detail.

Capabilities

As mentioned above, a capability is any command that can be executed to a controlled device. Examples of capabilities would be: Power On, Power Off, Input A, Light On, Light Off, Volume Up and Volume Down. Within a device driver you will find all of the possible commands that your equipment will accept. The device drivers are built based on the control protocols provided by the manufacturer. If you require a command that is not found within the driver please let us know or contact the manufacturer of the hardware directly.

- Also found within a capability would be the option of a discrete command or a toggle command.
 - Discrete command
 - Discrete commands execute a specific value. Examples of discrete commands found below
 - Power On. When we execute a Power On command, the device being controlled will never turn off because we are telling the unit to Power On.
 - * A volume discrete command would be to execute a specific level command, i.e. volume level = 50%.
 - Toggle Command
 - A toggle command is a non specific value. A toggle command will continually execute the same command regardless of the state of the device being controlled. Examples of toggle commands found below

- **Power Toggle.** A power toggle command will keep executing a power command regardless of whether the unit is On or Off. Example scenario using a Power toggle command
 - Execute Power toggle – unit turns On. Execute Power toggle – unit turns off. Execute Power toggle – unit turns on and so on and so on. This scenario will continue to repeat itself when the command is executed. There is no definite state to track if the device only has a toggle command.

Categories

Within each device driver we have separated the capabilities out between different categories. Below is a short list of the possible categories you will encounter within a device driver. Example of the capabilities found within each category will also be included in the topics below.

- **Power**
 - Not just Power on and off, toggles and sleep timers will be found here as well
- **Input Select**
 - This includes input/output mapping of a switcher, sources on a receiver and/or inputs on a display
- **Volume**
 - Includes volume up, volume down, discrete levels for slider control and muting options
- **Navigation**
 - This will include cursor commands for up, down, left and right. Also includes exit, enter, cursor enter, and menu for example
- **Keyboard**
 - Includes number pad and certain devices might include alphanumeric keys
- **Transport**
 - Fast forward, rewind, play, pause and stop are examples
- **Tuner**
 - Channel up, channel down and discrete channels would be found here

States

Device status will be found within the categories as well. Below is an example list of states that could be found within each device driver category.

- **Examples of states**
 - **Power**
 - Power On
 - Power Off

- Projectors also have Powering Off state, standby states and bulb hours
- Volume
 - Level 50
 - 50%

State based changes

Using the state of a device, we can:

- [Trigger Events](#)
- [Change the property of a button](#)
 - In the above example we are changing an image based on the Mute status of a device.

Builder Toolbar

Overview

Within the center window of the builder you will locate the below toolbar. Within the rest of this short thread you will more detail about each icon you will see in the toolbar. Follow the links at the end of the brief description for a full breakdown of the shortcut.



Zoom

- The first three items you see on the toolbar will alter the zoom level within the center pane
- More information on zoom [found here](#)

Alignment/Spacing

- The second set of icons is used to adjust alignment and/or spacing of objects within your center pane
- More information on alignment and spacing [found here](#)

Create/Edit Shortcuts

- The third set of tools includes a shortcut button to add buttons, sliders, list boxes and/or backgrounds
- The pencil icon will return you to editing any items within your center canvas
- More information on these shortcuts can be [found here](#)

Layers/Overlays

- The last set of icons will change the viewable layer of you center pane, as well as provide you with the tool to add an overlay to your page
- The first icon will remove the background from view, allowing the user to edit only the images in focus
- The second icon removes all items that are not part of the background, allowing the user to edit the background image locations
- More information on overlays can be found here

Zoom

Overview

Within the center window pane there are three icons that can be used for zooming. You can zoom in, zoom out or return to 100% view. This tool provides the designer with the ability to expand the center screen to see the entire interface that is being built. This makes aligning items on the interface easier since you can see the entire screen. When you need to zoom in to edit an exact location based on a single pixel, you can use the zoom in feature to get this amount of detail. Follow the process below to take advantage of the zoom feature within the builder.






Process



The above image is a snippet of the center window toolbar within the builder. The “+”, “-” and “100” icons are covered in more detail below

- The + sign will zoom inwards the center pane until you can fine tune your image location to an exact pixel.
 - Each click of the + icon will zoom the center window ~10%. There is no press and hold feature to this button, so the only way to continually zoom in is to keep clicking on the + icon in the center toolbar
- The ‘ – ‘ sign will zoom outwards the center pane until you can view the entire interface you are building
 - Each click of the ‘ – ‘ icon will zoom the center window ~10%. There is no press and hold feature to this button, so the only way of continually zooming out is to continually click on the ‘ – ‘ icon in the center toolbar
- The “100” symbol will return the zoom level on the center pane to the 100% level
 - After zooming in or out to make your edits, clicking on the “100” icon will return the center window to the original view percentage.

Shortcut for creation

-  Create button (U)
-  Create slider (I)
-  Create list box (O)
-  Create background (P)
-  Create frame (M)

Overview

The pencil icon that is found within the center window toolbar of the builder has four options for creating new elements within a page. Within this thread you will more information on each of these options starting with creating a button. At the end of each thread there is a link explaining in more detail what shortcut is being created.

Creating Buttons

1. Click on the pencil icon in the builder toolbar
2. Choose the option to create a button
 - After selecting the option, your cursor will change from a mouse pointed to a cross
3. Using mouse, click and drag to highlight an area within center window
 - The newly visible red area is your button area
 - This red area is the selectable area within the application that can be tapped to execute an action
4. [Refer to properties window to edit your newly created button](#)

[More information on Buttons found here](#)

Creating a slider

1. Click on the pencil icon found within the center window toolbar
2. Choose the option to create a slider
 - After selection the option to create a slider, your mouse pointed will change to a cross
3. Using mouse, click and drag to highlight the area you want to add a slider
 - Depending on how the area was highlighted, you will either see a horizontal slider or a vertical slider
4. The slider currently in view, has no commands for control
5. [Refer to the properties window to edit your slider](#)

[More information on sliders found here](#)

Creating a list box

1. Click on the pencil icon found within the center window toolbar
2. Choose the option to create a slider
 - After selection the option to create a list box, your mouse pointed will change to a cross
3. Using mouse, click and drag to highlight the area you want to add a list box
 - After highlighting your area, you will see a white placeholder within your center pane
4. [Refer to the properties window to edit your slider](#)

More information on list boxes found here

Create Background

1. Click on the pencil icon found within the center window toolbar
2. Choose the option to add a background
 - After selection the option to add a background, your mouse pointed will change to a cross
3. Using mouse, click and drag to highlight the area you want to add your background
 - The area you highlight will indicate the size of the background image created
4. [Refer to the properties window to edit your slider](#)

[More information on adding backgrounds found here](#)

Creating a frame

1. Click on the pencil icon found within the center window toolbar
2. Choose the option to add a frame

- After selection the option to add a frame, your mouse pointed will change to a cross
3. Using mouse, click and drag to highlight the area you want to add your frame
 - The area you highlight will indicate the size of the frame within the page
 4. [Refer to the properties window to edit your frame](#)

More information on frames/overlays found [here](#)

Align and Spread

Overview

Adding multiple elements such as, buttons – sliders – list boxes, to any page will create disarray. Dragging and dropping each items is easy, but keeping all items aligned while dragging is not. Using the tools below we can help make that aligning process much easier. Follow the steps below to both align and space your elements within the center page of the builder.

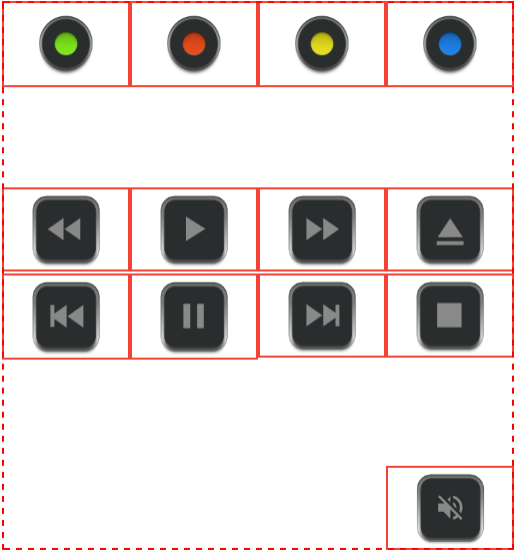
Process

1. Select all images that need to be adjusted
 - Using Command/Control and click to select the other items that need to be adjusted
 - Using mouse, drag and highlight an area of images to select a large group at once

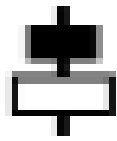
Alignment

When we talk about aligning an image, we are talking about any additional image selected after the anchor. The second, third, forth images will move based on your selection from the list below.

When selecting multiple items in the builders center window you will see a red box surrounding your selected items. This area (shown in the below screenshot) is referenced below explaining how the images will move for alignment purposes.



- Center horizontally



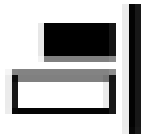
Center horizontally (E)



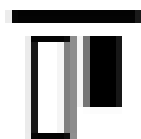
Center vertically (Q)



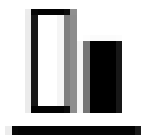
Align left (A)



Align right (D)



Align top (W)



Align bottom (S)

- Centering images horizontally will move images based on the center X coordinate of the highlighted area
- Center vertically
 - Centering an image vertically will move the secondary images based on the Y coordinate of the highlighted area
- Align Left
 - This will arrange all items based on the lowest value X coordinate of the highlighted area
- Align Right
 - This will arrange all items based on the highest value X coordinate of the highlighted area
- Align Top
 - This will arrange all items based on the lowest value Y coordinate of the highlighted area
- Align Bottom
 - This will arrange items based on the highest value Y coordinate of the highlighted area

Spacing

The spacing tool is used to create equal distance between X or Y coordinates of your highlighted items.

- Spreading items horizontally will adjust the items location within the row of the page.
 - The spacing will be calculated by determining the overall distance of the X coordinates of your highlighted area and the number of items that exist within that area
- Spreading items vertically will adjust items the items location within the column of the page
 - The spacing will be calculated by the overall distance of the Y coordinates of your highlighted area and number of items that exist within that area

Actions Menu

Overview

Above is a screen capture of the actions menu found within the center pane while viewing a button that has been added to the interface. Different widgets will have a different amount of options, but while viewing a button, you will see all possible options. Found below in this thread we will discuss each option and explain how the action can be used successfully within your interface.

Command Action

When adding a command action, a new command is added to the actions view of the center window pane. The command that is added is a blank command with no data. In order to fill in the blank information, choose a category from within your device and drag your command to your placeholder in the center window.

[Add Conditional](#)

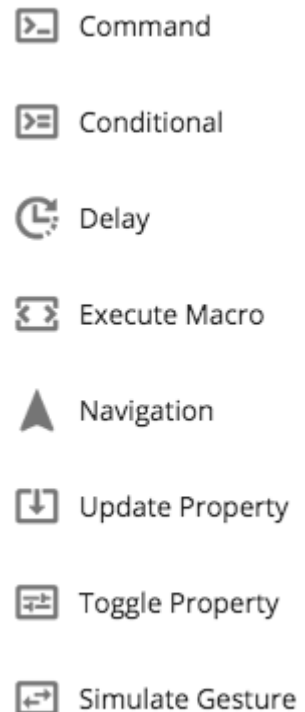
Adding a conditional to your actions view of the center pane is the first step in logic based programming. The initial *IF* statement will be added to the actions section of the center pane. This is a blank placeholder that is awaiting a state to be added to the *IF* statement, and also awaiting for other actions to be added within the *IF* statement.

Add Delay

Adding a delay is a break in between actions. The amount of delay can be adjusted within the properties window. Delays are added in seconds and the default is 0 seconds until further edited.

[Add Execute Macro](#)

Adding an executable macro refers to previously created macros in the left window pane. These macros can be used across interfaces and across different widgets within the interface. Once you have selected to add



an executable macro, the properties window will update and provide you with a dropdown list of all your previously created macros.

Navigation

Navigation is used to direct the end user to a different place within the interface. This can be directing them back to a previous page, to a new page or into the admin section. Once navigation is added to the actions area, the properties window will update and provide tabs to select the above options of back, specific panel/ page and admin.

Update Property

The update property is used to adjust a widget within the user interface. Within the properties section of the update property you will find a target widget field, this can be adjusted. Once the target widget is identified, any property option found within the target widget can be changed upon button press. Things that can be updated include, Font – Image – Overlays and much more. By clicking on the link above, you will be pointed to a use case explaining how to change a frame found within a page using the update property.

Toggle Property

The toggle property will act upon tap, press or release. Including a toggle property for Font, Bold, Alignment, Hidden, Image Size, or Repeat on Hold will cause the button to change based on the dropdown list of the widget. For example, toggling a buttons font will change the font from Helvetica, to Helvetica Neue, then to Helvetica Neue Light and so on thru the dropdown list.

Simulate Gesture

Conditional Logic

Overview

Conditional logic within the Nebula builder adds the capability for IF – THEN programming. IF – THEN programming provides the designer the ability to create scenarios within the programming based on state changes of equipment. Logic programming has options for IF, ELSEIF, ELSE, AND, OR. Within this thread we will discuss the differences and provide short examples on the logic options found within the builder.

Explanation

IF

The IF within a logic statement is the anchor. When building a logic statement you start with the first scenario and build other scenarios based on this initial statement. The application will try and match the scenarios in the order that they appear within your logic statement. The top line of the statement is the initial IF statement.

- Examples of an IF statement **IF** – InputState = BD/DVD *then* UpdateImage to Blu Ray graphic **ENDIF**

ELSEIF

ELSEIF is a secondary scenario that can occur based on the state of equipment. Some states have multiple possibilities, for example the source state of a switcher. In a scenario where we are building a logical statement to update image properties for each source that is being used within the space.

- Continuing the example of above
- **IF** – InputState = BD/DVD *then* UpdateImage to Blu Ray graphic **ELSEIF** InputState = CBL/SAT *then* UpdateImage to DirecTV log graphic **ELSEIF** – InputState = CD *then* UpdateImage to Sonos graphic **ENDIF**

AND

Within a logic statement AND is used to compound the scenario where the THEN scenario only occurs once multiple conditions are met.

- Continuing the example of above we add the PowerState for the and

- **IF** – InputState = bd/dvd **AND** PowerState = Power On *then* UpdateImage to selected Blu Ray graphic **ELSEIF** InputState = CBL/SAT **AND** PowerState = Power On *then* UpdateImage to Selected DirecTV log graphic **ELSEIF** – InputState = CD **AND** PowerState = Power On *then* UpdateImage to Selected Sonos graphic **ENDIF**

OR

Within a logic statement OR is used as an alternative possibility to your IF statement. Much like an ELSEIF multiple OR conditions can be added to the statement.

- **IF** – InputState = bd/dvd **OR** InputState = vcr/dvr **AND** PowerState = Power On *then* UpdateImage to selected Blu Ray graphic **ELSEIF** InputState = CBL/SAT*AND* PowerState = Power On *then* UpdateImage to Selected DirecTV log graphic **ELSEIF** – InputState = CD **AND** PowerState = Power On *then* UpdateImage to Selected Sonos graphic **ENDIF**

ELSE

An ELSE condition is used when you are only concerned about a single state. An ELSE means anything but. The example below follows the example of inputs much like the rest of the thread, but you will notice we are only concerned with the BD/DVD input

- **IF** – InputState = bd/dvd **AND** PowerState = Power On *then* UpdateImage to selected Blu Ray graphic **ELSE** UpdateImage to Power Graphic **ENDIF**

Else statement are typically used when you have two possible scenarios. Tracking the Mute state of a device would typically look like this

- **IF** – MuteState = Mute On *then* UpdateImage to pressed Mute graphic **ELSE** UpdateImage to default Mute Graphic **ENDIF**

Examples

[State based image changes much like what was discussed above can be found here](#)

Toggle Property

Overview

The toggle property action within the builder allows the designer to change a widget property within the interface. Items that can be toggle, are the properties of the widget that include a dropdown box. For example, Font and Alignment can be toggled. In the steps below we will explain how to toggle items of the current widget and other widgets in the setup.

Process

Toggling Property of currently selected widget

1. [Launch into Builder](#)
2. [Add a button widget](#)
3. Double click on newly added button widget
 - Choose your desired button action
 - Tap, Press or Release. The toggle property can be added to any of these options
4. Click on the + sign
5. Choose the option to add *Toggle Property*
6. Refer to properties window on the bottom of page
7. Choose your target property that you would like to change
 - Font
 - Choosing toggle font will change the font being viewed on the widget. The toggle feature will start with your selection as default, then move through the list of possible fonts
8. [Publish](#) and Test

Toggling separate widget within interface

1. [Launch into Builder](#)
2. [Add a button widget](#)
3. Double click on newly added button widget
 - Choose your desired button action
 - Tap, Press or Release. The toggle property can be added to any of these options
4. Click on the + sign
5. Choose the option to add *Toggle Property*
6. Refer to properties window on the bottom of page

7. Change target widget
 - Within left pane, expand your interface page and locate the new widget you would like to change
 1. Refer back to properties window of the newly created button
 2. From left pane, drag the target widget to the target widget field of the properties section
8. Choose your target property that you would like to change
 - Font
 - Choosing toggle font will change the font being viewed on the widget. The toggle feature will start with your selection as default, then move through the list of possible fonts
9. [Publish](#) and Test

Update Property

Overview

The update property is a useful tool to indicate a change within the interface. Updating properties can be done for widget currently being used, or updating other widget within the interface. Within this thread we will discuss both options and at the end you will find a link explaining a scenario of how to change a currently viewed overlay to something new via the tap of a button.

Process

Updating property of current widget

1. [Launch into builder](#)
2. [Add a button widget](#)
3. Double click on the newly added button
4. Select your button action type
 - Tap, Press or Release – The update property will work on each of these options
5. Click on the + sign to expand button actions
6. Choose the option for *update property*
7. Refer to the properties window
8. Choose your target property from dropdown list
 - This list will change depending on the widget currently selected
 - Example – Text
9. Change Property value
 - Continuing example of Text – type your new Text in this dialogue box
10. [Publish and Test](#)

Updating property for separate widget

1. [Launch into builder](#)
2. [Add a button widget](#)
3. Double click on the newly added button
4. Select your button action type
 - Tap, Press or Release – The update property will work on each of these options
5. Click on the + sign to expand button actions
6. Choose the option for *update property*

7. Refer to the properties window
8. Change focus to left pane
 - Expand your interface within the left pane and identify which widget from the list needs to be updated
 1. Refer back to properties window of the added button widget
 2. Click and drag the target widget from left pane to the target widget field of the properties window
9. Choose your target property from dropdown list
 - This list will change depending on the widget currently selected
 - Example – Text
10. Change Property value
 - Continuing example of Text – type your new Text in this dialogue box
11. [Publish and Test](#)

Example

[Click here to find a use case for changing currently viewed overlays via button press](#)

Macros

Overview

The macros tab within the builder allows the designer to create the necessary control macros in one place, then reference those macros throughout this controlled space. When designing multiple interface types within a single controlled space, there is bound to be redundancy and control macros are inevitably one of those redundancies. Instead of having to recreate the macro within each user interface, create the macros in the macro tab and then add the macro to the buttons on the different interfaces. The process below will explain how to design your macro as well as how to add the macro to a button.

Process

1. [Create a user interface and launch into builder](#)
2. Change focus to left pane within builder window
3. Click on the macros tab
4. Click on the three vertical dots
5. Choose option to add macro
 - A new window will popup asking you to name your macro.
 - The name of your macro should be unique to identify which activity is being executed or which scene is occurring
 - After choosing the option to complete the popup window will close and show the programmer the builder screen. Within the center pane you will have a new editing screen

Macros cont.

Within this new center window you will find three separate sections. The top section is for Actions, middle for references and a bottom properties window. Covered below you will find necessary information on each of these sections. Starting with the Actions section

Actions

The actions section of a macro is where we design the macro sequence. This includes adding the necessary capabilities from your device drivers to create single press activity launching. In the example below we will create a Power On macro to turn on a system and switch sources to AppleTV.

1. Shift focus to the right pane
2. Click on the devices tab
3. Expand the location of your device (This Space or Device Reference)
 - [For information on devices and device references click here](#)
4. Click on the name of your device
5. Choose the category of the command necessary
 - For this example choose the Power Category
6. Drag your capability to your center pane
 - In this example we are looking for the Set Power command
7. A new popup window will appear, the view of this window will be different for different devices

- In the image attached, we are looking at an Onkyo A/V Receiver which includes:

- Top Line Power – this is the capability to be executed
- Power State – this is the State of the device after executing the above capability
- Power Zone – this is asking the designer to

identify which zone is being controlled (Main Zone = Zone 1)

8. After identifying the parameters in the popup click submit
 - The popup window now closes and the Actions section shows the Execute Command line information from the added capability
9. Repeat the prior steps for every command necessary your macro

The screenshot shows a 'Command: "Set Power"' window. It has a title bar 'Add Command'. Below the title, it says 'Command: "Set Power"'. Underneath, there is a section 'Input Parameters' with three rows: 'POWER' with a dropdown menu showing 'Power On', 'POWER STATE' with a dropdown menu showing 'OFF', and 'POWER ZONE' with a dropdown menu showing 'Main Zone'. At the bottom left is a 'Cancel' button and at the bottom right is a 'Submit' button.

Once the macro is complete you should see a series of capabilities like the below image

'Test' : ACTIONS



Execute command: ONKYO - TX-DS989/Power/Power Discrete/Set Power -- POWER_ZONE = "Main Zone" --
POWER = "Power On" -- POWER_STATE = "ON"

Execute command: Panasonic - All Models_LR/POWER/POWER DISCRETE/POWER ON

Execute command: Vanco - EVMX4016/Input Select/Input Discrete/Input Select -- CURRENT_INPUT = "INPUT 2" --
OUTPUT = "OUTPUT 1"

'Test' : REFERENCES

Macro Toolbar



Within the center window of the macro editor you have two options within the toolbar:

- ' + ' Icon
 - Clicking on the ' + ' icon brings up a menu with 3 options
 - Command
 - Adding a command to your macro provides a placeholder for adding a capability from your controlled device in the process explained above
 - Conditional
 - This option add an IF statement to your Macro. Using IF THEN programming you can embed logic into your macro
 - More information on Conditional programming found [here](#)
 - Delay
 - If necessary you can add delays in between capabilities. Adding a delay creates a pause between capabilities, the length of which can be edited
 - Delay editing is done within the properties section of the center window
 - Within the properties section the Delay (Seconds) field can be edited by typing the value of the delay you require
 - A half second delay would be typed as .5
 - Execute Macro
 - This allows the designed to execute a macro within a macro
 - Within the properties window you choose the macro in which to embed

- A dropdown list of all created macros will appear. If this is your first macro, the list will only show the name of the macro currently being designed
- Items within the macro can also be maneuvered
 - click and hold the specific action that needs to be moved
 - drag and drop the items in the new space within the macro

Macro References

Beneath the macro actions section of the center window you will find the reference section. This reference section identifies every place within the User Interface that this macro is being used.

'Power Off' : REFERENCES

- /This Space/Tablet/Home/Home/New Button (5)

The granular detail in the image shows

- Name of space
- Name of handset
- Name of panel
- Name of page
- Name of the button

Adding macro to button

The following steps describe how to add the newly created macro to a button within your user interface

1. Select the UI tab from the left pane
2. Add a button to your center window
3. Within the left window pane, select the Macros tab
4. Drag the name of the macro from the left window pane – to the button within the center window
 - Double click on the button to see the New Execute Macro within the Actions section

Events

Overview

Events are scheduled actions that occur when certain conditions are met. The conditions are created within the builder. These conditions include, but are not limited to, Time of Day and the Status of another device in the controlled space. Within this thread we will discuss the three types of events that can be designed within the builder, as well as explaining the steps to create those events.

Creating Events

1. [Create a controlled space and launch into the builder](#)
2. Change focus to left window
3. Click on events tab
4. Click on the three vertical dot option
5. Choose the option to add an event
 - You will get three options for events, within the rest of this thread we will discuss each event type

Event types

Change focus to the center pane of the builder. There you will find a drop down to select one of three event types.

State based triggers

This trigger type relies on the selected state of a device within your space. States are covered in more detail in the [Devices thread found here](#). Examples of states that could be tracked could be Power, Volume, Mute, Source. Follow the steps below to build your state based event

1. Choose the state based trigger option from the drop down
2. Click on the option to create trigger
3. Select the devices tab from the right window pane
4. Expand your device from which the state is based
5. Select your category type
6. Locate your state
7. Click and drag your state to the upper section of the center window pane

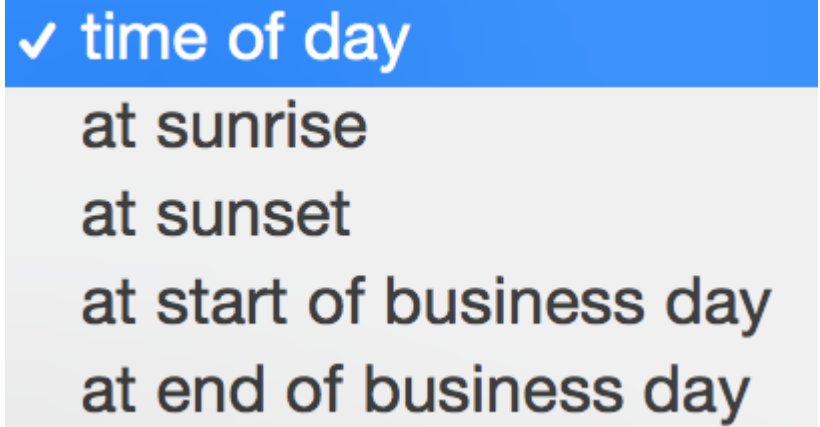
- Release the click on top of the No Trigger text in the center window pane

Adding actions to the events will be covered at the bottom of this thread.

Absolute time triggers

This trigger type is based around time of day. Examples of such events could be a 12PM macro to turn a system on, Sunset turns on the outdoor lights, or Sunrise turns off the outdoor lights.

1. Choose the absolute time trigger from the drop down of the center pane
2. Click on the option to create trigger
3. Choose the appropriate time scenario from the drop down
4. Select the day of week which the event should occur
 - Time of Day
 - This option will execute the event based on the time of day assigned in the center window
 - Sunrise
 - Using the predetermined location within the project creation, at the exact time of day the sun rises the event will execute
 - Sunset
 - Using the predetermined location within the project creation, at the exact time of day the sun sets the event will execute
 - Start of Business day
 - Using the predetermined business hours, the event will execute when the business day starts
 - End of Business day
 - Using the predetermined business hours, this event will execute when the business day ends



Adding actions to events will be covered later in this thread

Relative time trigger

Relative time events execute actions based on a predetermined allotment of time. Devices with requirements to keep network connection alive, often called a keep alive command, can be executed with a relative time trigger.

1. Choose the relative time trigger from the drop down of the center pane
 2. Click on the option to create trigger
 3. Type the amount for your trigger **
 4. Choose the correct allotment for the trigger
 - Seconds, Minutes or Hours
- If the trigger requires an hour and a half you could enter 90 minutes or 1.5 hours

Adding Actions to events

Once the trigger has been added the next steps are to add actions to the trigger

1. Change focus to the right pane
2. Select the devices tab
3. Locate the device
4. Select the category
5. Drag and drop the capability to the actions section of the center window
 - This is the portion of the event underneath the trigger. There is a note to drag and drop commands here
6. Repeat steps 3 and 4 if adding multiple capabilities to your event

Gateways

Overview

Gateways are the control hardware that is installed within your controlled space. Gateways are required in order to control equipment that is not supported over Network control such as, IR – infrared control, RS232 – serial control and/or Relay/IO – Contact closure and sensor controls.

Brain gateways also house the programming for the controlled space. Each controlled space will require a brain be installed in order to control the equipment within the controlled space.

Within this thread we will discuss creating your gateways within the builder and assigning your imported devices to the newly created gateways.

Control Types

- IR
 - Infrared control is a one way control that executes a single command to a piece of equipment. IR control is basic and used for most common devices such as Cable Boxes, Displays, Blu Ray players and more. IR is a fallback option of control when RS232 and/or IP control is not available.
- RS232
 - Serial control is a two way control that executes a command and receives a response from equipment. RS232 is a more advanced style of control that provides more information to the end user, such as Power State, Volume State, Bulb hours and so on. RS232 requires a typically requires a DB9 connector that comes in two types male or female. The Kramer hardware supports a bare wire connection, while the hardware being control will typically will require the DB9 connector.
- IP
 - Network control relinquishes the need for extra hardware such as IR or RS232. Network control will execute a capability directly through the local network of the installed system. Network control is also a two way control method that executes commands and receives responses on device states.

Creating Gateways

1. [Launch into your controlled space from within the Manager](#)

2. Change focus to left pane
3. Choose the Gateways Tab
4. Click on the three vertical dots
5. Choose the option to add gateway
6. Select gateway type

Gateway Types

- Network
 - Gateway type used when no extra hardware is necessary
 - Lutron lighting uses a network gateway for example
- FC-26
 - Includes 4 IR ports and 2 Serial ports
- SL-280
 - Includes 8 IR ports, 8 Serial Ports and 8 I/O ports
- FC-22
 - Includes 2 Serial ports, 1 of which can be RS-485
- FC-24
 - Includes 4 Serial ports, 1 of which can be RS-485
- iTach IR
 - Includes 3 IR ports
- iTach SL
 - Includes 1 Serial port

Editing your Gateway

After creating your gateway, the next step is to:

1. Edit the name of your gateway
 - Default name is New gateway, we suggest renaming to something more unique to the setup
2. Identify the IP address
 - Download an application called Find on your handset
 - Open Find and scan your local network
 - Look for Kramer Electronics within the Find results
 - Write down the IP address for future reference
3. Enter the IP address within the properties section
 - Properties section includes
 - Gateway name
 - Gateway IP address

Assigning Devices to gateways

1. Click on the name of your new gateway
2. Change focus to right pane
3. Select the devices tab
4. Select the device that corresponds to the gateway you have selected
5. Click and drag device to center pane section
 - Different gateway types have different views in center pane
 - Network gateways
 - Center pane will include a single end point for gateway
 - Username and password fields will be seen, if necessary
 - Kramer gateways
 - Center pane will include IR, Serial and I/O end points
 - When dragging devices to center pane, make sure to drop the device to the correct IR channel or Serial channel if using hardware
 - When dragging network controlled devices, port/username/password information will automatically be filled.
 - If you have configured a device to use different information than default, make sure to change the defaults in the gateway section

Frames and Overlays

Overview

Frames and overlays are tools that will help reduce interface sizes. Creating overlays instead of creating pages will allow the designer to create a single page interface, and by using overlays, change items being controlled. The frames that are added to a page identify the size of the overlay that needs to be created. The process for adding frames and overlays is found below.

Process

Launch into your controlled space, and while within the builder, follow the steps below

Adding frame to interface

1. Click on the create widget shortcut within the builder toolbar
2. Choose the option to create a frame
 - Your mouse pointer will change to a four pointed arrow
3. While clicking, highlight the area you want to add a frame
 - This new area will be identified with a red outline
4. Edit frame size and location within the [properties window](#)

Creating Overlay to use within frame

Launch into your controlled space and then follow the steps below to create an overlay

1. Click on the title of the interface you wish to add an overlay
 - Overlays are unique to each interface. If you have multiple interfaces within a controlled space, you will need to create overlays per interface
2. Click on the three vertical dots within the left pane, while the interface name is selected
3. Choose the option to add an overlay
 - After selecting this option a New overlay will be created within the overlays section of the selected interface
4. Edit the size of your overlay within the properties section
 - Options
 - The size of your overlay can match the size of your frame.

- For a scrollable frame, you will want to design an overlay that is larger than the frame that was added to the interface.
- Since overlays can be stretched, you can design an size overlay then images will be scaled to match the usable area of the frame

Adding widgets to overlays

Within an overlay you can add any type of widget.

- Adding buttons to overlays
- Adding sliders to overlays
- Adding list boxes to overlays
- Adding backgrounds to overlays

Adding frames to overlays

Overlays can have frames of overlays nested inside. You will follow the same process as mentioned above to add a frame within a newly built overlay.

Review

Overlays are created per user interface and frames can be nested within another overlay. Creating frames and overlays is the first step in creating a single page interface that changes frames when switching activities.

[In order to swap frames via a button press or logical programming, follow the steps found here](#)

Properties Section

Overview

The properties section of the builder is the area where you can edit elements in granular details. Items such as handset names, button size, font, font color, background color and much more. Within this document you will find a list of items that can be adjusted within the properties section of the builder.

Options

Text

Add custom words to identify a button name, page name, panel name and/or handset name.

Font

This dropdown list changed the appearance of the text that is displayed within your user interface. The fonts available are the same ones you would find when creating word docs or emails.

Font Size

This editable field changes the size of the text that is displayed within the user interface. This is an indefinite number field ranging from 1 to anything.

Bold Option

This option changes the intensity of your text. **Instead of a skinny letter or number, change the option to bold so your text really stands out**

Background Color

This option prompts a popup color picker to appear in the center of your screen. You can adjust the background color of your widget that has been added to the user interface.

Color

This option also prompts a popup color picker to appear in the center of your screen. However, this color picker is editing the color the text that appears within the user interface.

Alignment

There are 9 different options for textual alignment. This alignment is found within the widget that is found within the user interface. You can adjust the location of your text to appear in the upper left, upper middle, upper right, center left, center center, center right, lower left, lower center, or lower right.

X

This is the horizontal point on the grid of the canvas pane. Adjusting the X value changes the location of the button on the page based on its left to right position

Y

This is the vertical point on the grid of the canvas pane. Adjusting the Y value changes the location of the button based on the position related to the top or bottom of the page

Width

This option changes the size of your widget based on its horizontal size. This is an indefinite number scale starting at 1 and growing to as large as you require.

Height

This option changes the size of your widget based on its vertical scale. This is an indefinite number scale starting at 1 and growing to as large as you require.

Image

This is a thumbnail of the image currently being used for your button. Clicking on the red x within the thumbnail will remove the image from your button. You can also drag a new image to this field to change the currently used image within the user interface.

Pressed Image

This is thumbnail of the image that will appear upon pressing the button once in control mode. Clicking on the red x within the thumbnail will remove this image from the button. You can also change the image that will be used by dragging a new image to this field within the properties section.

Image Size

3 options

- Contain
 - This setting will adjust the width and height of the image to the largest possible value, while keeping image integrity, that fits the placeholder you have created within your page (i.e. button, background, etc.)
- Stretch
 - This setting will enlarge your image, ignoring image integrity, to match the size of your placeholder.
- Normal
 - This maintains the image integrity regardless of the size of your placeholder.

Slider Properties

Orientation

This option changes the way the slider appears within the user interface. Two options are available:

- Vertical
 - A vertical slider is used in a bottom to top motion. The vertical slider spans a larger Y scale within the user interface. The bottom of the slider is the lowest possible value and the top of the slider is the highest possible value
- Horizontal
 - A horizontal slider is used in a left to right motion. The horizontal slider spans a larger X scale within the user interface. The left side of the slider is the lowest possible value and the right side of the slider is the highest possible value

Steps

This is the number of commands that can be executed within the slider. For example, a dimmable light could have 100 steps for each percentage of illumination. Starting at 0% and ending at 100%. This field is editable and the number of steps can be changed from the default range that appears based on the device driver.

Send Commands On

- Drag
 - This options send commands as the user changes the position of the knob of the slider. While the user moves the knob up/down for vertical or left/right for horizontal, commands will be executed at each step during the movement
- Release
 - This option waits until the user ends the dragging of the knob. When the knob movement stops, a command is executed based on the ending position of the knob

Delay

This number scale adjusts the amount of time between executing commands while dragging a slider knob. When the option for executing commands on drag is enabled, you can execute commands at different intervals during the drag.

Knob Color

This option prompts a popup window that allows the designer to choose a unique color for the knob of the slider. The knob is portion of the slider the end user interacts with to change the value of the device being controlled.

Bar Fill Color

This option prompts a popup window that allows the designer to choose a unique color for the filled area of a slider. The filled area of the slider indicates the current level of the device being controlled. This would be the area found under the knob of a vertical slider and the area left of the knob on a horizontal slider.

Bar Empty Color

This options prompts a popup window that allows the designer to choose a unique color for the unused area of the slider. The empty area shows the remaining value of the slider. The empty area if found above the knob in a vertical slider and to the right of the knob on a horizontal slider.

Thickness

The thickness of a slider is the width of a vertical slider and the height of a horizontal slider. Enlarging the value within this section of the properties window makes the width/height of the slider bar bigger. Lowering the value within this section makes the bar of the slider smaller.

Knob radius

Adjusting this field within the properties window changes the size of the knob within the slider. The larger the number that larger the knob will be. The knob is the portion of the slider the user interacts with.

Use Cases

Overview

Use cases are example scenarios that can be created when using Kramer Control. Found within this topic will be examples such as when to save vs when to publish, state based event that changes image to indicate current state and more

Examples

[Saving vs Publishing](#)


[State based image change](#)

Adding Background

Overview

Adding a background is the first step in customizing a setup. Any image can be used as a background image. This could include – company logos, customized imaging, team photos etc. Follow the process below to add a background to your newly created pages.

Process

1. Within the Kramer Control builder, under UI, Choose the Page you would like to edit
2. Click on the second to last icon on the toolbar 
3. Move focus to right pane of the builder
4. Click on the option for Images
5. Expand an image library by selecting the name of the library
6. Select an image from the lower pane below the name of the image library
7. Drag the image to the center canvas pane using your mouse
8. To customize your background location, drag image to specific location
 - Edit your image within the properties section beneath the center canvas pane
 - [Notes on properties section can be found here](#)

Shortcut

By holding the shift key down while dragging your image, you can automatically resize your image to be used as a background.

Adding Buttons

Overview

Buttons are the elements that the end user will interact with when they are controlling their setup. Buttons can be single actions, macros or navigational. Within this article we will cover how to add a new button to the user interface.

Process

1. Launch into the Builder from your controlled space
2. [Open your user interface](#)
3. Expand the user interface until you can select your page

Once the page is shown in your center window, follow one of the 3 ways mentioned below to add a new button

Multiple Ways to Add Button

- [Use the toolbar shortcut](#)
 1. Select the option to create a button
 2. Use your mouse to select an area within the center window pane to highlight an area for your button
 - The red box that appears when releasing the mouse is the area in which your new button can be interacted with
- Drag an image to the center window pane
 1. Select the image tab from the right window pane
 2. Expand an image library
 3. Drag one of the images to the center window pane
 - The new image appears with a red box surrounding the image
 - This red box is the inter-actable area of your new button.
- Drag a capability directly to the center window
 1. Select the device tab from the right window pane
 2. Select a device
 3. Select a category for the command
 4. Drag a command to the center window
 - A pop-up might appear asking you about the command being executed

- New button appears in the center window with the textual name of the command that was dragged
- A red box appears showing the inter-actable area of the new button

Adding Capabilities and States to your button

- Note, if you followed the third option and added a capability to your center pane then your button already has a capability
1. Select your Devices tab from the right window pane
 2. Select your Device
 3. Select a category
 4. Drag and Drop capability to the red box in the center window pane
 - You can also drag and drop a state which can be used to track status and update properties
 - [Full tutorial on state based changes](#)

Adding a Slider

Overview

Sliders are used to control devices that have discrete capabilities for level control. Two examples of discrete level control would be: the volume level of an audio device and the dimming capability of a light. Within this thread we will discuss two ways of adding a slider to your user interface.

Process

1. [Enter the builder within your controlled space](#)
2. Choose the UI section of the left window pane
3. Select your interface
4. Select the panel you wish to add a slider
5. Select the page within the panel
6. Shift focus to center canvas pane

Using shortcut to add slider

1. [Within builder toolbar click on the menu for creation](#)
2. Choose the option to add a slider
3. Using mouse, click and drag an area within your center canvas pane
 - Depending on the area selected a horizontal or vertical slider will be created
4. Edit properties of slider such as colors and knob radius within properties window
 - [More information on each property found here](#)
5. Add capability
 - a. Select the Device tab within the right pane
 - b. Select a device
 - c. Select a category
 - d. Drag the capability to your slider
 - One example would be to drag the Set Volume capability of your device to your slider
 - Volume Up and Volume Down will not work within a slider. The slider relies on discrete levels such as Volume Level 50. Volume up and down commands would be added to a button, not a slider
 - e. (Optional) Drag the state to your slider
 - You can add the state of your device to your slider to identify the current level of your controlled device.

Drag discrete capability to your center pane

1. Select the Device tab from the right pane
2. Select a device
3. Select a category
4. Drag the capability to your center canvas pane
 - If you drag a discrete capability to your center pane, a vertical slider is created
5. Edit the properties of your slider
 - [More information on slider properties found here](#)

Saving vs Publishing

Save ⌘S

Publish ⌘P

Overview

This article explains the difference between the two options found in the File – Menu of the builder. The above screenshot also shows keyboard shortcuts which are also explained in more detail below.

Saving

Keyboard shortcut

- Mac
 - Command S
- PC
 - Control S

Saving a project is like creating a draft. The save is done within the manager, but is not sent to the controlled space. When promising a client a multitude of changes, you can work on the setup remotely, and save changes that you are making without affecting the interface that has been installed. Changes made to the setup will not appear within the user interface until the project has been published.

When to save

- If the controlled space is holding a meeting while you are programming – use the save feature. This will ensure that no changes are made to the space while the meeting is being held.
- Doing a large change to the UI, saving periodically is good practice to keep from losing work. Instead of publishing small changes, wait to publish until all changes have been made.

Publishing

Keyboard shortcut

- Mac
 - Command P
- PC
 - Control P

Unlike saving, publishing pushes all changes to the user interface. Publishing is not just saved to the manager, but will also update the user interface. Publishing should be done when all changes are final and ready for use. Publishing to a controlled space will add all changes to user interface since they last publish.

When to publish

- After all changes have been finished. When you have all gateways configured, UI designed and macros in place, publish the setup to the controlled space.
- When immediate changes are required. A meeting is scheduled and something is not working, make the necessary change and publish to the controlled space.

State based image change using logic

Overview

Using the state of a device, we can update content found within the properties window of a button. Items that can be changes include, but are not limited to: the text of a button, color of the text, boldness and the image shown for the button as well. Within this thread, we will discuss how to change an image based on the Mute state of our equipment.

*Note – This same process can be used to change other properties as well. The only section that would need be different, is when we are identifying what property to adjust

Process

- [Launch into the builder of your controlled space](#)
 - [Make sure devices are imported](#)
 - [Make sure buttons are added to a page](#)
1. Double click on the button you would like to add the state based change
 2. Select Devices tab from right pane
 3. Select your device
 - For this example, we are using an Onkyo receiver
 4. Select your category type
 - We are using Volume
 5. Drag command to your center pane
 - We are using the Mute Toggle
 6. Return to devices tab in right pane
 7. Scroll to bottom of category list to find states
 - Stay within the volume category
 8. Locate state and drag to center pane section entitled *Drop state here to add event*
 - At this point a popup will show on your screen
 - With our example, our popup shows a dialogue asking what zone is being controlled with this button and which state we are tracking.
 - You can select a single state to track, however leaving this section unselected allows us to build multiple scenarios based on the different states

- You can add multiple states to a single button or use conditional logic to track multiple states. In the process below we will use Conditional logic within a single event with no desired state
- Event 1 has now been added beneath your button action within the center pane

Adding substitutions via Conditional logic

Once your unspecified event has been added to your button follow the steps below to add your conditional

1. Click on the + sign within the event section
2. Choose the option to add a conditional
3. Change focus to devices section of the right pane
4. Drag the state to your IF statement
 - Within our example, we drag the mute state from the Onkyo
 - This is the same state we added to the event field of the button
5. Choose operator within popup
 - Two options, = or !=. This means equal or not equal
 - Our example will use the =
6. Select value of state
 - Different options will populate this field
 - Our mute example has two options Mute On or Mute Off
 - For the IF statement, we are choosing Mute On
7. Click on the + sign within the event section of the center pane
8. Add update property option
9. Refer to properties window
10. Select target property
 - In this example we are changing the image based on state, so we select the Image property
11. Deselect the option to use State Value
12. Select the images tab within the right pane
13. Locate your image
14. Drag image to the update property portion of the IF statement
 - This image will now appear when the state of your device matches your conditional
 - In our example, this is the image shown when the Mute State = Mute On

For the second Mute state possibility we will add an ELSEIF condition to our Event

1. Click on the +Condition next to the above IF statement
2. Add ELSEIF
3. Change focus to devices section of the right pane

4. Drag the state to your IF statement
 - The state to use is the same state as the IF statement
 - In our example we used the Mute state
 5. Click on the + sign within the event section of the center pane
 - Click on this icon while the ELSEIF statement is selected in the event section
 6. Add update property option
 7. Refer to properties window
 8. Select target property
 - In this example we are changing the image based on state, so we select the Image property
 9. Deselect the option to use State Value
 10. Select the images tab within the right pane
 11. Locate your image
 12. Drag image to the update property portion of the IF statement
 - This image will now appear when the state of your device matches your conditional
 - In our example, this is the image shown when the Mute State = Mute On
- IF your device has more possible states than two, repeat the above steps to create your ELSEIF statements for all possibilities

Changing frames to a different overlay

Overview

You want to build a single page interface and to do so, you will need to add a frame to a page, then change the loaded overlay via button press. Within this thread we will discuss all of the steps necessary to change frames via button press.

Process

[Before following the process below, make sure to create your frame and multiple overlays via the process found here](#)

1. Add the buttons that will be used to change the overlay that is loaded in your frame
 - [Tutorial on adding buttons found here](#)



2. Double click on one of your buttons to open the edit screen
3. Click on the + sign to add an action
4. Choose the option to add an update property
 - Adding an update property gives you the option edit anything within the target widget of the update property. By default the target widget is the currently selected widget
5. Change target widget
 - In order to change a different widget within the interface, drag the widget from the left pane to the target widget section of the properties window

- Drag the New Frame from your page to the target widget field of the properties window

Type	Update Property
Target Widget	New Frame
Target Property	Name
Property Value	

-
6. Change target property to Overlay
 7. Choose the name of your overlay within the property value section of the properties window

Repeat the above steps for each button and new overlay you would like to use

Repeat on Hold Button

Overview

When you need an action repeatedly sent while holding down a button, you will need to use a repeat on hold button press. Examples of this type of command would be sending volume up or volume down commands to any audio device or channel up and channel down commands for satellite or set top boxes. Any button within the builder can be used for repeat on hold. Follow the steps below to set up your repeating button.

Process

Before adjusting the settings to enable repeat on hold make sure you have completed the steps below

- [Launched into the controlled space requiring the repeating button](#)
 - [Added a button to your interface](#)
1. Double click on your button requiring the repeating action
 2. Within center pane, change tab from Tap to Press
 3. Select devices from the right window pane
 4. Select your device
 5. Select your category for the repeating command
 6. Drag the command to the *drag and drop commands here* section of the center window
 7. Change property view
 - After dragging command to action section, the properties window displays information on the command that was just added.
 - Click on the name of the widget within left window pane to change the property section to show the editable fields of the button
 8. Scroll to bottom of properties window
 9. Click on the check box next to *Repeat PUSH on Hold* to enable the repeat on hold function
 10. Change repeat frequency
 - This frequency can be anything from 0.0 to any numeric value
 - 0.0 enables a Smooth Repeat function within the button press