

Welcome!

Making it GUI:

One University's Journey Into Making A Standardized User Interface

Who we are



Eugene AV Programmer



Octavian
Project Manager

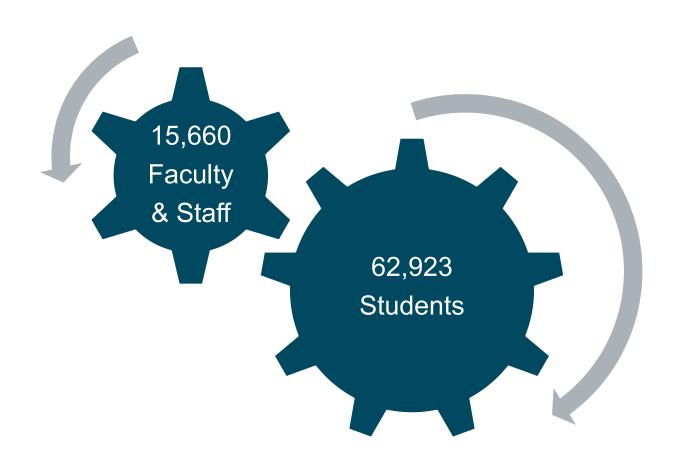


Chris
AV Programming Lead

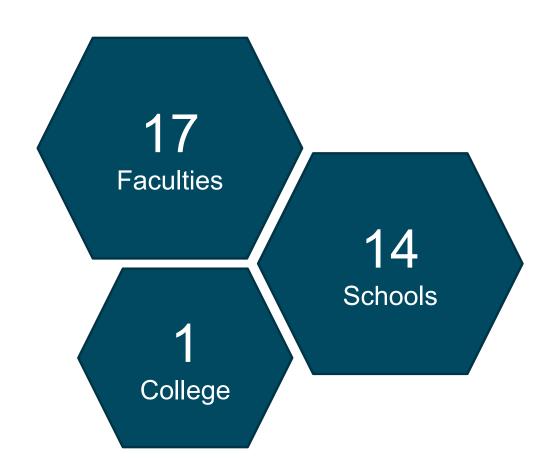




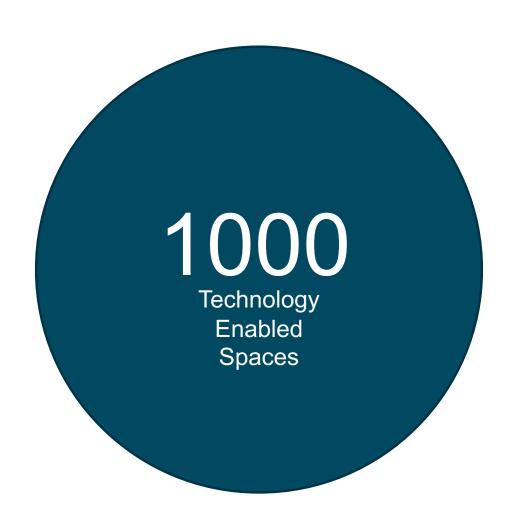
In 2017, UBC served...



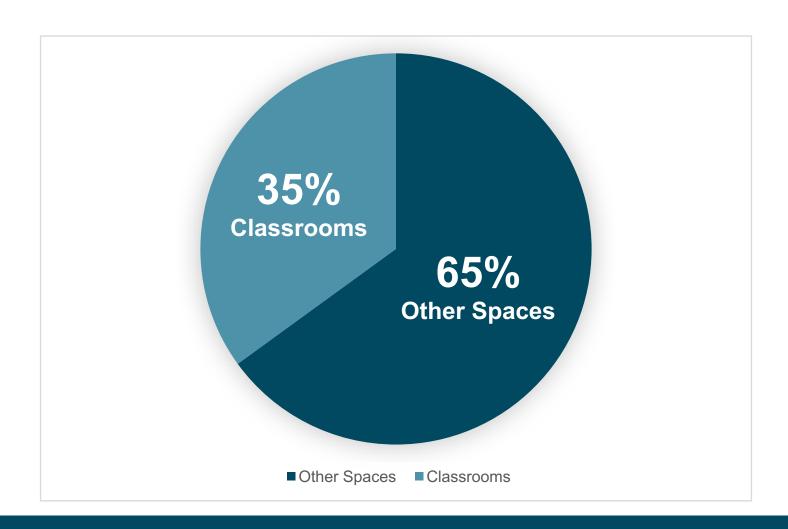
UBC is home to...



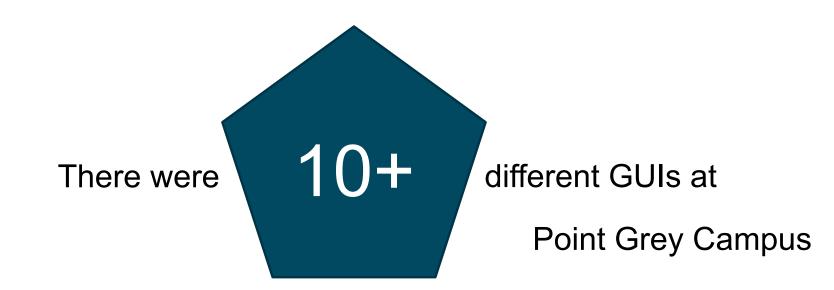
UBC supports...



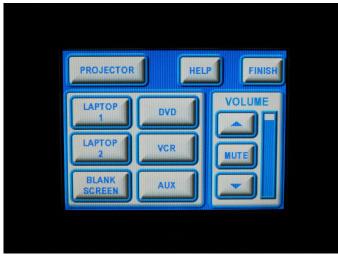
Tech Enabled Spaces consist of...



Before the standardized GUI...

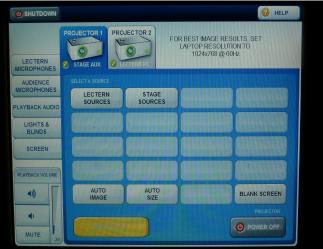


Here are some examples...









When the GUI didn't work...





Integrator Programmer

Challenges...

Different looks between rooms

Inconsistent button behaviours

Hard to learn

Slow to fix

Difficult to maintain/support

Frustrated users

So we set out to address it...

A common look and feel throughout UBC

Easy to use

Consistent GUI behavior

Works in any of the 1000 technology enabled spaces

Easy to maintain and support

A Common Look and Feel

Single UBC Theme File
Official brand colours
Official font
Easy to update when UBC's brand refreshes

Dynamic background

Changeable anytime for special events

Ease of Use - Users

Students

Faculty

Administrative Staff

Event Staff

AV Staff



Ease of Use - Tasks

General Room Related Tasks (Always available)
Making an announcement
Adjusting lights/shades

Presentation Related Tasks
Presenting Locally

Conference Tasks

Meeting Remotely

Sharing Content

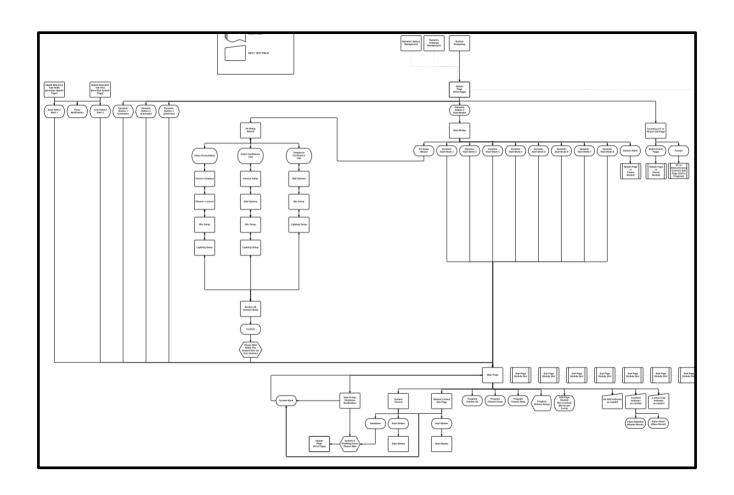
Hierarchy and Flow



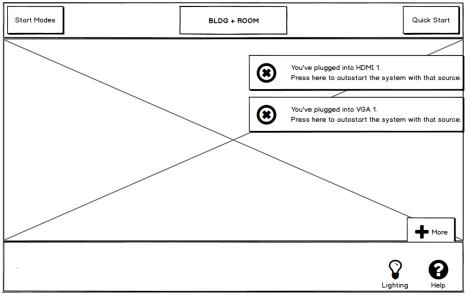
Presses or less to:

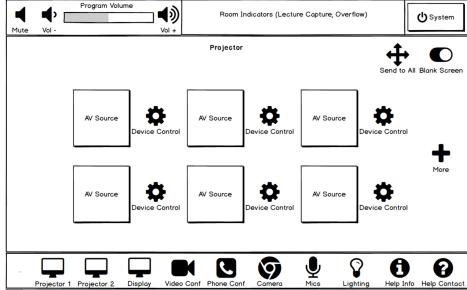
Start Presenting (On all displays)
Start Conferencing (Pre-dialing)
Make an announcement
Adjust shades/blinds
Turn lights on/off

Hierarchy and Flow

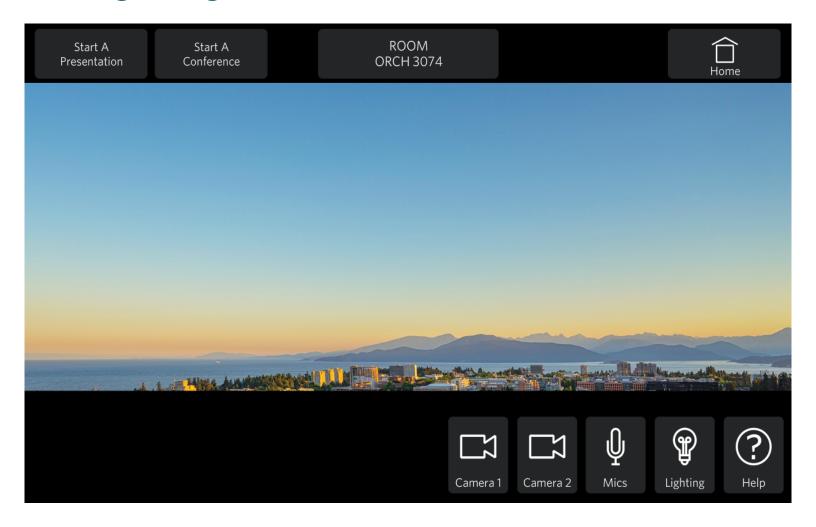


Make A Plan

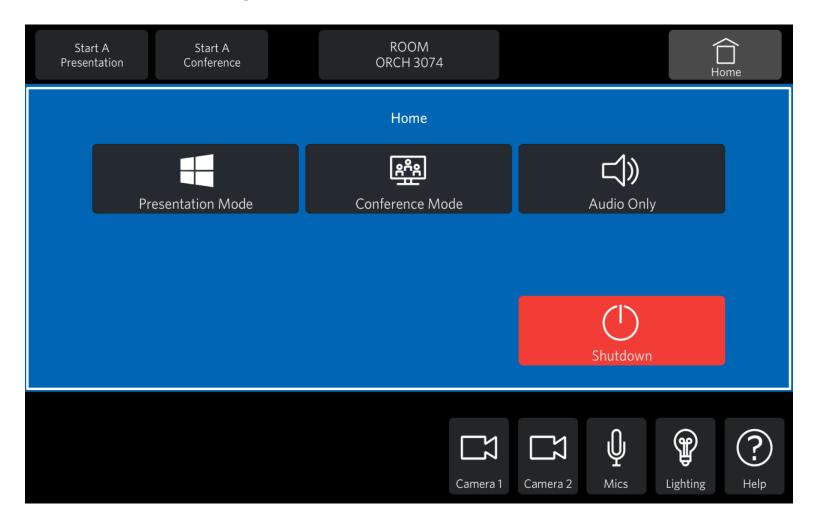




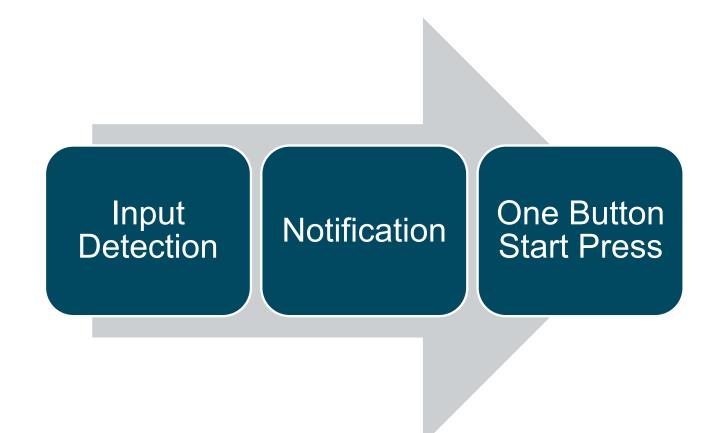
Starting Page



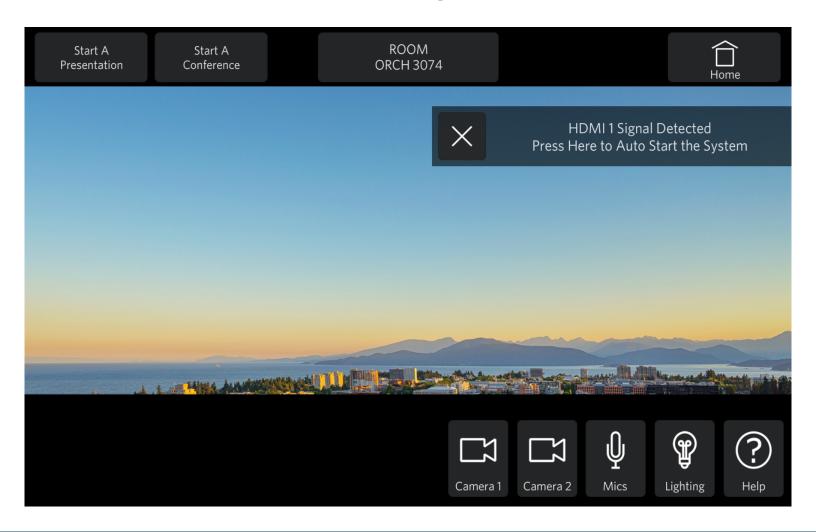
Modes Example



One Button Start



One Button Start Example



Ordering Sources

Standardized order for sources



Naming Conventions

New GUI Name (Full Name)	New GUI Name (Abbreviated)	Module/Navigation Bar
Floor Plate / Input	Floor Plate	Floor Plt
AirMedia	AirMedia	AirMedia
ClickShare	Click Share	ClkShare
Document Camera	Doc Cam	Doc Cam
Camera	Camera	Camera
Presenter Camera	Camera 1	Camera 1
Room Camera	Camera 2	Camera 2

Icons and Text Labels









Standardized icons

Use of only approved wording for all pages

"This room has a scheduled recording ongoing. Manual controls have been disabled until it has completed."

Crestron Fusion

All graphics files located on Fusion server

Jointly used by all touchpanels

Easy to update look and feel

Consistent Behaviour

Standards documentation

Programming modules for all pages

GUI elements

Lighting

Microphones

Projectors

Etc...

Module Example

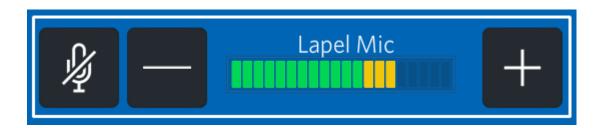
	UBC GUI Nav Bars Driver v3		
System_Active_sr	System_Active	Current_Visible_Subpage	Current_Visible_Page
•		Subpage_Title_Text	Page_Title_Text
-	Top_Nav_Inputs	Module_Disabled_Text	Module_Disabled_Text
Top_Nav_Bar_Off_Button_1_press	Top_Nav_Off_Button_1_press	Top_Nav_Outputs	-
Top_Nav_Module_1_Visible_Page	Top_Nav_Off_Module_1_Visible_	Top_Nav_Bar_On_Visible	Top_Nav_Bar_On_Visible
Top_Nav_Module_1_Page_Title_Text	Top_Nav_Off_Module_1_Page_Ti	Top_Nav_Bar_Off_Visible	Top_Nav_Bar_Off_Visible
Top_Nav_Bar_Off_Button_2_press	Top_Nav_Off_Button_2_press		ŕ
Top_Nav_Module_2_Visible_Page	Top_Nav_Off_Module_2_Visible_	Top_Nav_Off_Module_1_Active	Top_Nav_Off_Module_1_Active
Top_Nav_Module_2_Page_Title_Text	Top_Nav_Off_Module_2_Page_Ti	Top_Nav_Off_Module_2_Active	Top_Nav_Off_Module_2_Active
Top_Nav_Bar_Off_Button_3_press	Top_Nav_Off_Button_3_press	Top_Nav_Off_Module_3_Active	Top_Nav_Off_Module_3_Active
Top_Nav_Module_3_Visible_Page	Top_Nav_Off_Module_3_Visible_	Top_Nav_On_Module_1_Active	Top_Nav_On_Module_1_Active
Top_Nav_Module_3_Page_Title_Text	Top_Nav_Off_Module_3_Page_Ti	Top_Nav_On_Module_2_Active	Top_Nav_On_Module_2_Active
		Home_Page_Active	System_Home_Page_Active
Top_Nav_On_Button_1_press	Top_Nav_On_Button_1_press		, in the second
Top_Nav_On_Module_1_Visible_Page	Top_Nav_On_Module_1_Visible_	Shutdown_Timer_Expired	System_Control_Shutdown_Timer_Expired
Top_Nav_On_Module_1_Page_Title_Text	Top_Nav_On_Module_1_Page_T	/Top_Nav_Outputs	
Top_Nav_On_Button_2_press	Top_Nav_On_Button_2_press	Bottom_Nav_Outputs	-
Top_Nav_On_Module_2_Visible_Page	Top_Nav_On_Module_2_Visible_	Bottom_Nav_One_Row_Visible	Bottom_Nav_One_Row_Visible
Top_Nav_On_Module_2_Page_Title_Text	Top_Nav_On_Module_2_Page_T	Bottom_Nav_Two_Rows_Visible	Bottom_Nav_Two_Rows_Visible
,		Bottom_Nav_Three_Rows_Visible	Bottom_Nav_Three_Rows_Visible
System_Control_Shutdown_Confirm_press	System_Control_Shutdown_Conf	Bottom_Nav_More_Button_Mode	Bottom_Nav_More_Button_Mode
System_Control_Back_press	System_Control_Back_press	3ottom_Nav_More_Button_Visible	Bottom_Nav_More_Button_Visible
System_Control_Home_press	System_Control_Home_press		ĺ
System_Control_Shutdown_or	System_Control_Shutdown_pres	Bottom_Nav_Module_1_Active	Bottom_Nav_Module_1_Active
,	/Top_Nav_Inputs	Bottom_Nav_Module_1_Visible	Bottom_Nav_Module_1_Visible
-	Bottom_Nav_Inputs	Bottom_Nav_Module_2_Active	Bottom_Nav_Module_2_Active
Bottom_Nav_Button_1_or	Bottom_Nav_Button_1_press	Bottom_Nav_Module_2_Visible	Bottom_Nav_Module_2_Visible
Bottom_Nav_Module_1_Enable	Bottom_Nav_Button_1_Enabled	Bottom_Nav_Module_3_Active	Bottom_Nav_Module_3_Active
Bottom_Nav_Module_1_Visible_Page	Bottom_Nav_Module_1_Visible_F	Bottom_Nav_Module_3_Visible	Bottom_Nav_Module_3_Visible
Bottom_Nav_Module_1_Page_Title_Text	Bottom_Nav_Module_1_Page_Tit	Bottom_Nav_Module_4_Active	Bottom_Nav_Module_4_Active

Standardized modules allows...

Same GUI programming across projects

Consistent button behaviour

Predictable user experience



Reusing modules also means...



Less programming time needed per room

Works Everywhere

Modular structure allows easy scaling up

Handles any room of any size and any complexity at UBC

Some theoretical limits to the design are:

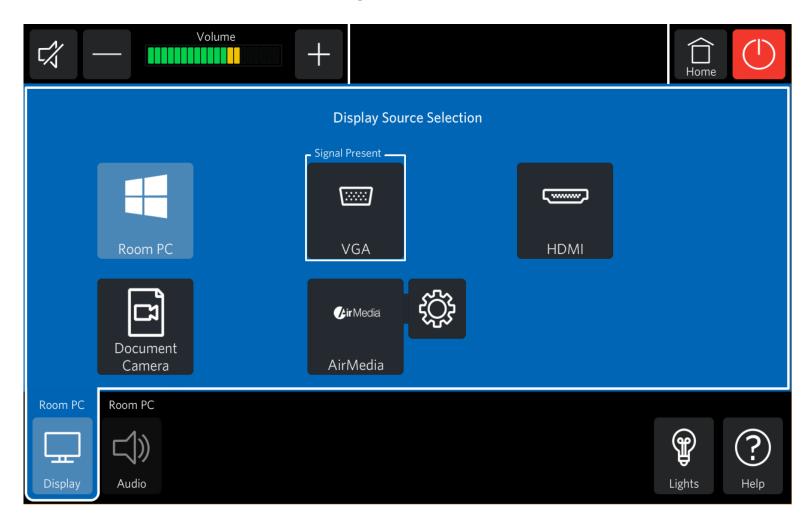
30 Projectors

Unlimited Microphones

Unlimited AV Sources

Unlimited Lightning Zones

Presentation Example



Conference Example



Support and Maintain

AV Support Staff need to know only 1 GUI

Change settings to control any room remotely

Eliminates need to troubleshoot GUI during service calls

Easy to train and support users

How did we get here?

Agile approach

Frequent delivery of a working product/software

Collaboration between the business stakeholders and developers throughout the project

Simplicity

Flexibility to avoid delays when a requirement or feature request changes

Continuous improvement

Thank You

