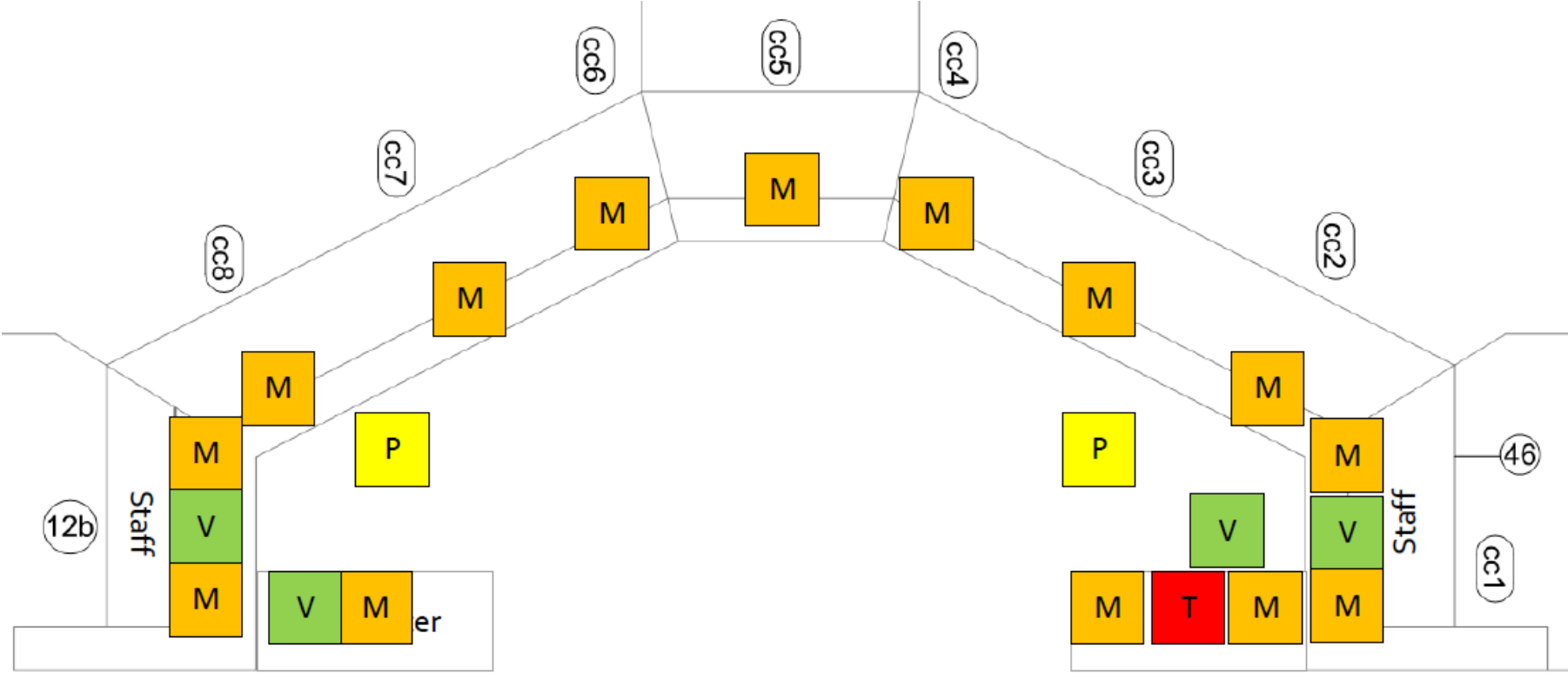


Chamber Technology Requirements Update

January 27, 2020



Chambers Layout



LEGEND

- M MICROPHONE STATION
- V VIDEO INPUT
- C FIXED CAMERA
- P PROJECTOR
- T CONTROL TOUCHPANEL



Presentation/Media Switching & Control

Option 1 – Incremental/Open Approach

- control panel - any source can be displayed on any or all displays
- presentation/media & control of proposal from October 21 - other components added later
- original networked system approach to ensure full scalability using standard off-the-shelf equipment
- limits exposure to a total system failure if any one device fails
- does not include audio processing which would need to be added later
- uses existing microphones - Addition B is needed to increase audio quality within Chambers and especially for recorded and/or streamed audio

Option 2 – Proprietary Vendor Approach

- control panel - any source (can be displayed on any or all displays
- control and audio processing built into the same device
- not open architecture - must be purchased with enough connections to meet future needs - limits flexibility to expand in the future
- majority of the functionality is in a single box - if it fails chambers will loose all operations
- includes audio processing that would need to be added later with Option 1
- uses existing microphones - Addition B is needed to increase audio quality within Chambers and especially for recorded and/or streamed audio

Option 1: Presentation/Media Switching & Control

The "Front End"



AMX or Crestron

Tabletop Control Touch Panel



Option 1: Presentation/Media Switching & Control

The "Back End"



AMX or Crestron



Control Processor



Switch



CISCO

Option 1: Presentation/Media Switching & Control

The “Back End”

Media Encoders/Decoders

Encoders and Decoders distribute 4K visual quality quickly to anyplace you need video

Expand without replacing infrastructure - add an Encoder to each video source and a Decoder to each display or projector



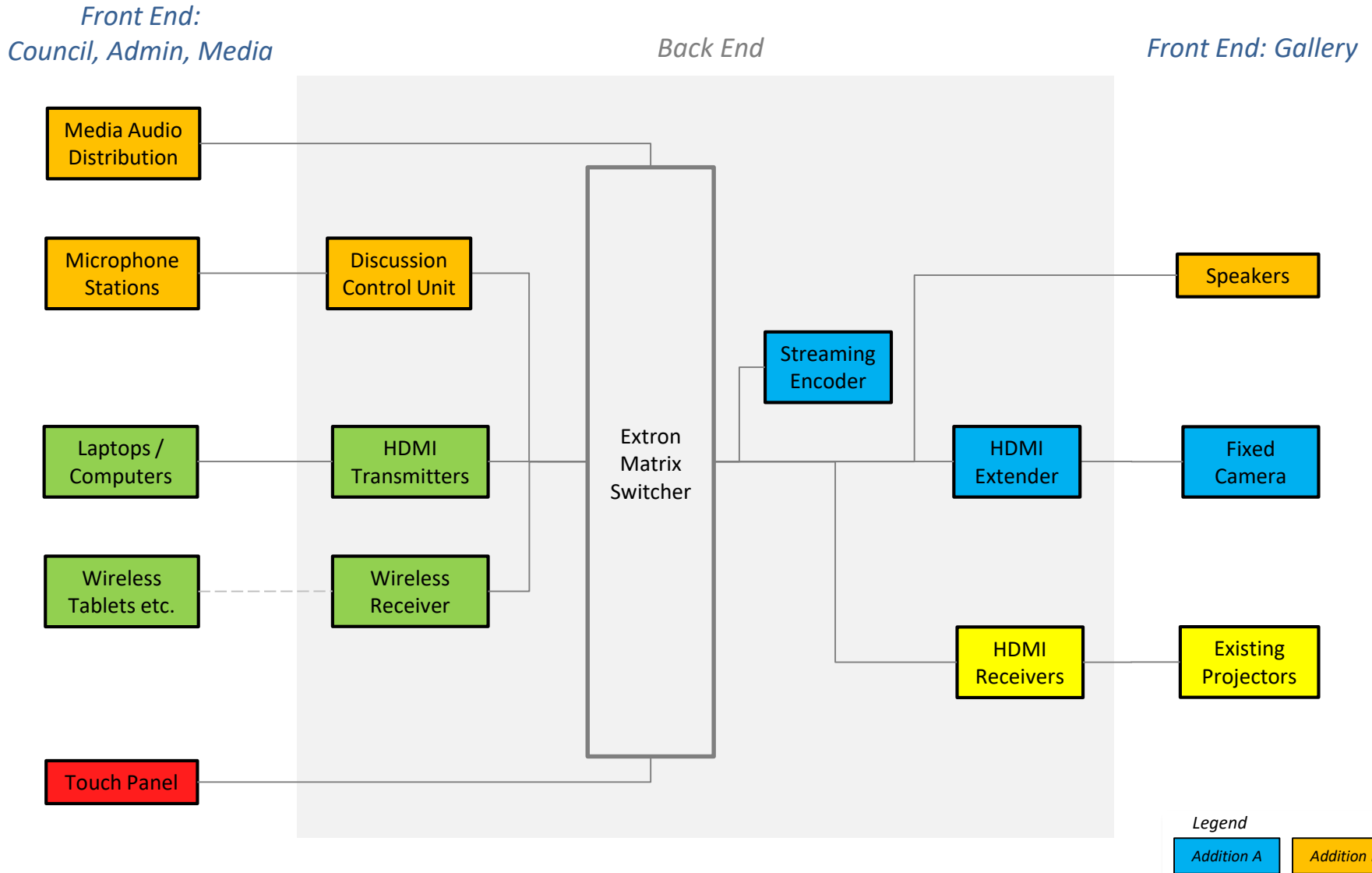
Wall Plates



AMX or Crestron



Option 2: The “Front End” & The “Back End”



Option 2: Presentation/Media Switching & Control

The “Front End”

Control which sources get sent to which destinations

Sources - computers, cameras, Blu-ray players, etc.

Destinations - projectors, flat panel displays and video conference etc.



Extron Touch Panel

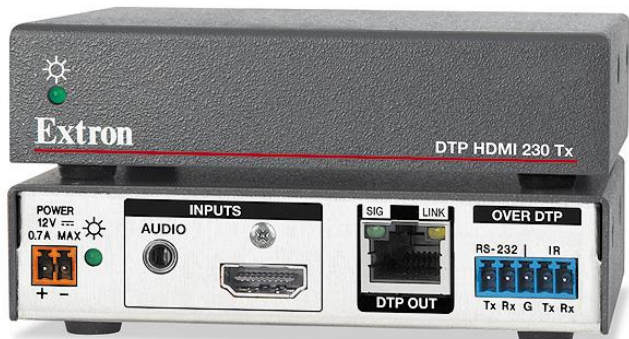
Option 2: Presentation/Media Switching & Control

The "Back End"

Extron
Matrix Switcher



HDMI Receivers & Transmitters



Extron Transmitter



Extron Receiver

Option 2: Presentation/Media Switching & Control

The “Back End”

**Extron
Wall Plates**



Power Sequencer/Conditioner



Furman or Surgex



Addition A: Fixed Camera & Streaming

The “Front End”

Fixed, wide angle
Camera



Panasonic

The “Back End”

Streaming Encoder



Matrox or AJA



Addition B: Discussion Microphone System & Loudspeaker Upgrade

The "Front End"



Delegate Station & Microphone



The "Back End"



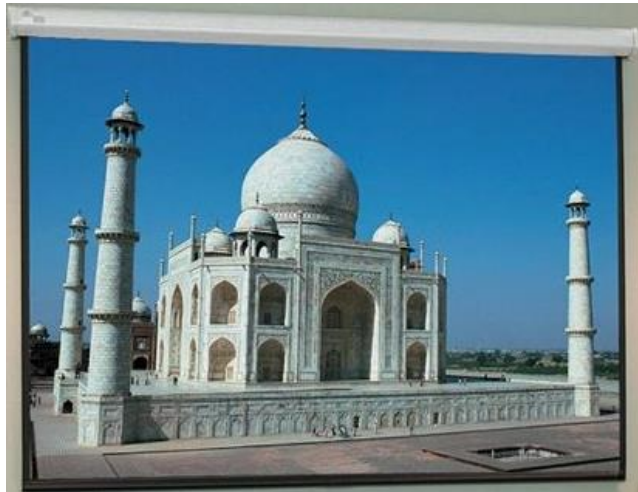
Addition C: Projector & Screen Upgrade

Laser Projector



Epson or Panasonic

Motorized Screen



Draper or DA-LITE

Questions & Discussion