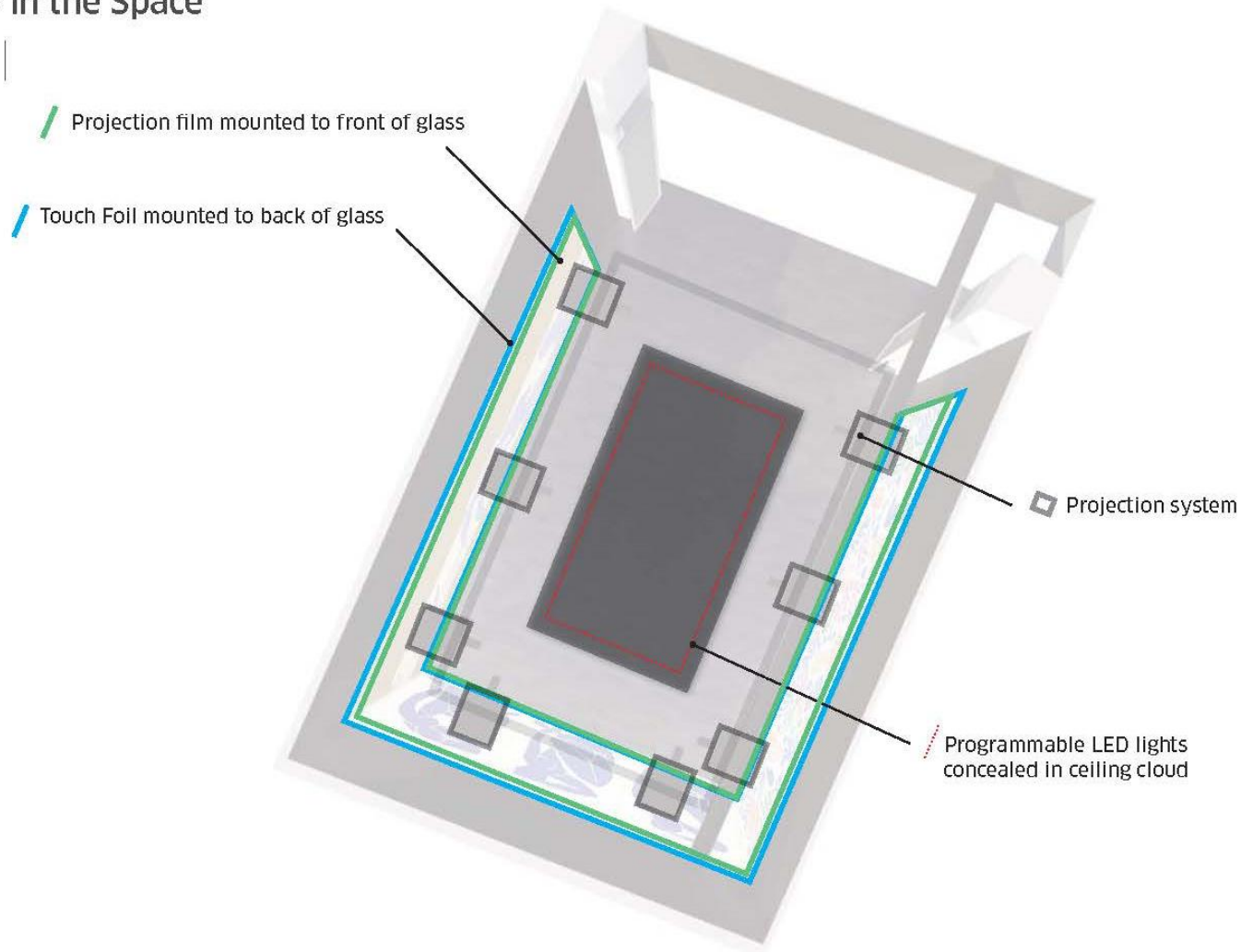
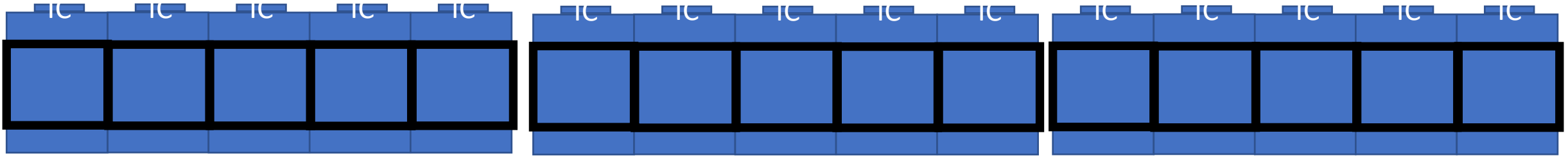
Technology in the Space

Visual



Entire Room configuration

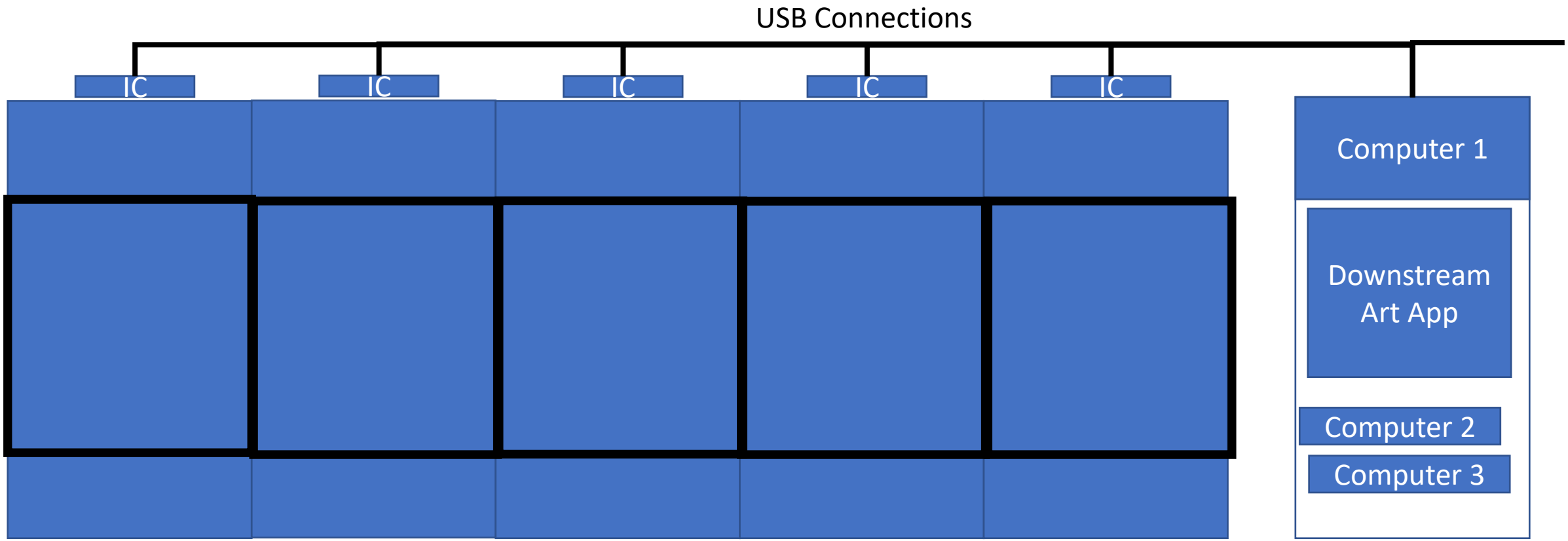


Computer 1

Computer 2

Computer 3

Existing System Configuration



A Single Luminary Wall

Touch Panel

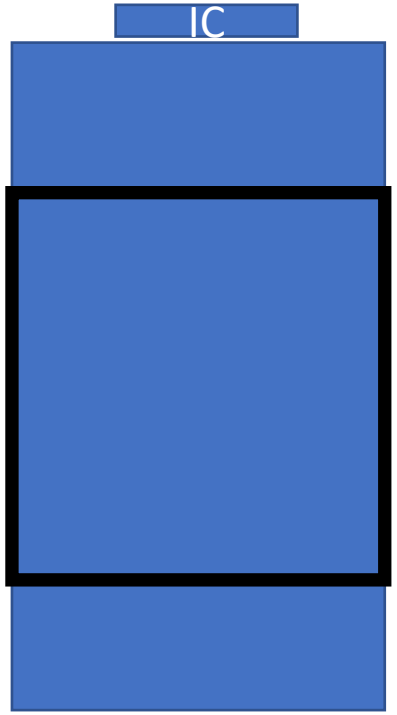
Integrated Circuit Board at the Top.

Sends packets on USB connection to host.

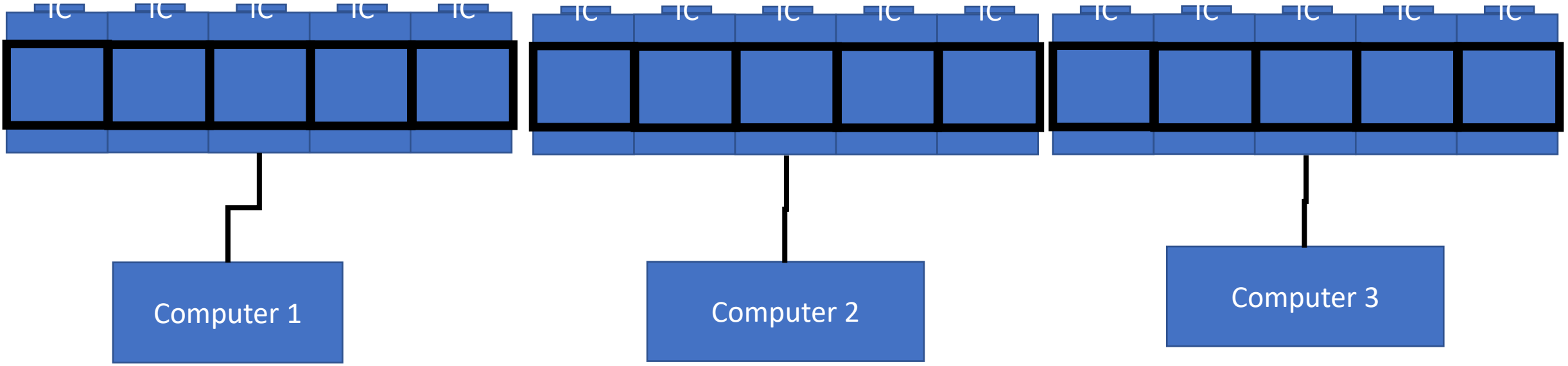
Only sensitive in the black rectangle.

Each IC board can be configured to send packets to an IP Address and Port.

Currently configured to send to same computer and port.



Entire Room configuration

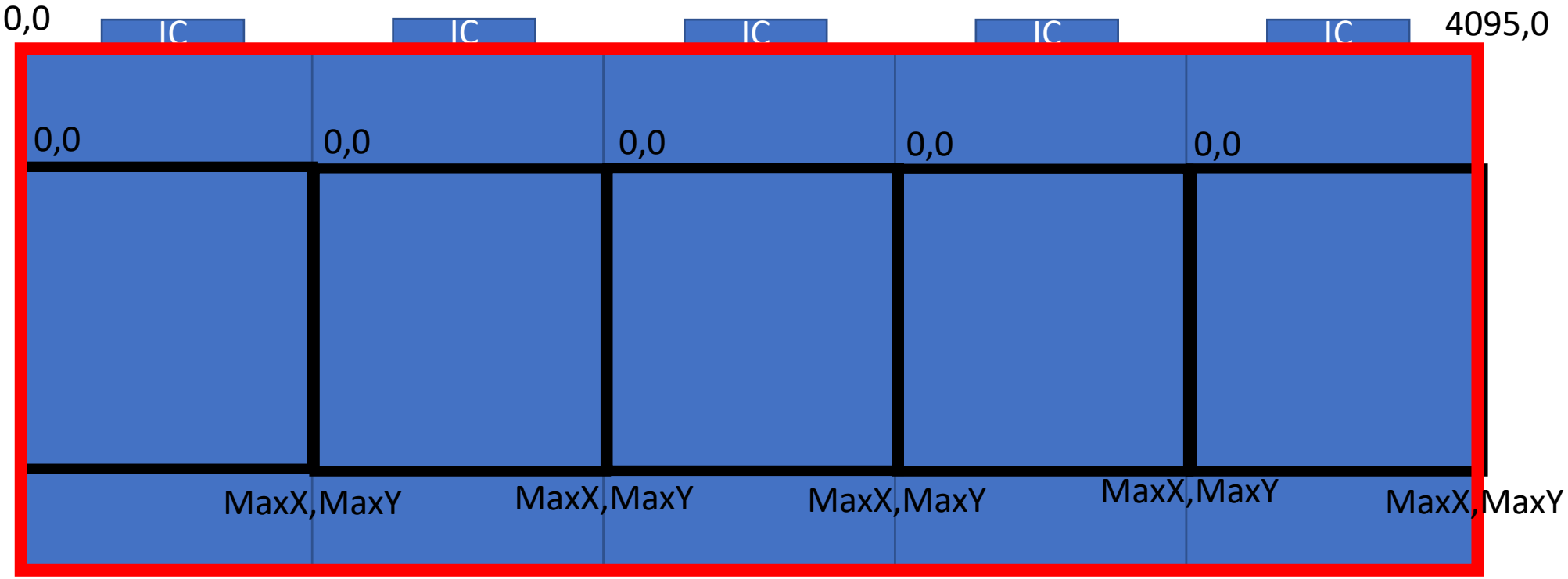


Python Server Listening on each machine.
Pynput injects mouse presses on each machine.
Needs to run as service.

Steps to Create

- Write simple Python Server listening for packets.
  - For testing output packet info to screen.
- Configure the Displax Touch foil to send packets to correct machines.
- Inject touch presses as mouse events using pynput
- Align Coordinate Mapping to proper positions
- Test and debut this implementation.
- Eventually install Python application as a Windows Service
- So can have auto-start on bootup.

Coordinate Mapping Issue

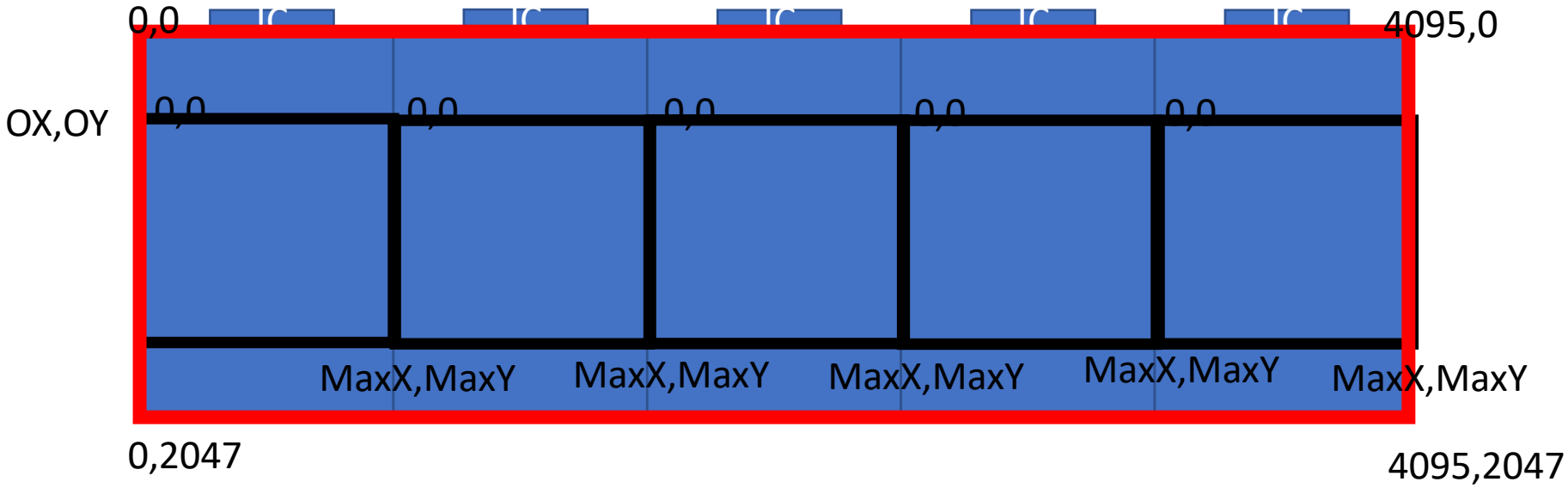


A Luminary Wall

Panel Packet Info: Panel ID, X,Y in individual Packet Coordinates.
Let's assume Panel ID=0,1,2,3,4

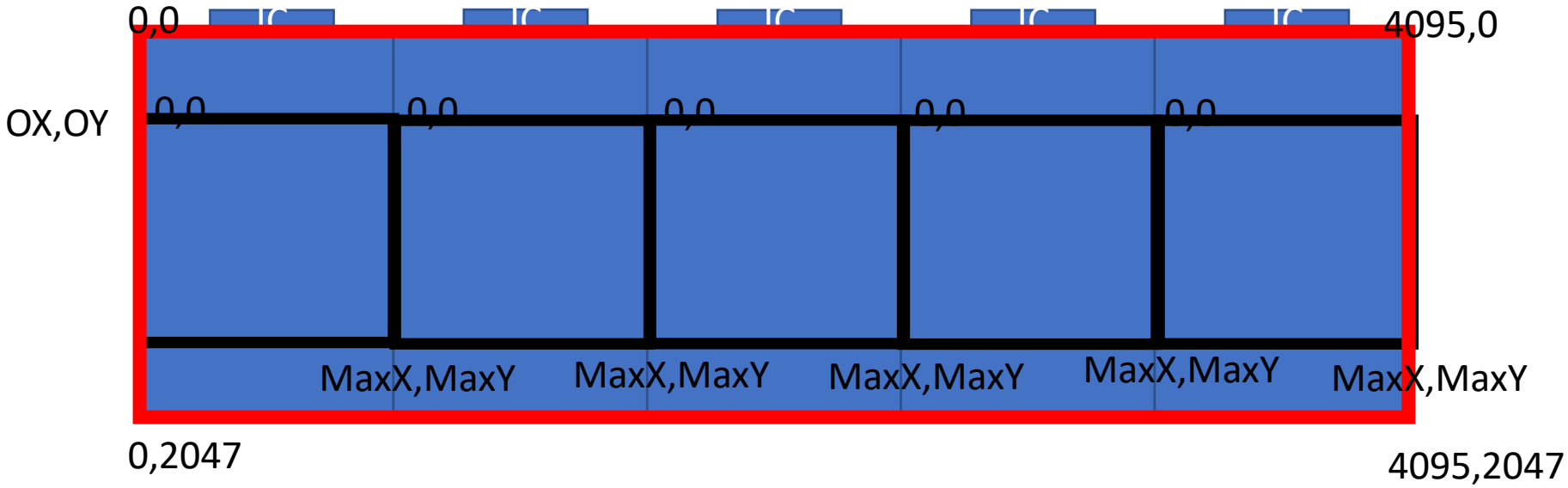
How to convert from Panel Coordinates
Into absolute Screen Coordinates?

Coordinate Mapping Issue



ScreenX = OX + PanelID*PanelWidth+PanelX;
ScreenY = OY + PanelY

Coordinate Mapping Issue



ScreenX = OX + PanelID*PanelWidth+PanelX * panelScaleFactorX;
ScreenY = OY + PanelY*panelScaleFactorY

Say 4 Panel X Pixels = 2 Screen X Pixels then panelScaleFactorX = 2/4
Say 6 Panel Y Pixels = 5 Screen Y Pixels then panelScaleFactorY = 5/6

These values may need to be customized