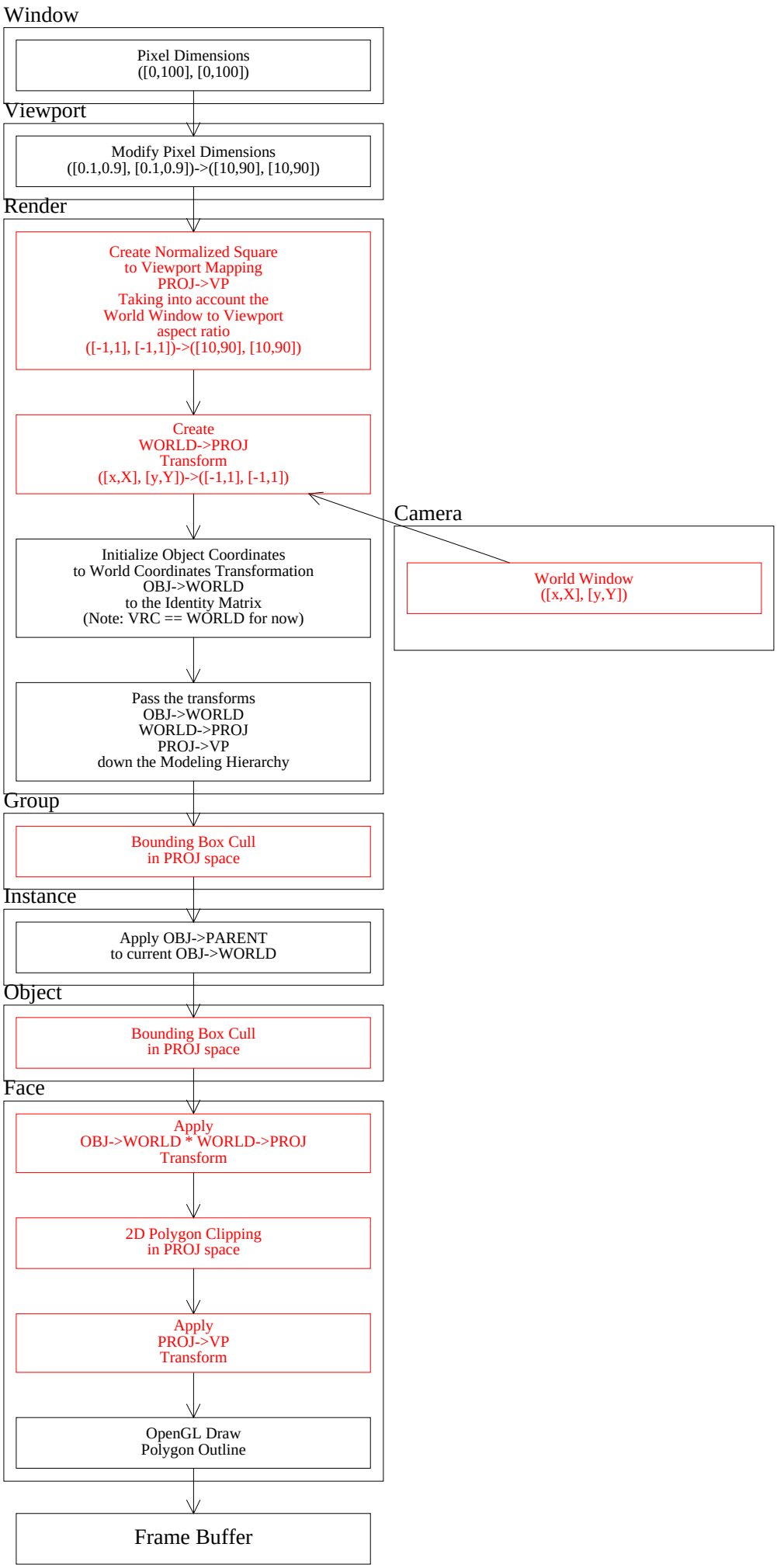
Window
Pixel Dimensions
([0,100], [0,100])
Viewport
Modify Pixel Dimensions
([0.1,0.9], [0.1,0.9])->([10,90], [10,90])
Render
Create Normalized Square
to Viewport Mapping
PROJ->VP
Taking into account the
World Window to Viewport
aspect ratio
([-1,1], [-1,1])->([10,90], [10,90])
Create
WORLD->PROJ
Transform
([x,X], [y,Y])->([-1,1], [-1,1])
Camera
World Window
([x,X], [y,Y])
Initialize Object Coordinates
to World Coordinates Transformation
OBJ->WORLD
to the Identity Matrix
(Note: VRC == WORLD for now)
Pass the transforms
OBJ->WORLD
WORLD->PROJ
PROJ->VP
down the Modeling Hierarchy
Group
Bounding Box Cull
in PROJ space
Instance
Apply OBJ->PARENT
to current OBJ->WORLD
Object
Bounding Box Cull
in PROJ space
Face
Apply
OBJ->WORLD * WORLD->PROJ
Transform
2D Polygon Clipping
in PROJ space
Apply
PROJ->VP
Transform
OpenGL Draw
Polygon Outline
Frame Buffer