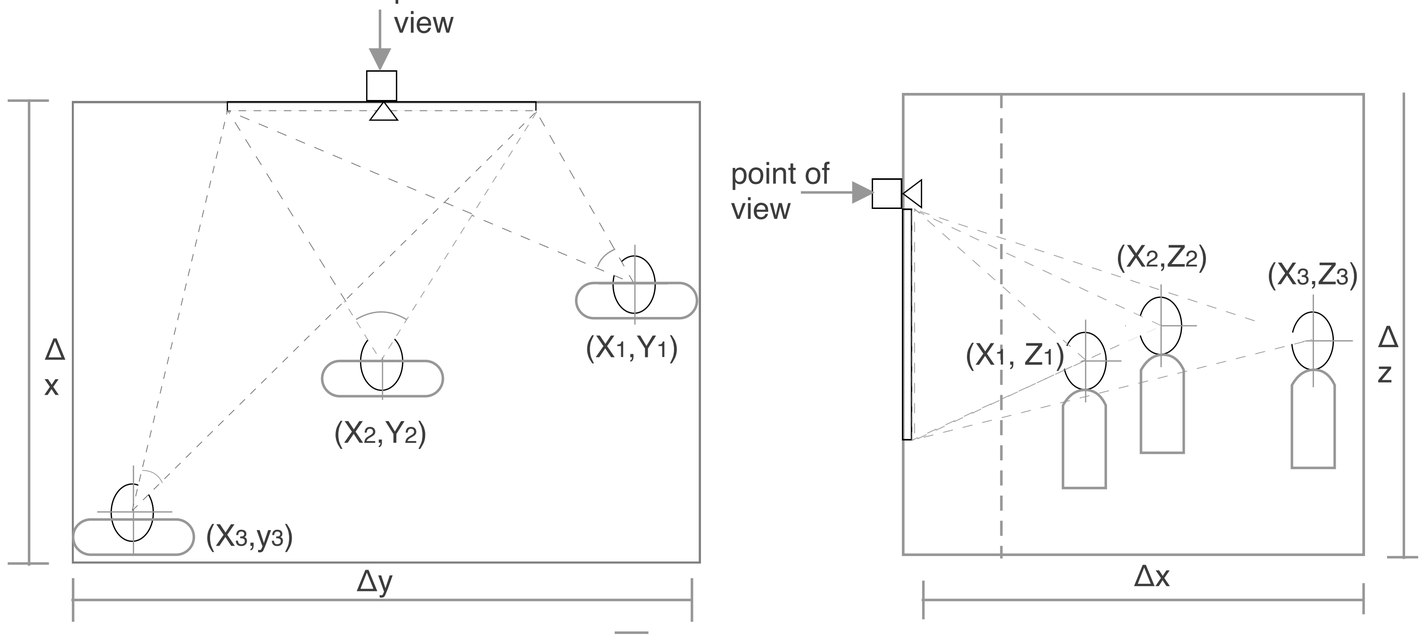

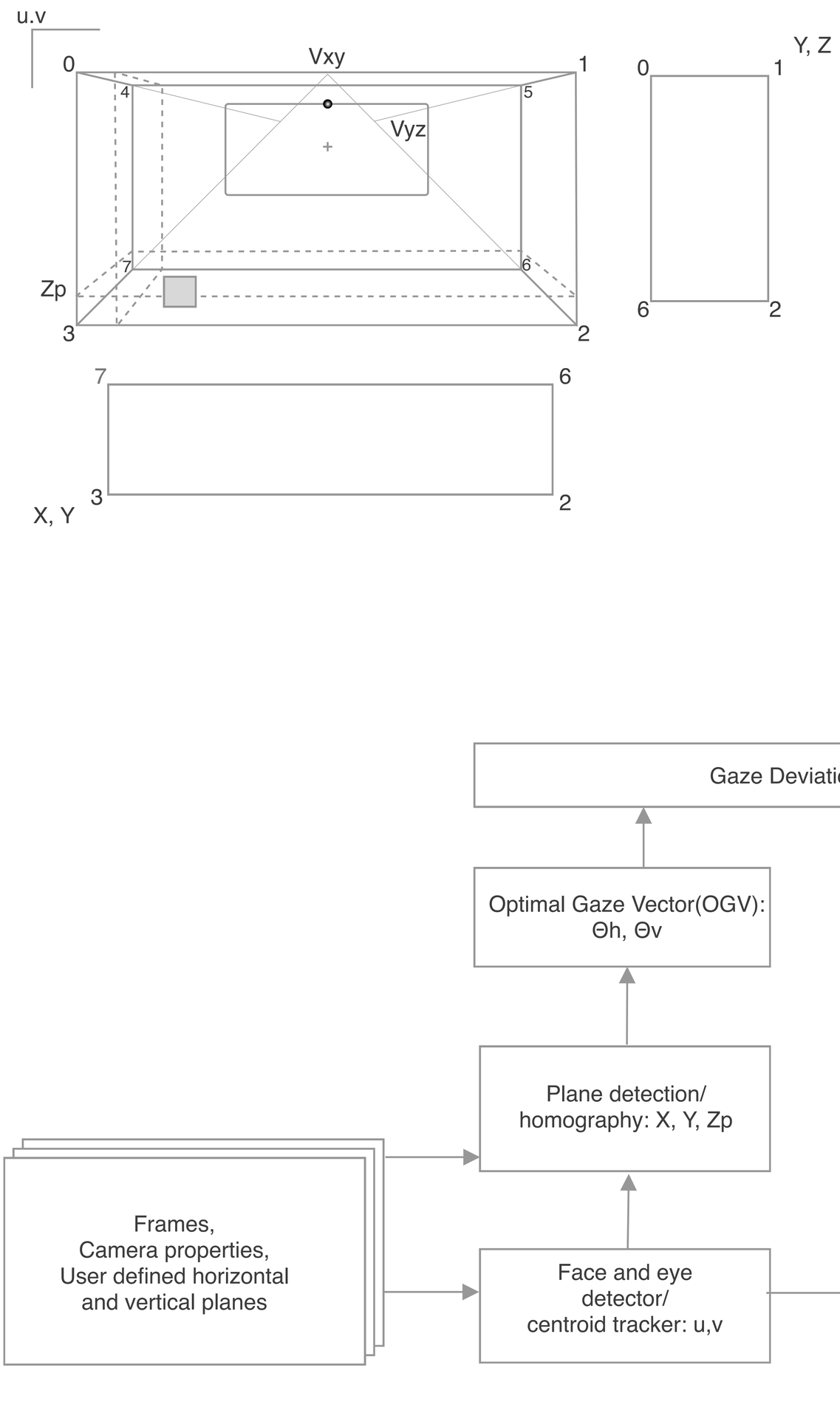

Given physical parameters

Origin (top corner of class) = (0,0)
Classroom size = L x B x H
Board position (rel to class origin: (Ox, Oy) = X,Y
Board size = (w, h)

Computed parameters

Centre coord of board = (w/2 + X , h/2 + Y)

Camera coord: default = centre of board : homography
Camera coord: top of board = (w/2 + X, Y)
Dxy = centre coord of board - camera coord

Grid: num rows n columns = m * 5

Max area for detection = 1/2(a+b)z

Predicted computations

Total Gaze Vector: TGV = PRY + PY

Optimal Gaze Vector: h,v = f(x,y,z,b)

$$\tan v = (H - z - Y - b/2)/Y$$
$$\tan h = x/y$$

Gaze delta = TGV - OGA

Image properties

Camera intrinsic properties:
Camera extrinsic properties: