**Vision Location Transformation – From Camera Frame to Robot Frame**

1

(x,y)

**V1**

**V2**

**V3**

Object Location = V1:V2:V3:Trans(x, y, θ)

4

3

2

**θ**

y

5

x

Camera Frame

X

Robot Frame

Y



Directional Vectors

V1: Upper Arm

V2: Forearm

V3: Camera Frame Offset

Location Coordinates

A: Joint

B: Gripper (x, y)

C: Camera (0, 0)

D: Object (x, y, θ)