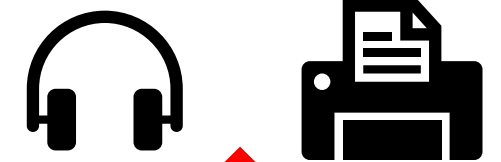


Target BLE device



1. AoA Point cloud Extraction

BLE localization

Azimuth & Elevation
angles

θ ϕ

Camera coordinate

(u_i, v_i)

$$(u, v) = (f \frac{\sin \phi}{\cos \phi}, f \frac{\cos \theta}{\cos \phi \sin \theta})$$

2. Vision Enhanced BLE Identification

Distance(pixel)

Mask matching

Homography

$Mask_i$

Vision localization

Mask Acquisition

BLE signal

AoA

$\Delta \rho$

AR device

Level meter

Camera



Image

Instance

segmentation

