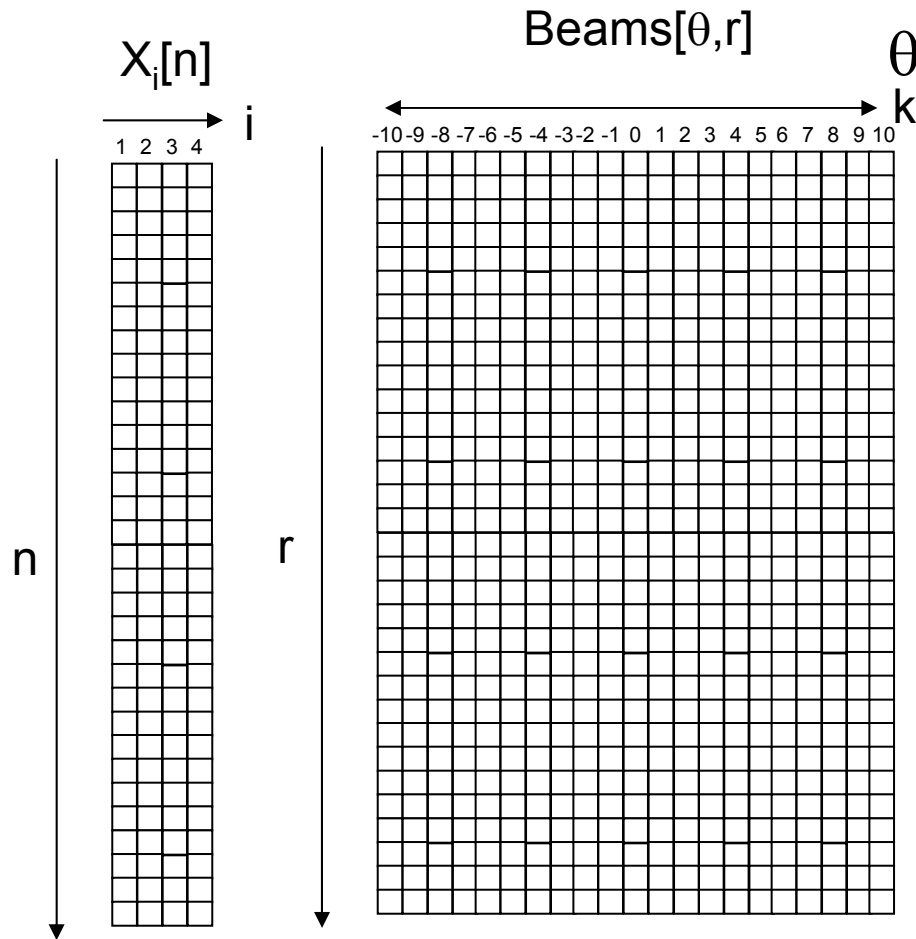
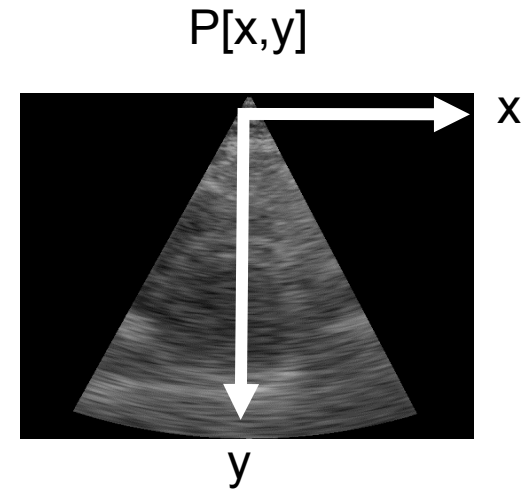


Figure 3. EE434 CPX3 SONAR DATA STRUCTURES

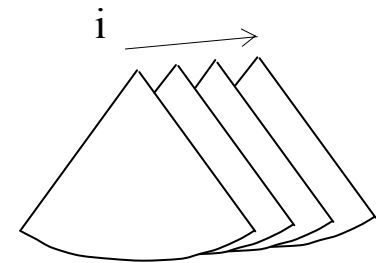


$X_i[n]$ is the sampled arrays from the 4 channels. i is the channel number. n is the sample number.

$\text{Beams}[\theta, r]$ is the result of beamforming. k is the delay between samples, representing a fixed phased delay, and in turn the angle of the beam θ . r is the range index.



$P[x, y]$ is the echo image after scan conversion. x and y are the spatial coordinates.



$P[i]$ is the final output image after the persistence filter, an IIR filter blending the current image with the previous output image. i is the image index.