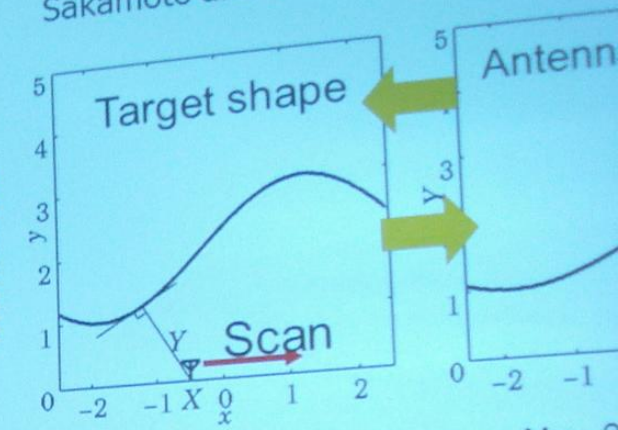


Boundary for linear scattering

Sakamoto and Sato, IEICE Trans. Commun., May, 2011

One omni-directional antenna
mono-static radar system
Target with clear boundary



T. Sakamoto and T. Sato, IEICE Trans. Commun., May, 2011

2-D Boundary Scattering Transform



2-D Inverse Boundary Scattering Transform

$$\begin{cases} X = x + y \frac{dy}{dx} \\ Y = y \sqrt{1 + \left(\frac{dy}{dx}\right)^2} \end{cases}$$

$$\begin{cases} x = X - Y \frac{dY}{dX} \\ y = Y \sqrt{1 - \left(\frac{dY}{dX}\right)^2} \end{cases}$$

