Concept

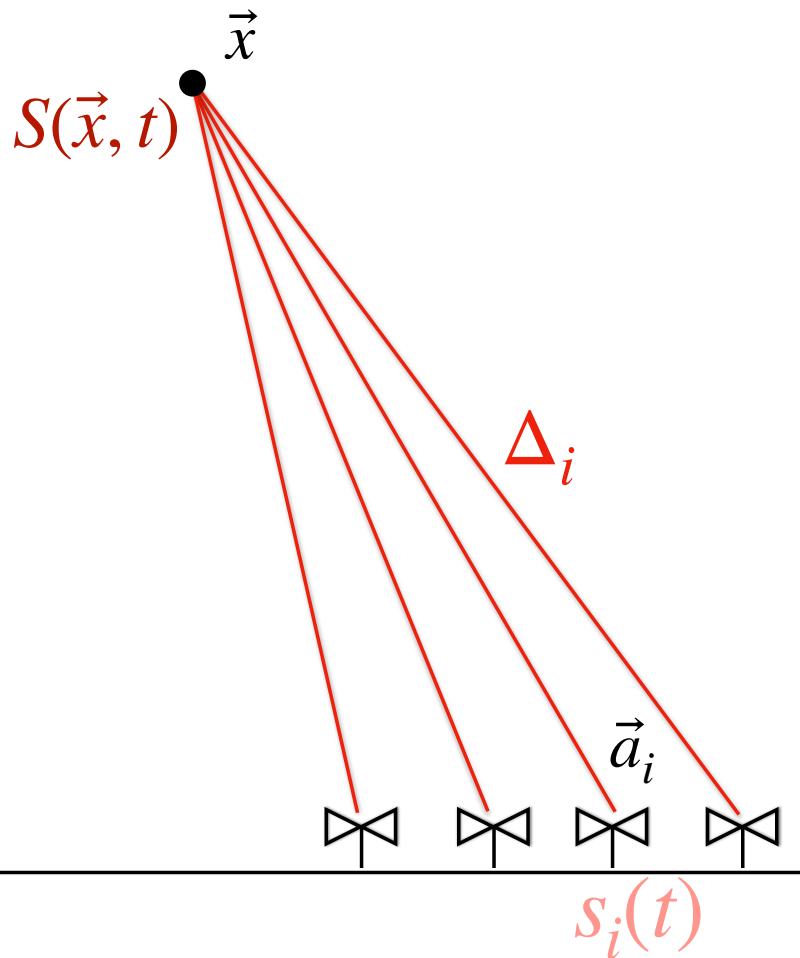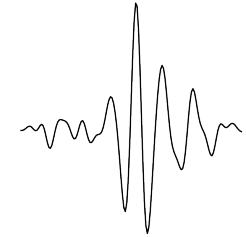$\vec{x}$

$S(\vec{x}, t)$

Δ_i

$\vec{a}_i$

$s_i(t)$

Measure signal $s_i(t)$ at location a_i

Calculate light travel time from antenna $\vec{a}_i$ to a location in space $\vec{x}$

$$\Delta_i(\vec{x}) = \frac{|\vec{x} - \vec{a}_i| \, n_{eff}}{c}$$

Sum the waveforms from all antennas together with delays $\Delta_i(\vec{x})$ at $\vec{x}$:

$$S(\vec{x}, t) = \sum_{i}^{N} s_i(t + \Delta_i(\vec{x}))$$