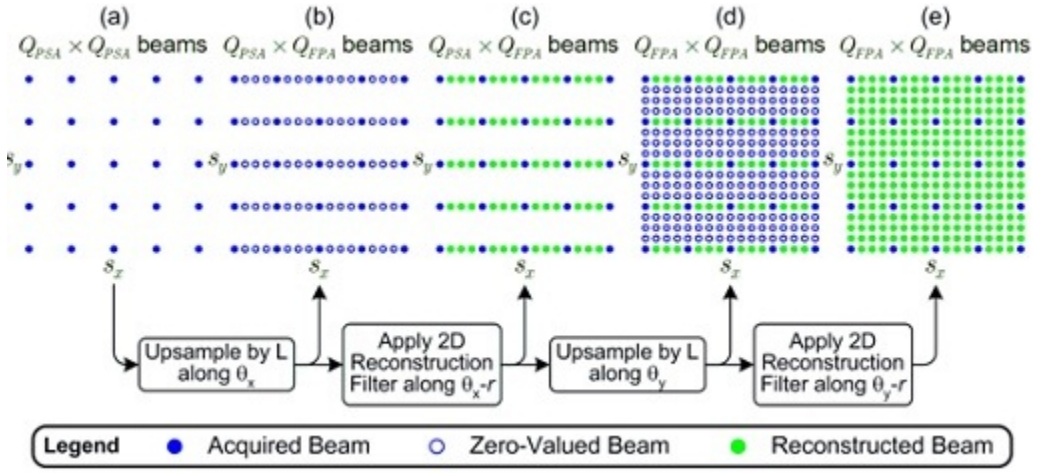
Docket #: S02-161

Interpolation Filter for Subarray Image Reconstruction

This patented ultrasound imaging system reduces the hardware complexity for coherent array image formation and restoration. This technology is especially useful when there are fewer front-end electronic channels than the number of transducer elements in an array. The invention is applicable for both 2D and 3D imaging using either 1D or 2D linear arrays, respectively. The system reduces the frame rate by a factor of two or more while producing image quality equivalent to the "gold-standard" full phased array beamformer.



Application Of Separable 2-D Filters For 3-D Image Reconstruction. Each Point Represents A Single Beam That Extends Radially From The Center Of The Array.

Applications

- **Ultrasound image processing** – particularly for 3D systems with increased element count and increasing demand for front-end electronic channels

Advantages

- **Simpler hardware requirements** - compared to full-phased array imaging, uses significantly fewer front-end electronic channels than number of array elements
- **High quality image** - performance comparable to full phased array beamformer

Patents

- Published Application: 20050101867
- Published Application: 20070208254

Innovators

- Mustafa Karaman
- Jeremy Johnson
- Butrus Khuri-Yakub

Licensing Contact

Luis Mejia

Senior Licensing Manager, Physical Sciences

Email