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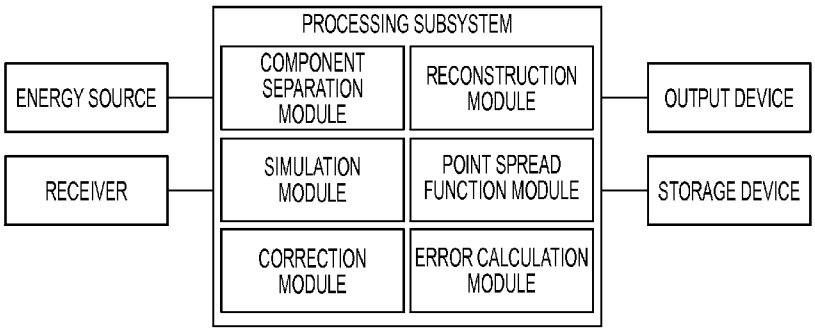


FIG. 1

(57) Abstract: A system is provided for component separation. In an embodiment, a light source or other source of electromagnetic energy delivers energy to a volume of tissue. A transducer array or other sensor receives a resulting acoustic signal, and a processing subsystem processes the acoustic signal to separate a direct acoustic return component from a secondary acoustic return component of the acoustic signal. An output and/or storage device presents and/or stores information about the direct acoustic return component, the secondary acoustic return component, or both. Other embodiments include a coded probe, a probe having an isolator that produces a wavefront, a sensor for measuring intensity of an acoustic wave produced by absorbed photons, and a system that receives acoustic signals from surface targets to determine an optical parameter of the volume.

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