



US005170170A

United States Patent [19] Soumekh

[11] Patent Number: **5,170,170**
[45] Date of Patent: **Dec. 8, 1992**

[54] RADIATION IMAGING UTILIZING DATA RECONSTRUCTION TO PROVIDE TRANSFORMS WHICH ACCURATELY REFLECT WAVE PROPAGATION CHARACTERISTICS

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[21] Appl. No.: 744,603
[22] Filed: Aug. 13, 1991

Related U.S. Application Data

[63] Continuation of Ser. No. 473,895, Feb. 2, 1990, abandoned.
[51] Int. Cl.⁵ G01J 13/89; G01J 15/89; A61B 8/15; G01N 29/06
[52] U.S. Cl. 342/179; 342/25; 367/7; 73/603; 128/660.07
[58] Field of Search 342/179; 367/7; 73/603; 128/660.07, 661.01, 661.02

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[57] ABSTRACT

A system for radiation imaging of an object in response to echo signals from a target area of the object, such as a region of the anatomy of a body. Data is obtained by time domain measurements at monostatic transducers which can be disposed in different locations. The data is processed by two-dimensional Fourier transformations reconstructed using a mapping function and which compensates for variation in the radiation pattern at the various detector locations by using a phase correction function which avoids the need for Fresnel or plane wave approximations.

5 Claims, 4 Drawing Sheets

