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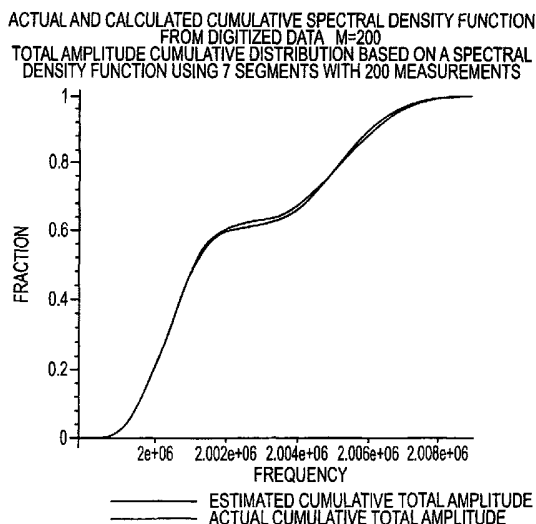
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(54) Title: DIAGNOSTIC SIGNAL PROCESSING METHOD AND SYSTEM



(57) Abstract: A signal processing utility (7) is disclosed involving time-to-frequency domain transforms for applications including medical diagnostic signal processing. Such transforms can be used to define a continuous spectral density function or other spectral density function including non-zero values at irregularly spaced frequency intervals. The invention thereby enables more accurate representation of certain real spectra and reduced spectral broadening. The utility also accounts for digitization errors associated with analog-to-digital conversion. The invention has particular advantages with respect to medical contexts where the received signal has a changing spectral content as a result of interaction of an interrogating signal (2) with moving physiological material such as blood flowing through an artery.

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/36804

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : A61B 8/00

US CL : 600/437

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 600/437-472, 73/595-633; 367/7, 11, 130, 138; 128/916

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

Please See Continuation Sheet

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 4,509,526 A (BARNES et al.) 09 April 1985 (09.04.1985), entire document.	1-95
A	US 5,628,321 A (SCHEIB et al.) 13 May 1997 (13.05.1997), entire document.	1-95



Further documents are listed in the continuation of Box C.



See patent family annex.

* Special categories of cited documents:		"T"	later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A"	document defining the general state of the art which is not considered to be of particular relevance	"X"	document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
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"O"	document referring to an oral disclosure, use, exhibition or other means		
"P"	document published prior to the international filing date but later than the priority date claimed		

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INTERNATIONAL SEARCH REPORT

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Continuation of B. FIELDS SEARCHED Item 3:

EAST:

search terms: signal, processing, ultrasound, frequency, transform, nonzero, amplitude, diagnostic, CW Doppler