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(72) Inventor: **Rowlandson, G. Ian  
Milwaukee, Wisconsin 53217 (US)**

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(74) Representative: **Goode, Ian Roy  
London Patent Operation  
General Electric International, Inc.  
15 John Adam Street  
London WC2N 6LU (GB)**

(71) Applicant: **GE Medical Systems Information  
Technologies, Inc.  
Milwaukee, Wisconsin 53223-3293 (US)**

(54) **System and method for detecting new left branch bundle block for accelerating treatment of acute myocardial infarction**

(57) A system and a method for automatically detecting a new left bundle branch block (LBBB) in an ECG series (4) and then issuing an alert for the purpose of accelerating treatment for acute myocardial infarction. A serial comparison program is used to compare each current ECG with a previous ECG for the same patient. Diagnostic statements, measurements and waveforms are compared and based on the comparisons, the system is able to automatically determine that the patient has a new LBBB. The system then automatically determines whether the patient belongs to the category of pa-

tients having a high probability of acute myocardial infarction. If acute myocardial infarction is suspected, the system generates a diagnostic statement stating that the new left bundle branch block may be due to acute myocardial infarction. The current ECG exhibiting a new LBBB is then identified with a special tag and sent to a central database server (2). The special tag enables the central database server to perform special routing of that record, e.g., via facsimile (10) or digital pager (6), to alert on-call medical personnel to the need for immediate treatment.

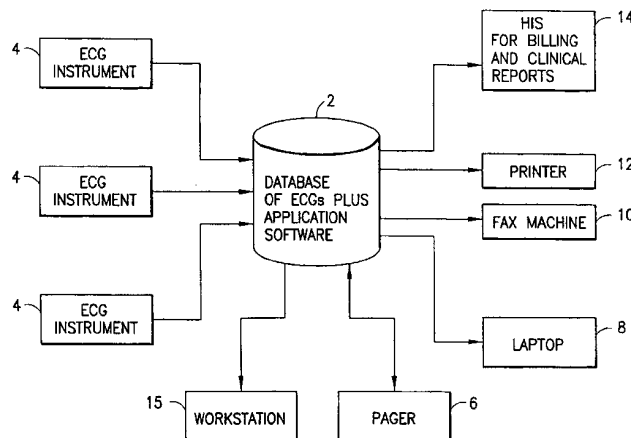


FIG. 1



European Patent  
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**PARTIAL EUROPEAN SEARCH REPORT**

Application Number

which under Rule 45 of the European Patent Convention EP 01 31 0515 shall be considered, for the purposes of subsequent proceedings, as the European search report

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
X	US 4 030 486 A (EASTMAN GEORGE) 21 June 1977 (1977-06-21) * column 2, line 53 - line 65 * * column 4, line 20 - line 43 * * column 7, line 39 - line 43 * * column 8, line 25 - line 57 * ---	4-9	G06F17/00 A61B5/04 A61B5/0452
A	WO 00/15098 A (PANGEA MEDICAL INC) 23 March 2000 (2000-03-23) * page 5, line 10 - page 7, line 7 * * page 20, line 24 - page 22, line 20 * ---	4-9	
A	US 3 114 019 A (KODA ARTHUR J) 10 December 1963 (1963-12-10) * column 2, line 44 - column 3, line 22 * ---	4-9	
A	WO 00/44378 A (NOVARTIS ERFIND VERWALT GMBH ;NOVARTIS AG (CH); ODDOU PASCALE (CH)) 3 August 2000 (2000-08-03) * page 3, paragraph 1 * -----	4-9	
			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
			G06F A61B A61N
INCOMPLETE SEARCH			
<p>The Search Division considers that the present application, or one or more of its claims, does/do not comply with the EPC to such an extent that a meaningful search into the state of the art cannot be carried out, or can only be carried out partially, for these claims.</p> <p>Claims searched completely : 4-9</p> <p>Claims searched incompletely :</p> <p>Claims not searched : 1-3,10</p> <p>Reason for the limitation of the search: Claims 1-3: Article 52 (4) EPC - Diagnostic method practised on the human or animal body Claim 10: Article 52 (4) EPC - Method for treatment of the human or animal body by therapy</p>			
Place of search		Date of completion of the search	Examiner
BERLIN		7 April 2004	Clevorn, J
CATEGORY OF CITED DOCUMENTS		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document			

EPO FORM 1503 03.82 (P04C07)

ANNEX TO THE EUROPEAN SEARCH REPORT  
ON EUROPEAN PATENT APPLICATION NO.

EP 01 31 0515

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on  
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07-04-2004

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 4030486 A	21-06-1977	US 3884221 A	20-05-1975
WO 0015098 A	23-03-2000	AU 5925499 A	03-04-2000
		EP 1124478 A2	22-08-2001
		WO 0015098 A2	23-03-2000
		US 6230048 B1	08-05-2001
US 3114019 A	10-12-1963	DE 1870879 U	
		FR 1301692 A	17-08-1962
		GB 995195 A	16-06-1965
WO 0044378 A	03-08-2000	AU 766453 B2	16-10-2003
		AU 2439700 A	18-08-2000
		BR 0007686 A	06-11-2001
		CA 2360691 A1	03-08-2000
		CN 1337879 T	27-02-2002
		CZ 20012682 A3	17-10-2001
		WO 0044378 A1	03-08-2000
		EP 1146872 A1	24-10-2001
		HU 0105199 A2	29-04-2002
		ID 29818 A	11-10-2001
		JP 2002535367 T	22-10-2002
		NO 20013459 A	05-09-2001
		NZ 513039 A	28-11-2003
		SK 10522001 A3	03-12-2001
		US 2003166699 A1	04-09-2003
		US 2002042436 A1	11-04-2002
		ZA 200106022 A	21-08-2002

专利名称(译)	用于检测新的左分支束阻滞以加速急性心肌梗塞的治疗的系统和方法		
公开(公告)号	<a href="#">EP1219236A3</a>	公开(公告)日	2004-06-02
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[标]申请(专利权)人(译)	GE医疗系统信息技术公司		
申请(专利权)人(译)	GE医疗系统信息技术股份有限公司.		
当前申请(专利权)人(译)	GE医疗系统信息技术股份有限公司.		
[标]发明人	ROWLANDSON G IAN		
发明人	ROWLANDSON, G. IAN		
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CPC分类号	A61B5/0006 A61B5/0452		
优先权	09/751024 2000-12-29 US		
其他公开文献	EP1219236A2		
外部链接	<a href="#">Espacenet</a>		

摘要(译)

一种系统和方法，用于在ECG系列（4）中自动检测新的左束支传导阻滞（LBBB），然后发出警报以加速急性心肌梗塞的治疗。串行比较程序用于将每个当前ECG与同一患者的先前ECG进行比较。比较诊断报告，测量和波形，并根据比较，系统能够自动确定患者是否有新的LBBB。然后，系统自动确定患者是否属于具有高概率急性心肌梗塞的患者类别。如果怀疑是急性心肌梗塞，系统会生成一个诊断声明，说明新的左束支传导阻滞可能是由于急性心肌梗死。然后用特殊标签识别呈现新LBBB的当前ECG并将其发送到中央数据库服务器（2）。特殊标签使中央数据库服务器能够通过传真（10）或数字寻呼机（6）执行该记录的特殊路由，以警告随叫随到的医务人员需要立即治疗。

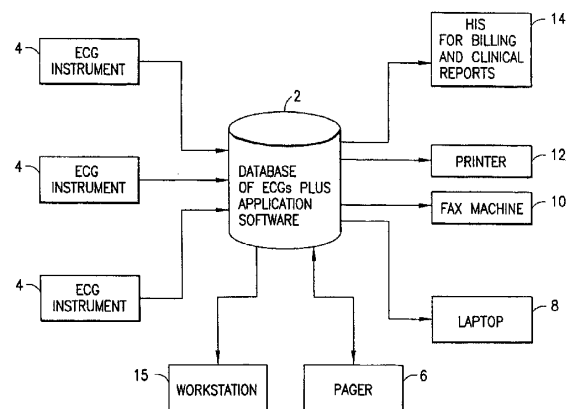


FIG. 1