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(54) **Methods and apparatus for monitoring consciousness**

(57) The application discloses several inventions as follows: (a) a method of monitoring consciousness of a sentient subject and automatically detecting transition states by obtaining an EEG signal and comparing the two signals to detect the transition and provide a warning signal when the transition occurs; (b) a method or apparatus for processing a non-stationary signal including segments having increasing and decreasing amplitude representing physiological characteristics of a sentient subject by performing syntactic analysis of segments, comparing height, width and error parameters of segments to identify noise segments and replacing noise segments with a straight line before classifying the signal as belonging to one of predefined sleep states; (c) a method of monitoring physiological characteristics of a sentient subject including substitution of a degraded first electrode signal by a second spare electrode signal and providing a warning signal when both signals are degraded; and (d) a capacitive or inductive element sensor for detecting the degree of opening of the eyelid including signal providing means indicative of the relative positions between a component movable with the eyelid and a reference component.

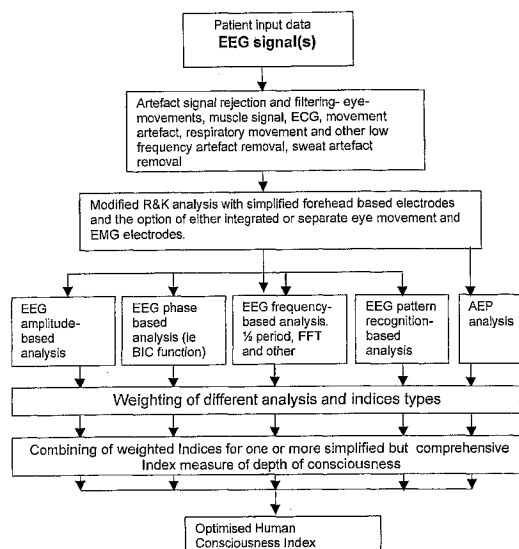


FIG 15



EUROPEAN SEARCH REPORT

Application Number
EP 08 16 3209

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
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The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (IPC)
			A61B G06F
Place of search		Date of completion of the search	Examiner
Munich		13 April 2012	Kurze, Volker
CATEGORY OF CITED DOCUMENTS 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 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			

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EPO FORM 1503 03.82 (P04C01)

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

EP 08 16 3209

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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13-04-2012

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专利名称(译)	用于监测意识的方法和装置		
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当前申请(专利权)人(译)	COMPUMEDICS有限公司		
[标]发明人	BURTON DAVID ZILBERG EUGENE		
发明人	BURTON, DAVID ZILBERG, EUGENE		
IPC分类号	A61B5/0476 A61B5/048 A61B5/11 A61B5/16 G06F17/00 A61B5/0484 A61B5/00 A61B5/0205 A61B5/0496 A61B5/08 A61B5/087 A61B5/145 A61B5/1455		
CPC分类号	A61B5/021 A61B5/0402 A61B5/0476 A61B5/048 A61B5/0496 A61B5/11 A61B5/14551 A61B5/16 A61B5/411 A61B5/4809 A61B5/4812 A61B5/6821 A61B5/7207 A61B5/7239 A61B5/7257 A61B5/7264 G16H50/20		
代理机构(译)	LAWRENCE , JOHN		
优先权	60/298011 2001-06-13 US		
其他公开文献	EP1989998B1 EP1989998A2		
外部链接	Espacenet		

摘要(译)

该申请公开了如下几个发明：(a) 监视感知对象的意识并通过获得EEG信号自动检测过渡状态并比较这两个信号以检测过渡并在过渡发生时提供警告信号的方法；(b) 用于处理非平稳信号的方法或设备，包括具有增加和减小幅度的片段，其通过执行片段的句法分析来比较感知对象的生理特征，比较片段的高度，宽度和误差参数以识别噪声片段和替换在将信号分类为属于预定义睡眠状态之一之前，具有直线的噪声段；(c) 监视被动对象的生理特征的方法，包括用第二备用电极信号代替退化的第一电极信号，并在两个信号都退化时提供警告信号；(d) 用于检测眼睑开度的电容或电感元件传感器，包括指示可与眼睑一起移动的部件与参考部件之间的相对位置的信号提供装置。

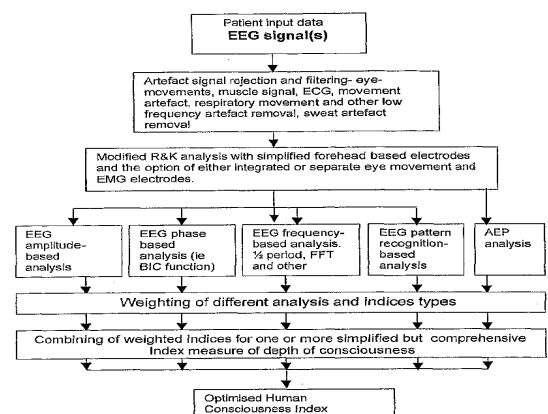


FIG 15