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**Felix et al.**

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(54) **METHOD FOR EFFICIENTLY ENCODING AND COMPRESSING ECG DATA OPTIMIZED FOR USE IN AN AMBULATORY ECG MONITOR**

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*A61B 5/1118* (2013.01); *A61B 5/721* (2013.01)

(58) **Field of Classification Search**  
None

See application file for complete search history.

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(\*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

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(65) **Prior Publication Data**

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**Related U.S. Application Data**

(63) Continuation-in-part of application No. 14/488,230, filed on Sep. 16, 2014, which is a continuation-in-part of application No. 14/080,725, filed on Nov. 14, 2013.

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(51) **Int. Cl.**

(57) **ABSTRACT**

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A method for efficiently encoding and compressing ECG data optimized for use in an ambulatory electrocardiography monitor is provided. ECG data is first encoded and compressed in a lossy process and further encoded and compressed in a lossless process. A compression ratio significantly higher than other Holter-type monitors is achieved. Requirements for storage space and power cell consumption are reduced, contributing to the long-term availability of the monitor.

(52) **U.S. Cl.**

CPC ..... *A61B 5/04017* (2013.01); *A61B 5/0006* (2013.01); *A61B 5/0432* (2013.01); *A61B*

**19 Claims, 20 Drawing Sheets**

