Reviewer’s report

Title: A New Methodology for the Performance of Heartbeat Classification Systems

Version: 1 Date: 14 November 2007

Reviewer: Irena Jekova

Reviewer’s report:

General

The authors propose new methodology for assessment of the performance of heartbeat classification systems. This methodology sounds reasonable and may be used as an additional criterion when a physician is trying to choose software for heartbeat classification which is fitting at most his/hers requirements.

The applied method for assessment of the performance of heartbeat classification systems is well grounded and well described. It could be easily applied if the required data (matrix of beat classification, a priory probabilities for each heartbeat class and the cost of misclassification of each heartbeat type) are available.

The abstract accurately conveys the content of the paper. However, I propose the title to be changed to: “A New Methodology for Assessment of the Performance of Heartbeat Classification Systems”

-------------------------------------------------------------------------------

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

Major Compulsory Revisions are not needed.

-------------------------------------------------------------------------------

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

1.) In the subsection ‘A priori probabilities’ the authors should specify which ECG recordings are included in the ‘first group’ (e.g. 100 - 124) and which ECG recordings are included in the ‘second group’ (e.g. 200 - 234).

2) There is clear explanation in the text concerning the calculation of the numbers 170.19 and 38.63 included in Table 2. However, the authors should explain how they calculated the number 2.15 in Table 2 (corresponding to misclassification of N or SVEB as VEB or F).

-------------------------------------------------------------------------------

Discretionary Revisions (which the author can choose to ignore)
Discretionary Revisions are not needed.

**What next?:** Accept after minor essential revisions

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

I declare that I have no competing interests.