MIT-BIH Arrhythmia Database

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Data Source

This is just a transposition of what you find at:
https://www.physionet.org/content/mitdb/1.0.0/

Citation Information

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> Moody GB, Mark RG. The impact of the MIT-BIH Arrhythmia Database. IEEE Eng in Med and Biol 20(3):45-50 (May-June 2001). (PMID: 11446209)

Citation for PhysioNet:

> Goldberger, A., Amaral, L., Glass, L., Hausdorff, J., Ivanov, P. C., Mark, R., ... & Stanley, H. E. (2000). PhysioBank, PhysioToolkit, and PhysioNet: Components of a new research resource for complex physiologic signals. Circulation [Online]. 101 (23), pp. e215–e220.

Additional References

- Mark RG, Schluter PS, Moody GB, Devlin PH, Chernoff D. An annotated ECG database for evaluating arrhythmia detectors. IEEE Transactions on Biomedical Engineering 29(8):600 (1982).
- Moody GB, Mark RG. The MIT-BIH Arrhythmia Database on CD-ROM and software for use with it. Computers in Cardiology 17:185-188 (1990).

Background

Since 1975, our laboratories at Boston's Beth Israel Hospital (now the Beth Israel Deaconess Medical Center) and at MIT have supported our own research into arrhythmia analysis and related subjects. One of the first major products of that effort was the MIT-BIH Arrhythmia Database, which we completed and began distributing in 1980. The database was the first generally available set of standard test material for evaluation of arrhythmia detectors, and has been used for that purpose as well as for basic research into cardiac dynamics at more than 500 sites worldwide. Originally, we distributed the database on 9-track half-inch digital tape at 800 and 1600 bpi, and on quarter-inch IRIG-format FM analog tape. In August, 1989, we produced a CD-ROM version of the database.

Data Description

The MIT-BIH Arrhythmia Database contains:

- 48 half-hour excerpts of two-channel ambulatory ECG recordings
- Data obtained from 47 subjects (1975-1979)
- 23 recordings chosen at random from a set of 4000 24-hour ambulatory ECG recordings from Boston's Beth Israel Hospital (inpatients 60%, outpatients 40%)
- 25 recordings selected to include less common but clinically significant arrhythmias
- Digitized at 360 samples per second per channel with 11-bit resolution over a 10 mV range
- Annotations by two or more cardiologists; disagreements resolved to obtain reference annotations (approx. 110,000 annotations)