Document Title

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Abstract

Briefly introduce the motivation of this work, highlight the main contributions, and summarize the conclusions obtained. **The abstract should be around 200 words.**

Index Terms

Wireless networks, multimedia communications, heterogeneous networking (up to six keywords).

This research was supported by ...

I. Introduction

Introduce the research motivation and current progress in this area [1]–[4].

Outline this work and the main contributions.

Describe the organization of this paper.

Around 1.5-2 pages.

II. System Model

A. Application Scenario

Introduce the application scenario aimed at.

Around 1 page.

B. *Network Model*

Introduce the network topology and wireless channel models considered in this study.

Around 1.5-2 pages.

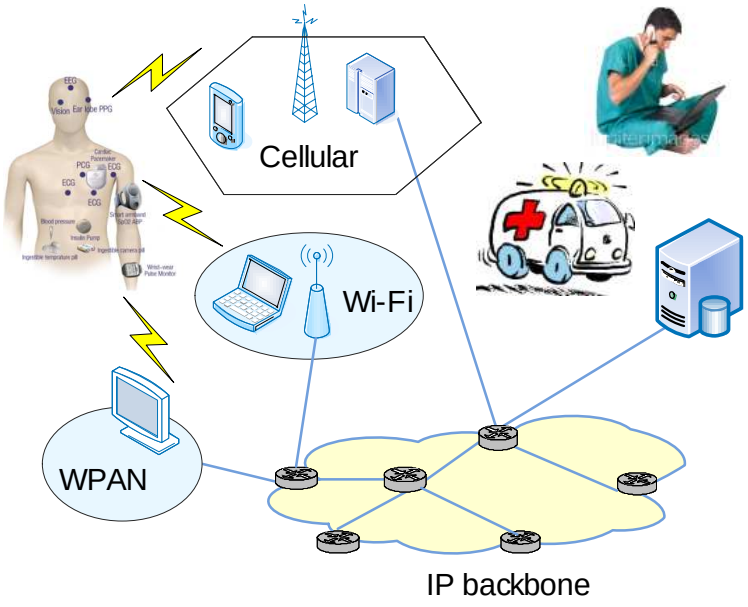


Fig. 1. Network model.

C. Mobility Model

If user mobility is addressed, describe the user mobility model in precise terms.

Around 0.5-1 pages.

D. Traffic Model

Describe the services under study and corresponding models to characterize the service traffic. The models should be mathematically stringent.

Around 1-1.5 pages.

III. Transmission Mechanism

First, introduce the communications or networking aspect under study.

Then, present the novel proposal of this work.

After that, give the numerical analytical approach.

At least 4 pages.

IV. Numerical Results and Discussion

Give the numerical / simulation configuration and experiments that have been conducted. Table I gives the system parameters.

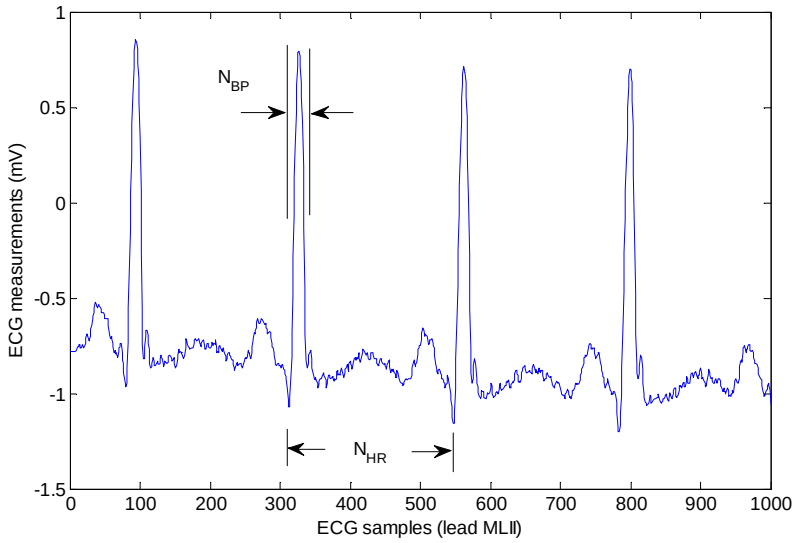
Briefly highlight the numerical parameters for each experiment before introducing the corresponding figures. Discuss the observations from the figure and presents insightful comments.

At least 4 pages.

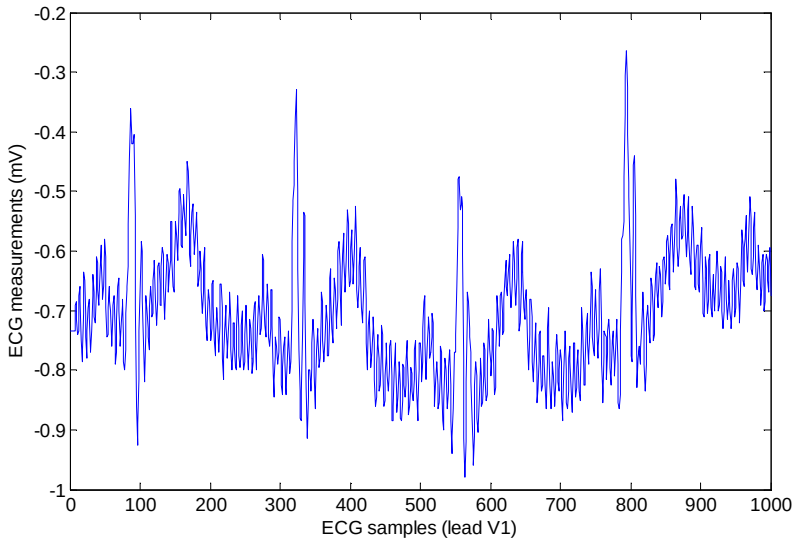
TABLE I

System parameters for numerical analysis.

Symbol	Value	Definition
γ_e	360	ECG sampling frequency (Hz)
N_{BP}	10	Number of ECG samples for a heart beat at rate of 70 beats/min
N_{HR}	306	Number of ECG samples between two adjacent heart beats at rate of 70 beats/min
V_u	1140.9	Variance of ECG sample size during a heart beat (bits^2)
V_l	68.7	Variance of ECG sample size between two adjacent heart beats (bits^2)
$\mathrm{E}[L_e]$	107.7	Mean ECG packet size (bits)
$\mathrm{E}[L_d]$	8000	Mean data packet size (bits)
$\mathrm{E}[L_v]$	3200	Mean video packet size (bits)
γ_v	10	Frame rate of video source (frames/s)
$\mathrm{Var}[L_v]$	74419.8	Variance of video frame size (bytes^2)
β/α	0.984	Autocorrelation factor of video packet size



(a)



(b)

Fig. 2. Original ECG waveforms. (a) ECG channel from lead MLII. (b) ECG channel from lead V1.

V. Conclusion and Future Work

Summarize this work and conclusions obtained.

Outline possible extension directions for future work.

Around 0.5 pages.

REFERENCES

[1] O. Omeni, A. Wong, A. J. Burdett, and C. Toumazou, "Energy efficient medium access protocol for wireless medical body area sensor networks," *IEEE Trans. Biomed. Circuits Syst.*, vol. 2, no. 4, pp. 251–259, Dec. 2008.

[2] J. P. Li, "A mobile ECG monitoring system with context collection," Master's thesis, Dublin Institute of Technology, 2008.

[3] D. Simunic, S. Tomac, and I. Vrdoljak, "Wireless ECG monitoring system," in *Proc. The 1st International Conference on Wireless Communication, Vehicular Technology, Information Theory and Aerospace & Electronic Systems Technology (Wireless VITAE)*, May 2009, pp. 73–76.

[4] C.-H. Ng and S. Boon-Hee, *Queueing Modelling Fundamentals: With Applications in Communication Networks*, 2nd ed. Wiley, 2008.