CSE713 PAPER REVIEW

Wireless Body Area Network (WBAN): A Survey on Reliability, Fault Tolerance, and Technologies Coexistence

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1. Summary:

1.1. Motivation:

The main purpose of this paper is to identify the existing infrastructures of WBAN technologies in various aspects and make a comparison with some relevant solutions to those technologies.

1.2. Contribution:

This paper is a highly recommended one in terms of someone who needs specific comparisons when working with WBAN embodied with specifically healthcare WBAN technologies. Anyone could get a quick glimpse about the ins and outs of WBAN sensors and faults.

1.3. Methodology:

The authors in this papers targeted the WBAN technology in terms of mainly healthcare sector though they provided several aspects of comparison of WBANS in various aspects. Moreover, they made a detailed review about the fault tolerance system using the nodes and cloud computing along with other types. They made clear how the existing fault tolerance detection has drawbacks for example, node tolerance has self driven errors. Finally, they provided solutions for those existing systems.

1.4. Conclusion:

They intend to improve the QoS of the WBAN sensors specifically for healthcare as it is related to human lives.

2. Limitations:

2.1. First limitation:

The first limitation is about the cloud computing tolerance system. Even though they suggested several layers of security it still has drawbacks. The power cut problem in Asian countries specially will be a great risk for this infrastructure. The solution might be installing different server locations with extreme power backup. This will eventually increase the cost but if applied is of a great advantage.

2.2. Second limitation:

The second limitation is for the node tolerance system. This type of WBAN system has self generated errors in many cases. This will self explode in metaphoric way. Solutions can be writing self sustaining error reduction codes and even if error occur, self rectifiable codes can help. Finally, we can also implement a central node for several smaller nodes and another error detection node or core which will do the job faster and efficient.

3. Synthesis:

The survey showed that healthcare sectors are in need of WBAN technology. However, the fault tolerance detection is a obstacle in this regard. If we can solve or make more efficient fault tolerance system, we can easily reduce healthcare costs and provide healthcare from afar.

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