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(51) International classification :A61B0005000000, G16H0040670000, G16H0040630000, G16H0050700000, H04W0080020000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)**Name of Applicant :** 1)**Dr. Pattlola Srinivas** Address of Applicant :Professor, Computer Science Engineering Dept., Malla Reddy Engineering College, Maisammaguda (Post. Via. Kompally), Medchal-Malkajgiri-500100. Maisammaguda ----------- ----------- 2)**Malla Reddy Engineering College** **Name of Applicant : NA** **Address of Applicant : NA** (72)**Name of Inventor :** 1)**Dr. Pattlola Srinivas** Address of Applicant :Professor, Computer Science Engineering Dept., Malla Reddy Engineering College, Maisammaguda (Post. Via. Kompally), Medchal-Malkajgiri-500100. Maisammaguda ----------- ----------- 2)**Dr. Syed Jalal Ahmed** Address of Applicant :Professor, Computer Science Engineering Dept., Malla Reddy Engineering College, Maisammaguda (Post. Via. Kompally), Medchal-Malkajgiri-500100. Maisammaguda ----------- ----------- 3)**Ms V.Sreedevi** Address of Applicant :Assistant Professor, Computer Science Engineering Dept., Malla Reddy Engineering College, Maisammaguda (Post. Via. Kompally), Mechal-Malkajgiri-500100. Maisammaguda ----------- ----------- 4)**Ms Asmita Pankaj Ambekar** Address of Applicant :Assistant Professor, Computer Science Engineering Dept., Malla Reddy Engineering College, Maisammaguda (Post. Via. Kompally), Mechal-Malkajgiri-500100. Maisammaguda ----------- ----------- 5)**Mr. Dhanaveera Pavan Kumar B** Address of Applicant :Assistant Professor, Computer Science Engineering Dept., Malla Reddy Engineering College, Maisammaguda (Post. Via. Kompally), Mechal-Malkajgiri-500100. Maisammaguda ----------- ----------- 6)**Mr. Kurapati Veeranjaneya Varaprasad** Address of Applicant :Assistant Professor, Computer Science Engineering Dept., Malla Reddy Engineering College, Maisammaguda (Post. Via. Kompally), Mechal-Malkajgiri-500100. Maisammaguda ----------- ----------- 7)**Mr. E. Sunil** Address of Applicant :Assistant Professor, Computer Science Engineering Dept., Malla Reddy Engineering College, Maisammaguda (Post. Via. Kompally), Mechal-Malkajgiri-500100. Maisammaguda ----------- ----------- 8)**Ms Veeranalla Siva Pavani** Address of Applicant :Assistant Professor, Computer Science Engineering Dept., Malla Reddy Engineering College, Maisammaguda (Post. Via. Kompally), Medchal-Malkajgiri-500100. Maisammaguda ----------- ----------- 9)**Mr.A.Madhu** Address of Applicant :Assistant Professor, Computer Science Engineering Dept., Malla Reddy Engineering College, Maisammaguda (Post. Via. Kompally), Mechal-Malkajgiri-500100. Maisammaguda ----------- ----------- 10)**Mr.Vinnakonda Jagadish Kumar** Address of Applicant :Assistant Professor, Computer Science Engineering Dept., Malla Reddy Engineering College, Maisammaguda (Post. Via. Kompally), Mechal-Malkajgiri-500100. Maisammaguda ----------- -----------

(57) Abstract :
The present invention pertains to a comprehensive analysis of Medium Access Control (MAC) protocols within the context of Wireless Body Area Networks (WBANs) applied to healthcare applications. Specifically, the invention focuses on the comparison of three prominent MAC protocols: Modified SMAC, Wise MAC, and Adaptive MAC. WBANs have emerged as transformative technology for real-time medical data transmission and patient monitoring. However, the dynamic and complex nature of healthcare environments necessitates tailored MAC protocols. The invention employs an interdisciplinary approach, combining network simulations and real-world experiments to evaluate the protocols' performance in scenarios mirroring healthcare settings. Key performance metrics including latency, throughput, energy consumption, and adaptability are quantitatively assessed. The insights derived from the analysis empower informed protocol selection, refinement, and advancement of MAC protocols for healthcare WBANs. This invention holds potential for enhancing patient care, remote diagnostics, and the overall efficacy of wireless communication within healthcare contexts.

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