Abstract

The recent advancements in technology in the wireless technology has led to rise of wearable antennas made of different fabrics. It is an unconventional antenna, meant to be a part of clothing and body. The radiating element is made of copper or any other conductor while the substrate used for wearable antenna application are textile or cloth based material. This literature review tends to reveal the various considerations for designing of wearable antenna from different textile materials and illustrates the effect of wearable antenna on human body and vice versa. These antennas have wide range of applications in the area of tracking, navigation, telemedicine, public safety and defence.

References

A Review of Textile and Cloth Fabric Wearable Antennas

- N. H. M. Rais, P. J. Soh, F. Malek, S. Ahmad, N. B. M. Hashim, P. S Hall, School of Computer and Communication, University Malaysia Perlis (UniMAP), No. 12 & 14, Jln Satu, Kompleks Pengajian UniMAP Seberang Rama, 02000 Kuala Perlis, Perlis, Malaysia
- Titti Kellokomi, effect of human body on single layer wearable antenna, Tampere University of Technology, publication 1025
- Rita Salgado, Caroline Loss, Ricardo Goncalves and Pedlo Pinho, Textile Materials for Design of Wearable Antennas: a survey, MPDI
- Kirkwood CE, Kendrick NS (Jr) and Brown HM, Text Res J, 24(9)(1954)
- Measurement of dielectric properties and their application, Kausik Bal and V. K. Kothari, Department of textile technology, IIT New Delhi, India
- Algie JE Text J, 34(6)
- Shaw TM and Windle JJ, Appl Phys, 21(1950)
- Development of textile antennas for body wearable applications and investigation their performance under bent conditions, S. Sankaralingam and B. Gupta, Department of Electronics and Tele-Communication Engineering, Jadavpur University, Kolkata 700 032, India
- Design of Wearable Antenna for Telemedicine Application Sonia C. Survase, Vidya V. Deshmukh, Electronics and Telecommunication Dept, Pune University, AISSMS College of Engineering, Pune- India, Electronics Dept, Pune University, AISSMS College of Engineering, Pune- India
- Low profile wearable UHF Antenna for portable radios and radar application, Yu-Jiun Ren, Reasearch in motion, 5010 Riverside Drive, Irving, TX 75039, USA.
- Hertleer C., Tronquo A., Rogier H., Langenhove L. V. The Use of Textile Materials to
- Determination of Dielectric Constant of Fabric Materials and Their Use as Substrates for Design and Development of Antennas for Wearable Applications, Shankarlingam S., Grupta B., Department of electronics and telecommunication engineering, Jadavpur University, Kolkata, India, IEEE Explore, 14 Oct 2010

**Index Terms**

Computer Science

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**Keywords**

Body-induced gain, detuning, dielectric heating, electro-textiles, high-contrast materials, telemedicine, wearable antenna