

The Internet of Healthcare Things: A European Perspective and a Review of Ethical Concerns

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Abstract : The Internet of Things (IoT) is a disruptive technological paradigm that is at the center of the digital evolution by integrating physical and virtual worlds leading to the creation of extended interconnected ecosystems that are characterized as smart environments. The concept of the IoT has a broad range of applications in different industries including the healthcare sector. The Internet of Healthcare Things (IoHT), a branch of the IoT, is expected to bring promising benefits to all involved stakeholders and accelerate the revolution of the healthcare sector through a transition towards preventive and personalized medicine. The socio-economic challenges that the healthcare sector is facing further emphasize the need for a radical transformation of healthcare systems in both developed and developing countries with the role of pervasive technological innovations, such as IoHT, recognized as key to counteract the relevant challenges. Besides the number of potential opportunities that IoHT presents, there are fundamental ethical concerns that need to be considered and addressed in relation to the application of IoHT. This paper contributes to the discussion of the emerging topic of IoHT by providing an overview of the role and potential of IoHT, highlighting the characteristics of the current and future healthcare landscape, reporting on the up-to-date status of IoHT in Europe and reflecting upon existing research in the ethics of IoHT by incorporating additional ethical dimensions that have been ignored which can provide pathways for future research in the field.

Keywords : ethics, Europe, healthcare, Internet of Things

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