Chapter 11
Brain-Computer Interface-Controlled Smartphones for Streamlined Organizational Data Management

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ABSTRACT

The integration of Brain-Computer Interface (BCI) technology with mobile devices is a novel approach to enhance organisational administration. This study examines

DOI: 10.4018/979-8-3373-5122-3.ch011

the potential of brain-computer interfaces (BCIs) to enhance task management, communication, and decision-making through smartphone control. BCI technology enables administrators and managers to remotely supervise organisational activities, monitor performance indicators, and access data through a hands-free, real-time interface with mobile applications. The paper examines the technical framework, implementation issues, and implications for organisational agility and productivity in the context of BCI-smartphone integration. Additionally, it investigates the adoption rate of BCI, security concerns, and the potential applications of BCI in mobile organisational tools in the future. This research demonstrates that modern management practices in enterprises could be transformed by brain-computer interface (BCI)-enabled mobile phones, which provide enhanced cognitive, real-time control over diverse processes.

INTRODUCTION

The accelerated advancement of Brain-Computer Interface (BCI) technology may soon lead to a transformation in corporate management and operations (Rai, P. K. et al., 2024). Numerous sectors, including healthcare, gaming, and assistive technology, are currently experiencing an increased interest in brain-computer interfaces (BCIs). These interfaces facilitate direct communication (Devasenapathy, D. et al., 2023) between the human brain and external technologies (Pandey, B. K. et al., 2024b). It is important to consider the potential applications of cellphones, which are frequently employed in administrative functions. BCI-controlled handsets have the potential to transform current corporate practices (Saxena, A. et al., 2024) by enhancing communication, task management, and decision-making. Smartphones that are operated by brain-computer interfaces (BCIs) offer a substantial advantage in that they allow users to operate their devices without the need for manual input. This concept has the potential to significantly improve efficiency by reducing distractions and enabling multitasking (George, A. S., & Pandey, D., 2024). Leaders and employees in any organisation could derive substantial advantages from automating routine duties, including communication (Pandey, B. K. et al., 2024d), scheduling, and data retrieval (Babu, S. Z. D. et al., 2022).

The integration of BCI capabilities into handsets is in perfect harmony with the current trend of smart offices. Artificial intelligence (AI) and the Internet of Things (IoT) are technologies that aid enterprises in the management of operations, the monitoring of performance (Zaidi, A., 2024a), and the making of informed decisions. Organisations should enable employees to access corporate databases, systems, and wireless communication channels (Pandey, D. et al., 2024a) in order to improve their digital transformation initiatives. Real-time data accessibility (Pandey, D. et

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Theodosia Prodromou, Maria Meletiou-Mavrotherisand Andreas O. Kyriakides (2016). *Human-Computer Interaction: Concepts, Methodologies, Tools, and Applications (pp. 1701-1722).*

www.irma-international.org/chapter/students-kinaesthetic-interactions-with-a-touch-enabled-virtual-mapping-tool/139114