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Using A Blockchain-Based, End-to-End Encrypted Communication System Between Mobile Terminals to Improve Organizational Privacy

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Abstract : Creating private and secure communication channels between employees has become a critical aspect in order to ensure organizational integrity and avoid leaks of sensitive information. With the widespread use of modern methods of disrupting communication between users, real use-cases of advanced encryption mechanisms have emerged to avoid cyber-attackers that are willing to intercept private conversations between critical employees in an organization. This paper aims to present a custom implementation of a messaging application named “Whisper” that uses end-to-end encryption (E2EE) mechanisms and blockchain-related components to protect sensitive conversations and mitigate the risks of information breaches inside organizations. The results of this research paper aim to expand the areas of applicability of E2EE algorithms and integrations with private blockchains in chat applications as a viable method of enhancing intra-organizational communication privacy.

Keywords : end-to-end encryption, mobile communication, cryptography, communication security, data privacy
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