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Web Browser Forensics: Tools, Techniques, and Case Studies for Investigating Digital Traces

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Abstract : Web browser forensics is an essential domain within digital forensics, enabling the identification, collection, and analysis of digital artifacts left by browser activities. This research focuses on evaluating the effectiveness of forensic tools in analyzing web browser data and their role in investigations. By examining tools like Autopsy, Browser History Examiner, and NetAnalysis, the study highlights their capabilities, advantages, and limitations in extracting and interpreting browser artifacts such as history, cookies, and cache. The study utilizes two tools across two investigative scenarios: examining online activities linked to a mass shooting and investigating breaches of acceptable use policies. The findings highlight the importance of selecting appropriate tools for accurate evidence collection and supporting legal and policy compliance.

Keywords: browser forensics, digital artifacts, forensic tools, web activity analysis

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