

## Documents

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### **Forensic Inspection of Sensitive User Data and Artifacts from Smartwatch Wearable Devices**

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#### **Abstract**

Wearable devices allow users the ability to leave mobile phones behind while remaining connected to the digital world; however, this creates challenges in the examination, acquisition, identification, and analysis of probative data. This preliminary research aims to provide an enhanced understanding of where sensitive user data and forensic artifacts are stored on smartwatch wearable devices, both through utilization as a connected and standalone device. It also provides a methodology for the forensically sound acquisition of data from a standalone smartwatch wearable device. The results identify significant amounts of data on the Samsung™ Gear S3 Frontier, greater than that stored on the companion mobile phone. An Apple Watch® Series 3 manual examination method which produces native screenshots was identified; however, the companion mobile phone was found to store the greatest amount of data. As a result of this research, a data extraction tool for the Samsung™ Gear S3 Frontier was created. © 2019 American Academy of Forensic Sciences

#### **Author Keywords**

data recovery; digital forensics; forensic artifacts; forensic science; internet of things; mobile forensics; smartwatch wearable devices

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