

Recovering Securely Erased Data from Mobile Devices

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We have investigated the Secure Erase mechanism which is implemented in the eMMC. The eMMC, or embedded MultiMediaCard, is the standardized memory which can be found almost all the modern mobile devices. While it is defined that Secure Erase must erase all the data, our experiment found that it is not always securely implemented in the eMMCs on the market, and that data is still recoverable even after Secure Erase. This impose a threat for data leak given that memory chips are often recycled in the IC ecosystem. In this talk, I will introduce our experiment where we have conducted advanced data recovery through eMMC hardware reverse-engineering, and show that more than 99% of the securely erased data can still be recovered in some eMMC models.

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