



## FALL 2020 E-NEWSLETTER

At Digital Mountain we assist our clients with their computer forensics, e-discovery, cybersecurity and data analytics needs. For this E-Newsletter, we focus on ephemeral communications and the affect of disappearing messages on discovery cases.

### Ephemeral Applications: Digital Trick or Treat

The trick in trick or treating is one that has evolved from the neighbor who dons a monster mask when opening the door to the disappearance of peanut butter cups when Dad does the safety check of the night's candy haul. Our digital communications have gone through an analogous transformation as we first marveled at how much data our devices could hold. Just as we upgraded from a small plastic pumpkin to a pillowcase for larger candy collections - we saved a growing plethora of emails, text messages, digital images, voice messages, and all manner of documents on mobile devices. Now, with the rise of discovery, we want our vulnerable data to disappear as if it were our least favorite candy. Ephemeral applications may be just the trick for that unwanted data.



#### Call It What You Will

There is no consensus about what constitutes an ephemeral application beyond the understanding that there is an element of impermanence. In 2016, three Georgia Tech College of Computing researchers proposed the creation of "ephemeral apps" that would allow users to engage with apps on a trial basis that would "pop-up instantaneously" on devices and then disappear after a certain period

(<https://www.cc.gatech.edu/~kbhardwa/papers/eapps.pdf>).

At the opposite end of the spectrum, in 2017 fan favorite Snapchat modified its app to allow recipients to determine when photographs and video would disappear rather than the burn after reading settings that propelled Snapchat's rapid rise

(<https://www.vox.com/2017/5/9/15595040/snapchat-product-update-limitless-q1-earnings>).

Other types of apps huddling under the ephemeral umbrella include private file sharing,

directive video, social broadcasting, temporary phone numbers, social media, private networks, and probably the most popular, messaging and communications apps. There has been a proliferation of apps offering messaging and communications functions that promise a myriad of privacy options based on ephemerality. Signal, Wickr, Confide, Threema, SilentCircle, and Vaporstream, are among the names garnering attention.

### **Going, Going, Gone**

Data processed by an ephemeral messaging engine is sent through a secure channel employing end-to-end encryption from the originating device to the receiving device. Once the message is read on the receiving device, the message is scrubbed from the sending device, the channeling server, and the receiving device. The Wickr platform for ephemeral messaging calls the code that ensures the data disappears the “Secure Shredder.” Of course, there are exceptions to the basic process; some app developers allow users to set their own expiration triggers such as time after reading, time without being read, and differentiated settings for data type, i.e., text versus images or video.

There are concerns that the basic send-read-shred process isn’t uniformly reliable. In January 2017, two researchers at Canterbury Christ Church University tested the ephemeral messaging apps Wickr and Telegram on identical Android devices. While the researchers were unable to find any traces of data sent via Wickr, they were able to extract image artifacts from Telegram despite the app developer’s claims of secure data destruction (<https://cyberforensicator.com/wp-content/uploads/2017/04/Forensic-Analysis-of-Secure-Ephemeral-Messaging-Applications-on-Android-Platforms.pdf>).

Granted, the process undertaken by the researchers is closer to professional digital forensics than mere curious snooping. However, the results do give credence to why companies such as Wickr provide bounty programs for enthusiasts who ingeniously discover ways to defeat their ephemeral app code. They are better off rewarding the clever white hat than trying to rectify damage done by a black hat hacker.

If making data disappear is the surest way to maintain privacy, then we are likely to continue seeing developments in the ephemeral app market. Established developers will increase the functionality of their apps by adding features – as Signal did this year with a trial of single-view media, which allowed users to view a media file just once before it disappeared – as well as new versions of familiar apps such as the redesigned Facebook Messenger app looking to supplant all others by integrating Facebook, Instagram, and WhatsApp contacts, and offer a wide-array of desktop and mobile functions, including encrypted messaging and limited removed/undo options approximating ephemerality. With features and functions that offer so much variety for those in the ephemeral messaging app market, we’re unlikely to see this market segment disappear anytime soon – unlike the spooky speed with which that Halloween candy evaporates.

**Please direct questions and inquiries about electronic discovery, computer forensics, cybersecurity and data analytics to [info@digitalmountain.com](mailto:info@digitalmountain.com).**

## UPCOMING INDUSTRY EVENTS

THE SEDONA CONFERENCE WORKING GROUP 1 ANNUAL MEETING 2020,  
VIRTUAL

October 28-29, 2020

DATA CONNECTORS GREAT LAKES VIRTUAL CYBERSECURITY SUMMIT

November 5, 2020

FORENSICS@NIST 2020, VIRTUAL

November 5-6, 2020

THE SEDONA CONFERENCE WORKING GROUP 12 ANNUAL MEETING,  
VIRTUAL

November 9, 2020

OPENTEXT ENFUUSE ON AIR 2020, VIRTUAL

November 10, 2020 - December 1, 2020

*[Click here to see more upcoming events and links.](#)*



*Digital Mountain, Inc. Founder and CEO, Julie Lewis, will be presenting at various upcoming industry events. Please send requests for speaker or panel participation for her to [marketing@digitalmountain.com](mailto:marketing@digitalmountain.com). In the short term, she is available for webinars and remote e-conferences.*

### DIGITAL MOUNTAIN, INC.

4633 Old Ironsides Drive, Suite 401  
Santa Clara, CA 95054  
866.DIG.DOCS

[www.digitalmountain.com](http://www.digitalmountain.com)

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