in this issue >>> V. 2.02

TOUCHPOINT
INTERNATIONAL DEVELOPMENT GROUP, INC

A Bi-Monthly Snapshot into Emerging Threats and Trends

Digital Update

current topics >>>

In the News:

- The FTC's Internet of Things (IoT) Challenge
  - Krebs on Security
- Telegram Encrypted Messaging App Adds "Unsend" Button
  - Naked Security
- Official Tor Browser for iOS Now Available for Free
  - Ars Technica
- Attorney Re-Writes Instagram's Privacy Policy in Plain English
  - Quartz
- Tor and its Discontents: Problems with Tor Usage as a Panacea
  - Medium

Wire Private Messenger

Encrypted Text, Voice, and Video

The marketplace for encrypted messengers is becoming a crowded one. Dozens of applications are currently available that offer encrypted texting, and offer a reasonable level of security. New ones are cropping up that offer encrypted calling. For an encrypted messenger to distinguish itself it has to bring something unique to the table. This is why we were initially a bit skeptical about Wire Private Messenger. After checking it out, however, we're glad we gave it a chance.

At first glance Wire seems like most other secure messengers. Wire does end-to-end encrypted text messaging and it allows you to sync up to eight devices. Wire also allows you to confirm fingerprints (much like Signal's Safety Numbers) to verify that your conversation isn't being intercepted. Wire offers end-to-end encrypted voice chat, and is one of the most stable VoIP services we have yet tested. The call quality is extremely clear, even when calling overseas, which we tested.

The new feature that Wire brings is one we have struggled to find elsewhere: cross-platform encrypted video chat. While FaceTime brings encrypted videotelephony to iOS and Mac users, everyone else is left out. There are a couple of other options out there but they are much more technically challenging than Wire which is extremely simple to use.

Wire Private Messenger is free. The best part of the application is that is available anywhere, on almost any device. Wire applications are available for Windows, Mac, and Linux computers, and Android and iOS mobile devices. You can also open Wire in your Chrome, Firefox, Internet Explorer, or Opera browser. Another great feature is that you don't have to provide a phone number to sign up (this is one of our big complaints with Signal) if you are signing up on a computer. Wire allows you to sign up using either a phone number or an email address, allowing you to be a bit more private.

We really like this app and it did well in a recent secure messaging app comparison (see Page 3). For more information on Wire Private Messenger, visit **https://wire.com/**

set the stage >>>

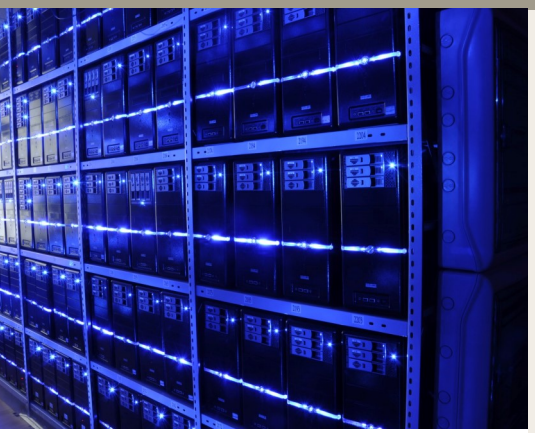
Brave: Security-Focused Browser

If you're looking for an internet browser that caters to privacy and security, you owe it to yourself to check out Brave. Brave is built on Chromium code, but with some substantial differences. Unlike Google's Chrome, the privacy and security settings in Brave are intuitive and easy to understand. Most are written in plain-language with a simple ON/OFF toggle. Also unlike Chrome, Brave can be set to clear all history automatically when closing the browser without the use of a third-party extension.

Ad-blocking is built-in and does not require third-party add-ons. Brave's organic ad-blocking also blocks tracking scripts and tracking pixels, and can be set to block all scripts. Unfortunately this breaks many websites, and unlike NoScript is a global setting that cannot be tailored to your individual browsing preferences. The Electronic Frontier Foundation's HTTPS Everywhere add-on is integrated into Brave and attempts to enforce TLS-encrypted connections wherever possible.

One of our favorite features of Brave: it is truly cross-platform. Brave is available for Windows, Mac, and Linux computers, as well as Android and iOS mobile devices. We have worked with the Windows, Mac, and iOS versions and all are highly streamlined. Brave is also fast, which is one of the purported benefits of it's integrated ad-blocking. Because ads can't consume your bandwidth you get your real content faster.

We don't see Brave as a full replacement for the Firefox setup we teach in our Digital Protection and Non-Standard Communications courses. It is a great option for family members or those who don't have the time to learn NoScript, or for mobile devices that are not compatible with SnowHaze (SnowHaze was discussed in the last issue). For more information on Brave visit **https://www.brave.com/**



Upcoming Events:

Law Enforcement Intelligence Units
May 1-5 2017, Bloomington, MN

Associated Locksmiths of America Expo
June 16-22 2017, Rosemont, IL

National Technical Investigators' Association Annual Training Conference
July 12-23 2017, Tampa, FL

BlackHat USA
July 22-27 2017, Las Vegas, NV

The easy button >>>

Turtl App

Secure File Sharing & Collaboration

In December, the popular collaboration platform Evernote announced that they were changing their data optimization system, and that would require that some humans actually look through their customers' notes. Obviously people didn't like this, and Evernote quickly back-tracked. Even so, we were still interested in more secure alternatives and found Turtl, an app that bills itself as a "secure, encrypted Evernote alternative."

Turtl is an encrypted file-sharing application for Windows, Mac, and Linux computers. It is currently also available for Android, with an iOS version in development. Using Turtle requires you to install the Turtl application and create a login. When you initially create your account a RSA-4096 key pair is generated. This is the key that keeps all your data safe, while still allowing you to share it with friends and co-workers.

Turtl is incredibly simple to use. After logging into the app you can create a note or upload a file. Notes and files can be organized into different projects called "boards", and each note, file, or board can be shared with friends or colleagues. When you share a file or board the recipient will receive an email invitation. Shared files and boards are password protected, so you will also have to create a password and transmit it to the intended recipient.

Turtl is a very simple, easy-to-use online collaboration platform. As always, we recommend using caution with data stored in the cloud regardless of what platform you are using, and using a good, strong password for your Turtl account. For more information on Turtl visit **https://turtlapp.com**

Secure Messaging

"Secure" App Comparison Chart

As we mentioned in the Wire article on page 1, a lot of applications are offering secure messaging solutions. Unfortunately, comparing their security is somewhat difficult but there is a new website that can help make the comparison easier, located at **https://www.securemessagingapps.com/**. The website consists mainly of a comparison chart that examines the following encrypted messaging applications:

- Google's Allo
- Apple iMessage
- Facebook Messenger
- **Signal—RECOMMENDED**
- Skype
- Telegram
- **Threema—RECOMMENDED**
- Viber
- WhatsApp
- Wickr
- **Wire—RECOMMENDED**

Each app is judged on a number of factors. These include whether or not the content provider has access to your messages, the company's general stance on customer privacy, where their funding comes from, and what cryptographic algorithm is used by each.

Our favorite section of the chart is the first line: TL;DR (too long; didn't read): Should I use the app? For those pressed for time or who are less technically savvy this is a really quick indicator of whether or not a supposedly secure messaging app is betraying the user. We are also happy to see that most of the messaging applications that we have recommended in the Digital Update are deemed safe to use.

APP NAME	ALLO	IMESSAGE	MESSENGER	SIGNAL	SKYPE	TELEGRAM	THREEMA	VIBER	WHATSAPP	WICKR	WIRE
TL;DR: Should I use the app?	No	No	No	Yes	No	No	Yes	No	No	No	Yes
Company jurisdiction	USA	USA	USA	USA	USA	Germany	Switzerland	Luxembourg & Japan	USA	USA	Switzerland
Infrastructure jurisdiction	USA, Belgium, Finland, Ireland,the Netherlands, Chile, Taiwan,and Singapore	USA (Ireland and Denmark planned); iMessage runs on AWS and Google Cloud	USA, Sweden (Ireland planned)	USA	USA, the Netherlands, Australia, Brazil, China, Ireland, Hong Kong, and Japan	UK, Singapore, USA, and Finland	Switzerland	USA	USA (unsure of other locations)	USA (unsure of other locations)	Switzerland

coming soon >>>

In Future Issues...

FLIRC

Ubiquiti VOIP

Mini Chameleon

EFF's Privacy Badger

PHYSICAL SECURITY: PHOTO TRAP

At a reader's request we recently checked out an iOS application called **Photo Trap** by **Escape the Wolf**. The application is a physical security app that allows you to take and compare "before" and "after" photographs. This is an excellent concept if you want to know for sure if someone has been messing with your stuff.

To use it, open the app and take the first photograph, taking careful note of where you are standing and the phone's orientation to the subject. When you come back, open the app again. A "ghost image" of the original photo will appear that will help you line up the second shot with the first. After the second photo has been taken, the app will rapidly toggle back and forth between the two. Theoretically any difference should be immediately noticeable.

We really like this idea and wanted the app to work, but no matter what we did we could not get the two photos to line up. It was clear that there is an issue with the app; no matter how carefully the second photograph was taken the second photo always "jumped" roughly 1/3 of the way down the screen, making a good comparison of the two pretty much impossible. To make sure it wasn't just us, we put the phone on a tripod and took both photos, one after the other, but the problem persisted.

We have reached out to Escape the Wolf to see if this is an issue with the app's compatibility with the iPhone 6S (the device used for the test) and if an update will be available anytime soon. We hope this problem is fixed; this app has real potential. In the meantime we don't recommend you spend the $1.99 to purchase it.