



# IT Security im Gesundheitswesen: Live Hacking – So brechen digitale Angreifer in Ihre Systeme ein

Sebastian Schreiber



Dipl.-Inform. Sebastian Schreiber  
Managing Director  
+49 7071 - 407856-0  
sebastian.schreiber@sysss.de



# LIVE HACKING



# ZUM UNTERNEHMEN



- 1998: Gründung der SySS GmbH durch S. Schreiber
- Heute: 175 Mitarbeiter
- Sitz in Frankfurt/M., Tübingen, München und Wien, weltweit tätig
- Dienstleistungen:
  - Penetration Testing
  - Incident Response/Forensik/TC/  
Schulungen/Auftritte



# AGENDA LIVE HACKING



1. Smarte Thermostate knacken
2. Krypto-USB-Drives: Code-Sperre
3. Krypto-USB-Drives: Fingerabdruck-Scanner
4. SMS fälschen
5. Virens Scanner überlisten
6. WebShop knacken
7. Angriff auf Alarmanlage
8. Fake-Anrufe
9. Angriff auf Funktastatur
10. Fotos von Android Smartphone stehlen

Falls Zeit

1. USB-Tools
2. Trojaner-Angriff gegen Smartphone
3. Übung: QR-Code

# WHY TO HACK A THERMOSTATE?



# Frühe iOS-Hacks bei SySS



# Zeitgleich bei der NSA....



TOP SECRET//COMINT//REL TO USA, FVEY

**COTTONMOUTH-I**  
ANT Product Data

(TS//SI//REL) COTTONMOUTH-I (CM-I) is a Universal Serial Bus (USB) hardware implant which will provide a wireless bridge into a target network as well as the ability to load exploit software onto target PCs. 08/05/08

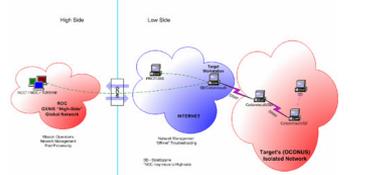
**COTTONMOUTH - 1**



(TS//SI//REL) CM-I will provide air-gap bridging, software persistence capability, "in-field" re-programmability, and covert communications with a host software implant over the USB. The RF link will enable command and data infiltration and exfiltration. CM-I will also communicate with Data Network Technologies (DNT) software (STRAITBIZARRE) through a covert channel implemented on the USB, using this communication channel to pass commands and data between hardware and software implants. CM-I will be a GENIE-compliant implant based on CHIMNEYPOOL.

(TS//SI//REL) CM-I conceals digital components (TRINITY), USB 1.1 FS hub, switches, and HOWLERMONKEY (HM) RF Transceiver within the USB Series-A cable connector. MOCCASIN is the version permanently connected to a USB keyboard. Another version can be made with an unmodified USB connector at the other end. CM-I has the ability to communicate to other CM devices over the RF link using an over-the-air protocol called SPECULATION.

**COTTONMOUTH CONOP**  
INTERNET Scenario



**Status:** Availability – January 2009      **Unit Cost:** 50 units: \$1,015K

**POC:** [redacted], S3223, [redacted] @nsa.ic.gov      Derived From: NSA/CSSM 1-52  
Date: 20070108  
**ALT POC:** [redacted], S3223, [redacted] @nsa.ic.gov      Declassify On: 20201008

TOP SECRET//COMINT//REL TO USA, FVEY

Unit Cost: 50 Units: \$1,015K  
Das sind 20.000\$ pro Kabel

# THE PENTEST EXPERTS

[WWW.SYSS.DE](http://WWW.SYSS.DE)