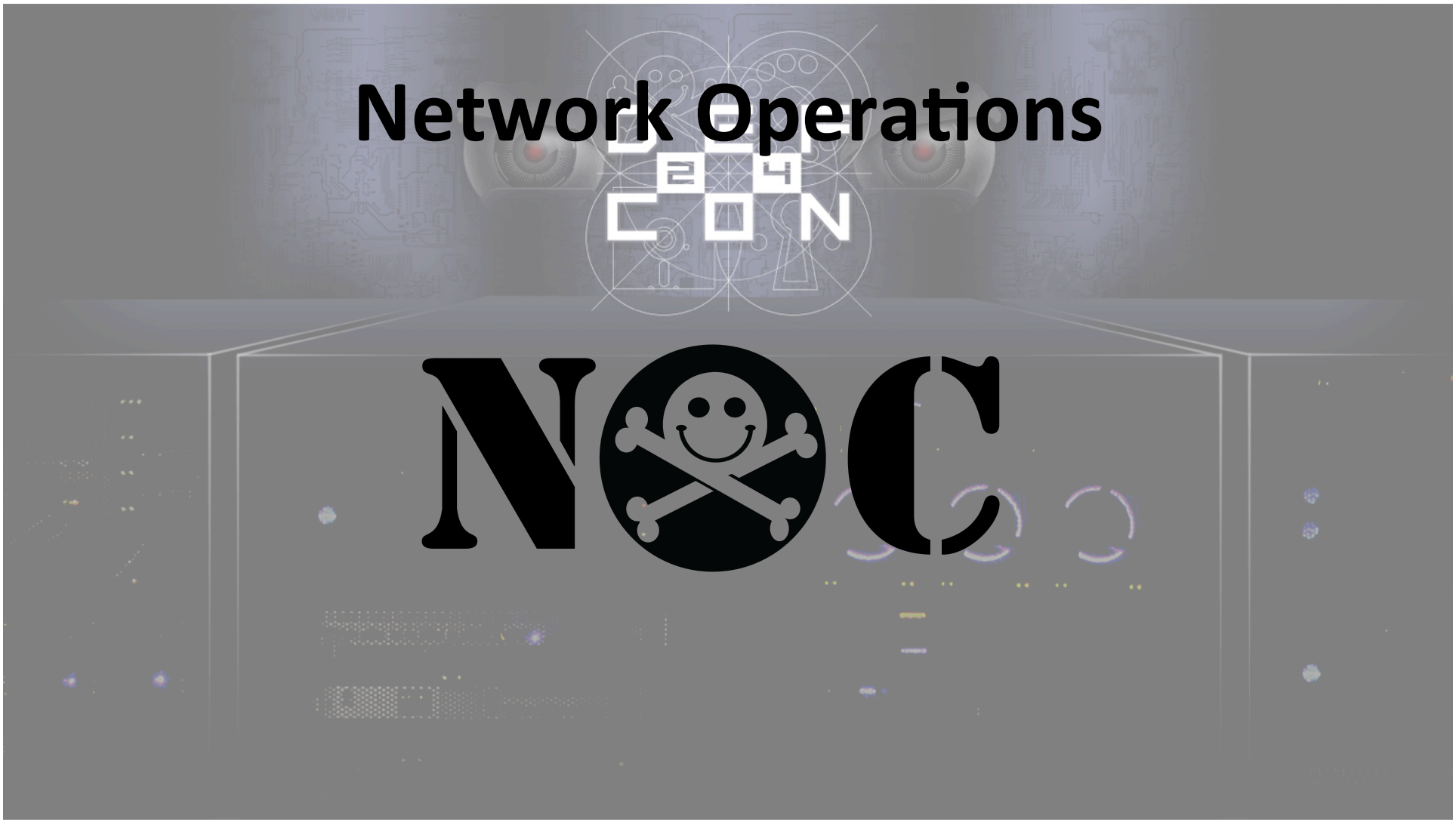
Network Operations



- **Wired Infrastructure**
  - Closed Captioning
  - Contests
  - DC TV
  - Goons
  - Media Server
  - openCTF
  - Press
  - rootz
  - SOMA FM
  - Speakers
  - Vendors
  - WiFi Monitoring
  - Workshops
- **DC TV**
  - for those people in their rooms
- **Wireless Infrastructure**
  - for the the brave people
  - openCTF

NOC

The Network

- 10 gbps backbone
- ~~125 175~~ 200 mbps internet uplink
- Wired
  - Firewall - FreeBSD
  - 2 x Core Cisco Switches
  - 16 x Edge Cisco Switches
  - Media Server

The Network (cont)

- Wireless
  - 7210 Aruba Controller
  - 61 Aruba Access Points (70, 105, 135, 225)
- DCTV
  - 10 raspberry pis
  - 5 channels in both Paris and Bally's
  - Video Transcoding provided by SOK
  - Video Transient Server in the NOC

DC TV

- HD Broadcast
- New Internet Streams (qwikcast.tv)
  - CGC
  - DC 101
  - Closing Ceremonies

Timeline

2016

- ~~Lots of Planning~~
- Less planning than it should have been
- (and yes, we are volunteers)

Sunday

- MDF/IDF connections
- Hotels Interconnect
- Internet UPLINK

Monday

- NOC Setup
- WiFi APs
- Patching
- DC TV headend install
- APs hanging start

Tuesday

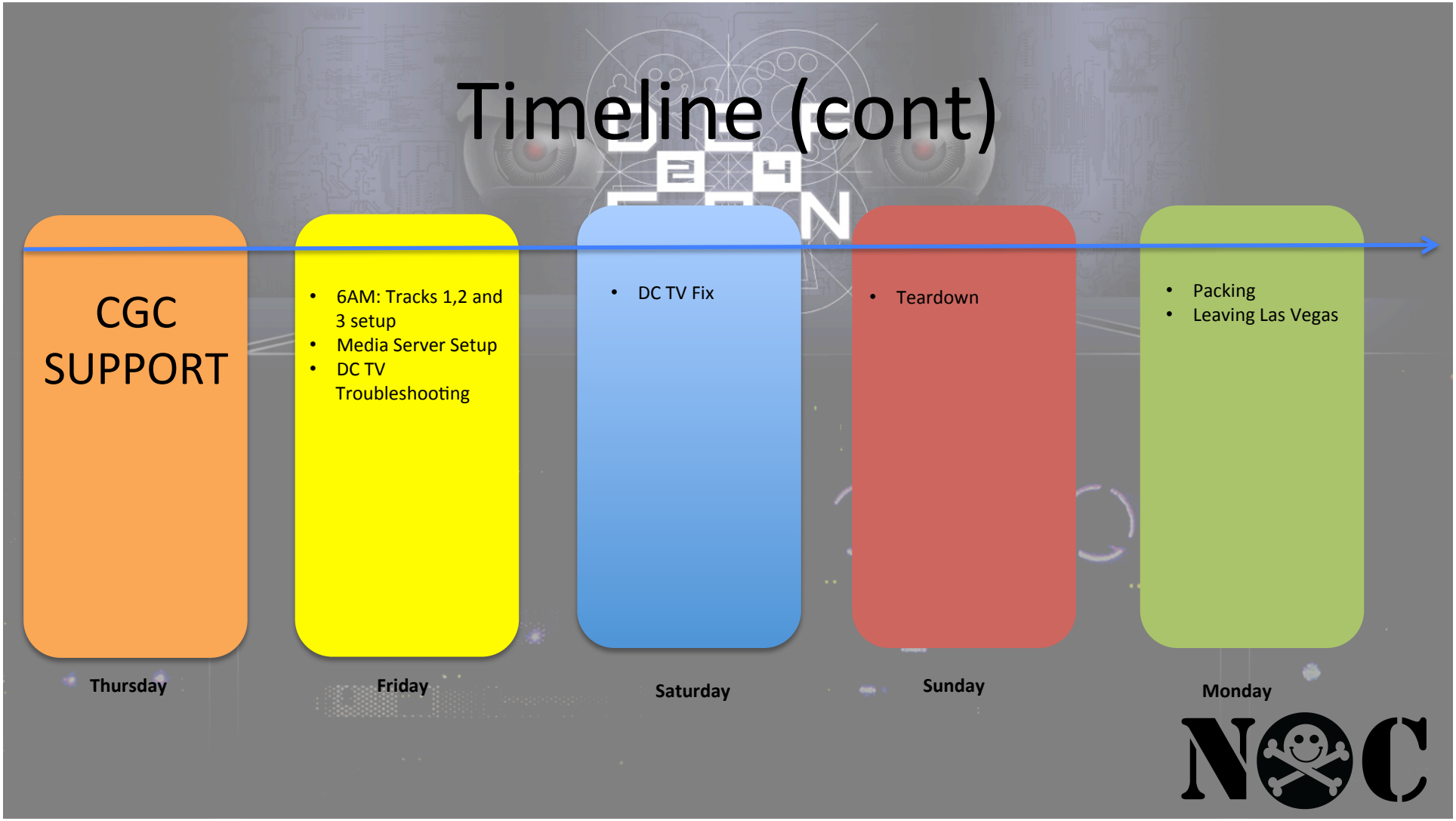
- APs install done
- patching patching patching
- Android 802.1x fun
- wifireg.defcon.org up!

Wednesday

- CGC Press Room
- Setup,
- patching patching mushroom mushroom
- Network Management Systems
- Network Monitoring

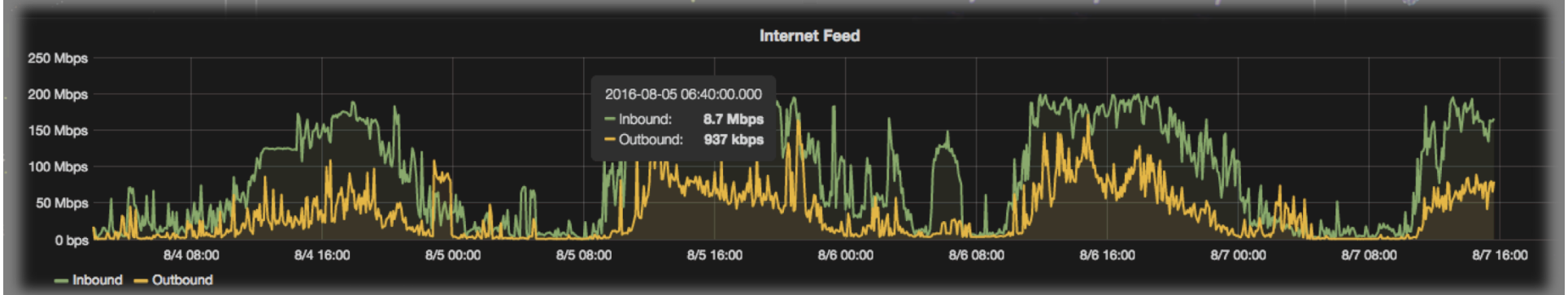
NOC

Timeline (cont)



Issues

- Bandwidth
- AP Coverage
- DC TV
  - bandwidth X streaming
  - resolution
  - switched from rtsp to rtmp



The Usual Stats

- 4.29 TB of internet traffic
  - Inbound: 3.13487072983
  - Outbound: 1.1607473418
- 4029 users registered on wifireg
- 1400 wireless users peak
- 35k unique DHCP leases
- 10k different mac addresses
- 10.29 TB of wireless traffic
- 1.76 TB media server traffic

Top 10 Wireless Chipsets

Apple, Inc.	5046
Intel Corporate	1073
SAMSUNG ELECTRO-MECHANICS(THAILAND)	900
Murata Manufacturing Co., Ltd.	771
LG Electronics (Mobile Communications)	476
Samsung Electronics Co.,Ltd	360
Hon Hai Precision Ind. Co.,Ltd.	299
Motorola Mobility LLC, a Lenovo Company	282
HUAWEI TECHNOLOGIES CO.,LTD	165
None	153

effffn's twelve

- **Leads**
  - @effffn
  - mac
- **Infra/ Systems**
  - #sparky
  - naifx
  - booger
  - commiebstrd
- **DC TV**
  - videoman
  - serif
- **WiFi**
  - planb
  - CRV
- **N00bs**
  - c7five
  - deadication

THANKS!

- DT
- Russ
- Charel
- Ceasars IT Staff
- Encore Staff
- Source of Knowledge
- The nice folks who always bring us snacks!
- YOU!

http://defconnetworking.org

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