Timeline

Tuesday, January 25

Amn El Dawla, the State Security Intelligence Service, orders the blocking of Twitter, which was largely accomplished.
Wednesday, January 26

The State Security Intelligence Service orders the blocking of Facebook, and DNS is blocked but this is not completely effective.

Arrests of people posting to the El Shaheeed and Yom Elsawra 25 January groups on Facebook begin.
Timeline

Thursday, January 27

9pm - Domestic and outbound international SMS shut down, inbound international continues to work.
Timeline

Friday, January 28

12:28am - Internet Routing shut down in international transport and national IXP section of Ramses exchange, 3500 prefixes and 50 Egyptian ASNs drop to 300 prefixes and 25 ASNs. All of the large ISPs are offline: TEData, Link.net, Raya Telecom (owned by Vodafone), and Nile Online and EgyNet (both owned by Etisalat).

Morning - Further ISPs offline, down to about 240 prefixes, and the intelligence service orders mobile operators to suspend voice service in some areas.

Wael Ghonim, a Google employee who was running the El Shaheeed Facebook group, is arrested.
Timeline

Saturday, January 29

Morning - Mobile operators allowed to resume voice service and international SMS, but domestic SMS remains shut down and under the control of the intelligence service.

Omar Suleiman is appointed vice president after having been denied that office several years ago. Suleiman had run the Mukhabarat, the General Intelligence Service, since 1993 and Egypt’s military intelligence service before that. He’s most generally recognized in the rest of the world as the coordinator of the extraordinary rendition program.
Sunday, January 30

The intelligence service begins astroturfing SMSes on Vodafone’s network, over Vodafone’s objection:

“HONEST AND LOYAL MEN: CONFRONT THE TRAITORS AND CRIMINALS AND PROTECT OUR PEOPLE AND HONOR.”

Evening - Mubarak orders the tanks of Egyptian Third Army, emplaced surrounding Tahrir Square, to massacre the demonstrators. They refuse, and General Hassan al-Rawani, head of the Army Central Command, makes clear that from that point forward, the army would stand with the people and see Mubarak out of office.
Timeline

Monday, January 31

Tarek Kamel reconfirmed as Communications Minister, while several of his cabinet colleagues are replaced with intelligence service generals.

The intelligence service continues to hunt down other ISPs, taking down Noor, whose customers include the stock exchange, major banks, the national airline, and government agencies. Only 12 ASNs and 130 prefixes remain.
Timeline

Tuesday, February 1

Morning - Tarek Kamel announces that Internet service will be restored “soon.” In a separate television interview, prime minister Ahmed Shafiq is asked when and replies “within 24 hours.”

The intelligence service continues to shut down remaining ISPs, and continues astroturfing SMSes:

“EGYPT’S YOUTH: BEWARE RUMORS AND LISTEN TO THE VOICE OF REASON. EGYPT IS ABOVE ALL SO PRESERVE IT.”
Wednesday, February 2

Noon - Internet service resumed, routing converges over the course of an hour.

The intelligence service continues astroturfing SMSes:

“TO EACH MOTHER-FATHER-SISTER-BROTHER, TO EVERY HONEST CITIZEN: PRESERVE THIS COUNTRY BECAUSE THE HOMELAND STAYS FOREVER.”

“A SWEEPING DEMONSTRATION STARTING AT NOON ON WEDNESDAY FROM THE MUSTAFA MAHMOUD SQUARE IN MOHANDESSIN TO SUPPORT PRESIDENT MUBARAK.”
Thursday, February 3

OECD estimates the outage cost the Egyptian telecom sector a minimum of $90M.

Forbes ups that estimate to $110M, noting that the OECD had not included call-center revenue.

Omar Suleiman says the economic impact on the tourism industry alone is “at least $1B.”
Saturday, February 5

All SMS services restored.

Tarek Kamel calls a meeting of call-center executives to try to assess the scale of losses. Vodafone, for instance, relocated hundreds of call-center jobs from Egypt to New Zealand during the prior week.
Egyptian International Transit

Source: Arbor
Egyptian Domestic Peering

Source: Cairo Internet Exchange
Egyptian Search-Engine Use

Source: Google
Egyptian Spam Sources

Source: Team Cymru
How Does This Compare?

January 2011, Egypt : 107B user/minutes
November 2010, Burma : 1.3B
January 2008, Middle East : ~1T
September 2007, Burma : 2.4B
September 2006, Zimbabwe : 26B
June 2005, Pakistan : 173B
February 2005, Nepal : 2B
Ockham’s Razor

Most pundits speculated that BGP hijacking, spoofing, or filtering was used.

They were wrong, some of the shut-down was effected by equipment being shut down in the Ramses exchange, and the rest was phone calls and arm-twisting.
Ramses Exchange, Cairo
Ramses Exchange, Cairo
Why a Power Cut is a Politically Liberal Mechanism

Fastest to restore: restore power, and everything comes back up.

Restoration doesn’t require that ISP staff be able to access the equipment.

No new security vulnerabilities introduced while equipment is powered down.

No communications means no intercept, so no chilling of speech nor accumulation of evidence against speakers.

Effects are fully transparent to the public.
Net Effect:

It’s unlikely that Egypt’s communications ministry will ever be asked to disconnect the Internet again.
The Internet was acting weird

so I tried turning it off and on again
Bring Internet Back
Thanks, and Questions?

Copies of this presentation can be found in PDF format at:

http://www.pch.net/resources/misc/Egypt-PCH-Overview.pdf

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