On “exceptional access”

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- FISA (Foreign Intelligence Surveillance Act, 1977)

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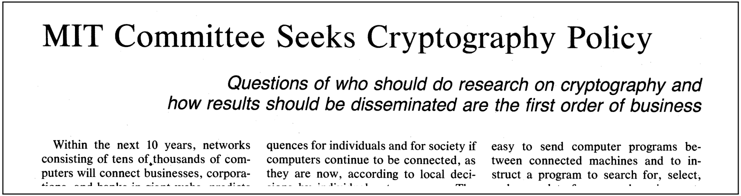
- Tim Berners-Lee, The World-Wide Web (1990)

Crypto Wars 1.0

- U.S. government initially tried to control and limit public-sector research and use of cryptography
- Attempt to chill research via ITAR (1977)
- MIT "Changing Nature of Information" Committee (1981; Dertouzos, Low, Rosenblith, Deutch,Rivest,...)



MIT Committee Seeks Cryptography Policy

Questions of who should do research on cryptography and how results should be disseminated are the first order of business

Within the next 10 years, networks consisting of tens of thousands of computers will connect businesses, corpora-

quences for individuals and for society if computers continue to be connected, as they are now, according to local deci-

easy to send computer programs between connected machines and to instruct a program to search for, select,

Science, 13 Mar 1981

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- Ray Ozzie promoted scheme in 1995 giving 24 bits of 64-bit encryption keys in export products to NSA. (Encrypted with NSA PK.) Swedish Parliament has conniptions.
- With defeat of “Clipper Chip”, it seemed “crypto wars” were over; strong crypto was recognized as necessary for commerce and for national security...

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- “Keys Under Doormat” report (2015) has 15 authors, including MIT authors Abelson, Rivest, Schiller, Specter, Weitzner.
- Report documents vagueness of LE request, and technical difficulties of achieving LE access without introducting catastrophic modes of failure.

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- FBI drops case when it gets access (via Cellebrite?) in March 2016

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  - LE enters phone encryption key obtained from Apple, and gets data, but phone is bricked.

Problems with Ozzie's proposal

- NASEM report on encryption debate (Goldwasser, Landau, Boneh and others)

  http://www8.nationalacademies.org/onpinews/newsitem.aspx?RecordID=25010

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  "Will the proposed approach be effective?"
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  `op-ed-ray-ozzies-crypto-proposal-a-dose-of-technical-reality/`

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- Metaphor that it is “like managing a code-signing key” doesn’t hold water: look up “Stuxnet”
- “Hardware security modules” (HSMs) have also shown vulnerabilities.
- Protection against secret surveillance by bricking phone probably won’t work either: see *Cellebrite* and *Grayshift*.

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  https://9to5mac.com/2018/05/11/secure-data-act/

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- FBI can’t count... (7800 locked phones → 1000-2000 at most)

  https://www.washingtonpost.com/news/monkey-cage/wp/2018/05/30/

  the-fbi-blunder-on-phone-encryption-explained/?utm_term=.3a7875569952