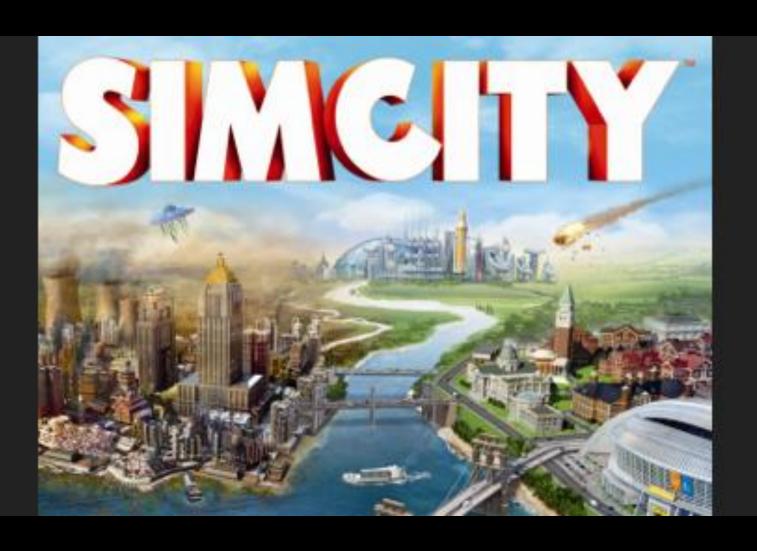
# Dumping DRM: Why Security Researchers Should Be Resisting "Digital Content Locks"

Corynne McSherry

## Defining the Problem: The Tech

- Digital Locks aka Digital Handcuffs
  - Access control
  - Copy controls
- Benefits: "Bump in the road"
- Costs:
  - Customers Hate It
  - Doesn't work
  - Privacy and Security Risks



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We are the SimCity dev team from Maxis. AMAA! (self, IAmA)

submitted 1 year ago\* by maxis 5189 comments share

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♠ [-] somersetbingo 7256 points 1 year ago\* ♠x5

#### ➡ The SimCity Community on EA/Maxis' proposed DRM:

"Please just make it playable offline -\_\_\_-" -PumpkinLatte

"This is why people make cracks and sales get barfed over to TPB." -secretchimp

"Being required to stay online to save a game is so stupid. There are many other consumer friendly DRM alternatives." -drylube

"Always-online DRM is a slap in the face of any franchise's fan. It's like putting a security guard to explicitly follow a customer..." -goldensox

"I would love good city builder but I refuse to support extreme DRM abuse." -Namell

"yeah i would 100% pay for this game if [...] it only had the gentle steam drm." -RatherDashing

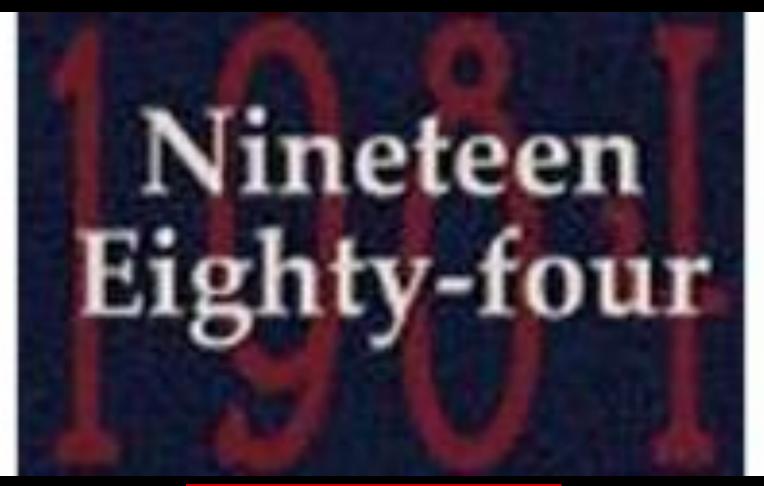
"...this kind of DRM is completely unacceptable to gamers. I am a huge simcity fan.... but hearing this news is a completely turnoff. I refuse to be punished for purchasing a game..." -terrific happy



- 1. DRM will always be broken.
  - 2. People will copy things.
- 3. People will be able to share (and some will want to).

## Privacy and Security Risks

- Treats user as untrusted party
- If you can't break it, you can't secure it
- Rootkits
  - —Sony Rootkit
  - Uplay
- Privacy (e.g. Warden; books)





### Compounding the Problem: the Law

DRM + DMCA

Unintended Consequences
Less Freedom to Tinker (make, break, fix, reuse, recycle)

#### **DMCA**

#### Prohibits:

- (1) Act of circumvention of "technological measures" that control *access* to copyrighted works
  - excerpt eBook, rip DVDs, hack streaming content
- (2) Tools that can circumvent technological access controls and *use* restriction controls
  - DeCSS to make back-up copy of DVD
  - Software to remove CD copy-protection
- 7 exceptions to access ban for public policy purposes.
- Triennial rulemaking can grant 3 yr exemptions to access ban, but does not authorize devices



## Anti-Competitive Misuse

- Blocked aftermarkets, product lock-in at monopoly prices:
  - printer cartridges (Lexmark v. SCC)
  - garage remote controls (Chamberlain Group v. Skylink Technologies)
  - computer maintenance service (Storage Tek v. CHE)
  - cell phone unlocking (TracFone v. SOL Wireless)
- Geographic market segmentation

#### Chilled Scientific Research

- Chilling effect on scientific researchers, journalists, publishers:
  - 2000 Music industry group threatened to sue Princeton Professor Felten and research team for publishing research paper on security vulnerabilities.
- Ongoing effect computer security weakened:
  - 2005 Researcher discovered Sony BMG music CD "Rootkit" software security risk but consulted with lawyers for several weeks before raising alarm.

#### Lawful Use Restricted

- TPMs can prevent lawful non-infringing uses.
- U.S. copyright law's balanced set of rights replaced by "anti-circumvention" law:
  - new access right protection beyond copyright
  - no right to circumvent to make fair use
  - device ban downstream fair use no defense
  - U.S. statutory exceptions cumbersome and overridden
  - Exemption process ridiculous

Jailbreaking phone = OK (until 2015)
Unlocking phone ≠ OK (after 1/26/13)
Jailbreaking tablet ≠ OK

Jailbreaking game console ≠ OK

Helping others fix their
car/refrigerator/phone/computer ≠ OK

# We can do better

#### iTunes:

DRM free music since 2009

(Music industry has not collapsed)



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The Chronicles of Shakespeare: The Chronicles of Shakespeare: A Midsummer Night's Dream

["Piracy"] is people lending books. And you can't look on that as a lost sale.... What you're actually doing is advertising. You're reaching more people. You're raising awareness. And understanding that gave me a whole new idea of the shape of copyright and what the web was doing."

- Neil Gaiman



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O'Reilly
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Overdrive (audiobooks)
Humble AudioBook bundle

Obscurity is a far greater threat to authors and creative artists than piracy.

-Tim O'Reilly

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