

Take Control of Your Passwords



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The Password Problem

- Passwords are annoying!
- It's tempting to take the easy way out.
 - There *is* an easy way, but it may not be what you think.

Three Big Mistakes

- Choosing guessable passwords
- Reusing passwords
- Assuming security requires inconvenience

Guessability

Worst passwords of 2017

- | | | |
|--------------|--------------|--------------|
| 1. 123456 | 10. iloveyou | 19. passw0rd |
| 2. Password | 11. admin | 20. namaste |
| 3. 12345678 | 12. welcome | 21. hello |
| 4. qwerty | 13. monkey | 22. freedom |
| 5. 12345 | 14. login | 23. whatever |
| 6. 123456789 | 15. abc123 | 24. qazwsx |
| 7. letmein | 16. starwars | 25. trustno1 |
| 8. 1234567 | 17. 123123 | |
| 9. football | 18. dragon | |

Easily Guessed Passwords

- common words `computer`
- adding numbers `computer1`
- 1337 (“leet”) `c0mpu73r`
- patterns `qwertyio`
- quotes `carpediem`
- names `SusieFido`

Guessable? Really?

- You're not just up against people, you're up against machines
- Brute-force searches have gotten much better
 - ▶ Time to crack any 8-character password: 5.5 hours (9 characters: about 20 days)

Guessable? Really?

- Won't an attacker be locked out after a few incorrect password attempts?
- Even in a brute-force search, patterns are always checked first. So...
 - It doesn't matter if it takes centuries to try all possible passwords if yours can be guessed in an hour.

Entropy Is Your Friend

- character set
protagonist
pR3tA2\$N(St
- length (with qualifications)
horse
correct horse battery staple*
- randomness
ninjaboy
iYbnzJsE

Password Reuse

Recognize These Names?

- eBay
- Equifax
- Facebook
- IRS
- MySpace
- Target
- Twitter
- UPS
- Yahoo
- ...and hundreds more

Twitter says all 336 million users should change their passwords

by Heather Kelly @heatherkelly

🕒 May 3, 2018: 5:23 PM ET

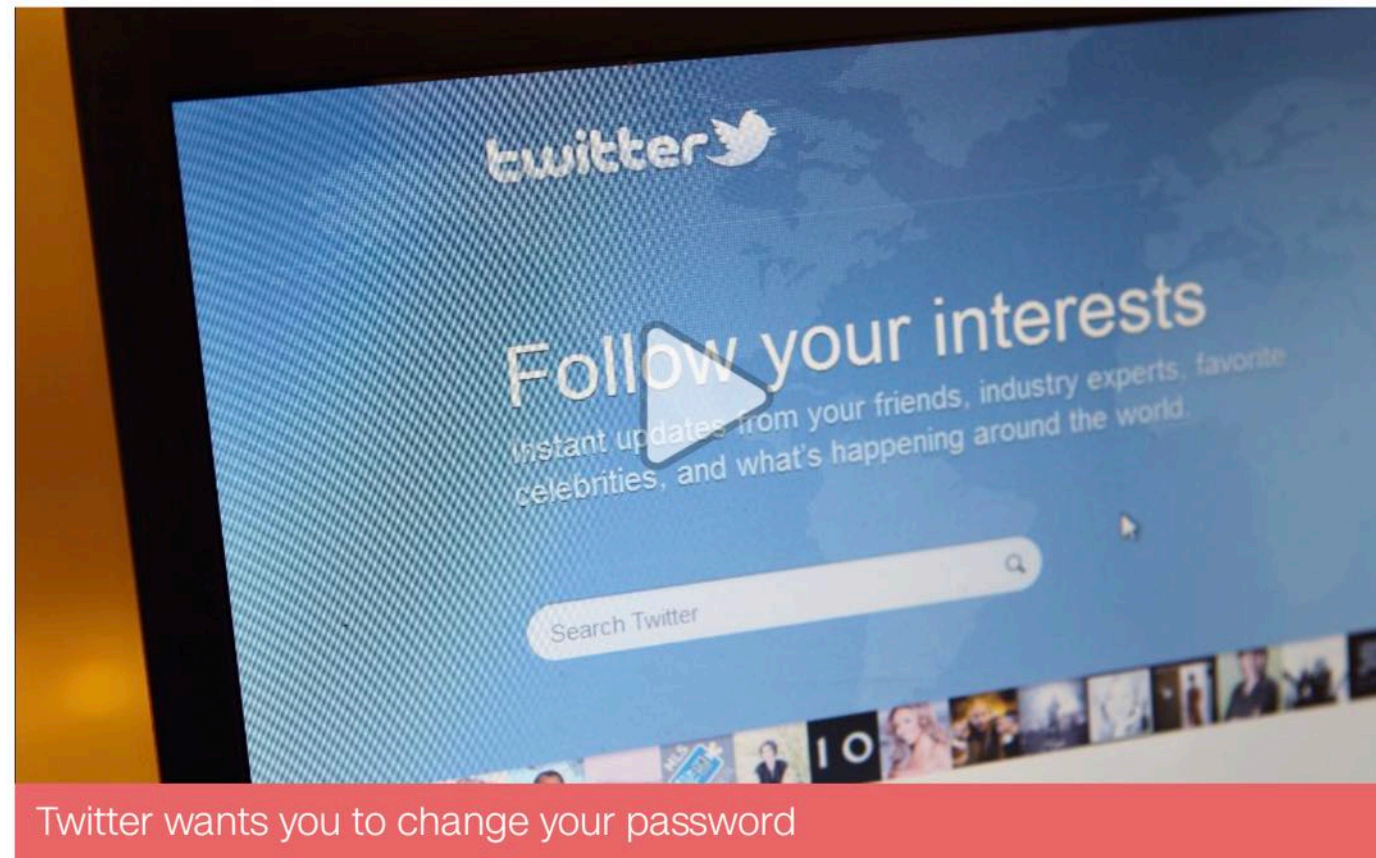
👍 Recommend 1



Personal Finance

SmartAsset

Paid Partner



Twitter has recommended its 336 million users change their passwords.

The company announced on Thursday it discovered a bug that saved user passwords unprotected on an internal log.

Twitter said it has since fixed the issue. Although the company said there is no evidence passwords have been leaked or misused, it is urging its users to update their passwords.

"As a precaution, consider changing your password on all services where you've used this password," the [company tweeted](#).

If You Reuse a Password...

1. Password list stolen, leaked, or hacked.
2. Attacker breaks into the stolen account.
3. Attacker tries same password on Gmail, PayPal, Amazon, your bank account...

Moral of the Story

Never use the same password
in more than one place.

Security vs. Convenience

Here's the Problem

- `iYb48nzJ#;sEoR`
Hard to create, remember, and type
- `MyNameIsJoe`
Not strong enough

Joe's Basic Strategy

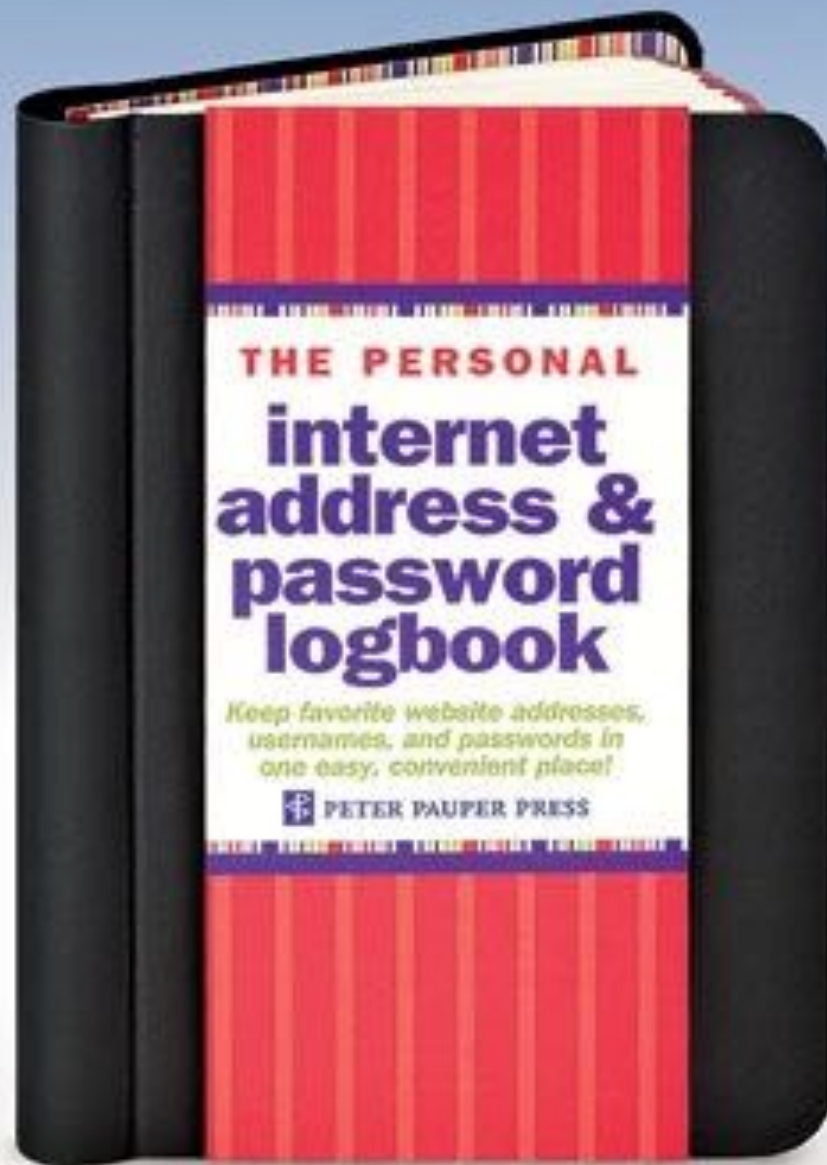
- Figure out which *few* passwords you *have to* memorize.
- Make those few strong, and memorize them.
- Use a password manager for everything^{*} else.

The VIP list

- Passwords you have to enter frequently and/or in places a password manager can't reach
- If you can't count them on one hand, you probably have too many
- Create high-entropy passwords (random or long—your choice)
 - Bite the bullet and memorize them

Use a Password Manager


This is not a password manager.



Use a Password Manager

- Automatic random password generation
- Saves web forms as you log in
- Autofill for web forms
- Securely syncs with all your devices
- An example...

1Password

1PasswordAccountsViewItemHelp

Example

All items45

Favorites

WATCHTOWER

Compromised Logins1

Vulnerable Passwords

Reused Passwords

Weak Passwords1

Unsecured Websites9

Inactive 2FA4

Expiring3

CATEGORIES

Logins31

Secure Notes2

Credit Cards3

Identities3

Passwords1

Search Example+

45 items sorted by Title ▾

Dropboxwendy.h.appleseed@gmail.com

E

ebay

eBaywendy.appleseed

Etsy

Etsywendyappleseed

Evernote

Evernotewendy-appleseed

F

Facebook

Facebookwendy.h.appleseed@gmail.com

Fitbit

Fitbitwendy.h.appleseed@gmail.com

Forums

ForumsAlter Ego

G

Garage Door Code

Garage Door Code3/25/2015 11:30 AM

Gmail (personal)

Gmail (personal)wendy.h.appleseed

Edit

Dropbox

☆

usernamewendy.h.appleseed@gmail.com

password.....

website<https://www.dropbox.com/login>

One-Time Pas...497 • 50317

tagsApple Watch

Web form details ▾

last modified10/18/2018 11:56 AM

created9/15/2014 8:40 PM



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Sign in

[Text a temporary password](#)

[Reset your password](#)

or



Sign in with Facebook



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Uncheck to protect your account. [Learn more](#)

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.....


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☐ Stay signed in

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Uncheck to protect your account. [Learn more](#)

1 Password Can Also...

- Generate strong passwords instantly
- Remember credentials as you enter them
- Sync and autofill on all your browsers, platforms, and devices
- Help you identify passwords you should change
 - Store other secure data

Other Password Managers

- LastPass
- Dashlane
- RoboForm
- iCloud Keychain (Mac/iOS)
 - many others...

*Exceptions

- TV remotes
- Recalcitrant websites
- Physical PIN pads
- Telephone access

Extra Safety Steps

- Make your master password extra-strong
- Think about giving someone else access to your passwords in an emergency
- Be careful with security questions
 - Use two-factor authentication when you can

Security Questions

- Reset forgotten passwords or verify identity
- How to handle security questions & answers
 - Lie!
 - Store your answers in a password manager
- (Sometimes) Use two-factor authentication instead

Two-Factor Authentication

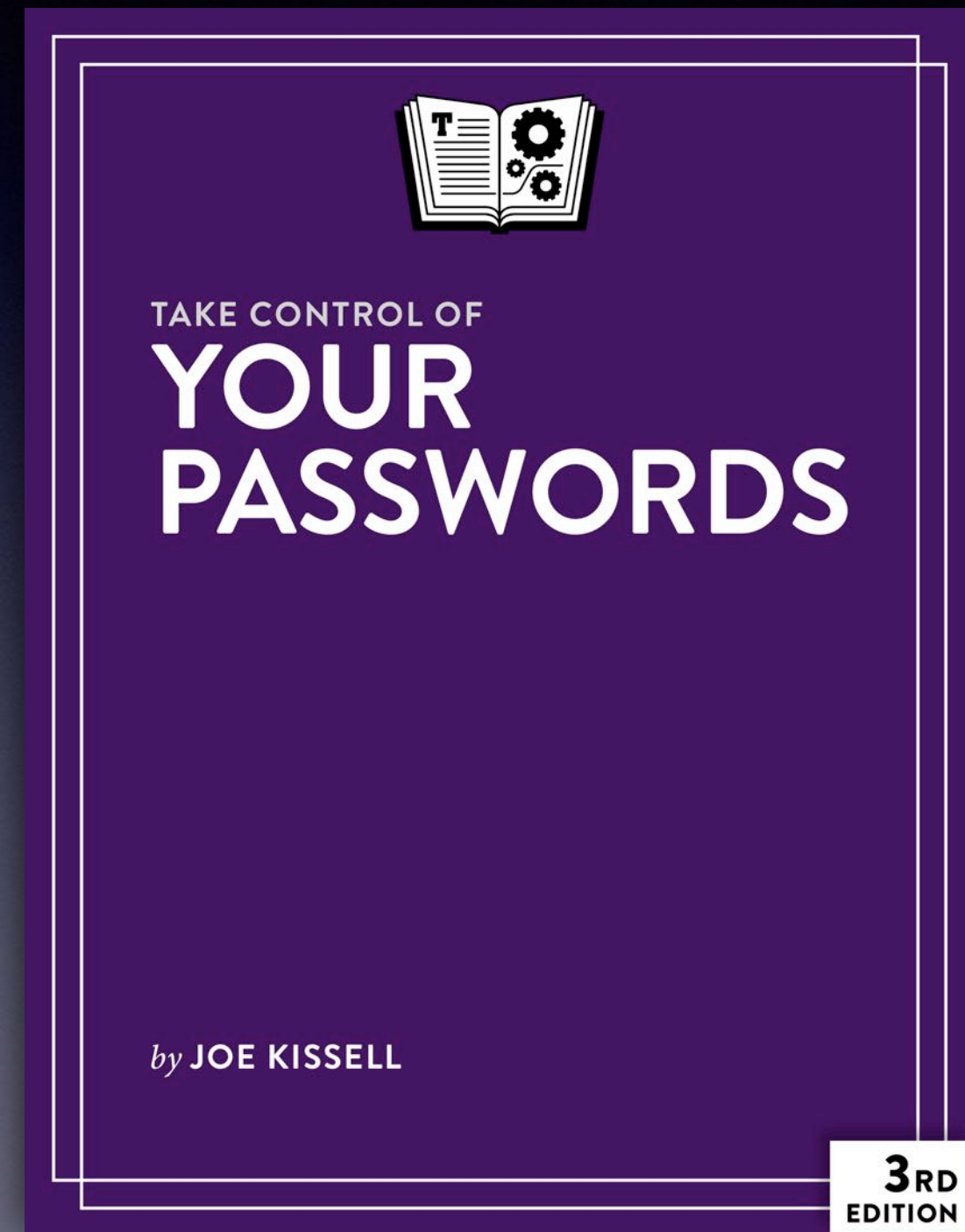
- What's a factor?
- Forms of 2FA
 - TOTP
 - Hardware Tokens such as YubiKey
 - Biometrics
- Why & how to use it



Learn More

- *Take Control of Your Passwords*
by Joe Kissell
- Extensive details on password risks and strategies
- 152 pages, ~~\$14.99~~ \$10.49

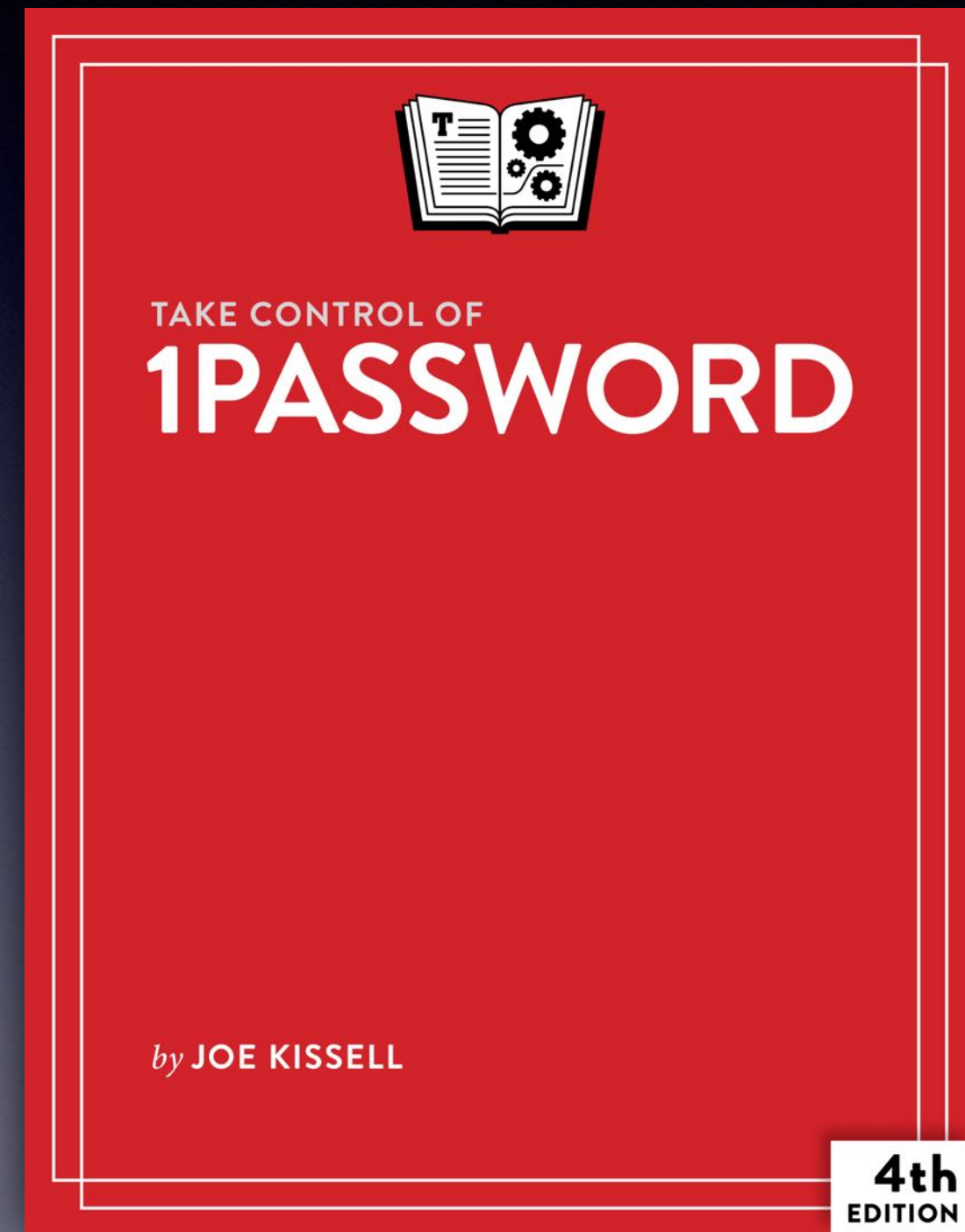
alt.cc/yp-apcug



Learn More

- *Take Control of 1Password*
by Joe Kissell
- How to get the most out of
my favorite password
manager (software not
included!)
- 167 pages, ~~\$14.99~~ \$10.49

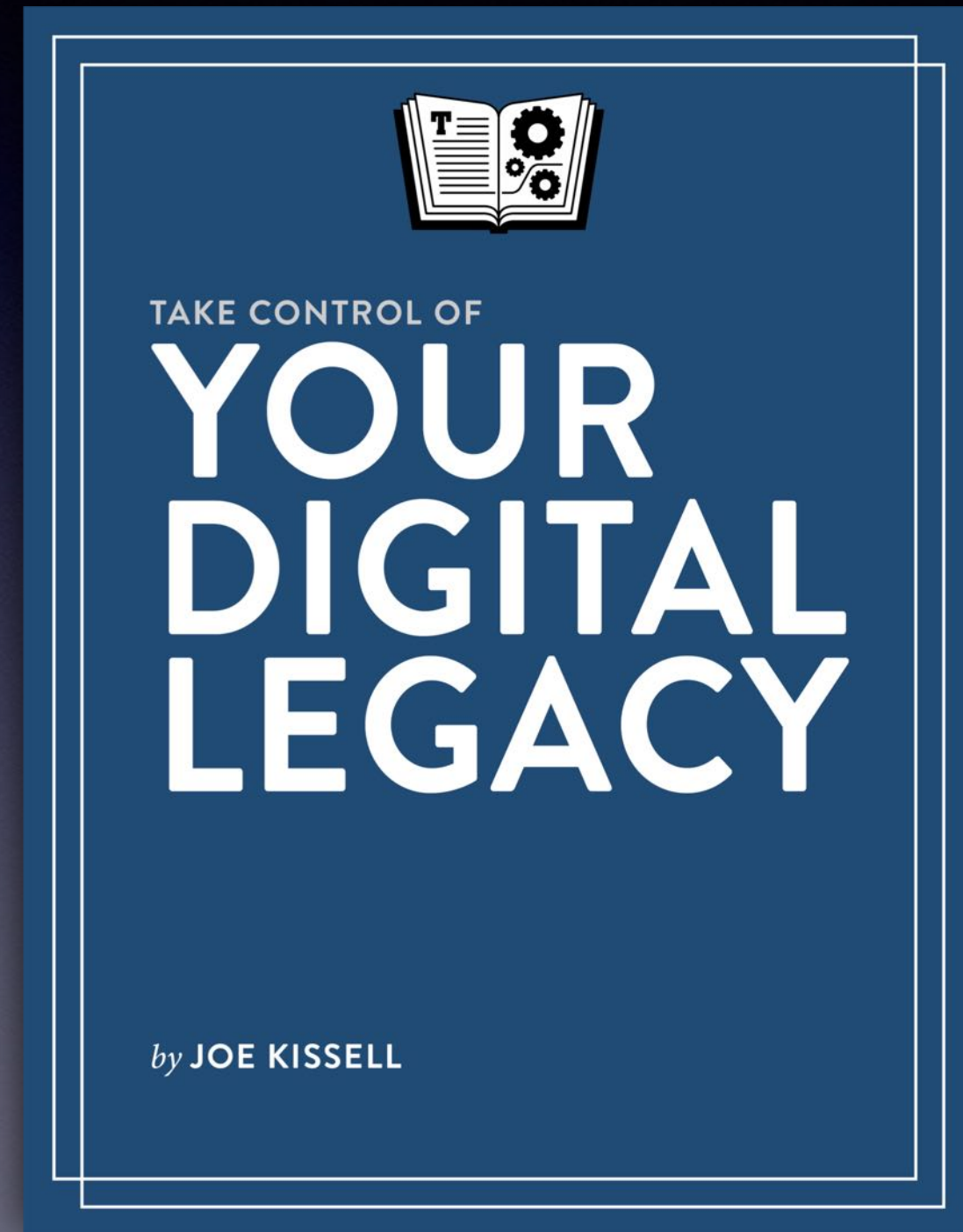
alt.cc/1p-apcug



Learn More

- *Take Control of Your Digital Legacy*
by Joe Kissell
- Includes free downloadable template for a digital will
- 127 pages, ~~\$15~~ \$10.50

alt.cc/dl-apcug



Questions?

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