Internet Privacy

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Your Presenter

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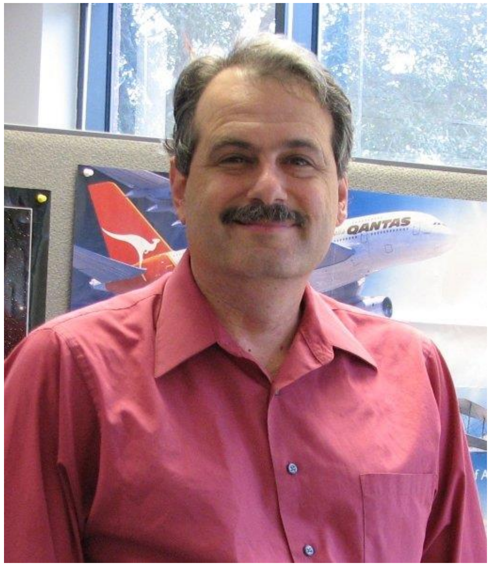


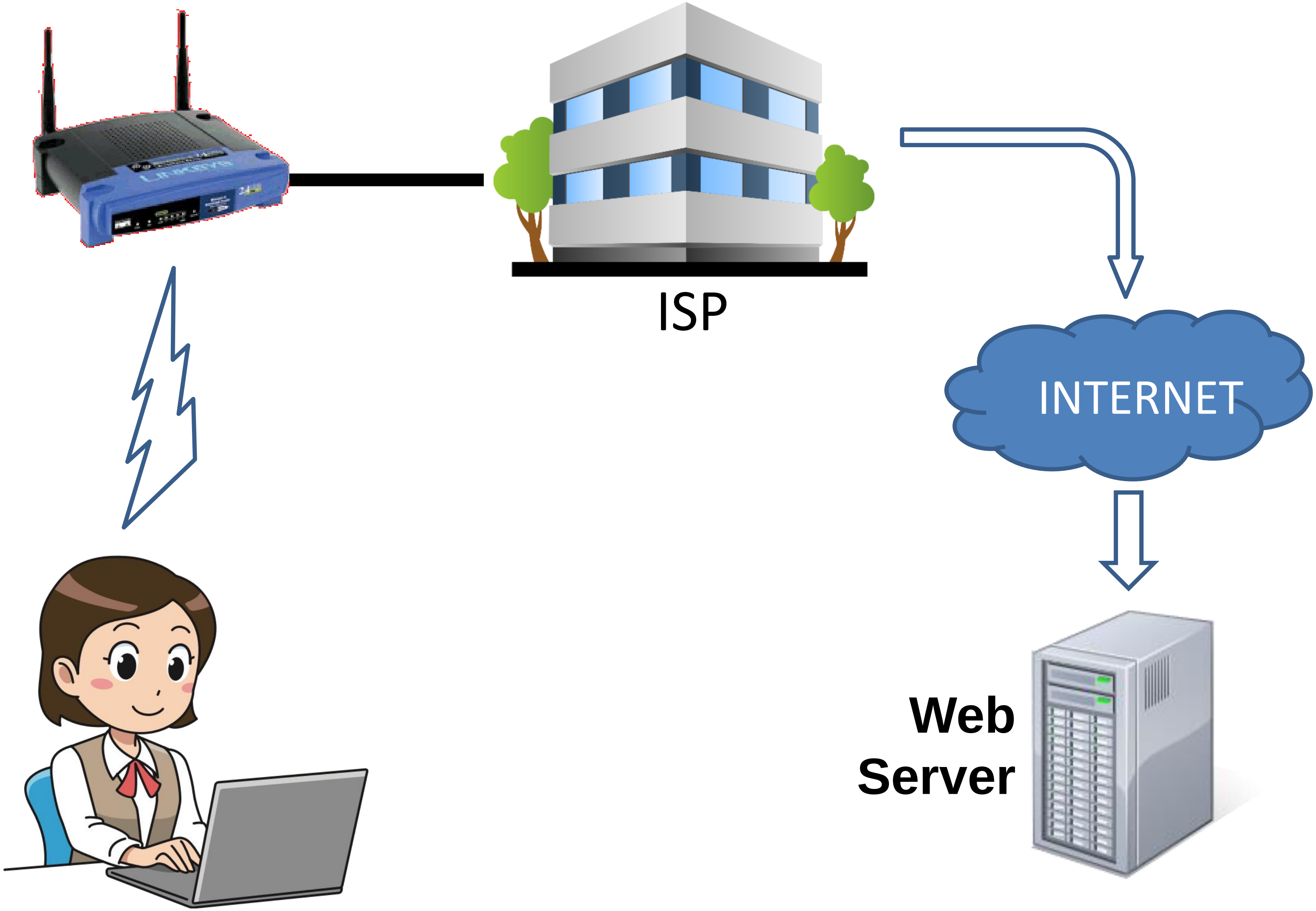
- IT professional for almost 40 years
- IT manager for a small medical office
- No affiliation with any product

What We'll Talk About

- Browser privacy
- VPNs
- Email privacy

Understanding Internet Browsing

Path Through the Internet

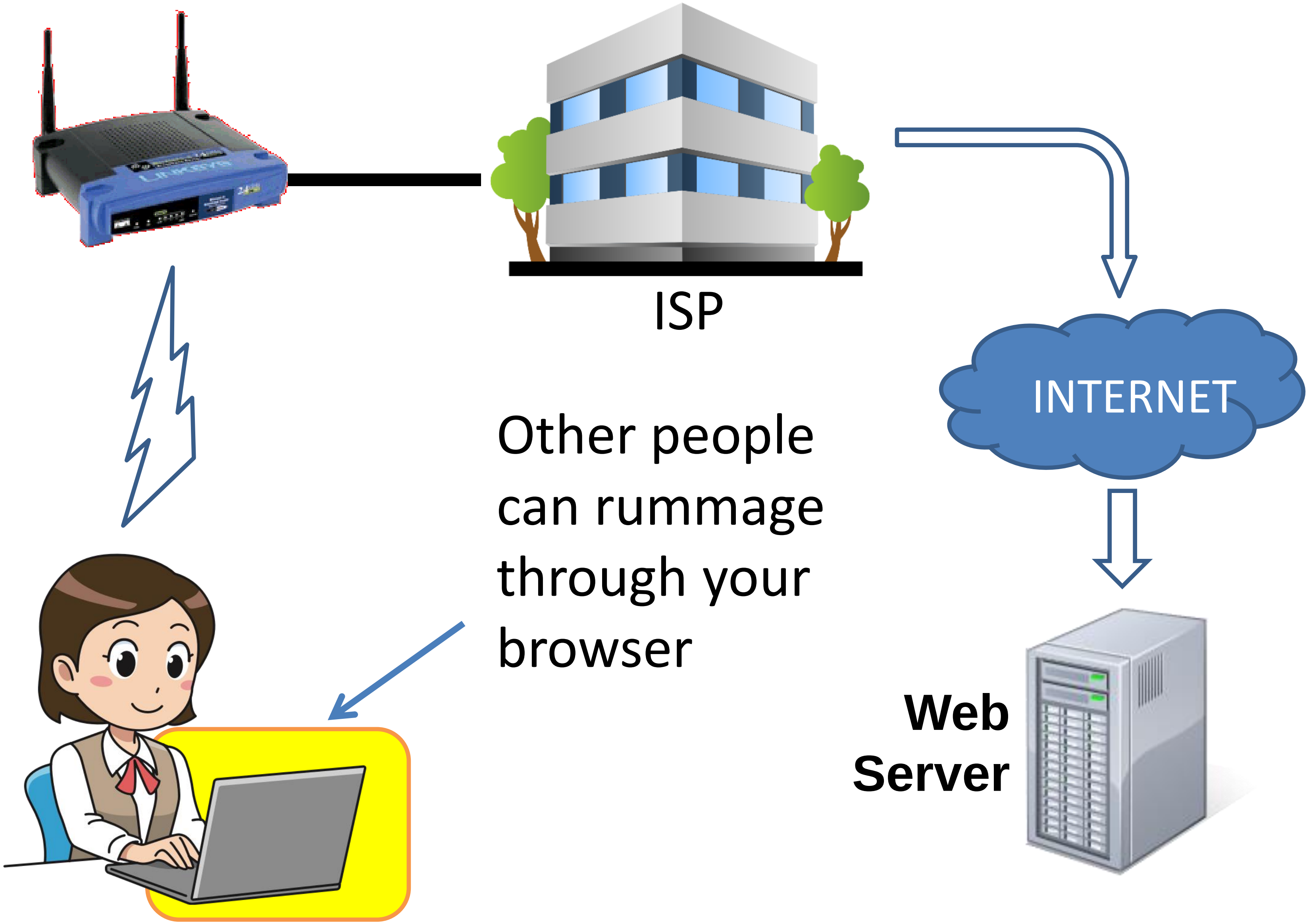


ISP

INTERNET

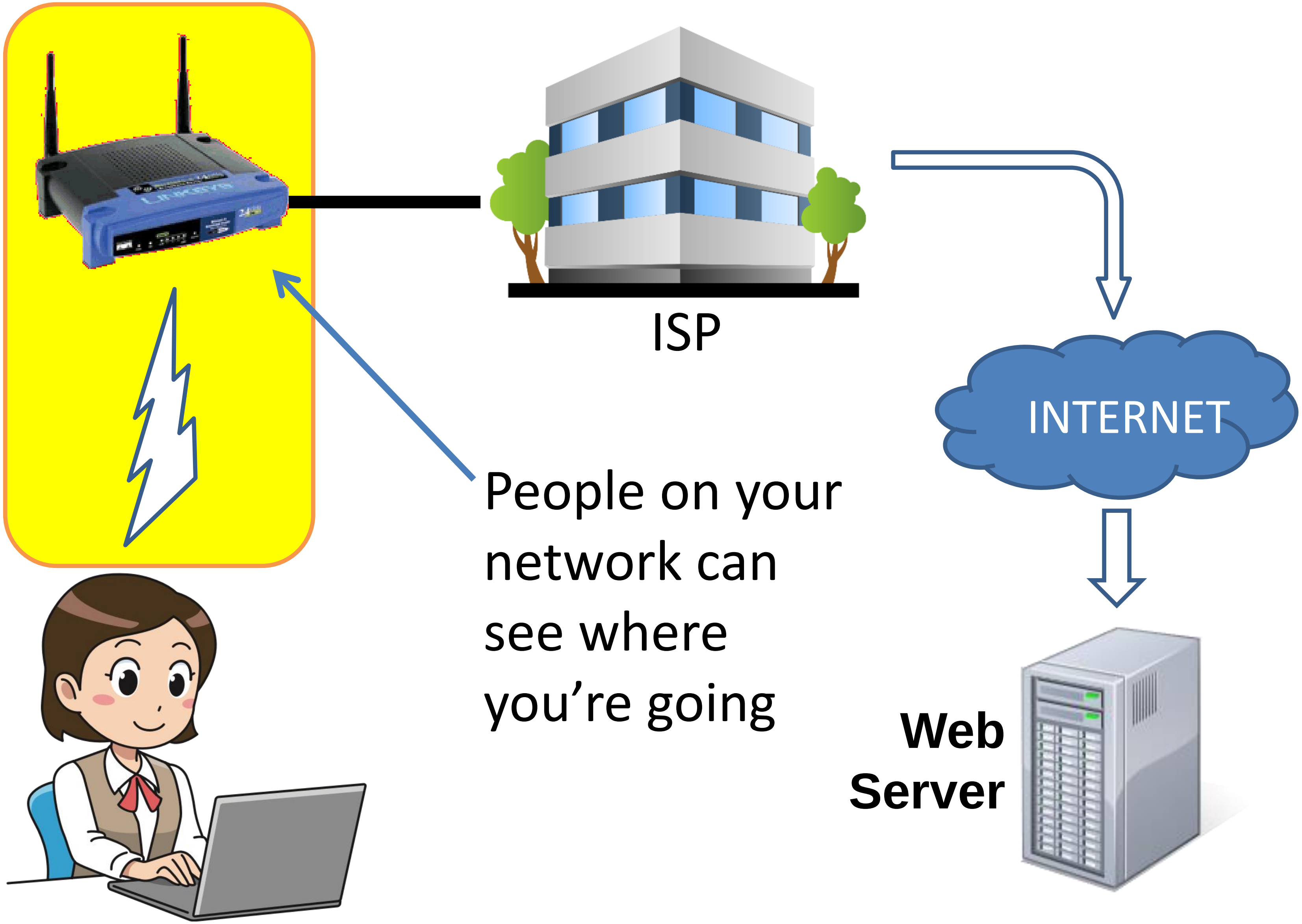
Web Server

Where It Goes Wrong



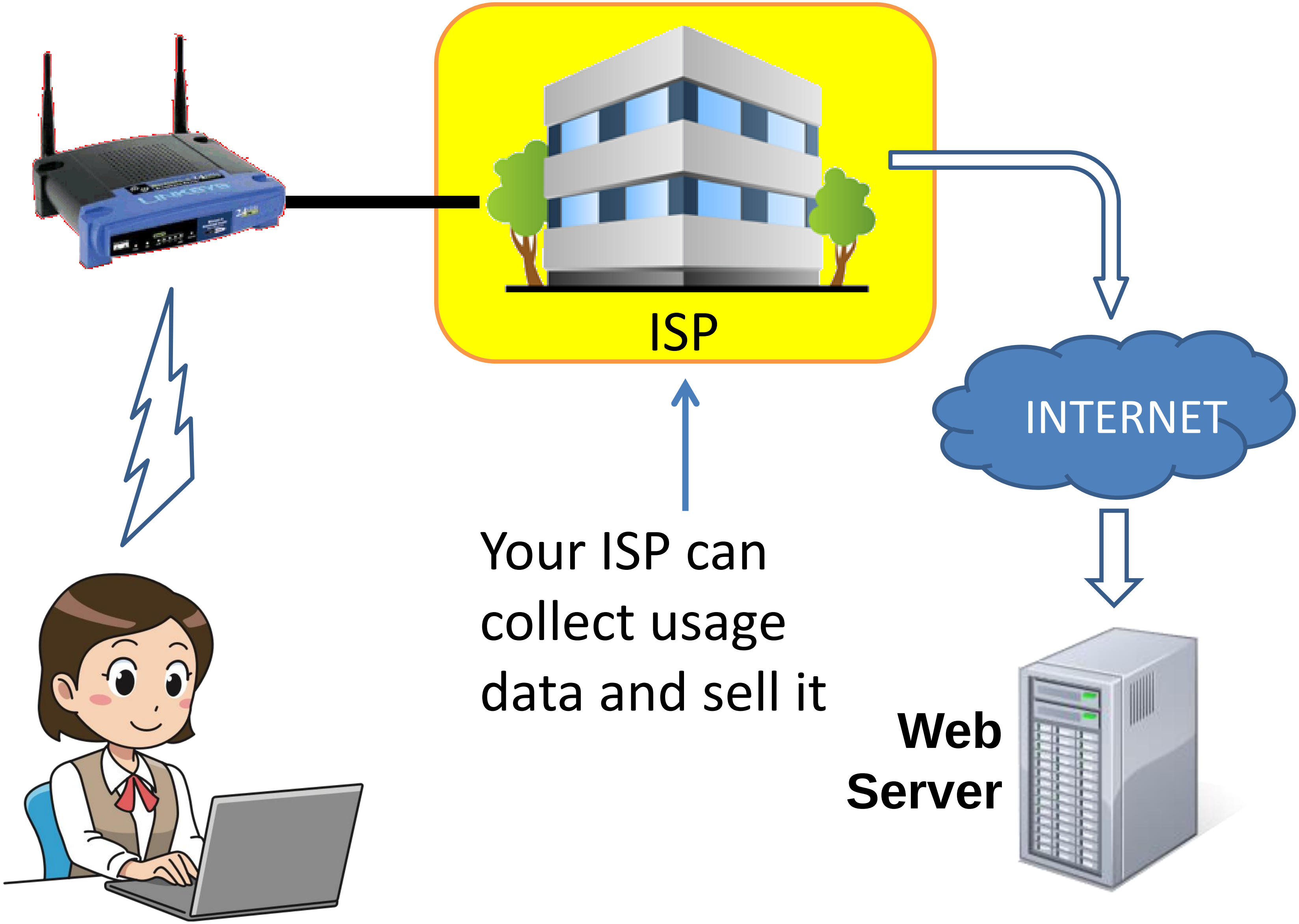
Other people can rummage through your browser

Where It Goes Wrong



People on your network can see where you’re going

Where It Goes Wrong



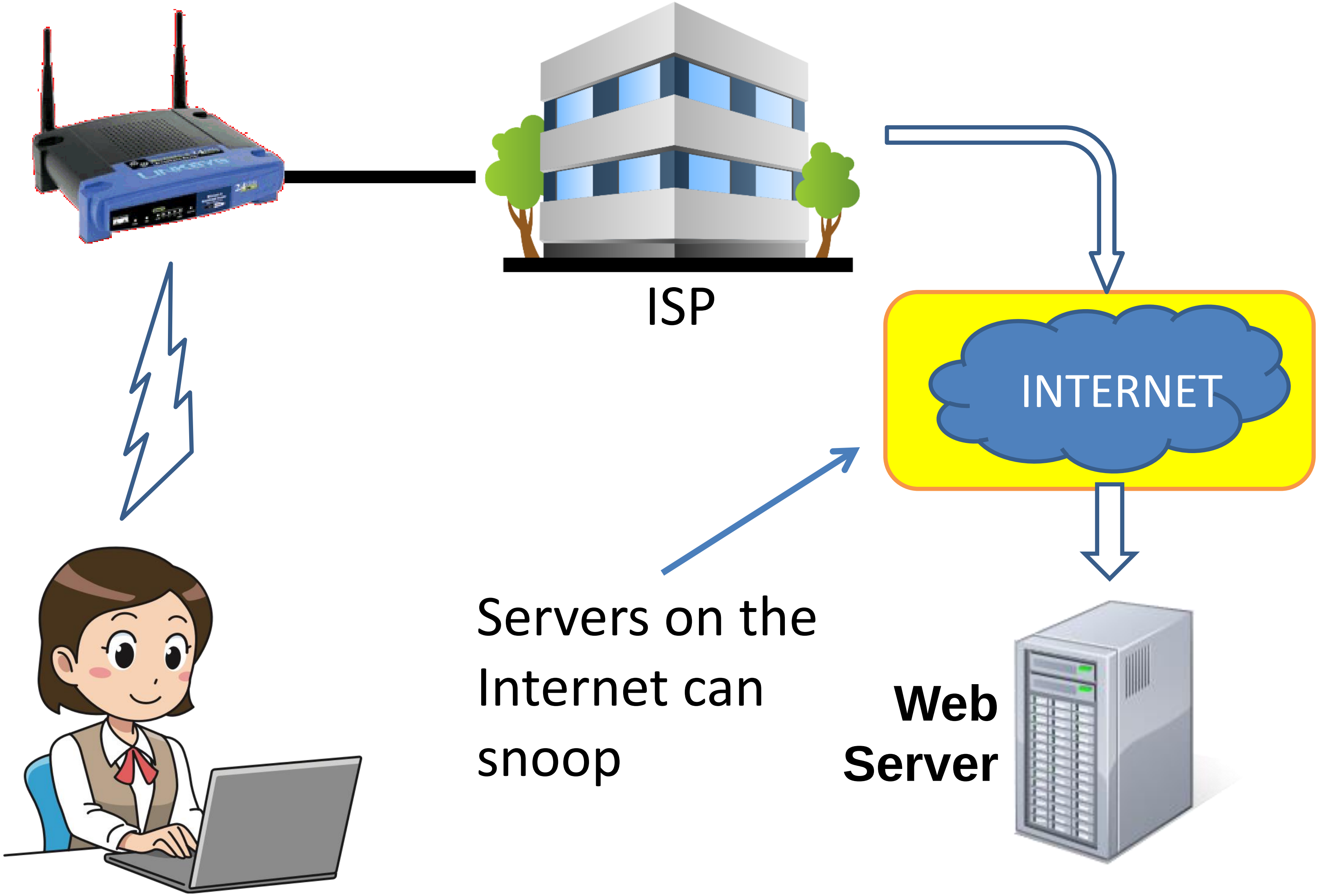
ISP

INTERNET

Your ISP can collect usage data and sell it

Web Server

Where It Goes Wrong



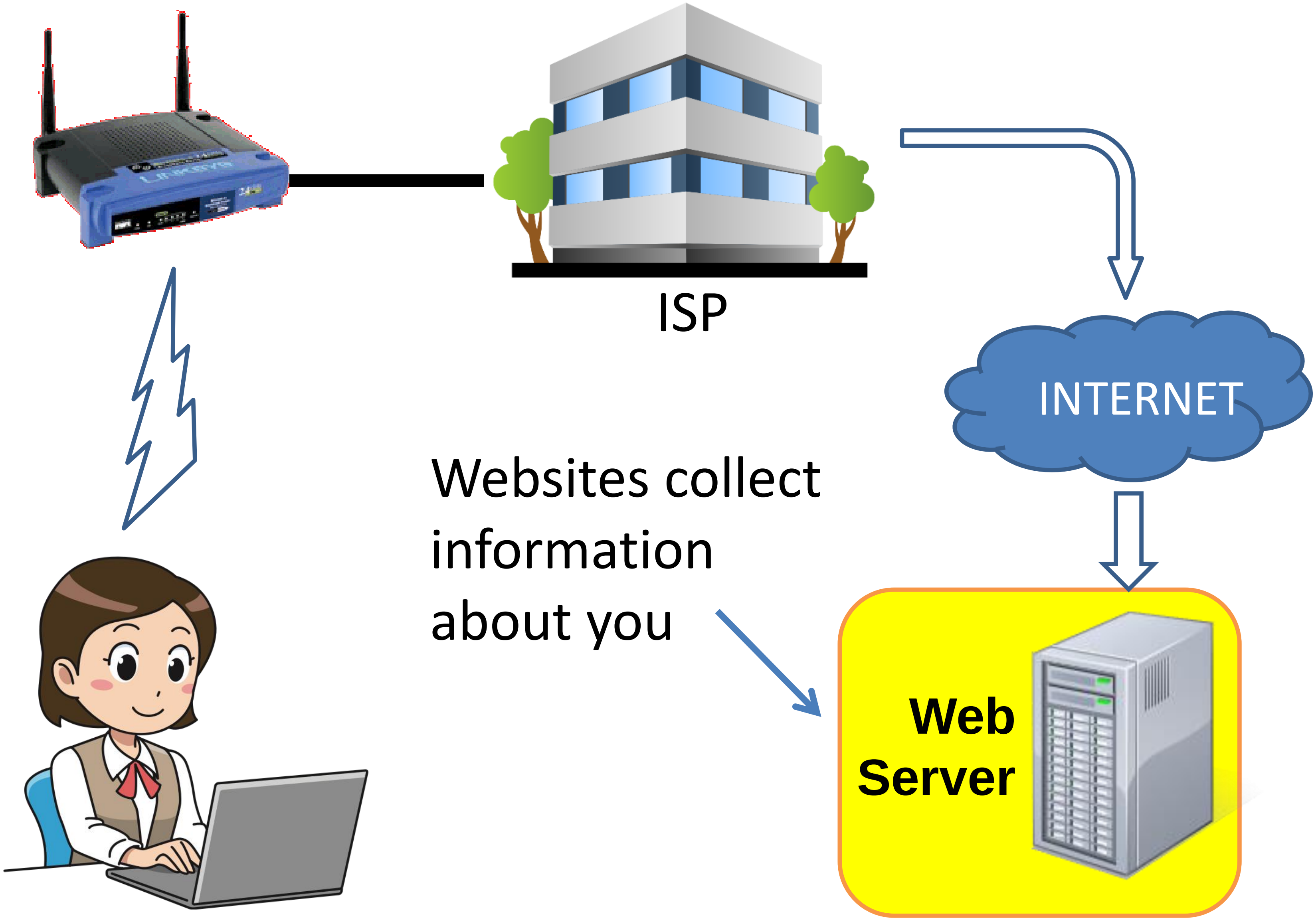
ISP

INTERNET

Servers on the Internet can snoop

Web Server

Where It Goes Wrong

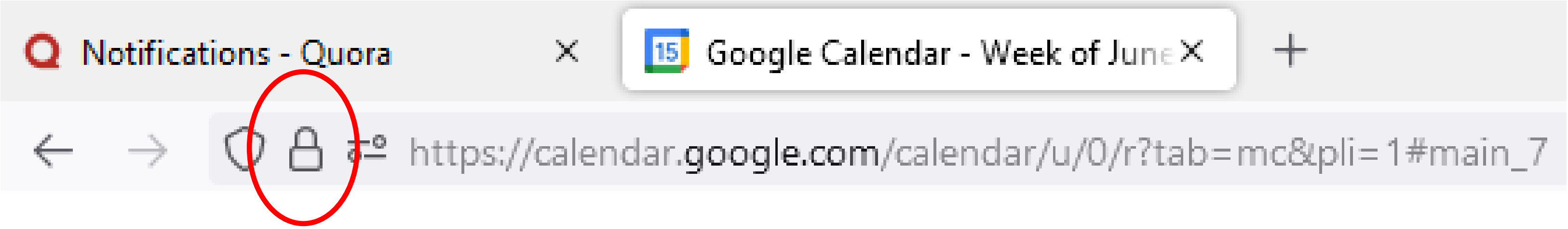


Websites collect information about you

Browser Privacy

HTTPS - Most Important Tip

- Use HTTPS for all sites



Notifications - Quora

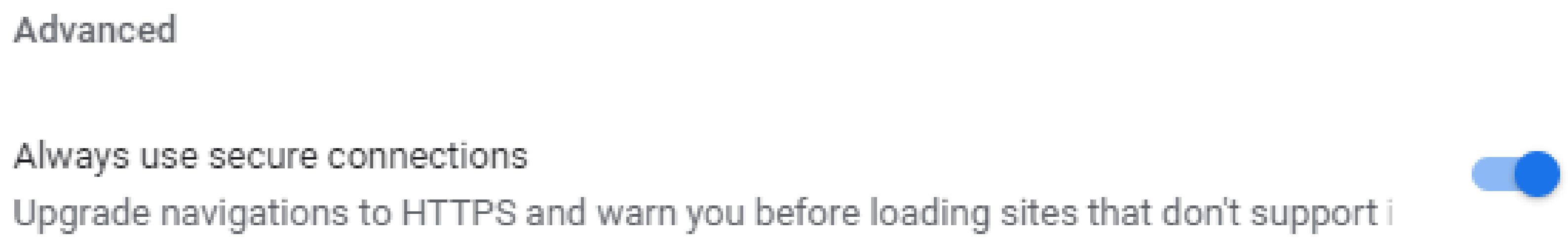
Google Calendar - Week of June

https://calendar.google.com/calendar/u/0/r?tab=mc&pli=1#main_7

- Hides browsing content, but snoopers could still see where you go

Force HTTPS

Force the use of HTTPS for all sites



Advanced

Always use secure connections

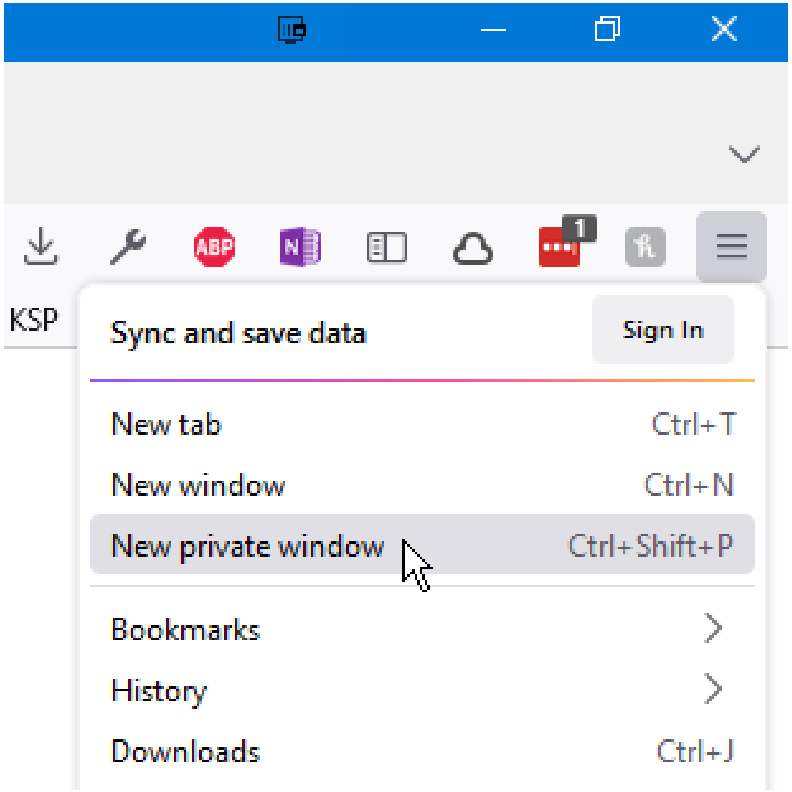
Upgrade navigations to HTTPS and warn you before loading sites that don't support i

Public Hotspot Cautions

- HTTPS is vitally important
- Remember: Everyone can see where you’re going
- Paid networks offer no protection
- Turn your wireless radio off when not in use

Private/Incognito Mode

- Available on all browsers
- Does not save history or cookies
- Initially not logged in to any sites



KSP

Sync and save data Sign In

New tab Ctrl+T

New window Ctrl+N

New private window Ctrl+Shift+P

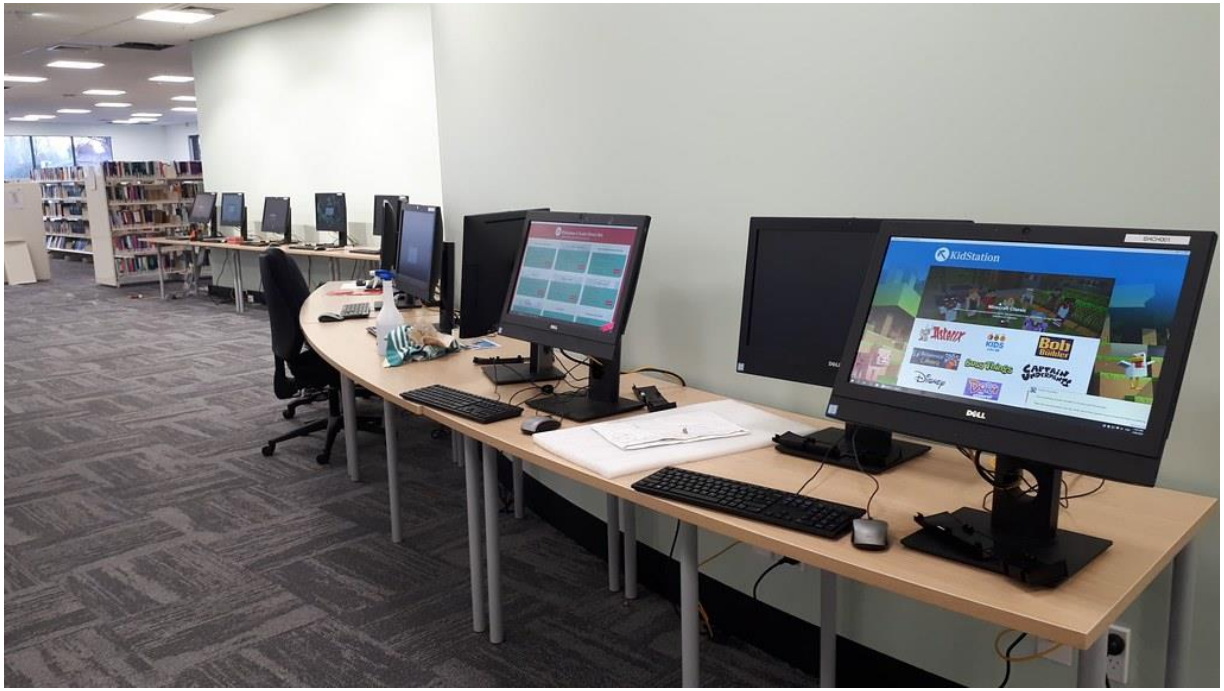
Bookmarks

History

Downloads Ctrl+J

Uses for Incognito/Private Mode

- Home computer: Hide the fact that you visited a website
- Public or friend's computer: Avoid saving any data



Firefox Portable

- Firefox browser which is not installed like a normal app
- Can be run from a flash drive
- All browser data is stored with the application

Firefox Portable

Q. Does Firefox Portable leave behind any personal data?

A. No. All your cookies and other data is self-contained on your portable device. At no time is any personal data stored on the local machine.

-- From Portable Firefox FAQ

Demo

Where to Get It

Firefox Portable:

https://portableapps.com/apps/internet/firefox_portable

Mozilla
Firefox.
Portable Edition

Firefox Portable: Where This Helps

- Prevents people from rummaging through your browser history
- Enables you to use a work or friend’s computer without leaving any data behind
- May slightly help prevent websites from gathering information about you
- Does **not** prevent spying on your local network, by the ISP

Using a Secure Browser

- Google wants your data, and Chrome helps them get it
- Use a better browser:

Vivaldi

Brave

Firefox

Waterfox

Search Engines

Search Engines

- Best to avoid Google if you can.
- Consider:

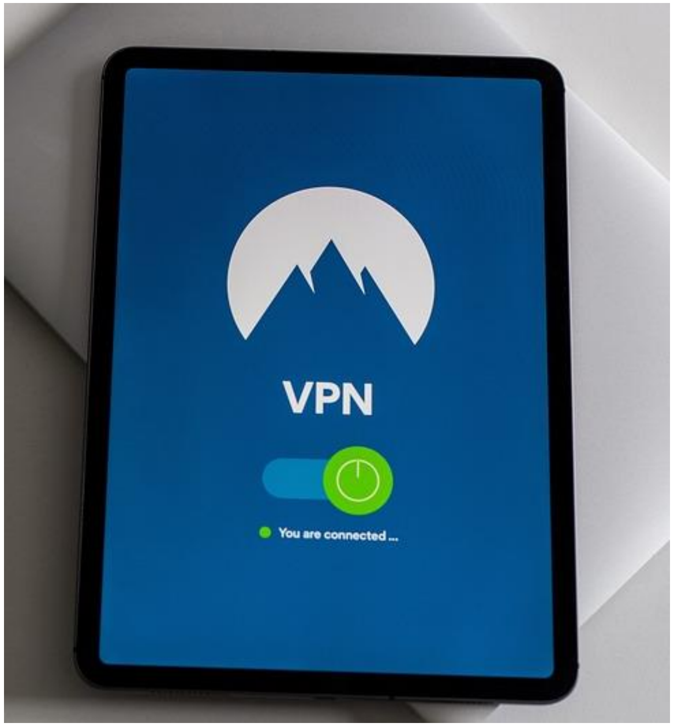
DuckDuckGo.com

StartPage.com

VPNs

VPN Overload

- Ads for VPNs are everywhere
- Hundreds of providers
- Dire warnings and extravagant claims



What is a VPN?

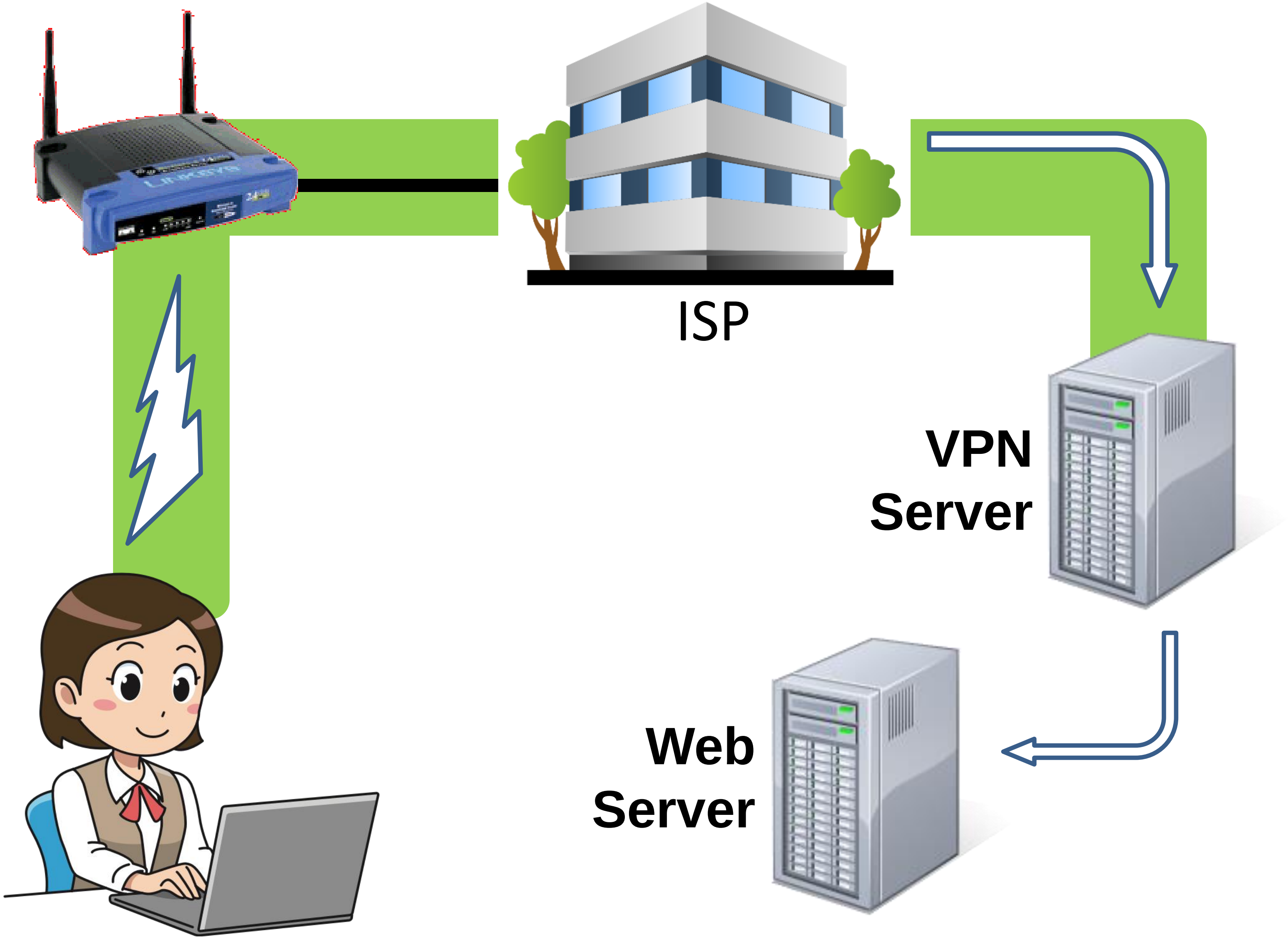
Virtual

Private

Network

... which really tells us nothing ☹

Path Through the Internet



How This Helps

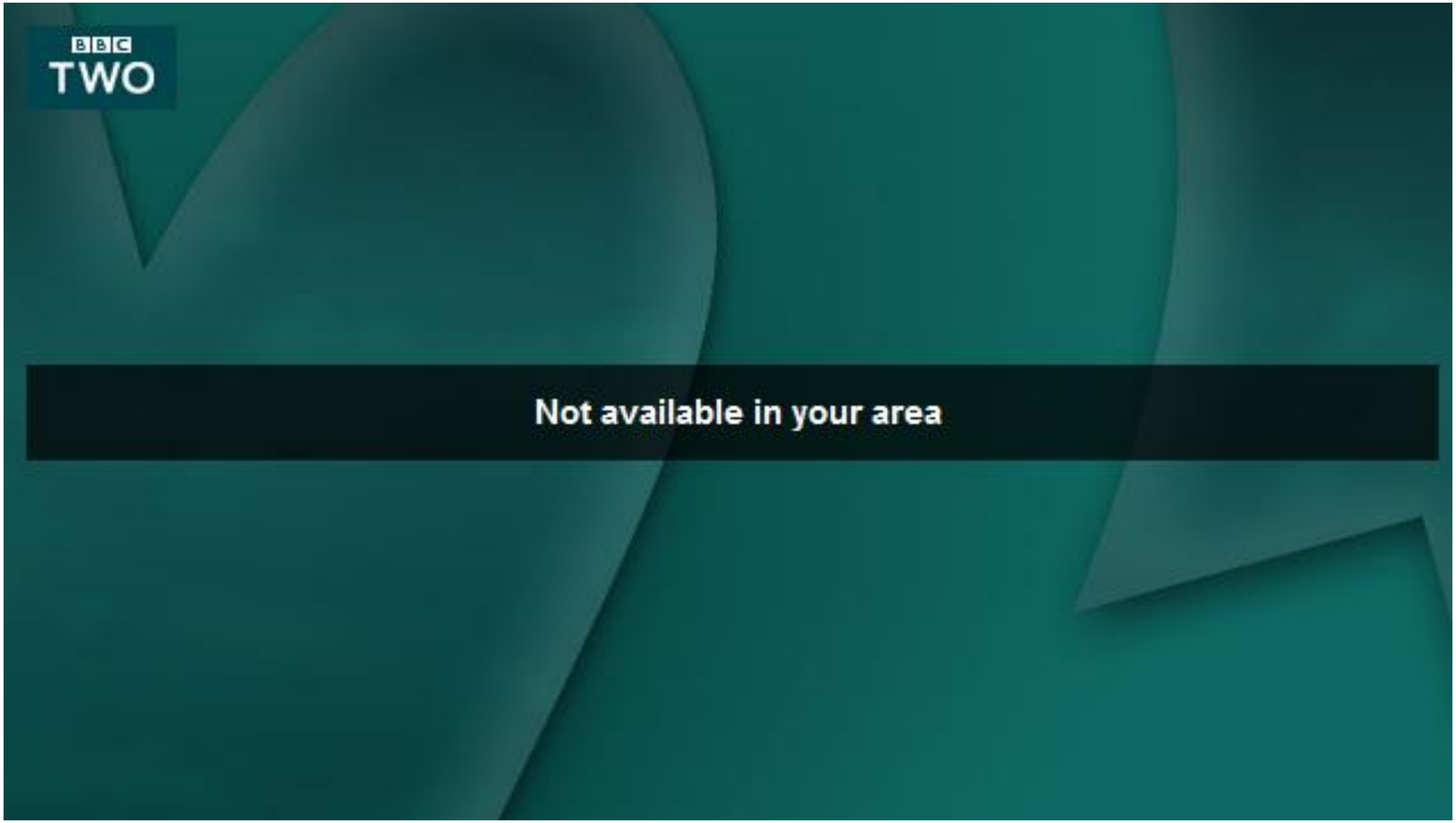
VPN

- People on your network and your ISP cannot learn anything about what you're doing
- Hides your IP address from website
- Does **not** affect what the website can learn about you **if you log in**

Where This Is Useful

- Hiding sites from your ISP
- Making sure no information is revealed on public hotspots

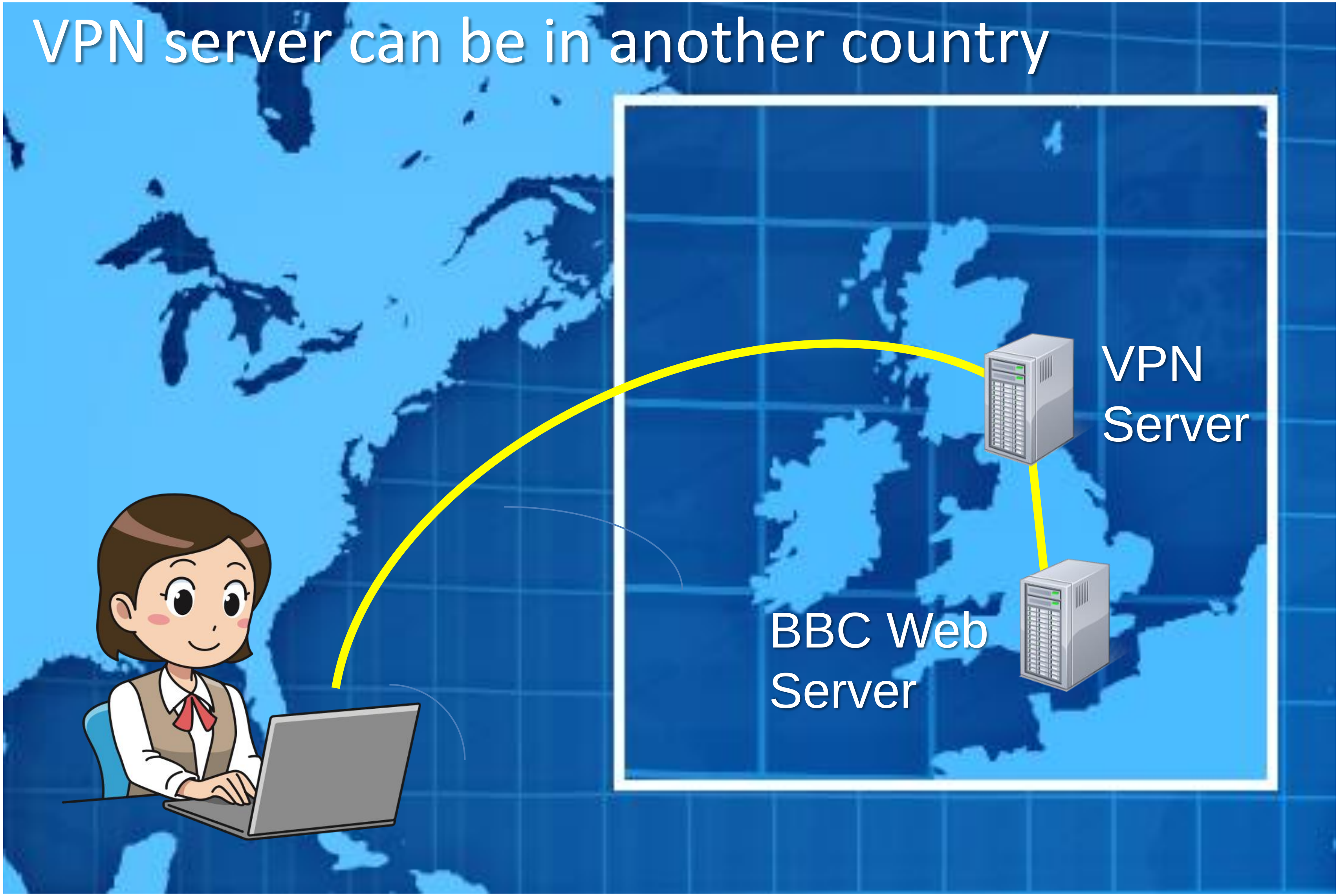
Additional Advantage of VPNs



Not available in your area

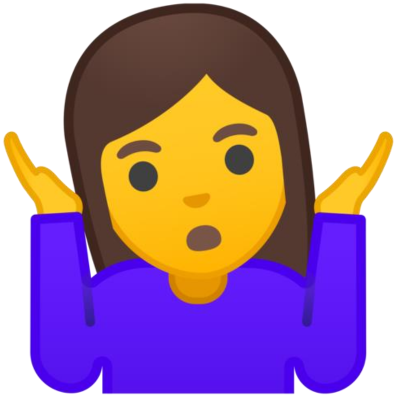
Addition Advantages

VPN server can be in another country



Reality

- Accessing content in other countries is hit-or-miss



What VPNs Don’t Do

- Don't protect you from malware and scams
- Don’t make you anonymous
- Don’t have anything to do with email

The Dark Underbelly of VPNs

- VPNs sometimes collect data on your, despite claims
- Several large companies own a majority of the VPNs
- 33% of VPNs owned by China
- VPN ads earn 40% commissions

Source: https://www.youtube.com/watch?v=8MHBMdTBlok

VPNs to Avoid

- Any free VPN (1clickVPN, FreeVPN)
- NordVPN
- ExpressVPN

VPN Recommendations

TunnelBear

MULLVAD

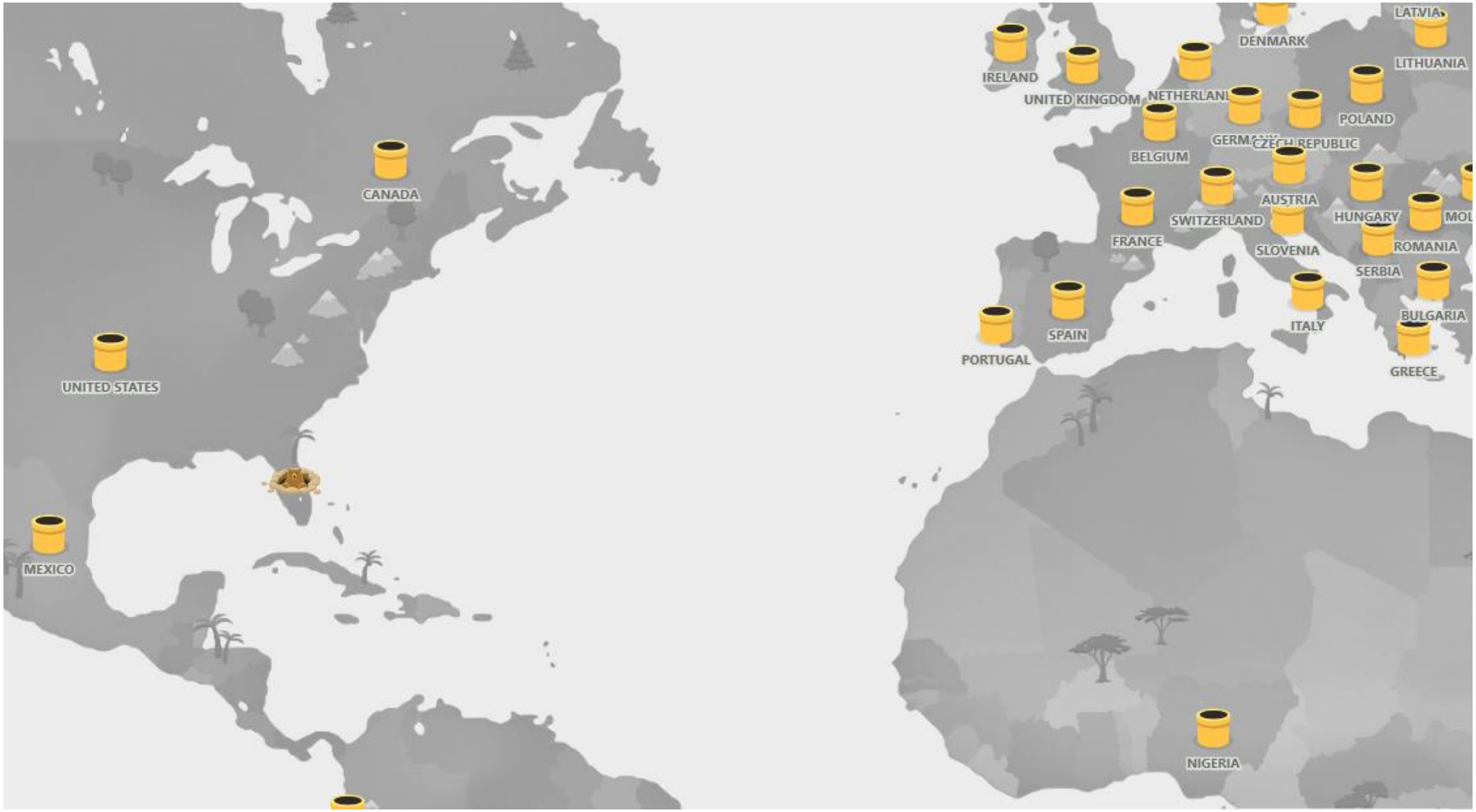
vyprvpn

IVPN

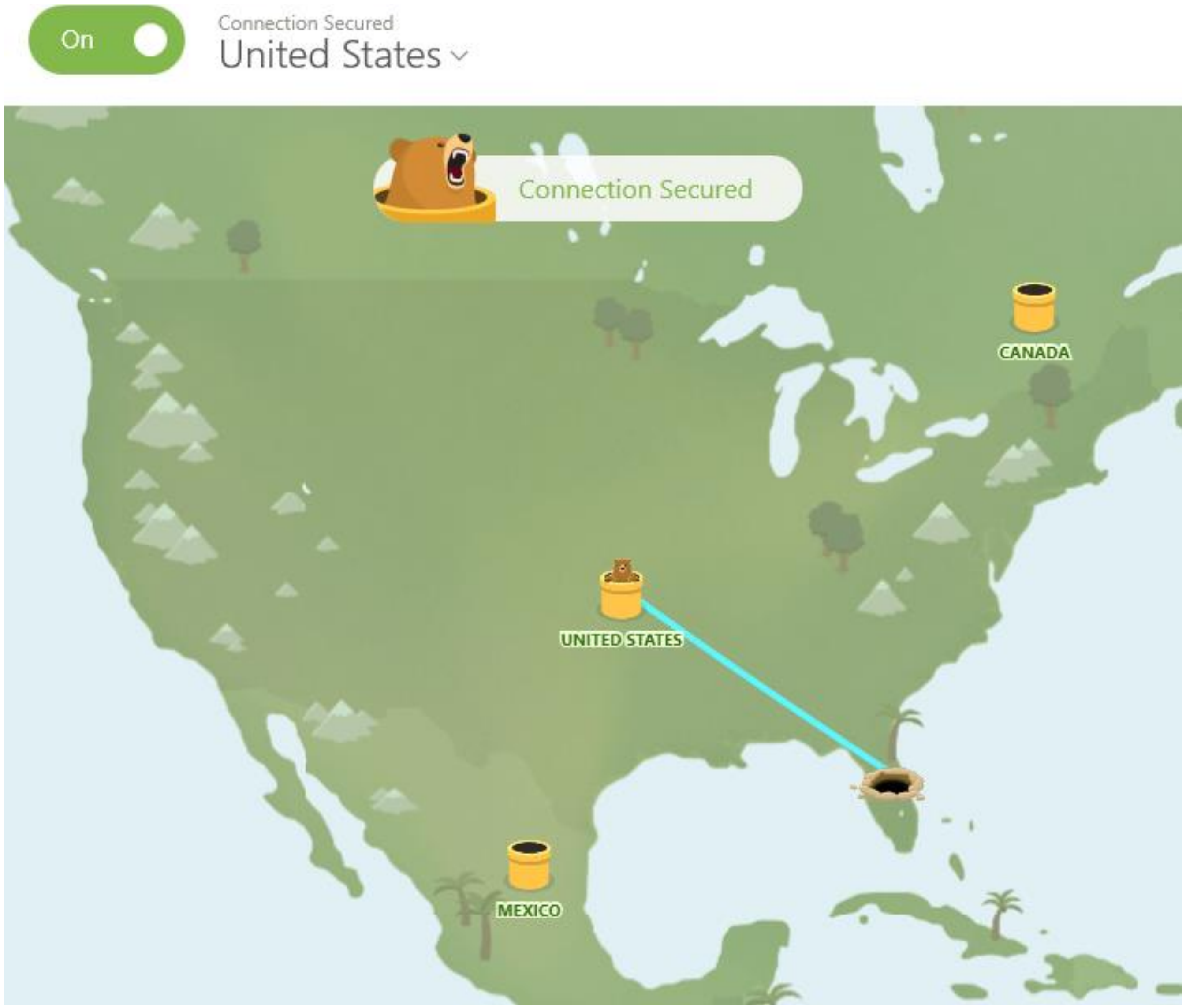
ProtonVPN

Demo

TunnelBear


LATVIA
DENMARK
LITHUANIA
IRELAND
UNITED KINGDOM
NETHERLANI
POLAND
GERM
CZECH REPUBLIC
BELGIUM
CANADA
AUSTRIA
HUNGARY
MOL
SWITZERLAND
FRANCE
ROMANIA
SLOVENIA
SERBIA
BULGARIA
ITALY
SPAIN
PORTUGAL
GREECE
UNITED STATES
MEXICO
NIGERIA

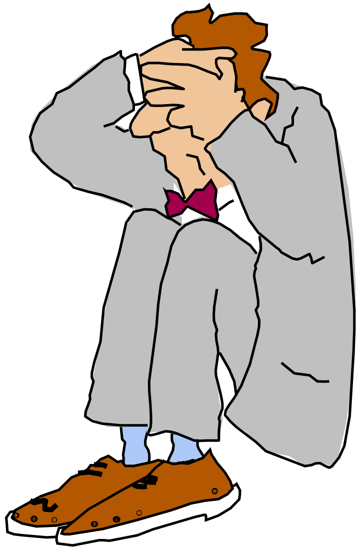
TunnelBear


On
Connection Secured
United States
Connection Secured
CANADA
UNITED STATES
MEXICO

Email Privacy

Email Privacy

- There isn’t any
- Email transmissions are “in the clear”
- Email passes through many servers, owned by …. ???
- Remember the advice your mother gave you growing up …



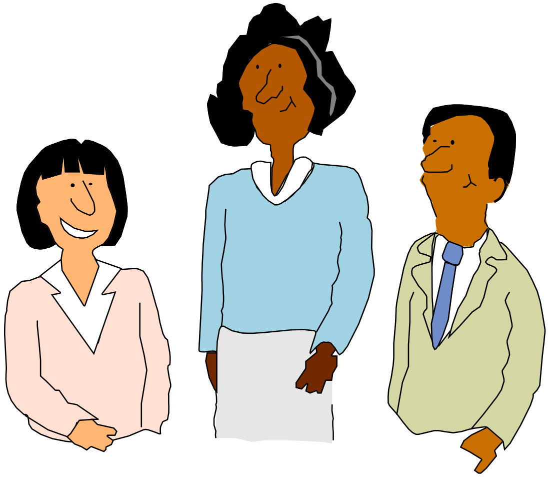
Sage Advice from Mom

> “ Be careful with that thing. You don’t know where it’s been. ”
>
> *-- Mom*

Email Solutions

- The free providers don’t respect your privacy
- Consider a secure email provider:
  - ProtonMail
  - Startmail
  - Tutanota
  - Zoho Mail
  - Thexyz

https://cybernews.com/secure-email-providers/



Another Email Alternative

- For secure communication, use encrypted attachments
- Both people use the same software
- Must exchange passwords ahead of time
- Suggestion: AES Crypt

Demo

Disposable Email Addresses

- Many free sites provide disposable email addresses
- Great for registering for newsletters or signing up for services
- Some services:
  - Email address good for a short time
  - Email addresses good long-term

Demo

10minutemail.com

fakemail.net

Disposable Email Addresses

- Don’t depend on these services for really secure stuff

Phones

Phone Cautions

- Turn of Wifi when not in use
- Assume that your phone is always being tracked

Where To Get It

Browsers

Firefox Portable	https://portableapps.com/apps/internet/firefox_portable
Vivaldi	https://vivaldi.com
Brave	https://brave.com
Firefox	https://www.mozilla.org/en-US/firefox
Waterfox	https://www.waterfox.net

VPNs

TunnelBear VPN	https://www.tunnelbear.com
Mullvad VPN	https://mullvad.net
VyprVPN	https://www.vyprvpn.com
IVPN	https://www.ivpn.net
ProtonVPN	https://protonvpn.com

Secure Email

ProtonMail	https://proton.me
StartMail	https://www.startmail.com
Tutanota	https://tutanota.com
Zoho Mail	https://www.zoho.com/mail
Thexyz	https://www.thexyz.com

Software

AES Crypt	https://www.aescrypt.com

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