What is the Internet doing to me? (witidtm 2021/2022 - TEU00311)

Lab Sessions

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https://github.com/sftcd/witidtm
https://down.dsg.cs.tcd.ie/witidtm

Public Service Announcement

- Don't be here if: symptoms, waiting for test result etc.

- Face coverings (e.g. masks) are mandatory (except: verified medical reason)

- Maintain 1m distance in lab

- Clean your workstation

- Take a pic of your seat number/surroundings (potential contact tracing)

- We have to stop at :45, so we'll start at :00 sharp

- Many more details at:

  https://www.tcd.ie/about/coronavirus/phased-reopening-plans/assets/student-induction.pdf
  https://www.tcd.ie/about/coronavirus/

F2F vs. Hybrid/Remote

- Definition:
  - "remote" == "we're all online"
  - "hybrid/remote" == "many of us are in one room but some are still online"
- Reminders for me: 1) Check if anyone is hybrid/remote and see how they'd like to proceed.
  2) Don't forget to Hit "record" !
- We'll try help hybrid/remote folks do the same work as those in-person (but we're learning as we go...)
  - Likely hybrid/remote people may need to send video for this to be useful
  - Remote video will default to being displayed in the lab, but I could turn off that screen for a bit if needed (video would still be sent to the WebRTC call though...)
- If the hybrid/remote experience sucks really really badly compared to being in the room, I'll try organise a separate session for those who **cannot** make it to college (if you really "cannot" as opposed to "just didn't")

Today's Goals

- Login to SCSS account and/or get your laptop online

- Fire up a "new" browser

- Explore settings

- Watch HTTP traffic (shift-ctrl-I)

- Find the "worst" site you can

  – NSFW disallowed, otherwise you define/justify "worst"

Stretch goal

- If we get the above done great, if not, we can do more next week

    – IOW – I'm very unsure how well this'll go;-)

- Could be some people get to the stretch goal today or we look at it in future...

- Stretch goal: HTTP archive (.har) file generation and a bit of analysis

Login/get-online

- Desktop logins: no "domain", use SCSS password, not your TCD password (if those differ), so e.g. if your TCD email is bloggsj14@tcd.ie then you enter "bloggsj14" as the username

- Get online: we'll deal with things as they arise

- After you're done: see if anyone else needs (1m distanced) help

I did check that username... :-)

"Your message to bloggsj14@tcd.ie couldn't be delivered.
A custom mail flow rule created by an admin at tcdud.onmicrosoft.com has blocked your message.
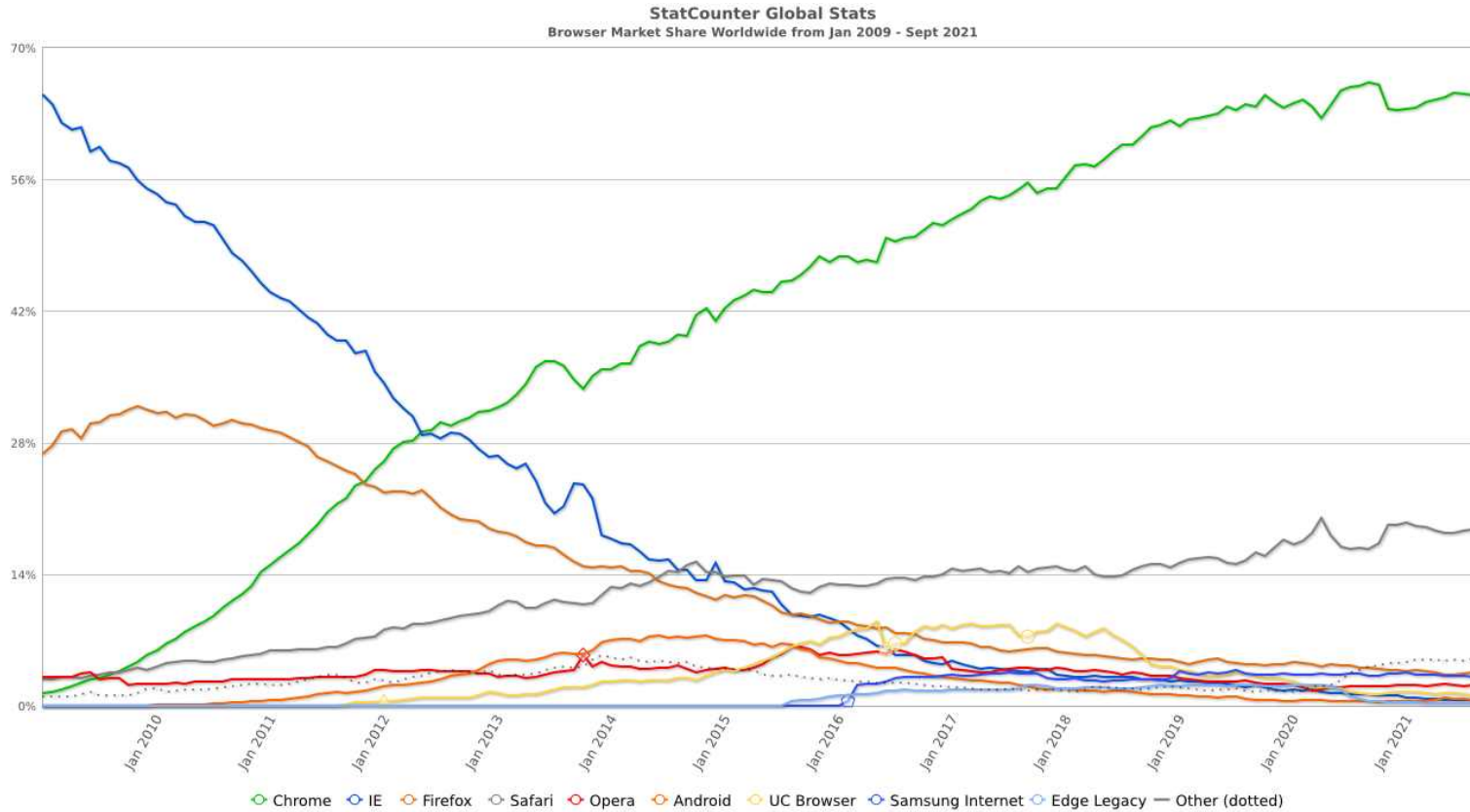5.1.1 The e-mail service at tcd.ie does not know this email address."

GOTO "the web" slides 16-22

https://down.dsg.cs.tcd.ie/witidtm/lectures/2021-2022/200-web.pdf

Browser Hygiene

Browser worldwide market share

StatCounter Global Stats
Browser Market Share Worldwide from Jan 2009 - Sept 2021

2009-2021

Chrome
Safari
Edge
Firefox
Opera
Android
UC browser

...
Brave
Vivaldi

Legend: ○ Chrome ○ IE ○ Firefox ○ Safari ○ Opera ○ Android ○ UC Browser ○ Samsung Internet ○ Edge Legacy ── Other (dotted)

https://gs.statcounter.com/browser-market-share#monthly-200901-202109

Overall browser landscape

- Browser defaults are chosen by browser implementers (Google, Mozilla, Microsoft, Apple, Handset vendors...)
  - Generally they allow Javascript and cookies, do telemetry, try get you to login, keep lots of state ...
- Historically, browser-makers seemed to care most about market share
  - Performance and rendering were their main concerns as they lose market share if they're slower or sites don't render (well)
- They started getting significantly better at security a while back (2013+)
- Some browser-makers are starting to get a bit better at privacy
- IMO they don't behave as if they think you should be the one in control

Why browser hygiene matters...

- Developer of popular (300k installs) chrome ad blocking extension hasn't time to keep maintaining that...

- Someone offers to buy the code and promises to maintain it...

- That someone adds malware to the code that steals cookies and session tokens, and maybe more...
    - That "someone" seems to be a repeat offender

- Result: 300k very unhappy people changing passwords all over and one very very embarassed original maintainer whose name is now mud (for some).

- Happened last year:
  https://github.com/jspenguin2017/Snippets/issues/2

My browser setup (1)

- Default browser: FF "nightly" + NoScript/Ghostery & disallowing cookies, with some white-listed sites, and search via DuckDuckGo ("!g" works too, if needed:-)
  - This is the only browser that saves logins, but not for sensitive things (we'll consider passwords later)
  - Some sites don't work with the above; mostly: screw 'em

- Opera for managing home network

- Tor Browser: If searching for anything sensitive (e.g. medical info)

- If-need-be: vivaldi or chromium/incognito with no write-access to disk and so that it shoots it's own brain out on exit (at least I hope so;-)
  - Use that e.g. for airline/hotel bookings

- If-all-else-fails: Brave

My browser setup (2)

- If I really have to watch some crappily DRM protected video, sometimes googlechrome (which differs from chromium on linux).

- On phone: Sailfish OS (not Apple and not Android) - sailfish browser with no JS/no cookies and 2ndary open-kimono browsers if-need-be (Webcat/Web pirate)
  - Or a 2nd phone phone (android, yuk!) with Brave or FF

- Recommend you figure out some browser-hygiene you consider ok and follow that
  - Requires some self-discipline!
  - Be willing to help others do the same!

Lab: play with "new" browser

- Don't use one that has e.g. stored credentials for some account you care about – basically don't muck up your daily-driver setup

- Lab machine browsers can probably be reset easily enough (TBC)

- On own laptop: install one you've not used before
    - Possibles: Firefox, edge, vivaldi, brave, opera...
    - More exist, but start being careful if you go beyond the above as esp. less widely used browser downloads have been known to contain malware from time to time (but mostly on phones)

Lab: watch http traffic

- Open browser
- Type shift-ctrl-I (or equivalent) to open developer interface
- Re-size screens to taste
- Choose "network" tab in developer pane
- Try loading a few sites and watch what happens
  - DO NOT load NSFW sites!
- Say which site is the "worst" from your POV and why
  - Just yell/put up hand when you have a "worst" to nominate
  - We'll pick a winner if we've time – Prize == applause:-)

Lab: stretch goal

- Figure out how to save an HTTP archive file (.har)
- Figure out how to view .har files
- Figure out how to diff .har files
- See what changes between seemingly identical browser sessions
  - ...any tracking?