

# Summary & closing ...

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# A pleasure to host you ...

- A huge amount of work on-display here.
- German airline strikes mean we miss out on some of the original authors.
- Still: the airline industry has achieved “net zero”
- Passport forgetfulness from Schengen types:
- **Sorry to miss you !**

(profit over its entire industry lifetime.)



Crypto.com – fortune favours the brave [flier](#)

**An amazing diversity of  
contributions & contributors  
& partners**

**A wise man once said:**

A wise man once said:  
**nothing**

A wise man once said:  
nothing

*However, since I was scheduled ...*

# Nevertheless ... look into the future

## Who can we turn to ?

- Bill Gates – “The Road Ahead” (pg 265) – 1995 ...
  - *“The obvious mathematical breakthrough would be development of an easy way to factor large prime numbers.”*
- Bill Gates – “[The Age of AI has begun](#)” (March 2023)
  - *“So excited ... in awe ... inspired ...”*
  - *“Global **health** and **education** are two areas where there’s great need and not enough workers to meet those needs. These are areas where AI can help **reduce inequity** if it is properly targeted. These should be a key focus of AI work, so I will turn to them now.”*

# Larry Ellison

*"The only way I can understand the computer industry; the computer industry is the only industry that is more **fashion driven** than Women's fashion."*

**"What the hell is cloud computing" - September 2008**

# GPT ...

Who(?) better to ask about the future ?

- Generative Pre-trained Transformers
  - Or – “Predict a plausible next word machines”
- Are you a “Stochastic parrot” ?
  - *ie. a person who speaks without thinking, much like a parrot might repeat words or phrases without understanding their meaning*
  - [On the Dangers of Stochastic Parrots: Can Language Models Be Too Big?](#) (which paper lost two of its authors their jobs)

Lets try asking about the present ... (with thanks to Arnaud Versini)

# Ask the SALAMI

Stefano Quintarelli

(Systematic Approaches To Learning Algorithms And Machine Inferences)

- can you explain how **golang** is used in the libreoffice code base for networking ?

*As far as I know, Go (also known as Golang) is not used in the LibreOffice codebase for networking.*

- please explain how **rust** is used in libreoffice

*As far as I know, Rust is not used in the LibreOffice codebase, at least not in any significant way. LibreOffice is primarily written in C++, and other languages such as Python and Java are also used for specific tasks.*

- So far - so sensible: (all prompts, paid-for, Chat-GPT - 2023-03-24)

# Answer a bit long: lets shorten it ...

- *please explain how rust is used in libreoffice*

+ can you explain how rust is used in the libreoffice code base in one sentence please ?

```
Rust is used in the LibreOffice code base to improve memory safety and performance of selected critical components, such as LibreOfficeKit, which provides a document editing interface to other applications.
```

Wow ! Wait but what ? ...

```
$ git grep -I -i rust | grep -v -i trust | grep -v 'svg>' | grep -v 'block-list:' | grep -v -i frustum | grep -v -i upperustr
```

```
grep: (standard input): binary file matches
```

```
sc/source/ui/view/viewfunc.cxx:    // It is frustrating to be unable to see content in mis-sized cells.
```

**Fun fact:  
rust – is not used in LibreOffice**

# So where exactly is it (not) used ? ...

\$ can you explain how rust is used in the libreoffice code base in four short bullets please

Sure, here are four short bullets:

1. Rust is used for selected critical components of LibreOffice, such as LibreOfficeKit, to improve memory safety and performance.
2. Rust code is integrated with C++ code in LibreOffice using Rust's Foreign Function Interface (FFI) and C bindings.
3. Rust is used for implementing parallel algorithms in LibreOffice, such as in the experimental multi-threaded formula calculation engine.
4. Rust is used in LibreOffice's online version, Collabora Online, to improve performance and scalability.

- \$ can you explain how rust is used in the libreoffice code base please ?

Yes, Rust is used in the LibreOffice code base in a few different ways. Here are a few examples:

1. Uno: LibreOffice uses a component-based architecture called Uno (Universal Network Objects) to allow different components of the suite to communicate with each other. Rust is used to implement some of the Uno interfaces, such as the udkapi library, which provides an interface to create and manage Uno objects from Rust.
  2. SVG Import: LibreOffice uses Rust to implement the SVG Import filter, which allows SVG files to be imported into LibreOffice documents. The **Rust implementation is faster and more memory-efficient** than the previous implementation in C++.
  3. UNO Language Binding: Rust is also used to implement the UNO Language Binding for Python, which provides a Python interface to Uno objects. This allows Python scripts to interact with LibreOffice documents and applications.
  4. Document Foundation SDK: The Document Foundation SDK (Software Development Kit) includes some Rust libraries, such as the rust-uno library, which provides a Rust interface to Uno objects. This allows Rust developers to write LibreOffice extensions and applications using the Rust programming language.
- Overall, Rust is used in LibreOffice in various ways, such as for performance optimization, improving memory efficiency, and providing interfaces to other languages. The use of Rust in LibreOffice is an example of how modern programming languages can be used alongside established codebases to provide new functionality and improve performance.

***Ship it!***

*Global health & education  
a curious target ...*

# Liberating the value of truthfulness

As programmers: avoid rat-holes ...

- Our grip on reality is precious ... nurture the belief in determinism!

As business-people: eg. Collabora Productivity culture doc on joining:

- Accuracy
  - accuracy is a core value: if you say something and you are not sure - equivocate:
    - "I **-think-** that it is 100Kb of RAM" vs. "it **is** 100Kb of RAM"
      - these convey different information, and what you say - may end up in front of a customer with our reputation on the line.
  - Unwinding inadvertent falsehoods – extremely expensive

Politics → appearing competent through stochastic parroting ...

**Flight to quality / truthfulness ?**

**Partners are integrating AI fast [!]  
will be very useful for generating  
text, images & design options  
under expert supervision**

*“We tend to overestimate the effect of a technology in the short run  
and to underestimate the effect in the long run.”*

**Roy Amara - “President of the Institute of the Future”.**

*Do you have to surrender all of  
your data to a humanities  
professor in a box?*



**Meanwhile the web future:**

# The web: an open ISV platform ...

## Unhelpfully inflammatory:

*"[Netscape will soon reduce Windows to] a poorly debugged set of device drivers."*

(Marc Andreessen, 1995)

*"We tend to overestimate the effect of a technology in the short run and underestimate the effect in the long run."*

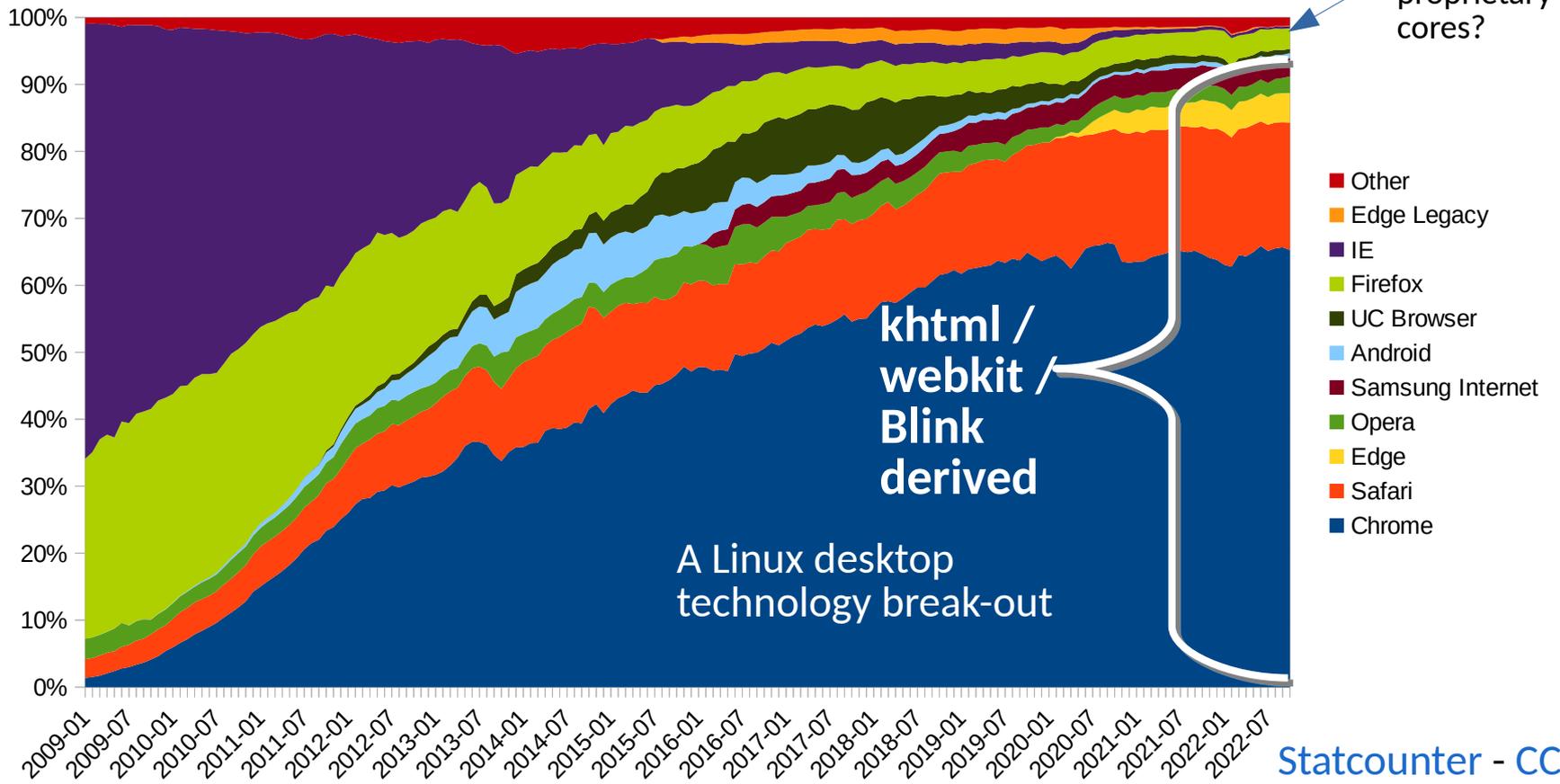
Roy Amara - "President of the Institute of the Future".

## The Web APIs: wildly attractive:

- Cross-platform, cross device form-factor ...
  - by 2012 (15+ years later) → we could even generate & play web-audio !
- Has broken the hold of Windows API for vertical-apps ... web apps everywhere.

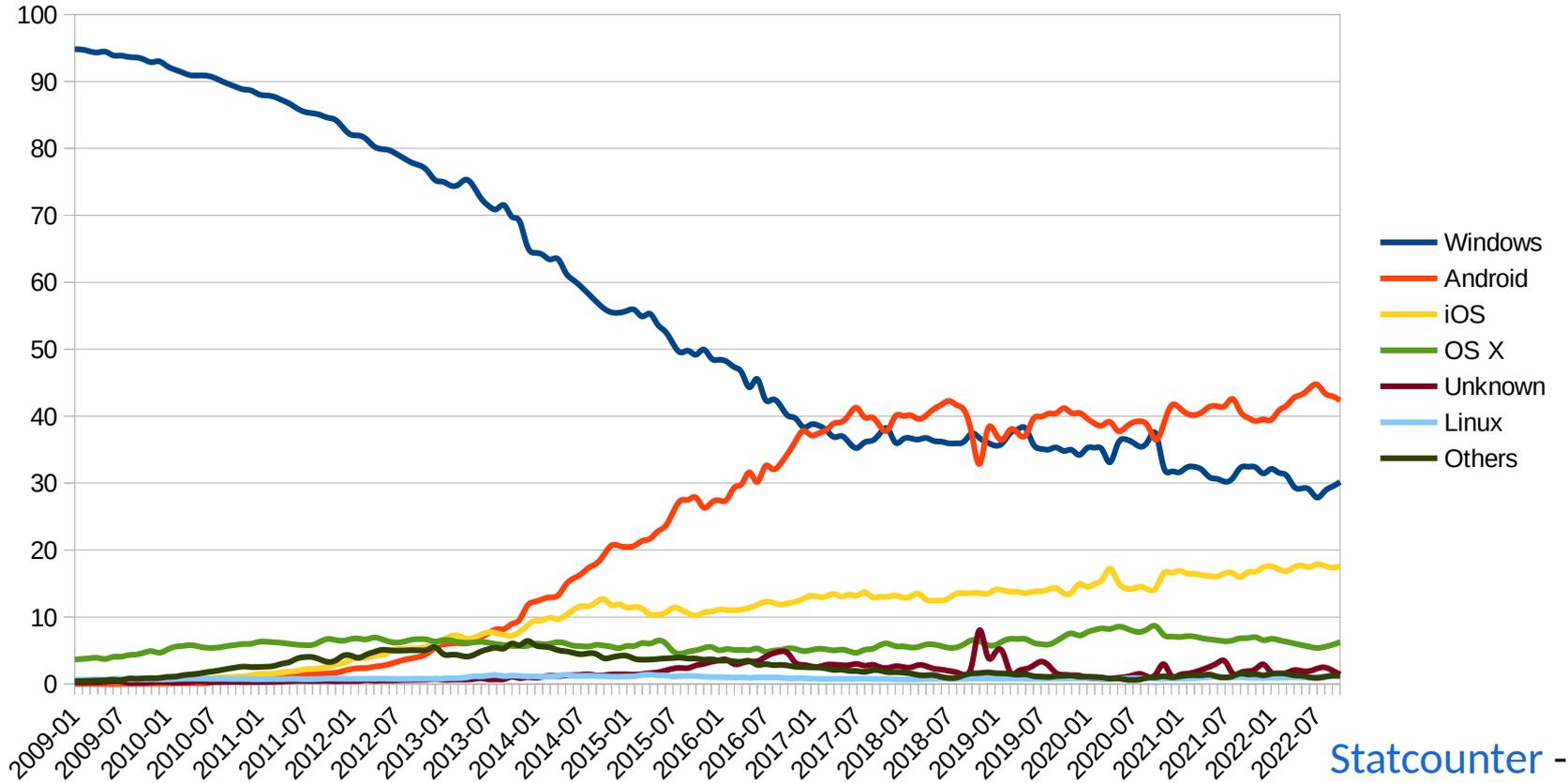
# Ad. supported FLOSS: fat PC apps

Browser usage - statcounter



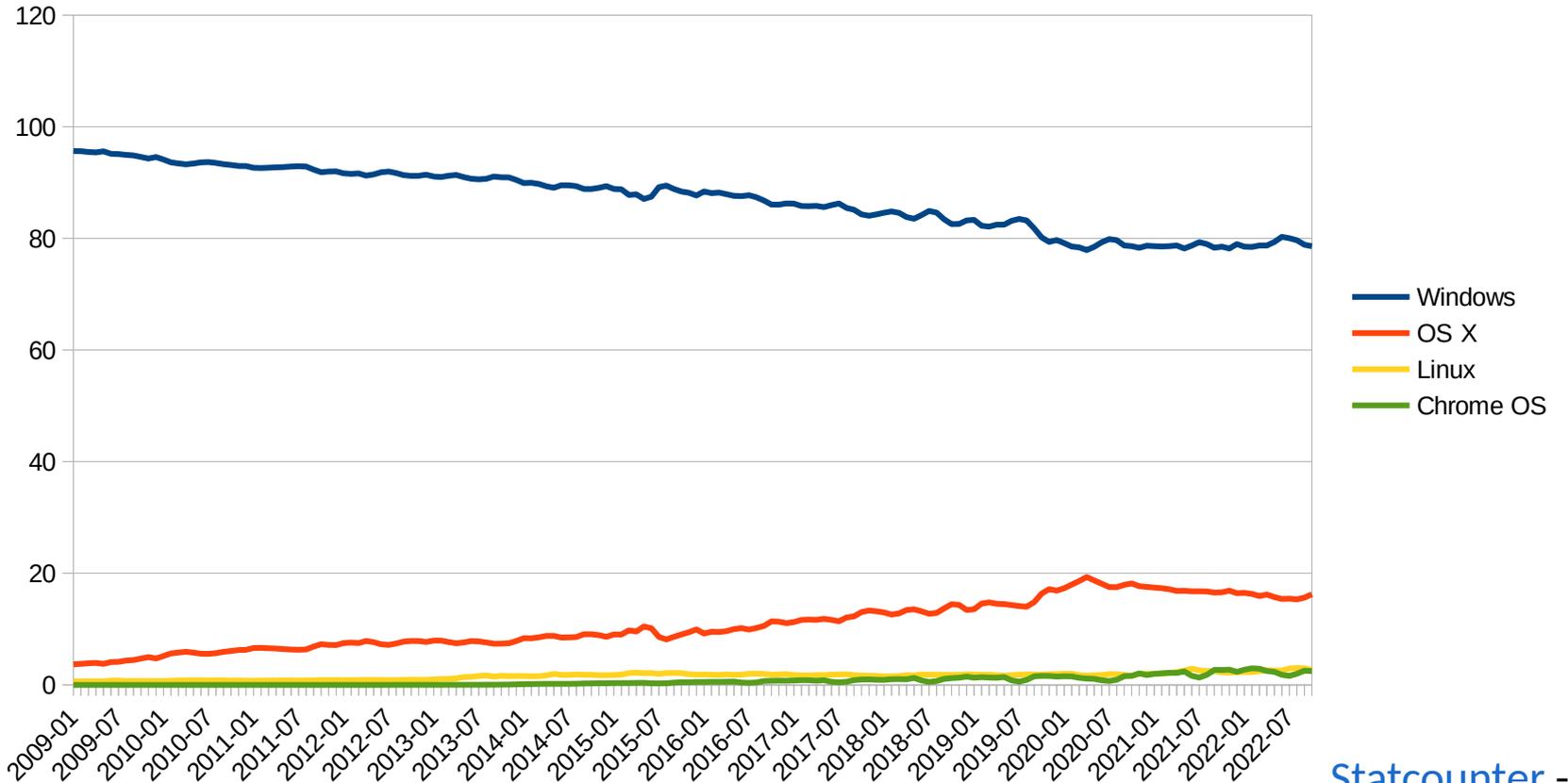
# Devices are changing:

OS market share - statcounter



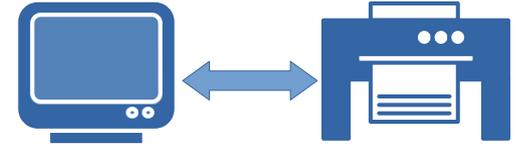
# Desktops are changing more slowly

Desktop OS - statcounter



# Digital Sovereignty

# Different framings:



## Free Software

- RMS' *jammed Xerox printer genesis* – *proprietary bites* ...
  - *"I don't own my own printer"* ...
- Free as in Freedom – a difficult framing; GNU as in GNU/Linux etc.

## Open Source

- Avoiding ambiguity & framing of 'Free'
- More business friendly / emphasizing a different Freedom.

## Open Standards

- Something totally different: ODF vs. OOXML
  - *"I don't own my own documents?"*

# Digital Sovereignty

## The same intuition

- Software is so interesting & somewhat broken ...
  - I shouldn't be excluded from fixing it.

## As the world is eaten by software:

- “Right to Repair” – becomes important

## I should have full control over my digital destiny:

- **Privacy (GDPR) / robustness**
- **Sovereignty** – Governments suddenly care
- **Innovation** – becomes possible – if economics keeps up
- **Security & autonomy** – stay safe, and don't ask the gatekeeper ...



StableDiffusion's take on:  
“bill gates welding new car  
hood shut in a parking lot”

# A different perspective:

## Today's Digital Sovereignty framed negatively:

*"The **data-trap is this**: that if you allow another country to gain access to really **critical data about your society**, over time that **will erode your sovereignty** - you no longer have control over that data."*

- Richard Moore (head of MI6) (James Bond's boss)

# Collabora Online / LibreOffice technology

**We are a critical part of this**

**A great place to strike a blow for software freedom, open-source & digital sovereignty.**

**Network effects**

- Partners bring deep goodness

**Open-source:**

- “Anything is possible”
- The only real solution for full sovereignty.

**Politically comprehensible**

**Exciting work ongoing.**

**I hope you enjoyed the hack-fest ...**

- Chat with Simon & Robert tomorrow
- Then partner workshops
  - Invite only
- Hack-fest in parallel.

**mission:**

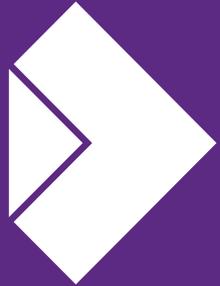
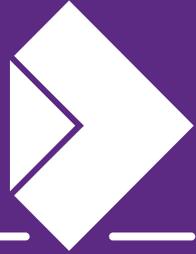
**Make  
Open  
Source  
ROCK**



# This event is only possible thanks to our partners, customers & collaborators ...



COOL  
*days*



Collabora  
Online

**Thank you!**

*By Michael Meeks*

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