"End Of 10"! Coordinating a Windows 10-to-Linux campaign across FOSS communities worldwide

@be4foss@floss.social

conf.kde.in
05 April 2025

CC BY SA

https://invent.kde.org/teams/eco/opt-green/ under "conferences/talks/"

Part 1 — This is NOT fine!

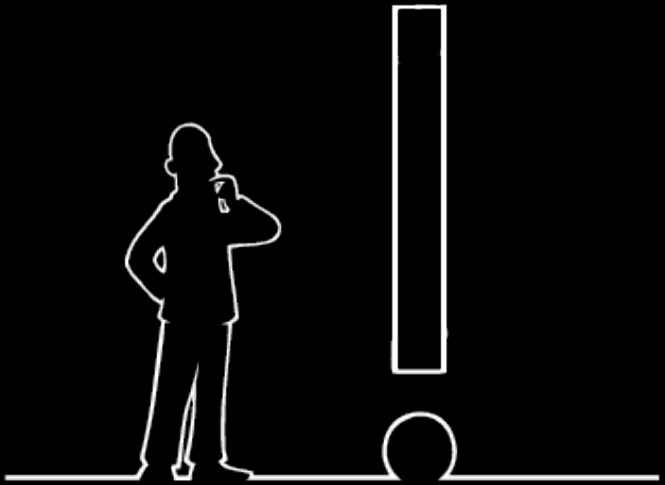
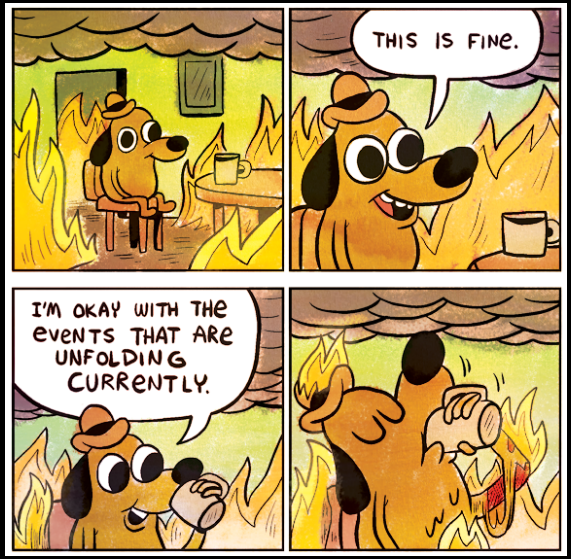


Image (modified) from Karanjot Singh published under a CC BY-SA 4.0 license:

https://eco.kde.org/blog/2022-03-03-sok22-kde-eco/



Comic from KC Green (used here with permission): https://gunshowcomic.com/648

Screenshots (modified) from: https://arstechnica.com/science/2023/09/yes-this-year-is-as-hot-as-you-think-it-is/

https://www.nytimes.com/2025/02/05/climate/earth-hottest-january.html

EDITION IN

THE TIMES OF INDIA

February this year was warmest since record keeping commenced in 1901: IMD

Vishwa Mohan / TNN / Feb 28, 2025, 22:26 IST

February 2025 experienced the highest temperatures since 1901, with IMD predicting March to May will also be unusually warm,...

NEW DELHI: This year's February was the warmest February in India since record keeping commenced in the country in 1901 and the upcoming hot weather season during March-May in most parts of the country is likely to be warmer with reporting of more number of heatwave days during the period, the IMD said on Friday.

It was the second consecutive month of the year that figured among the top three in record terms as Jan 2025 was the third warmest Jan since 1901.

nature

NEWS EXPLAINER | 29 May 2024

By Jude Coleman

Chance of heatwaves in India rising with climate change

Not only are these extreme events increasing in frequency, they are lasting longer and becoming hotter, too.

Screenshots (modified):

https://timesofindia.indiatimes.com/india/february-this-year-was-warmest-since-record-keeping-commenced-in-1901-imd/articleshow/118633962.cms

https://www.nature.com/articles/d41586-024-01577-5

This is NOT fine!

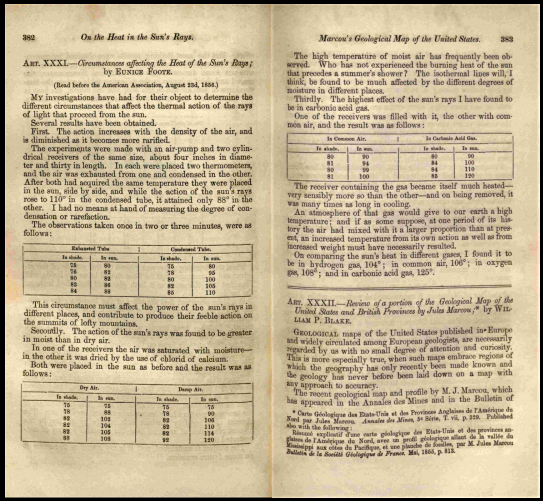
Comic from KC Green (used here with permission): https://thenib.com/this-is-not-fine/

1856 – “The Receiver [. . .] Became Itself Much Heated”

“The highest effect of the sun’s rays I have found to be in [CO2]. The receiver containing the gas became itself much heated [. . .] and on being removed [from the sun] it was many times as long in cooling”.

Eunice Newton Foote, 1856

floss.social/deck/@be4foss/109987603351052830



382 *On the Heat in the Sun's Rays.*

ART. XXXI.—*Circumstances affecting the Heat of the Sun's Rays;* by EUNICE FOOTE.

(Read before the American Association, August 23d, 1856.)

My investigations have had for their object to determine the different circumstances that affect the thermal action of the rays of light that proceed from the sun.

Several results have been obtained.

First. The action increases with the density of the air, and is diminished as it becomes more rarified.

The experiments were made with an air-pump and two cylindrical receivers of the same size, about four inches in diameter and thirty in length. In each were placed two thermometers, and the air was exhausted from one and condensed in the other. After both had acquired the same temperature they were placed in the sun, side by side, and while the action of the sun's rays rose to 110° in the condensed tube, it attained only 88° in the other. I had no means at hand of measuring the degree of condensation or rarefaction.

The observations taken once in two or three minutes, were as follows:

Exhausted Tube.		Condensed Tube.	
In shade.	In sun.	In shade.	In sun.
78	89	78	90
78	87	78	95
80	92	80	100
85	96	82	105
84	89	85	110

This circumstance must affect the power of the sun's rays in different places, and contribute to produce their feeble action on the summits of lofty mountains.

Secondly. The action of the sun's rays was found to be greater in moist than in dry air.

In one of the receivers the air was saturated with moisture—in the other it was dried by the use of chlorid of calcium.

Both were placed in the sun as before and the result was as follows:

Dry Air.		Damp Air.	
In shade.	In sun.	In shade.	In sun.
76	74	76	76
76	88	76	90
82	102	82	106
82	104	82	110
82	103	82	114
85	103	82	120

Marcou's Geological Map of the United States. 383

The high temperature of moist air has frequently been observed. Who has not experienced the burning heat of the sun that precedes a summer's shower? The isothermal lines will, I think, be found to be much affected by the different degrees of moisture in different places.

Thirdly. The highest effect of the sun's rays I have found to be in carbonic acid gas.

One of the receivers was filled with it, the other with common air, and the result was as follows:

In Common Air.		In Carbonic Acid Gas.	
In shade.	In sun.	In shade.	In sun.
80	90	80	95
81	94	84	100
80	99	84	110
81	100	85	120

The receiver containing the gas became itself much heated—very sensibly more so than the other—and on being removed, it was many times as long in cooling.

An atmosphere of that gas would give to our earth a high temperature; and if as some suppose, at one period of its history the air had mixed with it a larger proportion than at present, an increased temperature from its own action as well as from increased weight must have necessarily resulted.

On comparing the sun's heat in different gases, I found it to be in hydrogen gas, 104°; in common air, 106°; in oxygen gas, 108°; and in carbonic acid gas, 125°.

ART. XXXII.—*Review of a portion of the Geological Map of the United States and British Provinces by Jules Marcou*,* by WILLIAM P. BLAKE.

GEOLOGICAL maps of the United States published in Europe and widely circulated among European geologists, are necessarily regarded by us with no small degree of attention and curiosity. This is more especially true, when such maps embrace regions of which the geography has only recently been made known and the geology has never before been laid down on a map with any approach to accuracy.

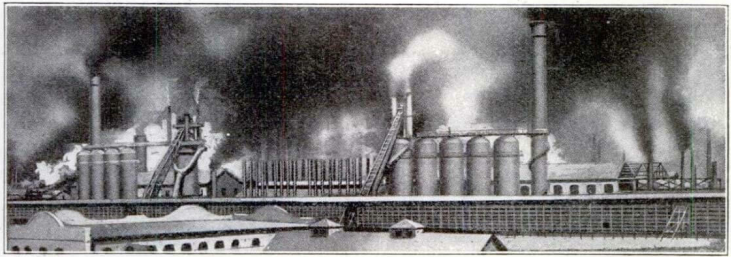
The recent geological map and profile by M. J. Marcou, which has appeared in the Annales des Mines and in the Bulletin of

* Carte Géologique des Etats-Unis et des Provinces Anglaises de l'Amérique du Nord par Jules Marcou. *Annales des Mines*, 5e Série, T. vii, p. 348. Published also with the following:

Mémoire explicatif d'une carte géologique des Etats-Unis et des provinces anglaises de l'Amérique du Nord, avec un profil géologique allant de la vallée du Mississipi aux côtes du Pacifique, et une planche de fossiles, par M. Jules Marcou. *Bulletin de la Société Géologique de France*. Mai, 1855, p. 813.

1912 – C02 A “Blanket For The Earth”

March, 1912 POPULAR MECHANICS 341



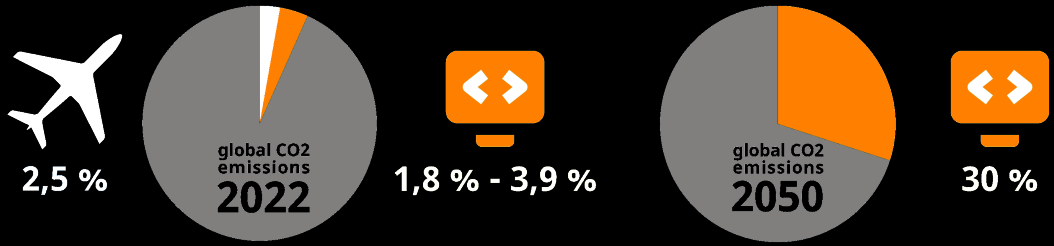
The furnaces of the world are now burning about 2,000,000,000 tons of coal a year. When this is burned, uniting with oxygen, it adds about 7,000,000,000 tons of carbon dioxide to the atmosphere yearly. This tends to make the air a more effective blanket for the earth and to raise its temperature. The effect may be considerable in a few centuries.

[Adding CO2] tends to make the air a more effective blanket for the earth and to raise its temperature. This effect may be considerable in a few centuries.

– Popular Mechanics, 1912

https://commons.wikimedia.org/wiki/File:191203_Furnaces_of_the_world_-_Popular_Mechanics_-_Global_warming.jpg

Information and Communications Technology (ICT)



ACM Tech Brief (2021): https://dl.acm.org/doi/pdf/10.1145/3483410

Worldwide ICT Electricity Consumption 8 to 9% of Total

Figures From 2019 ~8.5%

Worldwide Electricity Consumption ~23500 TWH

Data centres	~ 200	TWH
Networks: Internet & RAN	~ 250	TWH
End users	~ 550	TWH
Manufacturing of ICT	~1000	TWH
ICT Electricity Consumption	~ 2000	TWH

Table 1. Summary of the International Energy Agency's (IEA) estimates for the year 2019 of the electricity consumption (in terawatt-hours) worldwide by different sectors of ICT, namely data centers, networks including the radio access network and end users, and the manufacturing of ICT equipment, which represents roughly 50% of the total amount.

From: "Electricity Consumption by ICT: Facts, trends, and measurements" (2023, ACM):

https://dl.acm.org/doi/pdf/10.1145/3613207

Carbon Footprint by Device

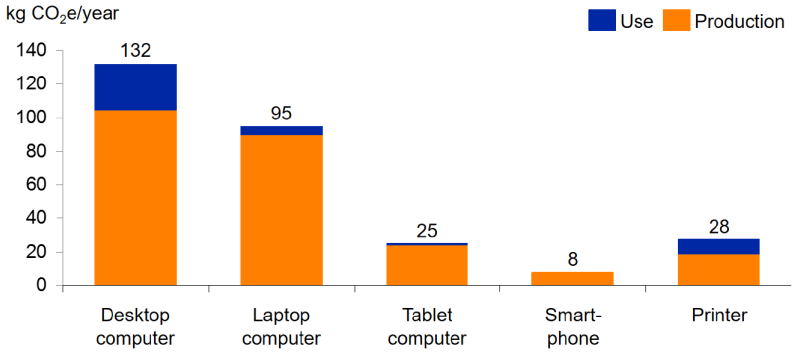


Figure 2: Average annual greenhouse gas emissions per end-user device during production and use by device type. The annual values of production emissions ~~(grey)~~ are based on current average useful lives of the devices.

From (modified): "Opportunities and Risks of Digitalization for Climate Protection in Switzerland" (2017):

https://www.zora.uzh.ch/id/eprint/141128/10/Study_Digitalization_Climate_Protection_Summary_Oct2017.pdf

Production “Impacts [. . .] Are So High”

With a “10% increase in the energy efficiency [. . .],
replacement of the older notebook can only be justified

after 33 to 89 years”

“Zeitlich optimierter Ersatz eines Notebooks unter ökologischen Gesichtspunkten”, UBA, 2012: http://www.uba.de/uba-info-medien/4316.html

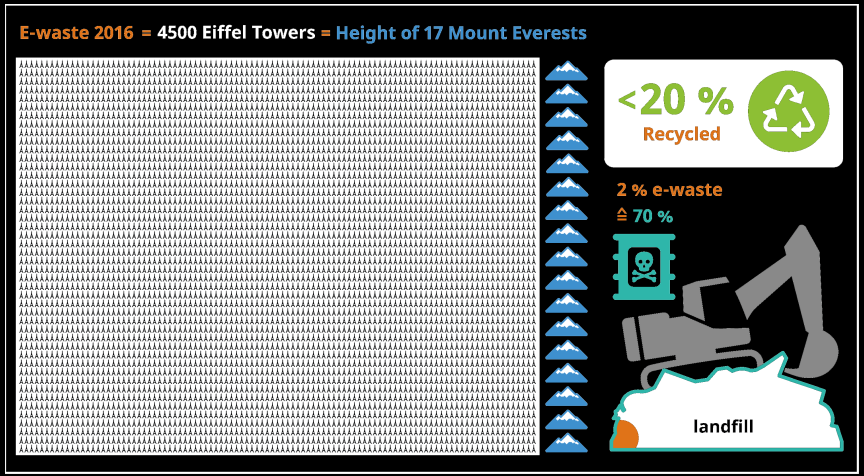
With Huge Social Costs, Including Human Rights Violations

Photo of child labor in a cobalt mine in Congo from Thomas Coombes (CC BY-SA 3.0 DE)

Holding Companies Responsible (Supply Chain Due Diligence Act): https://www.goethe.de/ins/id/en/kul/mag/22370005.html

E-Waste

A “tsunami of e-waste rolling out over the world” – Achim Steiner, UNEP, 2015



Based on report: https://www.itu.int/en/ITU-D/Climate-Change/Documents/GEM%202017/Global-E-waste%20Monitor%202017%20.pdf

Waste Electrical and Electronic Equipment (WEEE)

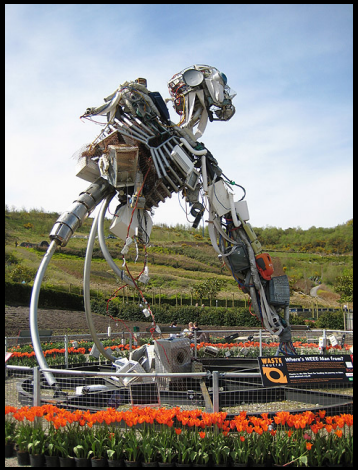


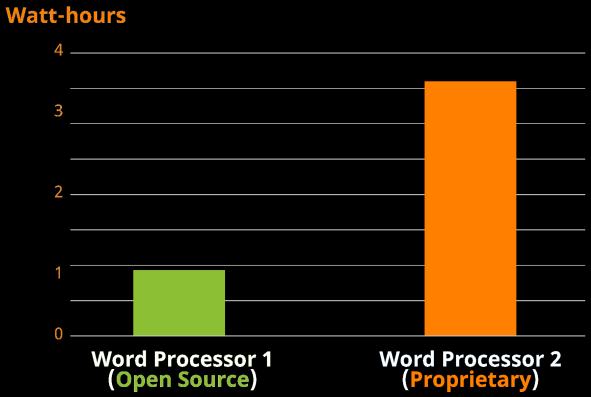
Photo: Pauline Eccles (CC BY-SA 2.0): https://en.wikipedia.org/wiki/File:WEEE_Man,_Eden_Project_-_geograph.org.uk_-_785381.jpg

Image by Muntaka Chasant: https://en.wikipedia.org/wiki/File:Agbogbloshie,_Ghana_-_September_2019.jpg

Photo by Joanna Murzyn: https://branch.climateaction.tech/issues/author/joanna-murzyn/

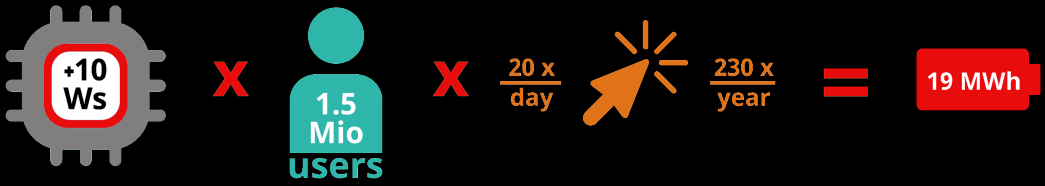
Part 2 – The Critical Role Of Software

Bloatware & Feature Creep Increase Energy Consumption



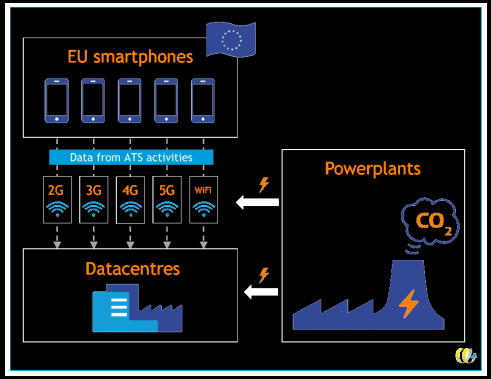
Adapted from: https://www.umweltbundesamt.de/publikationen/entwicklung-anwendung-von-bewertungsgrundlagen-fuer

Inefficiencies Scale Up



Adapted from Detlef Thoms HPI course: https://open.hpi.de/courses/cleanit2021/items/5DHsS3tJsXAqfUE4q4F82Z

Ads & Tracking Increase Energy Consumption



ATS - Ad / Tracking Services

Screenshot with modified colors from "Carbon footprint of unwanted data-use by smartphones: An analysis for the EU":

https://groenlinks.nl/sites/groenlinks/files/2021-09/CE_Delft_210166_Carbon_footprint_unwanted_data-use_smartphones.pdf

Software Is Often Designed In The Interest Of The Vendor

Trains were designed to break down after third-party repairs, hackers find

ASHLEY BELANGER - 12/13/2023, 10:14 PM

Screenshot: https://arstechnica.com/tech-policy/2023/12/manufacturer-deliberately-bricked-trains-repaired-by-competitors-hackers-find/

Planned Obsolescence & Abandonware Drives E-Waste

From: https://arstechnica.com/gadgets/2023/07/with-macos-sonoma-intel-macs-are-still-getting-fewer-updates-than-they-used-to/

Unsupported Software – Security Risks

About the security content of macOS Sonoma 14.7.5

This document describes the security content of macOS Sonoma 14.7.5.

AccountPolicy

Available for: macOS Sonoma

Impact: A malicious app may be able to gain root privileges

Description: This issue was addressed by removing the vulnerable code.

CVE-2025-24234: an anonymous researcher

AirDrop

Available for: macOS Sonoma

Impact: An app may be able to read arbitrary file metadata

Description: A permissions issue was addressed with additional restrictions.

CVE-2025-24097: Ron Masas of BREAKPOINT.SH

App Store

Available for: macOS Sonoma

Impact: A malicious app may be able to access private information

Description: This issue was addressed by removing the vulnerable code.

CVE-2025-24276: an anonvmous researcher

NSDocument

Available for: macOS Sonoma

Impact: A malicious app may be able to access arbitrary files

Description: This issue was addressed through improved state management.

CVE-2025-24232: an anonymous researcher

OpenSSH

Available for: macOS Sonoma

Impact: An app may be able to access user-sensitive data

Description: An injection issue was addressed with improved validation.

CVE-2025-24246: Mickey Jin (@patch1t)

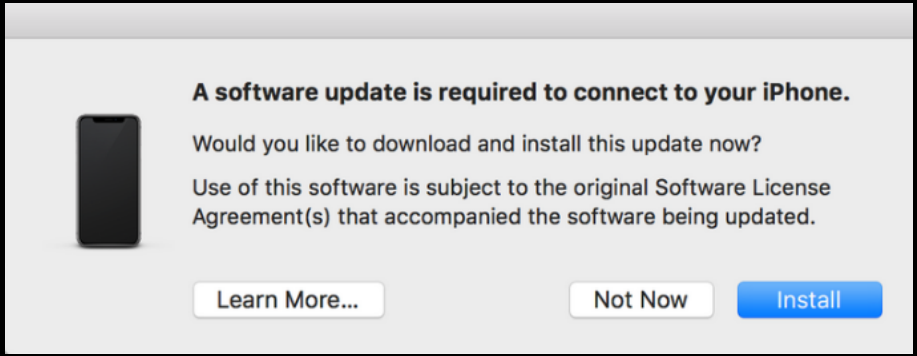
PackageKit

Available for: macOS Sonoma

Impact: An app may be able to modify protected parts of the file system

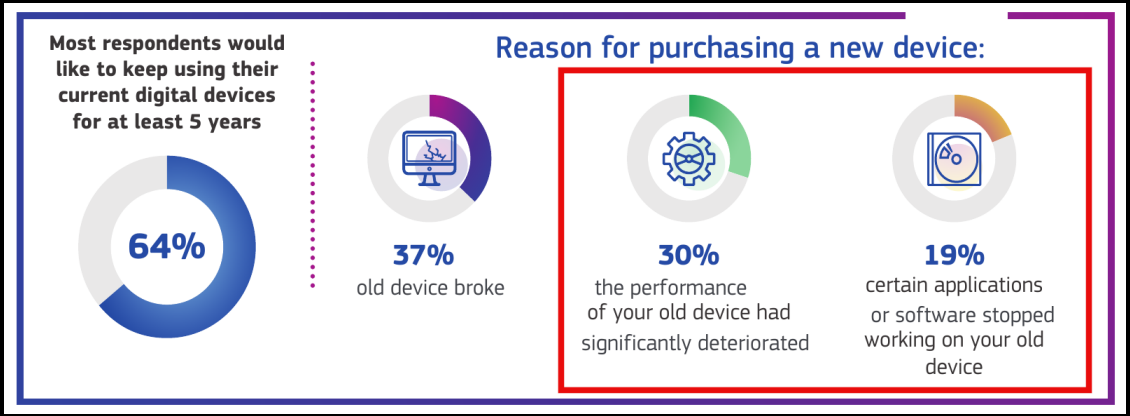
From: https://support.apple.com/en-us/122374

Unsupported Software – Functionality Issues



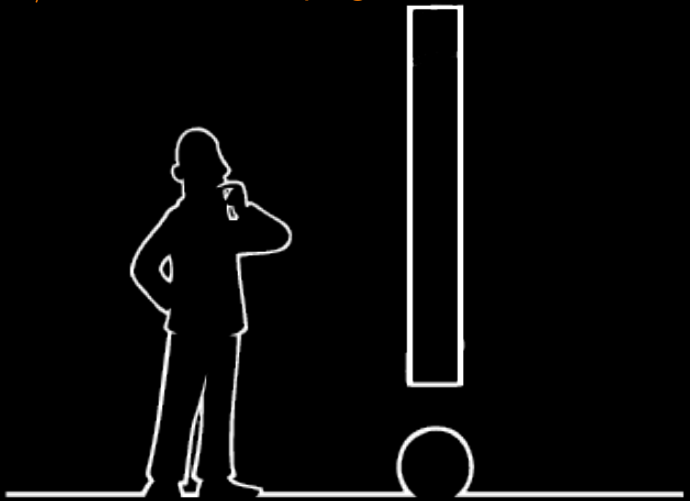
From: https://macreports.com/software-update-is-required-to-connect-to-your-ios-device-installation-failed-fix/

Consumers May Be Aware Of The Problem, But Not A Solution!

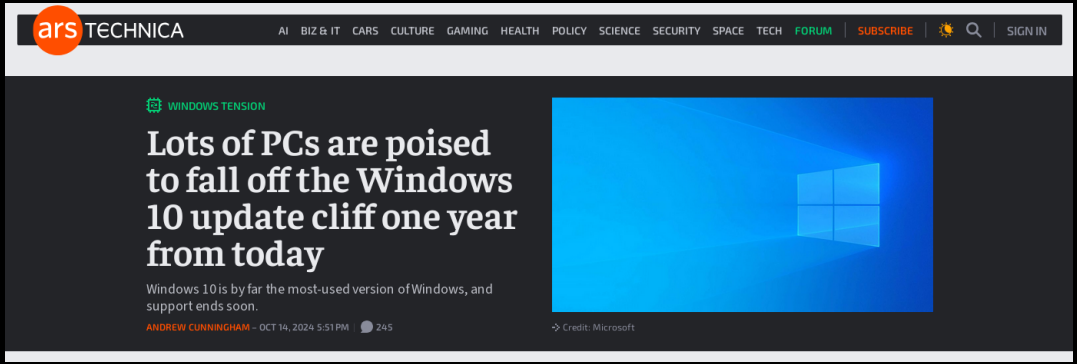


Screenshot (modified) from: https://europa.eu/eurobarometer/surveys/detail/2228

Part 3 – Opt Green / End of 10 Campaign



14 October 2025 – Windows 10 End-of-Life (EoL)



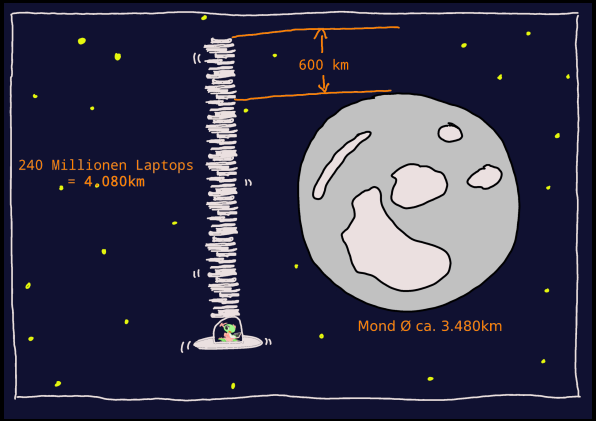
From: https://arstechnica.com/gadgets/2024/10/lots-of-pcs-are-poised-to-fall-off-the-windows-10-update-cliff-one-year-from-today/

240 million PCs ineligible for Windows 11 could become e-waste from October 2025

Incompatibility with Windows 11 prevents partners and ITAD firms from refurbishing and reselling still-viable PCs

Donating unsupported devices to disadvantaged communities globally presents challenges for digital equity

Microsoft will offer Extended Security Updates for Windows 10 from 2025 until 2028, but at an undisclosed annual cost



From: https://www.canalys.com/insights/end-of-windows-10-support-could-turn-240-million-pcs-into-e-waste

Moon image from KDE published under a CC-BY-SA-4.0. Design by Nicole Teale.

Unsupported Software – Security Risks

Windows 10 (release 2022)

Vulnerabilities by impact types

Year	Code Execution	Bypass	Privilege Escalation	Denial of Service	Information Leak
2021	1	0	0	0	0
2022	0	0	2	0	0
2023	156	0	156	66	68
2024	133	0	194	44	51
2025	41	0	36	19	18
Total	331		388	129	137

This page lists vulnerability statistics for CVEs published in the last ten years, if any, for Microsoft » Windows 10 22h2 » N/A for x86. Vulnerability statistics provide a quick overview for **security vulnerabilities of Microsoft » Windows 10 22h2 » version N/A for x86**.

From: https://www.cvedetails.com/version/712972/

Higher Energy Consumption From New Anti-Features

Screenshot (modified) from: https://www.pcworld.com/article/1668041/ads-in-the-windows-11-start-menu-are-definitely-coming.html

14 October 2025 Is Also International E-Waste Day (WEEE Forum)

The extent of the e-waste issue: 1.55 million trucks lined up on the Equator!

According to the latest UN's Global E-Waste Monitor, in 2022, 62 billion kg of e-waste were generated globally. This means 1.55 million trucks filled with e-waste lined up along the Earth's equator. The quantity of e-waste is expected to rise to 82 billion kg by 2030. Currently, the amount of e-waste is growing five times faster than formal recycling collection rates since 2010.

To help tackle this global problem, every year on October 14th, International E-Waste Day is celebrated. This awareness-raising event, initiated by the WEEE Forum and its members, aims to highlight the importance of the formal and responsible management of e-waste and the solutions available to each citizen within their community. Last year, 195 companies from 55 countries took part in the celebrations by organizing events, e-waste collections, social media, and press campaigns.

From: https://weee-forum.org/iewd-about/

. . . And KDEs 29th Birthday

New Project: Kool Desktop Environment (KDE) [14th October 1996 03:00]

Programmers wanted!

Motivation

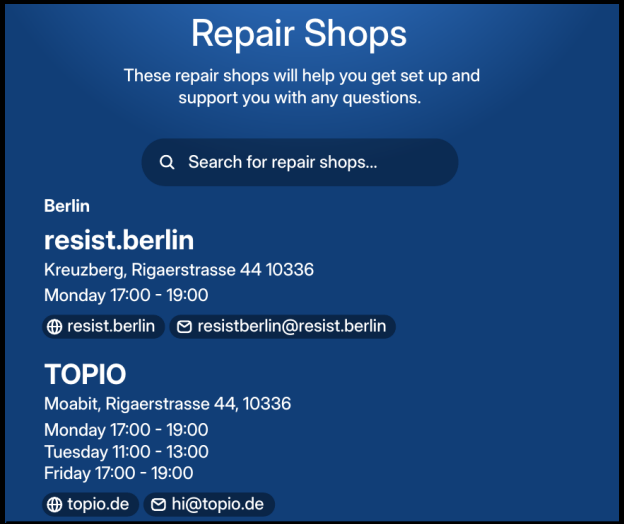
Unix popularity grows thanks to the free variants, mostly Linux. But still a consistant, nice looking free desktop-environment is missing. There are several nice either free or low-priced applications available, so that Linux/X11 would almost fit everybody needs if we could offer a real GUI.

From: https://kde.org/announcements/announcement/

We Are Organizing An End-User Campaign (endof10.org)

Our Message – GNU/Linux is the better alternative!

Our Focus – Promoting LOCAL End-User Support Networks



Matrix: #win2linux:kde.org

How can I get involved with the campaign?

There are many ways to get involved:

- Add repair cafes and independent computer shops offering GNU/Linux to our website
- Organize installation events
- Train volunteers at repair cafes in your area
- Design materials for new users like how-tos, promotional flyers, etc.
- Distribute materials in cafes, shops, universities, schools, and so on in your area
- Help with our online presence (social media promotion, website, etc.)
- Translate materials like the website, infoflyers, etc. (more below)
- Volunteer with FOSS communities participating in the campaign (improving documentation, software debugging, design)
- Your ideas!

Please contact us so we can coordinate your efforts with ours.

https://endof10.org/contribute/

Help Us! BoF On Sunday

- I want your help brainstorming contributions in the context of India
- Who? Schools & students, environmental groups, FOSS clubs, other ideas
- If not this campaign, perhaps another campaign?

Maybe An “i-Waste” Campaign?

ars TECHNICA

BIZ & IT TECH SCIENCE POLICY CARS GAMING & CULTURE STORE

SO, NO MORE UPDATES —

How long will the last Intel Macs be supported? macOS Sonoma gives us some hints

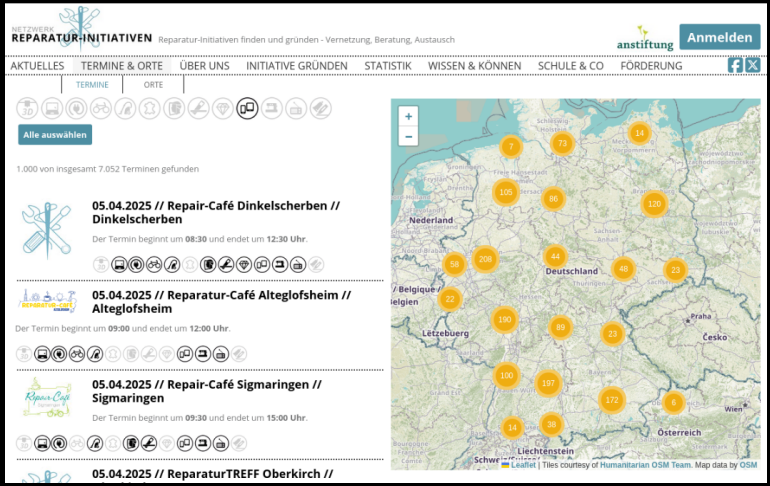
Nearly 20 years of data show how Intel Macs are faring as Apple switches chips.

ANDREW CUNNINGHAM - 7/17/2023, 11:00 AM

Enlarge

Get Involved! Build Up New Support Networks

Example: Germany



https://www.reparatur-initiativen.de/

Get Involved! Local FOSS Groups As Support Networks

https://fsci.in/

FOSS-Clubs-India

This repository contains the list of FOSS and open source related clubs at the Indian universities.

Name of the University/ college	Name of the FOSS Club	Activities	Google Summmer of Code Selects
Amrita University, Amritapuri	FOSS@Amrita	Conducted: • [FOSSTalks] (https://www.youtube.com/watch?v=EhsaOylf8j8) • MediaWikiToLearn Hackathon and Editathon • KDE Conference India 2015 • FOSSter	Details can be found here
National Institute of Technology, Calicut	FOSSCell, NITC	• [FOSSMeet] (http://fossmeet.in) • [Firefox OS Hackathon 2015] (http://fossmeet.in/2016/hackathon.tathva.org/) • [Rust Workshop 2016] (https://www.facebook.com/CSEA.NITC/posts/935276289884219)	
Arya college of Engineering and IT, Jaipur	Openmoz		
National Institute of Technology Karnataka	LUG, NITK		

https://github.com/v-thakkar/FOSS-Clubs-India

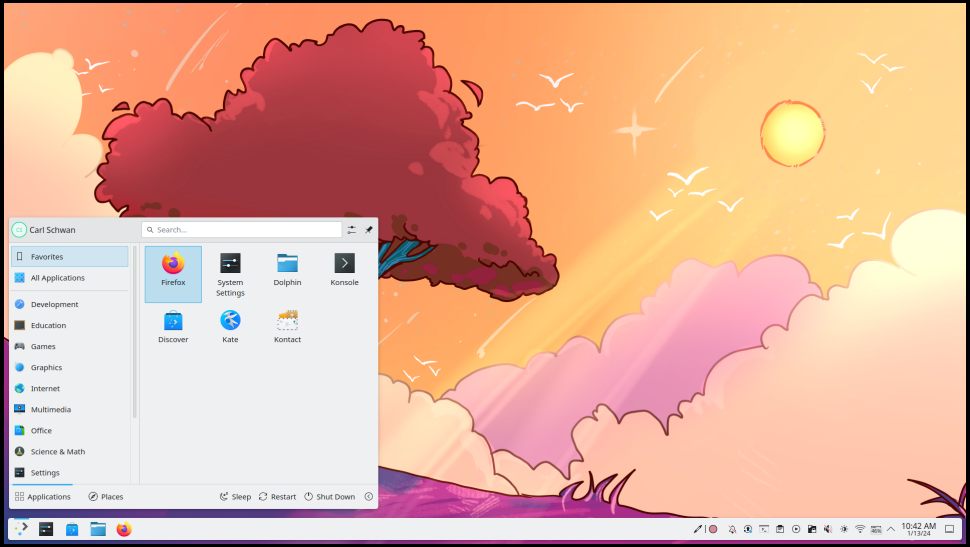
Get Involved! Bring GNU/Linux To Schools

https://itsfoss.com/kerala-linux/

Get Involved! Become A Campaign Supporting Organization

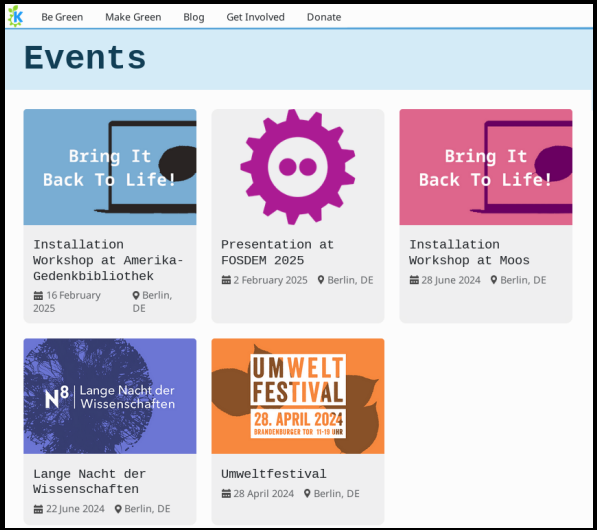
https://invent.kde.org/teams/eco/opt-green/-/issues/145

Get Involved! Install GNU/Linux – Especially KDE Plasma & Apps



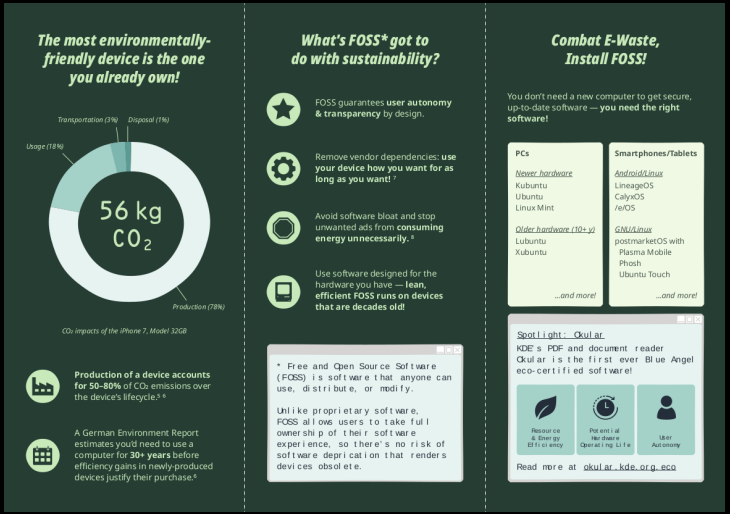
https://kde.org/announcements/megarelease/6/desktop.png

Get Involved! Organize Workshops



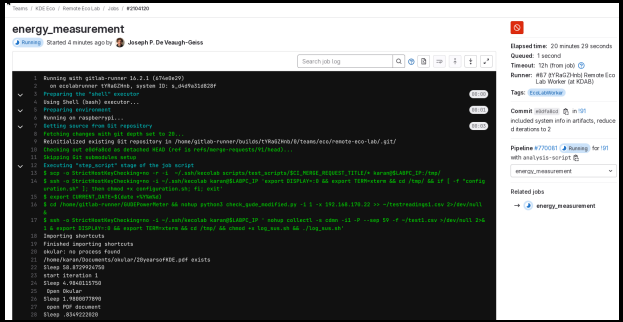
https://eco.kde.org

Get Involved! Translate & Distribute Materials In Your Community

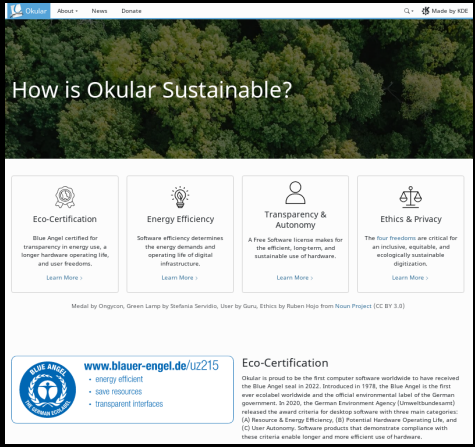


https://invent.kde.org/teams/eco/opt-green/-/blob/master/materials/leaflets/EN/kde-eco-umweltfestival-flyer-EN_final.jpg

Get Involved! Report How Your Software Is Sustainable

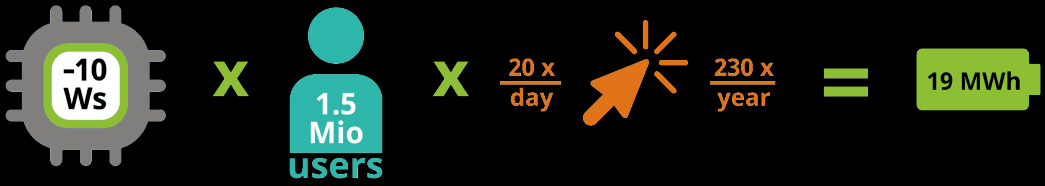


Screenshot KEcoLab



Screenshot (design Anita Sengupta): https://okular.kde.org/eco/

Savings Scale Up

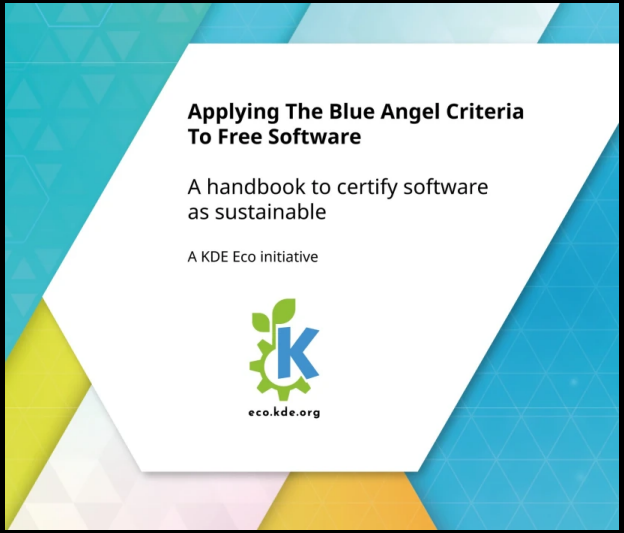


Adapted from Detlef Thoms HPI course: https://open.hpi.de/courses/cleanit2021/items/5DHsS3tJsXAqfUE4q4F82Z

Small Individual Changes = Huge Collective Savings

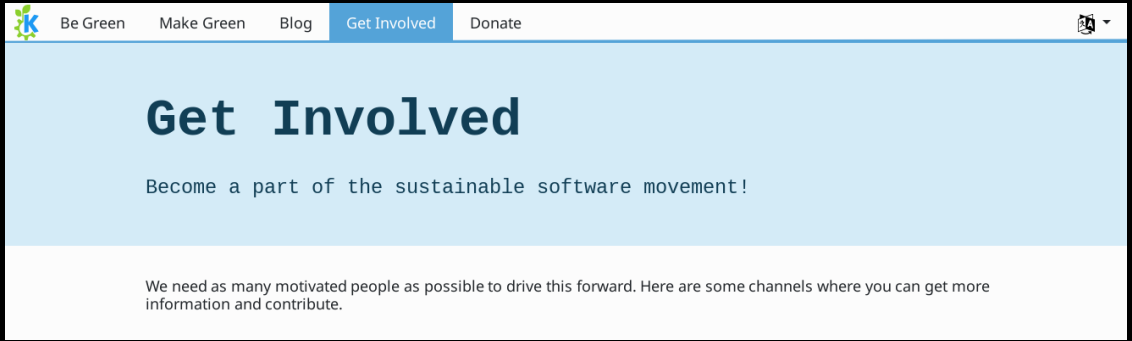
Adapted from Detlef Thoms HPI course: https://open.hpi.de/courses/cleanit2021/items/5DHsS3tJsXAqfUE4q4F82Z

KDE Eco Handbook – eco.kde.org/handbook

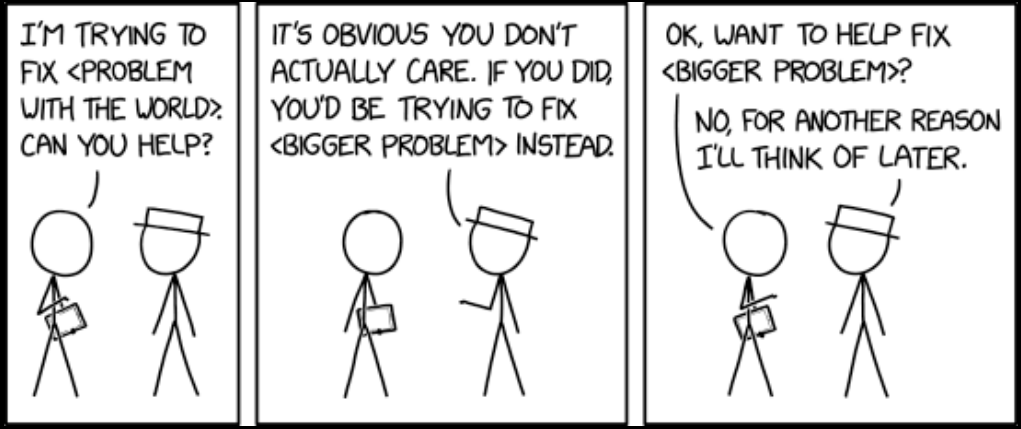


Get Involved! Join KDE Eco

eco.kde.org/get-involved/



Is All Of This Worth It?



XKCD comic "2368: Bigger Problem": https://xkcd.com/2368/

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