



KDE
GOALS



KDE's Accessibility Goal

A two-year Overview

Akademy, 7 September 2024

Carl Schwan <carl@carlschwan.eu>

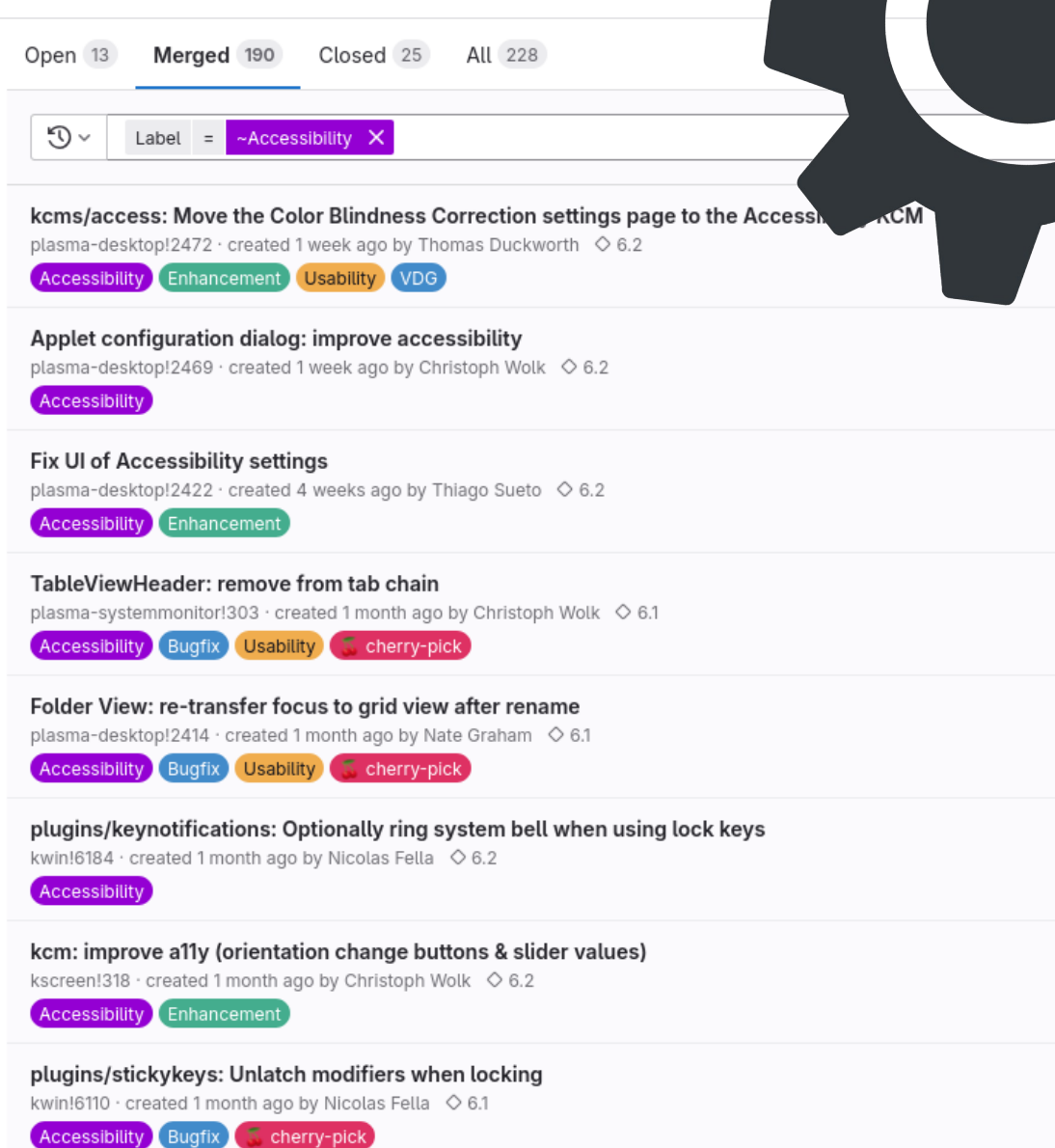
Why

- It's **INCLUSIVE AND** gives **EQUAL ACCESS** to all
- It promotes usability
- It's the right thing to do
- It's the law



Accessibility improvements

- Plasma
- Applications
- Frameworks
- Qt



Open 13 Merged 190 Closed 25 All 228

🕒 Label = ~Accessibility X

kcms/access: Move the Color Blindness Correction settings page to the Accessibility KCM
plasma-desktop!2472 · created 1 week ago by Thomas Duckworth · 6.2
Accessibility Enhancement Usability VDG

Applet configuration dialog: improve accessibility
plasma-desktop!2469 · created 1 week ago by Christoph Wolk · 6.2
Accessibility

Fix UI of Accessibility settings
plasma-desktop!2422 · created 4 weeks ago by Thiago Sueto · 6.2
Accessibility Enhancement

TableViewHeader: remove from tab chain
plasma-systemmonitor!303 · created 1 month ago by Christoph Wolk · 6.1
Accessibility Bugfix Usability cherry-pick

Folder View: re-transfer focus to grid view after rename
plasma-desktop!2414 · created 1 month ago by Nate Graham · 6.1
Accessibility Bugfix Usability cherry-pick

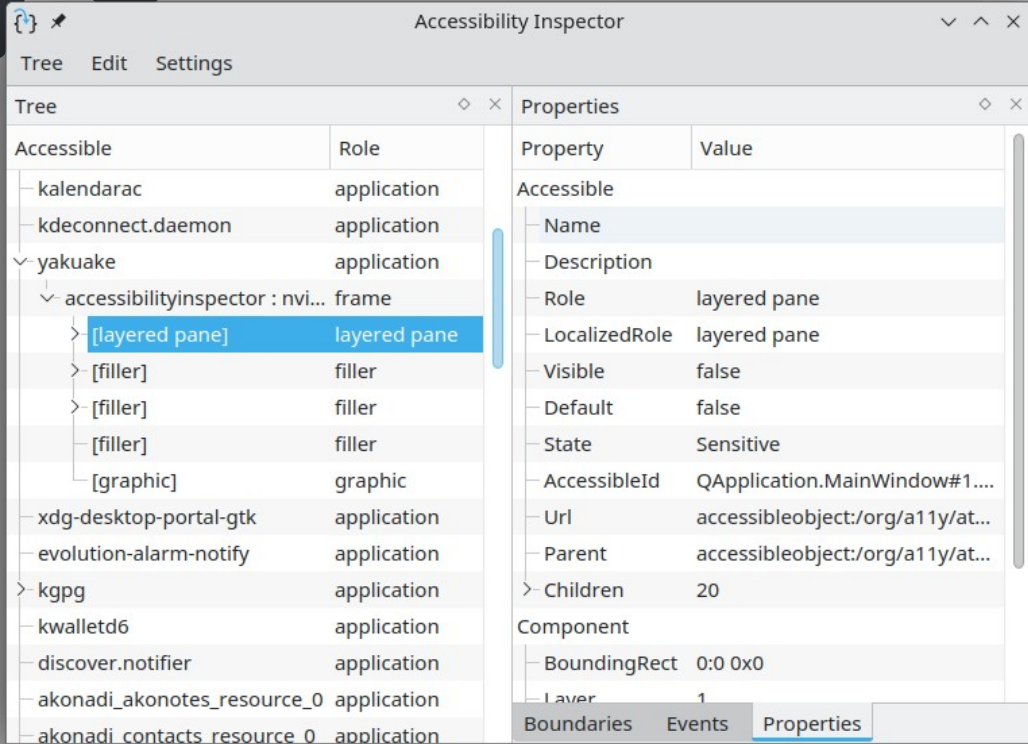
plugins/keynotifications: Optionally ring system bell when using lock keys
kwin!6184 · created 1 month ago by Nicolas Fella · 6.2
Accessibility

kcm: improve a11y (orientation change buttons & slider values)
kscreen!318 · created 1 month ago by Christoph Wolk · 6.2
Accessibility Enhancement

plugins/stickykeys: Unlatch modifiers when locking
kwin!6110 · created 1 month ago by Nicolas Fella · 6.1
Accessibility Bugfix cherry-pick

Accessibility Inspector

- Developer tool



The screenshot shows the Accessibility Inspector application window. The title bar reads "Accessibility Inspector". The menu bar includes "Tree", "Edit", and "Settings". The main area is divided into two panes: "Tree" on the left and "Properties" on the right.

Tree View:

Accessible	Role
— kalendarac	application
— kdeconnect.daemon	application
√ yakuake	application
√ accessibilityinspector : nvi...	frame
> [layered pane]	layered pane
> [filler]	filler
> [filler]	filler
— [filler]	filler
— [graphic]	graphic
— xdg-desktop-portal-gtk	application
— evolution-alarm-notify	application
> kgpg	application
— kwalletd6	application
— discover.notifier	application
— akonadi_akonotes_resource_0	application
— akonadi_contacts_resource_0	application


Properties View:

Property	Value
Accessible	
— Name	
— Description	
— Role	layered pane
— LocalizedRole	layered pane
— Visible	false
— Default	false
— State	Sensitive
— AccessibleId	QApplication.MainWindow#1....
— Url	accessibleobject:/org/a11y/at...
— Parent	accessibleobject:/org/a11y/at...
> Children	20
Component	
— BoundingRect	0:0 0x0
— Layer	1


At the bottom of the Properties panel, there are tabs for "Boundaries", "Events", and "Properties", with "Properties" currently selected.














Selenium Driver

- Integration tests suite
- Powered by AT-SPI

S Selenium Webdriver using AT-SPI 

master selenium-webdriver-at-spi / + History Find file

 **change return of find_elements API call if no matching element**
Antoine Herlicq authored 2 months ago

Name	Last commit
 LICENSES	Revert "inputsynth: prepare for libei"
 appidlist	Adjust to renamed KWayland library
 autotests	Accept wheel events in any direction
 cmake	install a cmake config and find depend...
 examples	Bump python requirements to the latest
 inputsynth	Fix moving the mouse by a certain dista...
 screenshotter	Add missing include
 videorecorder	videorecorder: remove import prefix
 .gitignore	ignore some stuff
 .gitlab-ci.yml	ci: remove freebsd
 .kde-ci.yml	Revert "inputsynth: prepare for libei"
 CMakeLists.txt	Set cmake minimal version before project
 README.md	license the readme

Appium automation testing

Learn how to run Appium tests for applications on Linux

Introduction

KDE uses manually triggered unit tests as well as autotests to prevent code changes to o issues. Oftentimes, this is not enough for graphical applications, so testing the user inter this, KDE uses Appium tests.

[Appium](#) is an open source tool based on [Selenium](#) for automating applications on variou

Selenium itself is used to automate testing web applications. Appium derives from it to a platforms and in multiple languages.

Appium does this leverage of multiple platforms and languages by using a *driver*. A drive a bridge between your test scripts and the application you want to automate. With it, dev interface tests for manipulating the user interface, test accessibility, and measure power

The Linux Driver: Selenium AT-SPI

Appium has the ability to automate Linux apps by using the Linux accessibility API [AT-SPI Selenium AT-SPI](#), a [WebDriver](#) server for Linux apps that runs the application in a localho environments (such as CI jobs), while also being able to run locally in a Wayland composi manually and see the results.

Documentation

[https://develop.kde.org/
docs/apps/tests/appium/](https://develop.kde.org/docs/apps/tests/appium/)



Sprint

Joint KDE Goal sprint in
April 2024 in Berlin

Future





Text to Speech with Spiel: <https://project-spiel.org/>

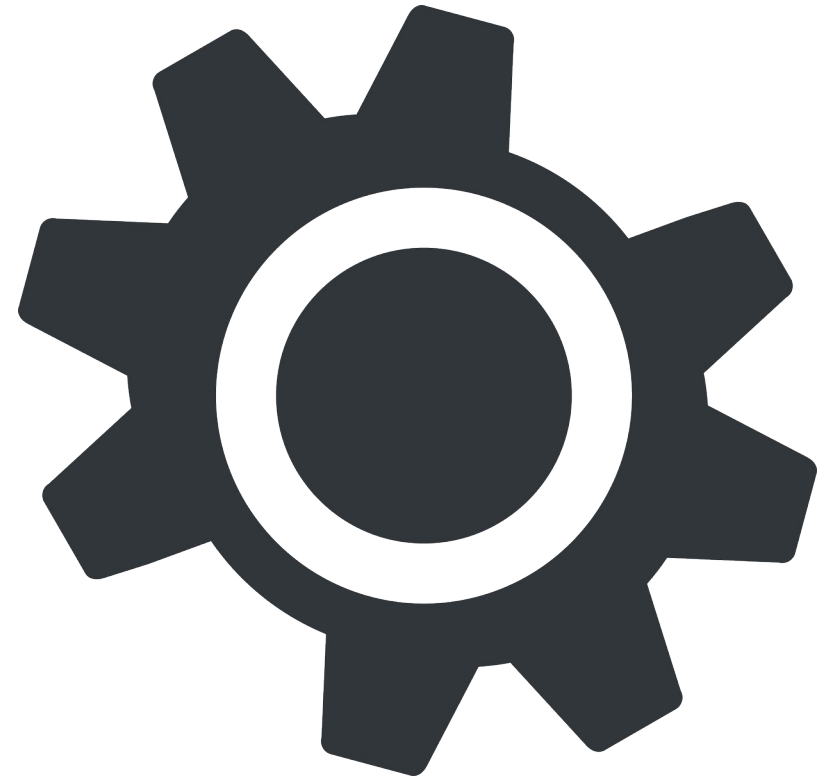


Replacement for AT-SPI: Newton



More accessibility improvements





Lesson learned
As goal keeper





Special Thanks

- Harald Sitter
- Fusan Wen
- Christoph Wolk
- Volker Krause
- Ingo Klöcker
- Felix Ernst
- And every one else who worked on accessibility

Automation & Systematization wrap-up

Nate Graham



One simple dream

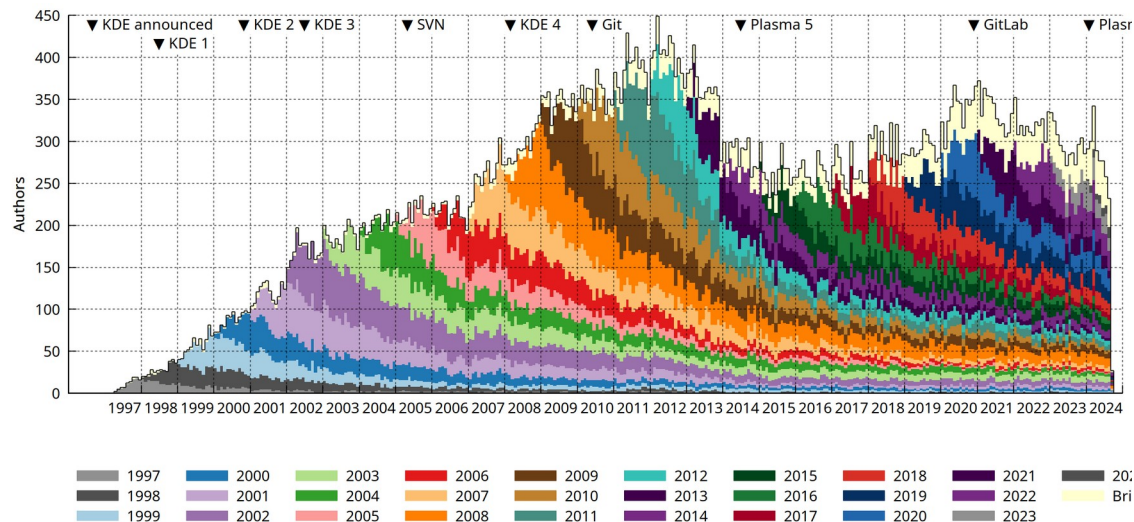
Be lazier

Three simple principles

- Automation > manual labor
- Policies > opinions
- Teams > working alone

Why bother?

- Lots of turnover
- People take their knowledge and labor with them
- Preserve it in KDE!



Benefits

More:

- Quality
- Consistency
- Free time

Less:

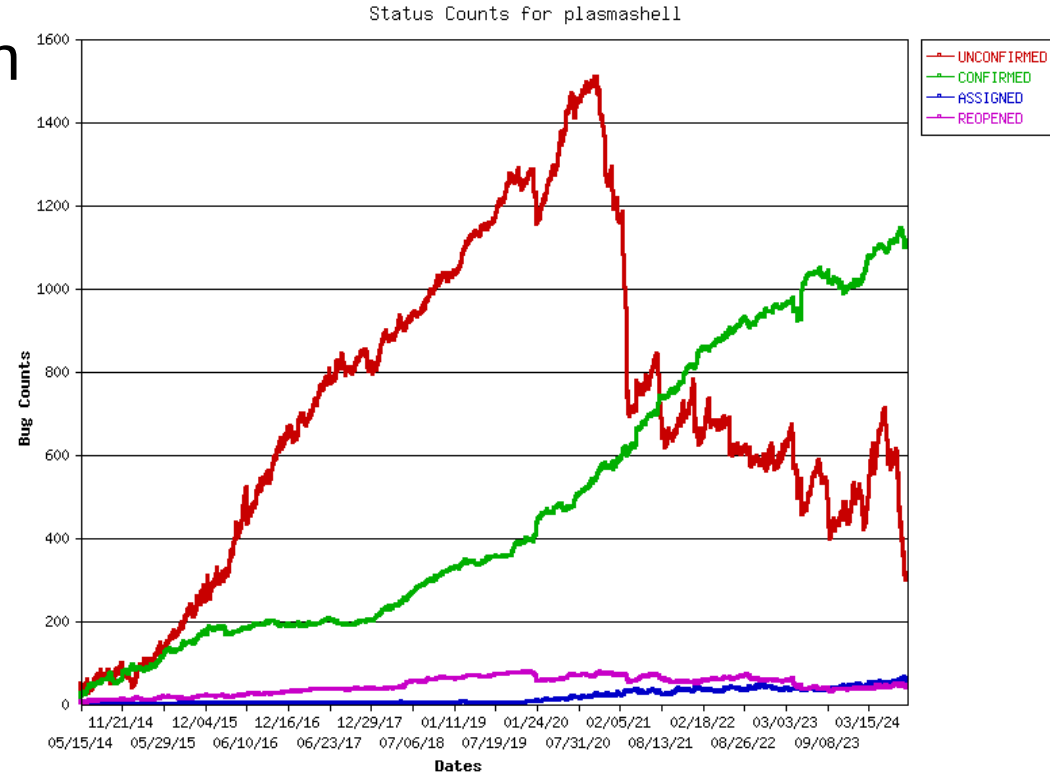
- Grunt work
- Regressions
- Style nitpicks and arguments

Areas of focus

- Automatic testing
- Automatic bug triage
- Documentation

Successes

- More tests in Plasma and KWin
- Made test passing mandatory in many projects
- CI jobs to build Flatpaks and Windows binaries
- Bugzilla bot automation
- Updated docs
- New HIG



Challenges

- Need is not urgent
- Writing tests is still hard
- It's boring
- Lack of leadership from me

Lessons learned

- Goal champions need to:
 - Be proactive
 - Lead by example
- Big wins inspire more action than small ones
- Big episodic communication better than a small trickle
- Changing a “good enough” status quo is really hard



KDE's Sustainable Software Goal

A two-year Overview

Akademy, 7 September 2024

Cornelius Schumacher <schumacher@kde.org>



KDE can deliver software
in a way which
preserves environment and society
for us and future generations.

KDE can deliver **Sustainable Software.**

Goal: Promote **Sustainable Software** in KDE by

Alignment

(i) aligning existing activities,

Visibility

(ii) highlighting where our software is already sustainably designed

Initiatives

(iii) stimulating actions to increase sustainability,
and

(iv) creating standards/tools to quantify software sustainability.

Alignment

Joint
KDE Goals
Sprint
in Berlin
April 2024





KDE Eco Community

Umbrella for Sustainability Activities

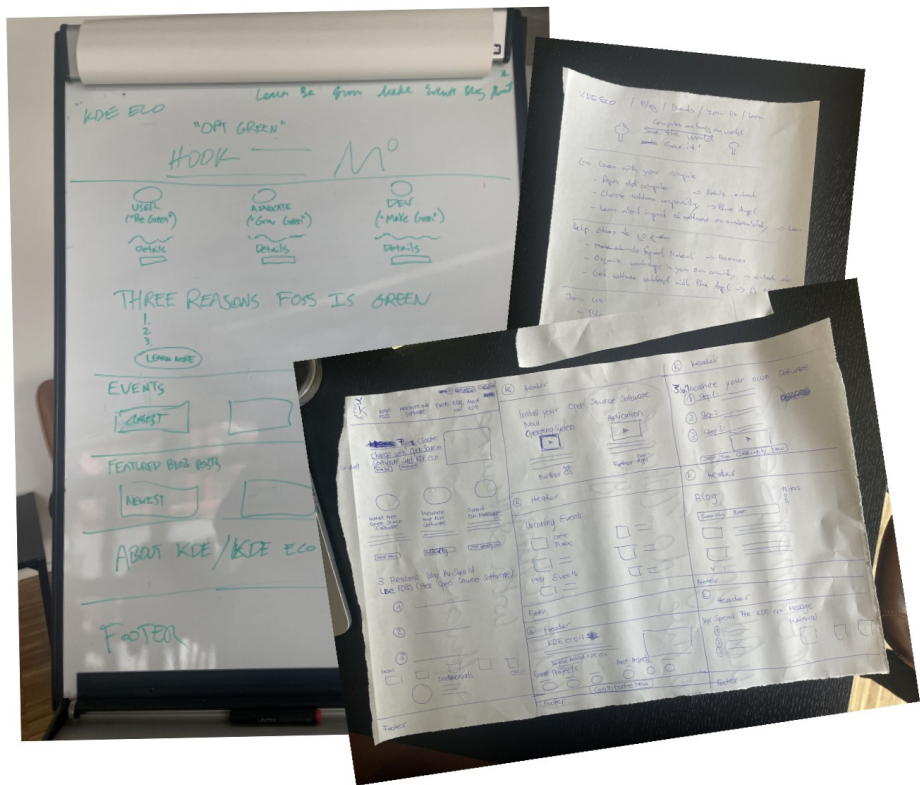
Blue Angel

Energy Measurement

Funded projects

Activism

<https://eco.kde.org>



KDE Eco x +

eco.kde.org

Handbook Blog Get Involved Donate

Opt Green

Independent, energy-efficient Free & Open Source Software for long-term hardware use.

Be Green (End User)

Opt in to lower energy demands, extended hardware life, device independence, and user control for a healthier digital society.

Grow Green (Advocate)

Build communities and user support networks to bring the benefits of independent, sustainable software to your hometown.

Make Green (Dev)

Develop applications and software features with a focus on efficiency and sustainability for this and future generations.

What makes FOSS sustainable?

Free & Open Source Software (FOSS) guarantees transparency and user autonomy, by design. These are not features, but inherent qualities to open development and software licensing. As a result, software and hardware are no longer dependent on vendors for support.

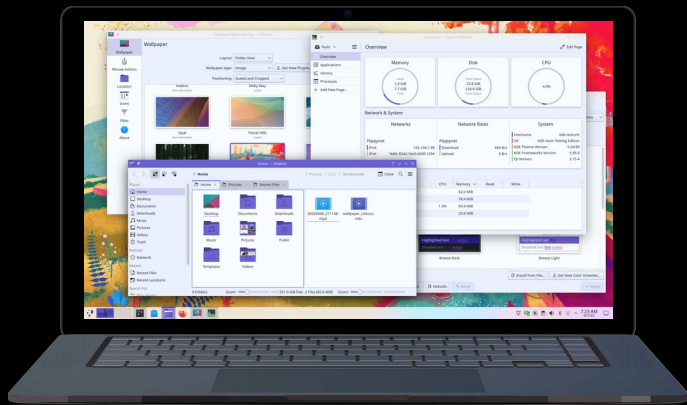
FOSS can be studied and improved independently, including in its energy consumption. Premature hardware obsolescence is a thing of the past. FOSS runs on devices that are decades old. Keep your computer in use to the end of the hardware operating life, not the software.



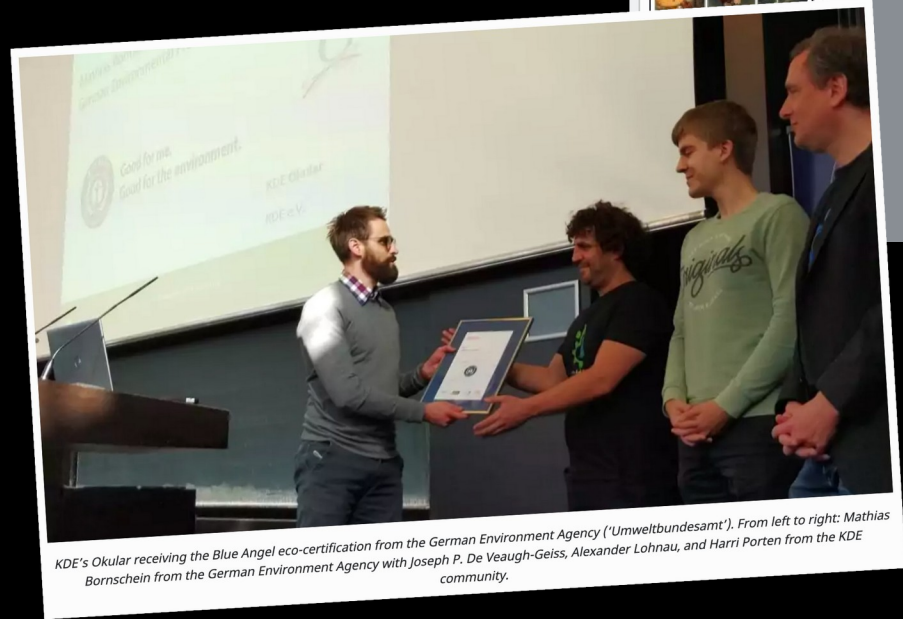
KDE's vision:

"A world in which everyone has control over their digital life and enjoys freedom and privacy."

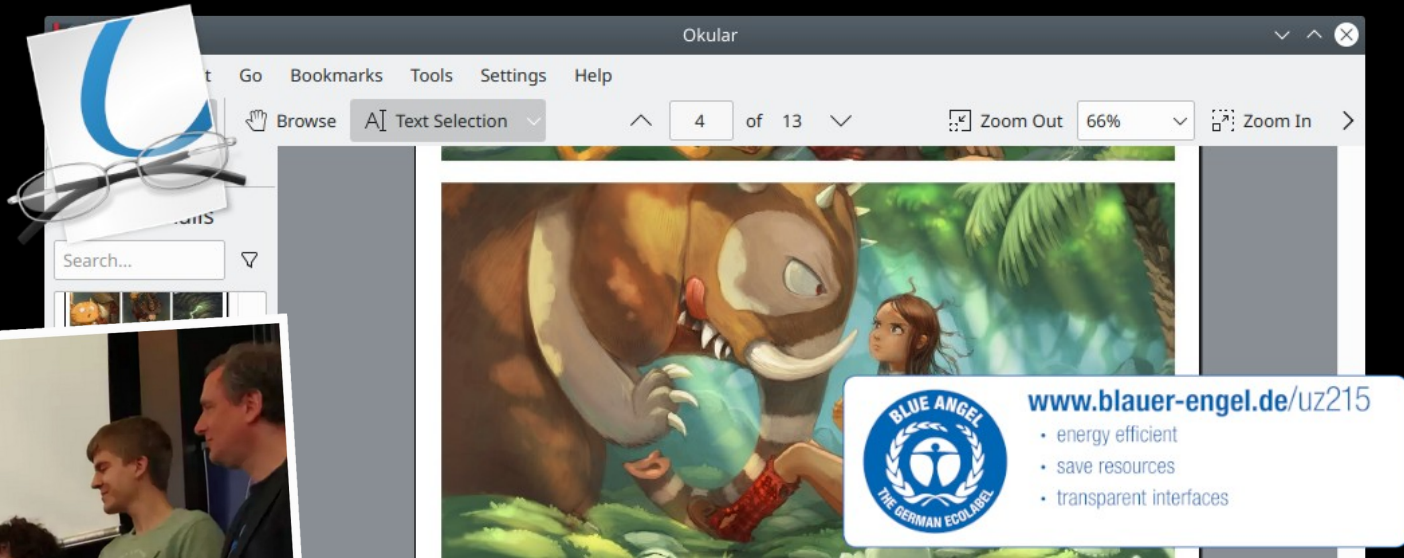
<https://community.kde.org/KDE/Vision>



Visibility



KDE's Okular receiving the Blue Angel eco-certification from the German Environment Agency ('Umweltbundesamt'). From left to right: Mathias Bornschein from the German Environment Agency with Joseph P. De Veaugh-Geiss, Alexander Lohnau, and Harri Porten from the KDE community.



Okular is first software with Blue Angel eco-label certification

<https://eco.kde.org/blog/2022-03-16-press-release-okular-blue-angel/>

Revised Blue Angel Criteria

Version 4 published in August
2024

- Extended scope: Desktop, Server, Mobile
- More flexible energy measurements
- Ongoing assessment of energy and resource efficiency

KDE was involved in revision

Okular certification will continue

Do we want to certify more KDE applications?

10
Mär 2023

Konferenz

Nachhaltig by design – für eine klimaneutrale digitale Zukunft

Digitalpolitik & Netzpolitik



Die digitale Transformation birgt großes Potenzial für die Gestaltung eines zukunftsgerichteten Staatswesens, für wissenschaftlichen Fortschritt und gesellschaftlichen Wohlstand. Mit Vertreter*innen aus Politik, Wirtschaft und Zivilgesellschaft sowie 400 Gäst*innen hat die grüne Bundestagsfraktion am 10. März 2023 auf einer hybriden Konferenz über den Handlungsbedarf an der Schnittstelle zwischen Nachhaltigkeit und Digitalisierung debattiert.

© Grüne Bundestagsfraktion / Aya Scharoni

KDE is seen as expert
for sustainable software

Invited to conference
about digital
sustainability in
German parliament

<https://eco.kde.org/blog/2023-04-26-sustainable-by-design/>

SZ Software soll umweltfreundl... x +

sueddeutsche.de/wirtschaft/blauer-engel-softwa... 🔍 ⏪ ⏩ ☆ 📄 📱 🗨️ 🏠 👤

SZ.de Zeitung Magazin Alle SZ-Produkte ▾

☰ Menü 🔍 **Süddeutsche Zeitung** Abos Logout

Meine SZ | SZ Plus | Ukraine | Energiekrise | Fußball-WM | Politik | Wirtschaft | Meinung | Panorama | Sport | München ▾ | Kultur ▸

Home > Wirtschaft > Technologie > Software soll umweltfreundlicher werden IT-Standort Bayern | Trisor Schließfach | Presseportal

Blauer Engel

Programmieren geht auch umweltfreundlich

21. November 2022, 14:10 Uhr | Lesezeit: 4 min

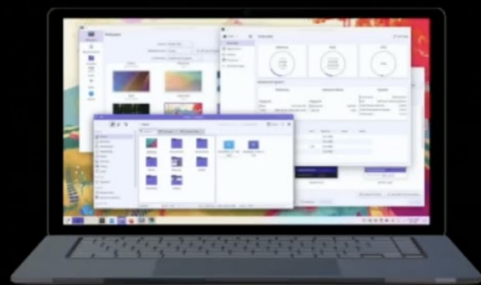


Vor 40 Jahren hat der Blaue Engel noch umweltfreundliche Flaschencontainer geschmückt, mittlerweile zeichnet er auch Software aus. (Foto: Blauer Engel/Archiv RAL.gGmbH)

Der Blaue Engel zeichnete bislang Klopapier und Wandfarbe aus. Jetzt hat erstmals Computer-Software das Öko-Siegel bekommen. Was das Programm besser als andere macht.

Von *Mirjam Hauck*

<https://www.sueddeutsche.de/wirtschaft/blauer-engel-software-open-source-okular-1.5700118>



KDE's vision:



"A world in which
everyone has control over their digital life
and enjoys freedom and privacy."

<https://community.kde.org/KDE/Vision>

Es geht um mehr als nur Technik...

Bits & Bäume



Bring it Back to Life!

Friday 28 June 2024

18:00-21:00

Moos Moosdorfstr. 7-9 (S Treptower Park)

Revive your old **laptop** and reduce toxic e-waste with Free & Open Source Software at this drop-in workshop with the KDE Eco community (eco.kde.org). Free of charge!



Download me:

https://invent.kde.org/teams/eco/opt-green/-/raw/master/workshops/2024-06-28_flyer_moos_berlin_workshop-bring-it-back-EN.pdf

The most environmentally-friendly device is the one you already own!

Beginner friendly, no technical knowledge is necessary.

18:00 Welcome / Introduction

19:00 Laptop upgrade workshop. Bring any laptop for step-by-step help. (Have an old Android smartphone? Write us!)



eco.kde.org

Questions? Email:

alistair@reclaimed.systems or joseph@kde.org

* Apple's policies mean iPhones will not work.

More presentations

Presence at events

Reaching out to related communities

More complete list:

https://community.kde.org/Goals/Sustainable_Software#Results

How is Okular Sustainable?


Eco-Certification
Blue Angel certified for transparency in energy use, a longer hardware operating life, and user freedoms.
[Learn More >](#)

Energy Efficiency
Software efficiency determines the energy demands and operating life of digital infrastructure.
[Learn More >](#)

Transparency & Autonomy
A Free Software license makes for the efficient, long-term, and ecologically sustainable use of hardware.
[Learn More >](#)

Ethics & Privacy
The four freedoms are critical for an inclusive, equitable, and ecologically sustainable digitization.
[Learn More >](#)

Medal by Ongycon, Green Lamp by Stefania Servidio, User by Guru, Ethics by Ruben Hojo from Noun Project (CC BY 3.0)


 www.blauer-engel.de/uz215

- energy efficient
- save resources
- transparent interfaces

Eco-Certification
Okular is proud to be the first computer software worldwide to have received the Blue Angel seal in 2022. Introduced in 1978, the Blue Angel is the first ever ecolabel worldwide and the official environmental label of the German government. In 2020, the German Environment Agency (Umweltbundesamt) released the award criteria for desktop software with three main categories: (A) Resource & Energy Efficiency, (B) Potential Hardware Operating Life, and (C) User Autonomy. Software products that demonstrate compliance with these criteria enable longer and more efficient use of hardware.

Interested to know more? Check out the KDE Eco handbook "Applying The Blue Angel Criteria To Free Software".

Energy Efficiency
Download the most recent reports for Okular's Idle Mode and Standard Usage Scenario energy consumption measurements. Software design and implementation have a significant impact on the energy consumption of the systems it is a part of.



Eco Tab in Okular

Visibility for Sustainability in KDE Applications

<https://okular.kde.org/eco/>

Initiatives

Applying The Blue Angel Criteria To Free Software

A handbook to certify software
as sustainable

A KDE Eco initiative



eco.kde.org

Blue Angel for Free Software

<https://invent.kde.org/teams/eco/be4foss>

Funding Notice

This project was funded by the Federal Environment Agency and the Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection (BMUV¹). The funds are made available by resolution of the German Bundestag.



Federal Ministry
for the Environment, Nature Conservation,
Nuclear Safety and Consumer Protection

**Umwelt
Bundesamt**

Think Global, Compute Local

Reduce E-Waste With Sustainable Software



Figure : The "Think Global, Act Local" campaign urged people to consider global health while taking action in their local communities. This new project urges people to do the same, but with computing. (Image from Karanjot Singh published under a CC-BY-4.0 license.)

Opt-Green – Sustainable Software for Sustainable Hardware

<https://invent.kde.org/teams/eco/opt-green/>

Funding Notice

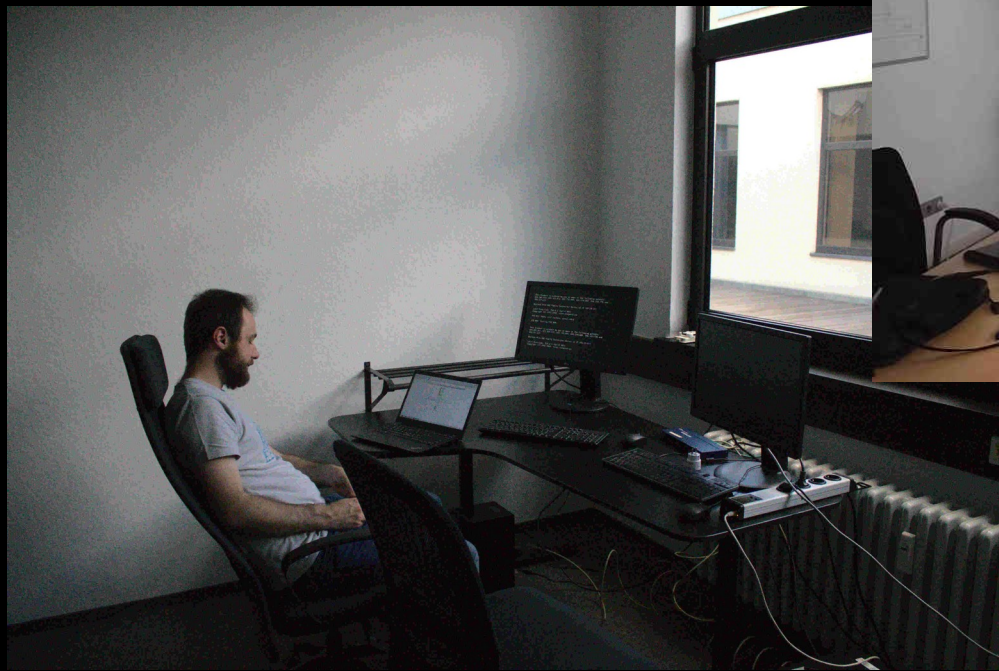
This project was funded by the Federal Environment Agency and the Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection (BMUV¹). The funds are made available by resolution of the German Bundestag.



Federal Ministry
for the Environment, Nature Conservation,
Nuclear Safety and Consumer Protection

**Umwelt
Bundesamt**

KEcoLab



Seasons of Code

- SoK 2022
 - Preparing Standard Usage Scenarios for Energy Consumption Measurements
- SoK 2023
 - Improve "KDE Eco Test" emulation tool
 - Measurement of energy consumption with Selenium
 - Preparation of KDE apps for Blue Angel eco-certification
- GSoc 2023
 - Measuring Energy Consumption Using Remote Lab
- SoK 2024
 - Improving KdeEcoTest's functionalities and compatibility
 - Testing and development of KEcoLab
 - Selenium testing and user videos
 - Adding Windows support for KdeEcoTest
 - Sustainability 1: Testing and Development of KEcoLab

Teaming up with others

Measurement (technology)

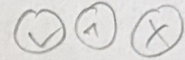
Umweltcampus Birkenfeld
Sustainable Digital Infrastructure Alliance
Green Coding Berlin
Green Web Foundation

...

Community (culture)

What didn't work?

KDE Sustainable Software Dashboard



Criteria

Apps	Criteria					Status					
	Documentable										
	Source Linked	Standard Found	Privacy Policy	Telecom Policy	Install Instructions	Usage Scenario	Measurement	Published	Open Tel. Party	Open Tel. Content	
<u>Okular</u>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Ed: 100%
<u>KMail</u>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Ed: 20%
<u>Groupis</u>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Ed: 74%

Add App

How can we get more
of KDE involved?

How do we act as one
community?



The goal lives on

Get involved



Mailing list:

kde-eco-discuss@kde.org

KDE-Eco Community (blog, chat, forum meetups, ...):

<https://eco.kde.org>

GitLab (progress board, code, data, docs):

<https://invent.kde.org/teams/eco>

Join the BoFs



Using KEcoLab To Measure Software's Energy Consumption

***When*:** Monday 9 September 10:00 CEST (UTC+2), Room 2

Opt Green / KDE Eco

***When*:** Monday 9 September 15:00 CEST (UTC+2), Room 2



Sustainable Software

We **have** to do something

We **can** do something

We **do** something

Let's do it together





KDE
GOALS