

25 minutes allocated. 20 minutes for talk, 5 minutes for questions.

Hello, this talk is going to be about parental controls and digital wellbeing and what's happened on them in the GNOME 47 cycle so far. The two are quite closely linked, and as you'll see, there's actually been more work on digital wellbeing this cycle than there has been on parental controls. That work will form the foundation for later parental controls work.

- Health breaks
- Session time limits / Screen time
- Bedtime

└ The plan

The plan for this cycle was to implement these three things, funded by a grant from Dalio Philanthropies to the GNOME Foundation. They are useful both for digital wellbeing and for parental controls. For digital wellbeing, we want to provide tools to help you keep yourself well and happy on the computer. For parental controls, we want to provide tools to help you help your children/dependents keep well and happy on the computer.

└ Health breaks

- Various existing apps
- Tighter integration with the shell
- Movement breaks
- Eyesight breaks

Firstly, health breaks or break reminders. These will function the same for both parents and children. Their purpose is to periodically remind you to take a break from the screen, to get you to move and to give your eyes a rest.

└ Health breaks

- Various existing apps
- Tighter integration with the shell
- Movement breaks
- Eyesight breaks

There are various apps which do this already, but by having an implementation in gnome-shell, we can provide tighter integration with the desktop and better performance. It means we can use the shell's internal activity notifications (for mouse moves) so no IPC is needed to detect the user being idle. And it means we can display custom overlays or desaturate the screen to hint to the user that it's time to take a break. A standalone app, on the other hand, can only really display notifications.

└ Health breaks

- Various existing apps
- Tighter integration with the shell
- Movement breaks
- Eyesight breaks

The design done by Allan Day gives two kinds of breaks: eyesight breaks, which are short and frequent; and movement breaks, which are long and infrequent. The idea is that you look away from the screen during an eyesight break, and step away from the computer during a movement break.

└ Digital wellbeing design

Digital wellbeing design

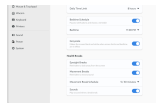


Figure: Digital wellbeing design in gnome-control-center (source)

Here's the design for the full set of digital wellbeing features for gnome-control-center. What will land in GNOME 47 will likely be a subset of the options here.

└ Health breaks notifications



Figure: Some health breaks notifications

Frustratingly, for a presentation, there's fairly little to show of break reminders. Essentially, they pop up some different notifications at different times, and give you the option to take, delay or skip a break. A lot of the implementation complexity comes from tracking your idle/active state and working out when breaks are upcoming (and which kind of break), and whether you've actually been consistently using the computer long enough to need a break.

2024-07-18

An update on parental controls for GNOME 47

[Health breaks implementation](#)

https://gitlab.gnome.org/GNOME/gnome-shell/-/merge_requests/3251

└ Health breaks implementation

Health breaks are implemented! They are currently undergoing code review but will hopefully land in time for GNOME 47.

└ Session time limits / Screen time

- A daily time limit on computer use
- For you, it's a hint; for children, it's mandatory

Secondly, session time limits or screen time. This is a feature which behaves similarly but not quite the same between digital wellbeing and parental controls. For digital wellbeing, we want to provide hints that you've spent enough time on the computer in a day. For parental controls, we want to provide a mandatory limit on the amount of time a child can spend on the computer.

└ Session time limits / Screen time

- A daily time limit on computer use
- For you, it's a hint; for children, it's mandatory

In both cases, the user interface for it will be similar — notifications when you're almost out of time, and when you are out of time, and either desaturating the screen (for digital wellbeing), or logging the child out (for parental controls) when time is up.

└ Digital wellbeing design



Figure: Digital wellbeing design in gnome-control-center (source)

Implementation wise, we need to know how long the user has spent logged in (on any session). We can get this information from systemd in the form of notifications about when the user's session state changes, but we then need to store that history over time. This can then be totalled to give the day's usage, and displayed in the graph at the top of the gnome-control-center panel.

└ Digital wellbeing design



Figure: Digital wellbeing design in gnome-control-center (source)

This gets a bit more complex when you consider the digital wellbeing and parental controls session histories act on different users: in the former case, the session history is being stored for you; in the latter, for a child user. The child user may try and tamper with the session history to get more time on the computer.

An update on parental controls for GNOME 47

└ Digital wellbeing design

Digital wellbeing design



Figure: Digital wellbeing design in gnome-control-center (source)

On top of that, a child user might want to set their own digital wellbeing screen time limit which is lower than the parental controls limit enforced by their parents.

└ Digital wellbeing design



Figure: Digital wellbeing design in gnome-control-center (source)

So, the session history for digital wellbeing is stored by gnome-shell for the current user. This is implemented and awaiting review. And the session history for parental controls will have to be stored by a separate daemon which will allow the parent user to query it, and not allow the child user to tamper with it. This is yet to be implemented.

2024-07-18

An update on parental controls for GNOME 47

Screen time implementation

https://gitlab.gnome.org/GNOME/gnome-shell/-/merge_requests/3397

└─ Screen time implementation

The digital wellbeing side of screen time is implemented! It's currently undergoing code review but will hopefully land in time for GNOME 47. The parental controls side of it is not yet implemented.

└ Bedtime

Bedtime

- Similar to screen time
- Reminds you to go to bed at a certain wall clock time
- Some tie in with night light

The bedtime feature is what it sounds like: a reminder to stop using the computer and go to bed at a certain wall clock time. Again, this is something which can be implemented for both digital wellbeing and parental controls, with the parental controls version being mandatory.

└ Bedtime

Bedtime

- Similar to screen time
- Reminds you to go to bed at a certain wall clock time
- Some tie in with night light

GNOME already has a 'night light' feature which changes the screen colour as the sun sets. Bedtime would be additional to this.

└ Bedtime

Bedtime

- Similar to screen time
- Reminds you to go to bed at a certain wall clock time
- Some tie in with night light

So far, though, this is still a design and has not been implemented yet. It should be fairly straightforward to implement once the session time limits / screen time code has landed, as it will reuse much of the same infrastructure.