

Re: GPLv3 Position Statement

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- *From:* Krzysztof Halasa <khc@xxxxxxxx>
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I generally agree with you, but...

Linus Torvalds <torvalds@xxxxxxxx> writes:

And it not at all uncommon to have a flash that simply cannot be upgraded without opening the box. Even a lot of PC's have that: a lot (most?) PC's have a flash that has a separate `_hardware_` pin that says that it is (possibly just partially) read-only. So in order to upgrade it, you'd literally need to open the case up, set a jumper, and `_then_` run the program to reflash it.

I think this is history. Yes, late 486s and Pentiums (60 and 66?) had a jumper protecting the flash. It's not true since ca. "Pentium 75+" days – while many boards use "bootblock" chips, it's (almost?) always unprotected (at most it just requires setting some GPIO pin(s)). The rest of flash obviously has to be R/W to support the ESCD etc.

I think there are systems with 2 copies of the whole BIOS, and the user selects the copy with a jumper (probably connected directly to the most significant address line of the flash IC) – the second copy might theoretically use a R/O bootblock but I've never checked it.

Most VGAs, disks, PCI cards etc. have flash chips with no protection either, and I have to say I felt much better when they used (EP)ROMs.

I think almost all hardware manufacturers use a blank flash chips, programming them "in system" with things like JTAG.

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Krzysztof Halasa

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