

Re: easy also patches for the stable kernel?

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- *From:* Thorsten Leemhuis <fedora@xxxxxxxxxxxxxxxx>
 - *Date:* Sun, 09 Sep 2007 12:45:04 +0200
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On 08.09.2007 19:49, Stefan Richter wrote:

Thorsten Leemhuis wrote:

On 08.09.2007 01:38, Takashi Iwai wrote:

[backports to -stable]

Linux will suck really if one breaks so-called stable thing easily without actually testing. For stable stuff, "it should be good" isn't enough. It must be: "it IS good."

This applies (or should apply...) to everything that goes to Linus in his pre -rc1 merge windows. To post -rc1 submissions and even more so to -stable submissions, additional criteria apply.

Sure -- but new PCI-IDs for ATA-controller these days get added to linux-tree post-rc1. They even find their way into the stable-tree since some weeks now, and I think that's really good (due to one of those patches my PATA-Controller in my 2 1/2 months old Laptop simply works now and I don't have to wait until 2.6.23 is out).

But similar easy-and-small patches for the sound drivers ⁽¹⁾ take way longer to get into the kernel.

(1) -- like the patches I linked to earlier in this thread that add a dmi-entry for another machine to the whitelist of machines to apply a known workaround on. Or the regression for my laptop:

<http://git.kernel.org/git/?p=linux/kernel/git/torvalds/linux-2.6.git;a=commit;h=a4eed138add1018846d17e813560b0c7>

[...]

Linux IMHO will suck even more if crucial pieces of hardware does not work for people easily, because Linux won't get even used then and will frustrate people.

Re: easy also patches for the stable kernel?

Don't get me wrong; I understand and agree mostly to the points you raised. But we nevertheless need to find a way to make today's hardware usable more quickly, as that hardware is often on the market only for some months or a year until the successor-model replaces it (which might need new drivers or workarounds) —

In the end there is but one solution to this: Open specs.

Sure, I suppose most of us will agree on that.

But "open specs" is only part of the solution — in an ideal world users IMHO should have *easy* access to the proper drivers immediately when the hardware becomes available. And that involves multiple layers IMHO:

1. hardware vendors need to open their specs before the hardware becomes available (some like Intel for their ATA-Stuff do that afaics); hardware also needs to be available for testing soon enough as well in case the hardware-vendor is not the driver author at the same time (like in the intel-case)

2. kernel developers need to have a workflow where at least small and easy driver enhancements (e.g. those that just add a new PCI-IDs or similar stuff like the extend list of machines to apply known workaround on) make it quickly out into an officially released kernel. (Even bigger driver updates IMHO need to get way quicker to the users, but that's a more complex topic as there the risk of breaking something is bigger)

3. Distributors need to pick those kernels up and provide them to the users. If they don't want to ship completely new kernels they need to cherry-pick the improvements — that's a lot of work and for the distribution-kernel-maintainers if the maintainer of the driver in question does not provide information if a patch should be safe even for older kernels; the interdependencies with other parts of the kernel make it more complicated.

Point "3" is solved for me, as Fedora regularly ships new stable- and linux-kernels during the life-time of a Fedora release (for other distributions you are often out of luck and you have to use the devel-tree, as only those get new kernels, but that's a different discussion). But that doesn't help much if even an in-time one-liner-pci-addition-patch from the vendor ("1") get stuck in area "2" for weeks or months.

but it sometimes even for small
also-fixes takes as many months to make it from the developers out to
the kernel and from there to the distributions the user uses.

It works better in some areas of the kernels (SATA and Network drivers

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come to my mind) where patches make it quicker into the linux- and stable-kernels --- in parts that is due to better cooperation with the hardware-vendors, but it seems the sub-tree maintainers have a better patch-/workflow, which has a strong impact as well.

Feature additions to SATA and networking, e.g. support of additional hardware, are not backported to -stable or merged post -rc1 either, I presume.

They are --- no many, but a few, and that's a good start IMHO:

=== linux

2.6.23-rc1 was on "22 Jul 2007"

<http://git.kernel.org/?p=linux/kernel/git/torvalds/linux-2.6.git;a=commit;h=f695baf2df9e0413d3521661070103711545>

The we had things like

Wed Aug 15 02:53:39 2007 -0400 sata_mv: PCI IDs for Hightpoint RocketRaid 1740/1742

<http://git.kernel.org/git/?p=linux/kernel/git/torvalds/linux-2.6.git;a=commit;h=cfbf723eb7928879292ee71fa0d118fc4e>

Wed Aug 22 14:28:02 2007 -0700 USB: resubmission unusual_devs modification for Nikon D80

<http://git.kernel.org/git/?p=linux/kernel/git/torvalds/linux-2.6.git;a=commit;h=83fc8a151beda2d63e196a7ab2e12316c>

Fri Aug 31 03:48:49 2007 -0400 ata_piix: IDE mode SATA patch for Intel Tolapai

<http://git.kernel.org/git/?p=linux/kernel/git/torvalds/linux-2.6.git;a=commit;h=c5cf0ffa71d32c03607d287b76483479a>

Fri Aug 31 04:00:19 2007 -0400 pata_marvell: Add more identifiers

<http://git.kernel.org/git/?p=linux/kernel/git/torvalds/linux-2.6.git;a=commit;h=d36ee189f392ea89de85124a0b58477bb>

=== stable 2.6.22.y

Wed, 22 Aug 2007 23:23:26 +0000 (16:23 -0700) libata: add ATI SB700 device IDs to AHCI driver

<http://git.kernel.org/?p=linux/kernel/git/stable/linux-2.6.22.y.git;a=commit;h=3443d563dc53875b15d919c4bece391f1>

Wed, 15 Aug 2007 16:25:10 +0000 (09:25 -0700) pata_atiixp: add SB700 PCI ID

<http://git.kernel.org/?p=linux/kernel/git/stable/linux-2.6.22.y.git;a=commitdiff;h=fd2efae63567dde934bb54772bb1b>

Thu, 9 Aug 2007 21:27:26 +0000 (14:27 -0700) Add a PCI ID for santa rosa's PATA controller.

<http://git.kernel.org/?p=linux/kernel/git/stable/linux-2.6.22.y.git;a=commit;h=a03cf181b9c19b4e95d847cd394c7ffaf5>

Maybe they are better in getting stuff ready in time before merge windows open ---- I don't know, I don't watch these subsystems.

Re: easy alsa patches for the stable kernel?

Well, hardware gets quickly from development over production into the market and we IMHO need to be quick as well if we want to support today's hardware and not only yesterday's.

Maybe they have less trouble with closed or nonexisting specs...?

Hehe, I'd say you should consider yourself lucky for the OHCI-standard in the FireWire space -- that makes sure you don't have to deal with PCI-ID-additions. ;-) And workarounds for specific controllers seem to be seldom in that area as well (but often needed for sound-drivers these days; and I had wrongly thought HDA would put that to an end...)

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knurd

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