

# Zack's Kernel News

## ■ Patch trace

A new patch attribution system is lumbering into existence, thanks in part to the SCO claims. The purpose, according to Linus Torvalds who proposed it, would be to make it easier to trace the full course of the patch, from its original author through any intermediary maintainers, along the chain of developers leading to the kernel maintainers.

The mechanism appears to be simplicity itself. Developers receiving a patch simply add a bit of text identifying themselves, and indicating that they affirm the freedom of their contributions. In order to debunk SCO-like attacks, it would be a matter of checking the affirmations of patches, rather than digging through ancient mailing list archives.

## ■ SMBIOS

The SMBIOS driver has been removed from the 2.6 kernel, much to the consternation of David Mosberger, who had just enabled it to run on ia64 machines. The reason for removal was that everything it did could be done in user space.

Unfortunately, as David pointed out, the user space technique relies on `/dev/mem`, which some developers have been trying to get rid of, or at least discourage use of, as well. Even Michael Brown, the original author of the SMBIOS driver, turned out to be in favor of the driver's removal. Michael himself had decided to use the `/dev/mem` user space solution in favor of the SMBIOS driver, and didn't want to maintain code he wasn't going to be using himself.

With even the driver's maintainer opposing its inclusion, it might be hard to convince Linus Torvalds or Andrew Morton to keep it in. However, if folks like David feel so strongly about it, it's possible that another maintainer might be found, or at least continue until a solution is found that satisfies those who want to avoid adding kernel features that could be implemented in user space, and those who feel that the user space solutions are themselves bad. ■

The affirmation would be somewhat formal, indicating that they had either written the code and were able to submit it under the specified license; or that they had modified code that was already licensed properly; or that they had received it from someone else who had signed off on it, and that they had then not modified it themselves.

As soon as Linus made the proposal, patches started coming in that used the system, in spite of the ongoing discussion about possible modifications to that system. One thing did seem certain: kernel developers approved of the idea.

Whether this will make it easier to debunk accusations of copyright infringement remains to be seen. ■

## ■ Build targets

With the advent of the new kernel build system (kbuild) in the 2.5 series, a Red Hat RPM build target appeared in the sources. Shortly thereafter, Wichert Akkerman posted a patch to produce a Debian `.deb` build target.

Unfortunately, Wichert posted his patch right at the center of the 2.6.0-test series, in which Linus Torvalds and Andrew Morton had frozen development until they could release 2.6.0 to inaugurate the new stable series. He was told to try submitting again later when there was not such a lock on new features.

That was in October of 2003. Now this June, Wichert posted his patch again. Sam Ravnborg, himself working on producing `.tar.gz` and `.tar.bz2` build targets, said he would add Wichert's `.deb` target to the patches when Sam offered them for inclusion later that week.

So it looks as through a `.deb` (and other) build targets will be soon arriving in the 2.6 kernel tree. These and the RPM target are really matters of minor convenience, since identical results can be achieved with simple userland scripts; but they are easy to implement and maintain, and provide a feature that kernel users might justifiably desire. ■

## INFO

*The Kernel Mailing List comprises the core of Linux development activities. Traffic volumes are immense and keeping up to date with the entire scope of development is a virtually impossible task for one person. One of the few brave souls that take on this impossible task is Zack Brown.*

*Our regular monthly column keeps you up to date on the latest discussions and decisions, selected and summarized by Zack. Zack has been publishing a weekly digest, the Kernel Traffic Mailing List for several years now, reading just the digest is a time consuming task.*

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## ■ NTFS gets more support

Anton Altaparmakov has been making progress with the NTFS driver. Up until now, write support has been unavailable, and it was necessary to run a utility after unmounting an NTFS partition, in order to prevent corruption.

Now, according to Anton, the work of that script is included in the filesystem itself, and it is also possible to overwrite resident files on the system with new data. Perhaps not as good as full write support, but still a very big milestone along the way. While the NTFS driver may never become anyone's first choice for a filesystem to run under Linux, it may become a convenient choice when accessing Windows disks, or sharing disks between Windows and Linux. ■

## ■ Maintainer lost

John A. Martin has given up maintainership of the CREDITS file. This doesn't mean the file itself will be going away. On the contrary, modifications to that file usually come from developers, as part of the patches they submit. The file has become such a successful part of Linux culture, that the need for a maintainer may have been obviated.

Adrian Bunk finally submitted the patch to remove John's name from the MAINTAINERS file and John was fine with that, although he did volunteer to maintain it again, should ever the need arise. ■

### ■ Maintainer found

Greg Kroah-Hartman has been working on SysFS, and finally agreed to accept the official title of Maintainer, by including his name in the MAINTAINERS file. Usually, developers are thrilled to get their names into that file, but Greg is already listed there many times, for his PCI and USB work, among other things.

He wasn't resistant to being named the maintainer, he just hadn't gotten around to signing up. He probably would have waited even longer, but Christian Gmeiner had been trying unsuccessfully to track the SysFS maintainer down, and finally asked on the linux-kernel mailing list. At that point, Greg owned up.

SysFS has proven itself a great success, and is the preferred interface between kernel space and user space for many applications and drivers. Linux still supports I/O controls (ioctl) and the /proc filesystem, new drivers are favoring the SysFS interface, being more maintainable, cleaner and less hindered with backward compatibility requirements. ■

### ■ Naming Names

No one has ever collated the names of all the contributors to the Linux code base.

Ridiculous as they may seem, it does take a significant amount of time to debunk claims of copyright violations in the Linux kernel, and Linus himself has had to deal with quite a bit of that.

Now, Peter A. Van Tassell has begun the Grokline project (<http://www.groklime.net>), to collect all the disparate data regarding Linux kernel authorship into a single place. This has been regarded as an impossible task, as when someone suggests converting Linux from the GPL to some other similar license.

When this sort of suggestion comes up, it is pointed out that every single kernel contributor in history would have to be consulted in order to get their permission to change the licensing of their particular contribution.

There have been uncounted thousands of contributors. Nevertheless, the first attempt to gather patch authorship data, is now underway. ■

### ■ New Book

Mel Gorman has published a book. The title is "Understanding The Linux Virtual Memory Manager", published by Prentice Hall. He was inspired by Linus Torvalds' decision to replace the existing VM subsystem in the early 2.4 kernels, with a completely new implementation.

This caused a lot of dissention among kernel developers. Among other complaints, the lack of code comments or other documentation for the new code, made it very difficult for developers to contribute to that area of the system.

In the midst of this, Mel decided to wade into the code, analyze its behavior, and provide not only a line-by-line commentary for much of the code, but also a clear, logical explanation of the code in well organized essays. It is that effort that has now been worked into this book, a work that pulls no punches, going deep into the subject, in an attempt to bring curious developers closer to being able to really participate in VM development. ■

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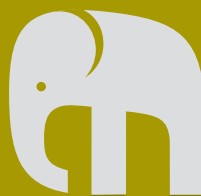
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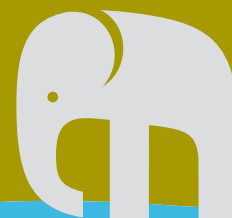
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