

Rusty Russell

POPPING

KERNELS

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Paul 'Rusty' Russell, one of the leading lights of kernel development, recently undertook a whistle-stop tour of Europe to explain his latest projects. Linux Magazine caught up with him on en route back to Australia.



Paul 'Rusty' Russel



Talking kernels in a Sheffield bookshop

Info

Rusty gives a talk in Sheffield

<http://www.sheflug.co.uk/apr01.html>

Rusty's Diary

<http://netfilter.filewatcher.org/diary>

<http://lantartica.penguincomputing.com/~netfiler/diary>

Rusty's Kernel Hacking Unreliable

Guide

<http://kernelbook.sourceforge.net/kernel-hacking.pdf>

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Rusty was born in London and left for Oz when he was three years old. He has spent most of his life in Adelaide and still lives there with his parents. He became interested in computers at the age of eight, when his father studied them as part of his medical course. Rusty knew he wanted to be a programmer from the age of 10, and so, naturally, when he got to university he chose Electrical Engineering with Computing Science. After graduating, he took to programming and never looked back.

Rusty went on holiday to Italy for four weeks before beginning his grueling schedule and then on to Madrid for Linux World, followed by a trip to a Santiago computer conference, Xuventude Galicia Net. If you have a look at his diary on the Internet you will see that, as part of his itinerary, he went to the VA Linux offices in Amsterdam where he was able to have a long talk with Wichert Akkerman. Wichert is the developer who used to be in charge of the Debian project. Rusty says that this chat was the highlight of his tour. Let's hope that all of us Linux users, and particularly the Debian fans, will benefit from this meeting.

Two UK stops were included on the tour, one at the University of Aberystwyth and the other at Sheffield. We were extremely privileged to attend of one of these presentations, held in Sheffield's Blackwell's bookshop, in which Rusty explained the netfilter that he has written for the 2.4 kernel.

The lecture was well attended, with many people travelling from all over the country to hear him speak. There were some heavyweight technical people in the audience including attendees from the Manchester and West Yorkshire users' groups.

Rusty opened by explaining that he has worked on ipchains as well as iptables. He is also responsible for producing, or working on, file hierarchy standard 2.2, network address translation 2.4, the kernel hacking unreliable guides and kernel locking. If you're a kernel coding person it's extremely likely that you will have come across his work at some time.

His explanation of netfilter and iptables was brilliant from beginning to end. The talk was well

received and those present showed their appreciation by way of a warm applause. Afterwards, I talked to him over a pint of Theakston's Old Peculier and asked him a few questions.

Rusty explained that he started on the 2.0 firewalling code in Slackware at a time when he was working on his own as a UNIX consultant. In January 1997 he decided to go to a Usenix session. Linus Torvalds was there along with Steven Tweedie, Alan Cox and a few other Linux luminaries. Rusty was hooked and has worked on Linux kernel code ever since. He wrote the packet filtering stuff for earlier kernels and later on became involved with writing code for network address translation.

Rusty was attracted to kernel coding because, for him, this enterprise represented a fresh project and a means of self improvement. Issues of Internet ownership and control also loomed large in his reasons for getting involved.

I asked him why he worked in Oz and not somewhere else. He says that anyone who wants to be successful goes to Silicon Valley. They don't have as much talent as they would like to have over there, and so they are willing to pay people. He thinks that it's not too hard to telecommute and so he prefers Australia where the scenery is great and the people and the beer are things he understands. His own kernel project has contributed to the growth of the Internet, which he can then use to work with people in many countries without actually travelling to them. We also discussed the controversial subject of documentation in Linux and agreed that someone ought to sort out the docs, although just who could do this no one really knows.

For all of us mere mortals here in Sheffield it was something of a religious experience to see Rusty walk along the street from the pub and take the tram to Sheffield Midland Station so that he could catch a 747 to go to work. We hope he'll come back sometime.

Richard is chairman and organiser of the Sheffield Linux User's Group. You can view their site at <http://www.sheflug.co.uk>