

# The risk of mixing free and non-free

In a world where anything (even SCO...) is possible, we have to remember that risks are taken when free and non-free software are mixed

Edward Macnaghten

If you are reading this you probably use free software. In fact, I think the probability that you are reading this article using free software is extremely high, whether it is “free-as-in-speech” as in Firefox, or “free-as-in-beer” as in Internet Explorer. Free software is increasingly being taken for granted and is almost treated as some kind of legal right in some quarters. And so it should be. A lot of people have had to put a great deal of effort into ensuring sufficient “free-as-in-speech” software exists for this to be so. However, over-basking in the sunshine of carefree internet surfing may be as risky as not using sunblock when going out in the sun. Drifting into over-indulging in the candy-shop of license free word-processing and spreadsheet-calculating may well cost you the IT equivalent of a jean size. The liberty of being able to use free software is still at risk.

## The amazing money-making tollbooth

Roads, or the vast majority of them, are free for us to use. Yes - I know - we do pay for them in taxes and other means of government extortion, but with the exception of a relatively small number of toll roads we don't have to pay for them when we use them. If you live in an area where toll roads have become a necessity then please let me apologize for using an inappropriate analogy.

Imagine if you could set up your own tollbooth at the bottom of your driveway though, or if not there, at your nearest major road. You could charge each car a dollar, or even

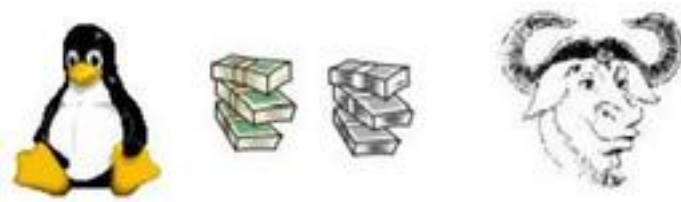
Fig. 1:



more, as it drove past. Your only cost was the administration of that toll, and you won't have to contribute to the building or upkeep of the road. Imagine that there was no alternative route for the cars to use to get from A to B. Imagine if it was all legal and above board. Wow! You could be a millionaire in no time at all. Forget about lottery tickets - This is the *real* way to get your yacht in the mountains - or whatever takes your fancy.

I can imagine cynics saying at this point “imagine if pigs can fly” or “imagine if politicians were honest” etc, and I admit, the above scenario is unlikely, but what if it *could* happen? I doubt if you, or the greater percentage of the population, think this a moral or fair way of earning money, but you would need to be very conscience driven not to fall into the temptation of earning loads of cash that way if you actually could. After all - if you dropped a hundred dollar bill in the street would you actually expect the person who found

Fig. 2:



it to try to give it back? What if you found a hundred dollar bill? Would you take the trouble to trace the owner or hand it to someone who you think the owner may enquire for it? Taking it is theft - but would that stop you? If you have been in that situation and you did the honourable thing then good for you. I salute you. However, you would be in the minority if you did. The majority of the population would pocket their newfound wealth for an extra treat when they next go out. And why shouldn't they? No one would stop them and honesty is unlikely to be reciprocated if the rolls were reversed. In the same vein, why shouldn't you piles of money using inappropriate toll-booths if you could?

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It is very difficult for most people to resist immorally making large amounts of money if they can get away with it. On the other hand, life wouldn't be so grand if someone else could legally put a tollbooth under these terms, say, at the bottom of your driveway. Suddenly this amazing tollbooth is not quite so wonderful after all. It may be unfair on you - but so what? The person doing it would have every right to. If you don't like it: you can just stop using your car. Don't be fooled into thinking that the world is too nice for this to happen, there are a lot of people around who'd be more than happy to take money from you in this way if they could.

I believe, in that case, there would be a race to get as many tollbooths situated at the bottom of as many driveways as possible. It would be a dog-eat-dog scenario, with relatively few participants ending up controlling the vast majority of tollbooths. The effect that would have would be simply to ensure as many tollbooths inconvenienced and extorted as many citizens in as short a time as possible.

Fortunately for us, there are laws that protect us from that. If any not-so-friendly neighbour tried it, all it would take is one phone call from you and the boys-in-blue would be around to take him away for some serious questioning and possibly a falling-down-the-stairs accident on the way to the cells. You have nothing to fear from a phantom booth mysteriously appearing where it doesn't belong. Your freedom to use the roads is more or less guaranteed. Of course, that's assuming there are sane (or at least not too insane) governments in control of things. There's no danger of your freedom being eroded in this way, or at least, I hope not.

Unfortunately, I cannot say the same about the freedoms of using free software. Government legislation doesn't protect the freedoms of free software, as much as other aspects of life, due to the fact it's considered unimportant and isn't really understood.

### How to take away freedoms in software

I'm a software developer. I have developed, and I am developing, free software as specified by the GNU General Public License. I rely on the copyright laws of countries to ensure my software is not used inappropriately and to give me recourse if it is. I have also in my time developed proprietary software, and the company I worked for relied on the same laws to ensure income from license revenue. This is all well and good and, like most people I know, I don't have a problem with this... so far.

It's possible that I could have developed proprietary software that runs on Linux. In fact, I believe that some of the UNIX proprietary code I wrote has now been ported to it. Suddenly we have the situation where, although you didn't have to pay for the operating system, and certain freedoms regarding it are guaranteed, you need to pay a license to run the application on it. This is also fine. It is an important part of the GNU/Linux model. All benefit from it.

However, mixing proprietary code in free systems can have a practical danger.

Going back to the tollbooth analogy imagine a hundred mile long road that goes from one town to another, and has no turn offs or means of entering or exiting it. Now imagine ninety-nine miles of that road being entirely free to use, and one mile of it is privately owned, and you have to pay just for travelling on that one mile. The fact that the vast majority of that road is on public land and is free to use is now

irrelevant. You still need to pay to use the road. None of it, in effect, is available to you, to make use of, without paying. By the same token: let's say I produce a GNU/Linux box, for a small company, with my proprietary application on it. The terms of my license specifies that if any software is installed, modified or altered on a machine with my application on it, or a machine on the same LAN, then the user loses all rights to use my software without reimbursement or recourse of any kind. This would be legally OK for me to do. I'm not violating the GPL because there is no GPL code in my application, and this is where I am putting the restriction. In addition, I'm not putting restrictions on their use of the GNU/Linux programs themselves, so I am not breaking the license there either.

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If I place a restriction one small part of your computer that is vital to you, then I have in effect restricted your use of the machine as a whole, regardless of the freedoms others may have granted you. Big deal you might suggest - they can dump my application and carry on using GNU/Linux - or run other boxes, not connected with the free software on it. However, this may not be a choice. The expense of dumping the software, if it is a custom-built application, which has been developed over a long time, may well be prohibitive. As for running a separate network or box, that may be unrealistic too. It could well mean two screens on every desk instead of one or some employees not having access to all of the systems. This could also be unacceptable.

Should the above scenario occur then, in effect, I would have succeeded in "un-freeing" the GNU/Linux system for that company. Many of the freedoms the GPL is meant to have guaranteed its users would have been denied them. Furthermore, I would have done it whilst not violating the GPL myself. I would have succeeded in placing a toll on a mile of road but in the process gained control of a hundred. I realise the above is rare, but occurs it does. I know of scenarios where this has happened in the past. Now, with the serious proliferation of software-method patents, it could

Fig. 3:



become easier and easier for such companies to gain control of crucial aspects of a computer's application processing, such that lets them gain a foothold in the entire computer's works. The SCO group have even tried it directly with GNU/Linux - they never claimed all the code was theirs, just sufficient amounts for them to warrant a per-machine payment for the use of it. Fortunately, it is looking increasingly likely that their lawsuit will fall completely on its face and be buried in the mud where it belongs. However, it may have been a different story if they had their act together better in the beginning, or "if it wasn't for those pesky volunteers at Groklaw" exposing it for the sham it was. It is wrong to be complacent about such things.

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Take a look at Sun's Java Desktop System. It's actually SuSE Linux running Gnome with all that goes with it, and Star-Office and some other Sun proprietary software on it. Sun charge you for the entire desktop, and support it. If you install software, not approved by them, on the system: you may find that Sun no longer guarantee uptime and support for it, until you un-install the software. However, either way, you'd still be liable for the annual payments. The fact you could get SuSE, Gnome and even OpenOffice from elsewhere could well be irrelevant in this case - your business

may depend on an aspect of the Java Desktop that is entirely sun's intellectual property. In effect - the freedoms granted to you by the GPL have potentially been destroyed.

## Conclusion

Allowing proprietary software to run inside free systems is a necessity in the real world. However, don't be fooled into thinking it's without danger. There are those around you who would use any tactic to obtain revenue from GNU/Linux licensing, or from any other free-as-in-speech software. Placing proprietary and highly controlled applications on systems could be a "foot-in-the-door" first step toward achieving this end. Computers are useless if you can't have practical use of them. If these proprietary applications mean, in effect, that you cannot use any part of the computer - including the free parts - without the permission of the vendor then the "freeness" of the software has been removed. It can happen. When you see proprietary software on a free system - look more closely. Be aware, and beware!

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## About the author

Edward Macnaghten has been a professional programmer, analyst and consultant for more than 20 years. His experiences include manufacturing commercially based software, in a variety of technical environments, for a number of industries in Europe, Asia and the USA. He is currently running an IT consultancy specialising in free software solutions based in Cambridge UK.