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Microsoft: what's next?

by Kragen Sitaker

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Microsoft just won their years-long antitrust lawsuit: they flouted the law, they perjured themselves with impunity, and they got off with a slap on the wrist.

The time has come for those of us in the free-software community to think about what this means, because now Microsoft considers us Microsoft Enemy #1. What should we expect in the next few years?

I don't think my writing this will help Microsoft much – they've probably already thought this stuff through quite thoroughly – but perhaps it will help the rest of the world.

Well, we can probably kiss Microsoft Office on Linux goodbye. It works now – at least, up to Office 97 – but Microsoft will do everything in their power to ensure that future versions of Office don't run on Linux, or, for that matter, on old versions of Microsoft Windows. In the past, they've licensed some products only for Microsoft operating systems. Antitrust law forbids this, but they might not care – they just laughed in the face of an antitrust case from the world's most powerful government and won.

In any case, they can certainly legally use technical means to make them difficult to run.

For example, they can integrate big chunks of application code into the operating system; running the applications on another operating system would then require that the other operating system include re-implementations of all of this application functionality. Taken to the logical extreme, this would mean including all Microsoft applications with every copy of the OS, only encrypted or disabled in some other way; the application CDs would merely contain activation keys. This would make it harder to upgrade the applications independently of the operating system, but it seems likely that Microsoft can use their "critical update notification tool" to distribute the necessary updates ahead of the application releases.

Strategic GPL applications on Microsoft Windows could become technically very difficult to run, especially when Microsoft can upgrade everybody's operating system to break them on a daily basis. Microsoft, of course, has no legal obligation to verify that their software updates don't break third-party applications.

Along similar lines, Microsoft Windows licensing might forbid linking GPL applications to system libraries, on the grounds that it might imperil Microsoft's intellectual property.

The Windows XP license forbids providing remote access to your desktop and, if I recall correctly, uses various technical means to make this difficult. These technical means won't work when the Microsoft Windows OS runs inside a virtual machine like VMware. So Microsoft could "legitimately" break VMware compatibility, and probably will. (Microsoft can break VMware compatibility easily, especially when they can update their software on a monthly basis.)

Microsoft has filed for a number of strategic patents on the .NET virtual machine. If they get them – which they probably will – they will legally control all .NET deployments, including those built on free software. Microsoft couldn't control GPL implementations of .NET this way – a patent holder can prevent them from being distributed, but cannot impose conditions on such distribution.

Ximian has built a free .NET virtual machine clone called Mono, which they originally licensed under the GPL; they relicensed it under a license that allows patent control and proprietary derivatives. Most likely, Microsoft offered them some quid pro quo for so doing, perhaps licenses to use the patents. If this comes to pass, Ximian and Microsoft will sell licenses for Mono and solutions built on it, but anybody else who does this will have to comply with arbitrary restrictions imposed by Microsoft. For example, Microsoft could require specific virtual machine features to change in a way incompatible with existing GPL application code, or require a per-seat license.

Microsoft Internet Explorer has essentially a complete monopoly on the Web browser market. Microsoft can use this monopoly to encourage use of Microsoft products on the server side in two straightforward ways. First, they can break existing functionality when interoperating with non-Microsoft server software – perhaps an occasional header misparsing, some extra processing delays, or some inefficient code that only runs when talking to non-Microsoft servers. Second, they can add new functionality that only works with Microsoft server software.

Palladium offers Microsoft a doomsday weapon against competition. Palladium-enabled software applications can store their files in formats that other software cannot decode and that software running on another operating system also cannot decode, and they can reliably refuse to run on other operating systems themselves.

In the past, Microsoft has exerted great pressure on hardware vendors not to support Microsoft's competition and not to differentiate their products. In the near future, this practice could work to great advantage against competing operating systems. For example, Microsoft can continue to forbid hardware vendors from offering machines configured with multiple boot options; they can give better financial terms to vendors who offer no competing operating systems; they can encourage hardware vendors to use hardware without good Linux support; and they can forbid hardware vendors to offer Linux drivers or give help to developers of Linux drivers.

Finally, many people perceive Linux as more secure than Microsoft Windows; if Microsoft can destroy that perception, they can prevent these people from leaving Microsoft Windows for Linux. For example, they could hire programmers to write better viruses and worms for Linux, and they could talk up Linux worm incidents.

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