

Engineering is about tradeoffs: How hard will you work to save 68KB of disk space?

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One of the recurring themes in the comments to [my explanation of the historical reasons why there are two copies of Notepad](#) was to use a hard link (or possibly a symbolic link) to save having to waste the disk space for two whole copies of Notepad. As I like to say, engineering is about tradeoffs. Let's look at the cost-benefit analysis.

On the one hand: Install two copies of Notepad. Cost: 68KB of disk space.

On the other hand: Use hard links or symbolic links. Cost: Add support for hard links or symbolic links to the FAT filesystem, to the operating system Setup program, to file formats such as the Windows Imaging Format, and to the various disk duplication systems that system builders (and corporate customers) use for deploying Windows to thousands of machines. Don't forget to count the cost for design and testing.

Imagine you're the scheduling manager for the Setup team. Which of these two options do you choose? 68KB of disk space or doing all the work to support hard links during Setup and then waiting for all the existing customers to upgrade their tools to versions which support hard links—which could take several years. Are you going to be the one to have to stand up in the [Ship Room](#) and say, "We can't ship Windows because ten of our customers hasn't upgraded their deployment tools yet, and I have no idea how long we're going to have to wait until they do"?

And for those commenters who said that Windows should just get rid of one of the copies, you'll be pleased to know that Windows Server 2008 got rid of the copy in the Windows directory. There is now only one copy¹ of Notepad, and it's the one in the system32 directory. It wasn't long after the product was released that I learned of a program that hard-coded the one that no longer exists; I wish the vendors good luck in getting a patch out quickly.

Footnotes

¹Nitpickers not welcome here. There is only one copy remaining *of the two under discussion*.

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