Why Do Error Messages Suck?

Whil Hentzen

Because you let them, that's why.

No, I'm not being a smart-alec. Someone recently suggested that every software manufacturer hold off on adding any new features to the next release of each product they produce, and simply spend the year fixing bugs. Novel idea, eh? Why do they continue to release version after version of software with new features – and the same bugs as the release from last time? Because we let them.

Why do you go back to a store that sold you a Piece of Crap (© Silver Fiddle Music, 1994) last time, only to find that they go ahead and sell you another Piece of Crap this time? Because you let them.

So, back to error messages. I was using InstallShieldExpress for Visual FoxPro a while back, and ran into a ton of ridiculous messages. But instead of putting up with it, I thought I'd do something about it – yes, using my bully pulpit for a change.

Here's the first message I received, as an example:

Figure 1. Error message from Windows Installer.

OK, what's wrong with this message? Other than the fact that I got the error in the first place, some of you may snicker. That's actually not fair – the cause of the error message is something outside of the software's control, as we'll see in a moment.

An error message like this doesn't do you much good, other than to flaunt in your face that you're screwed. "Internal Error 2355" looks like a copout by the developer – the lazy man's way out of having to do more work.

There are worse messages, of course. Another favorite is the following that showed up while I was removing old programs:
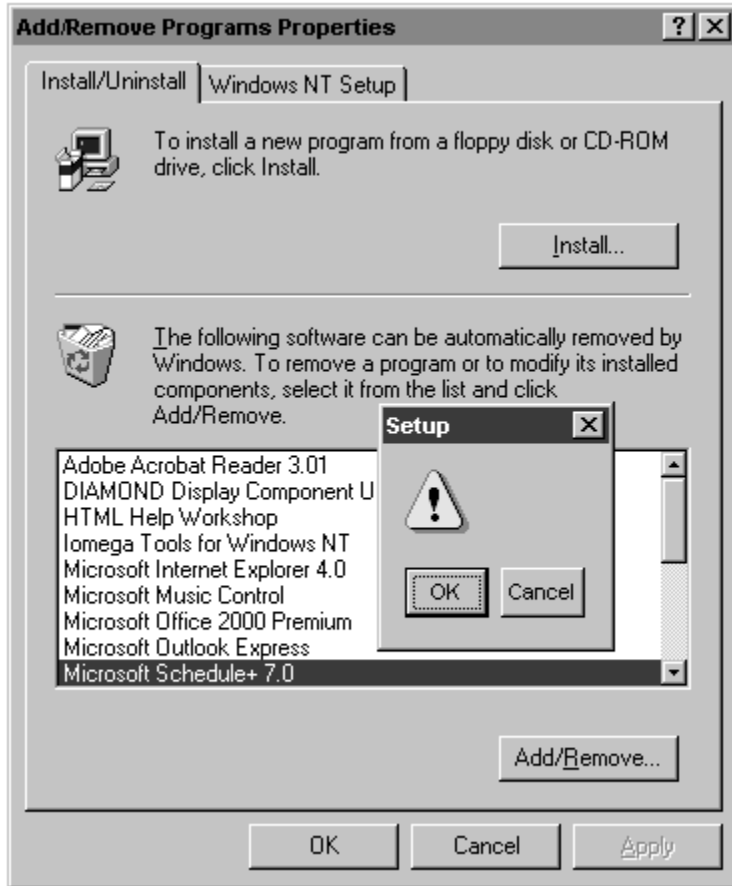
Figure 2. Error message during Add/Remove Programs.

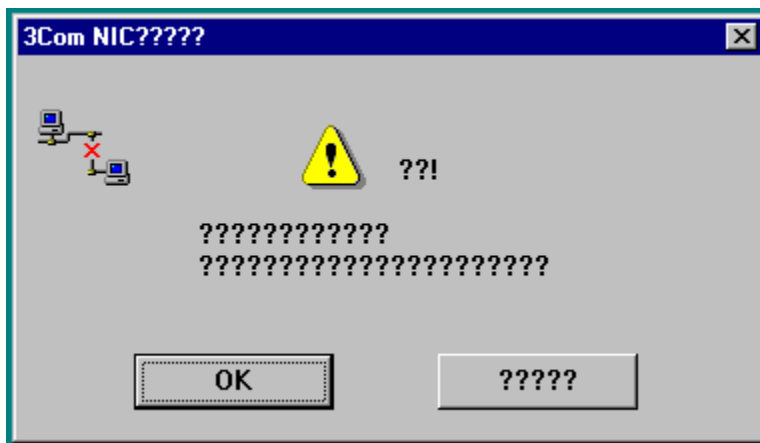And, of course, there's this one encountered during the installation of a NIC:

Figure 3. Error message while installing a 3COM NIC.

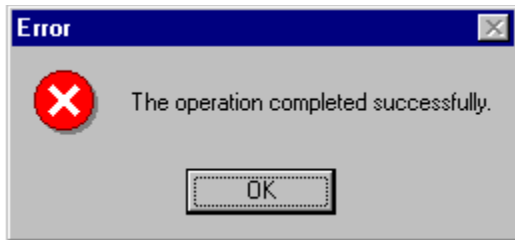Another favorite is this one from WinZip.

Figure 4. Error message from WinZip.

I scratched my head at this one for quite a while. Was it an error, or not?

These, though, are obvious screwups on the part of the programmer. Worse, though, are error messages that appear to have been given some thought, like the following. A first glance it looks quite reasonable.

Figure 5. Error message from Access 2000.

But… this is simply a 2000 version of the classic 1990 Fox message "Error #6 encountered while reporting Error #6." Someone still wasn't paying attention.

OK, we've had enough fun. Back to business.

An error message should consist of three parts. The first is a name or title or label that uniquely identifies the error, such as "Internal Error 2355." So far, so good.

The second part is a longer description – telling you what happened. In this case, this error indicates a problem with the cabinet file that is trying to be decompressed. If you look up this error in the MSI Help file (which comes with Windows Installer), you'll see the description "Corrupt cabinet."

Of course, simply adding the text "Corrupt cabinet" to this message, while more helpful than nothing, still wouldn't be enough. The error message should identify WHICH cabinet file.

Messages that indicate a problem with a memory variable, or a bad index, or missing file are virtually useless if the item in question isn't identified. Here's a favorite example of mine:
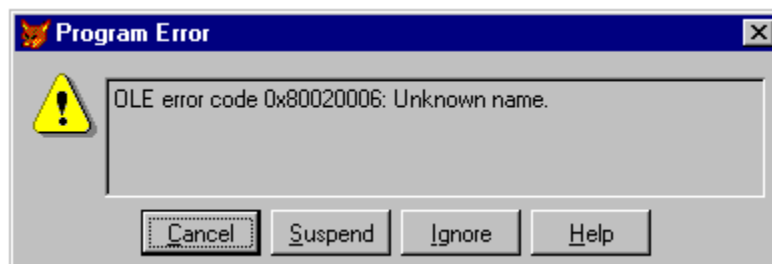

Figure 6. Error message encountered while instantiating an ActiveX control.
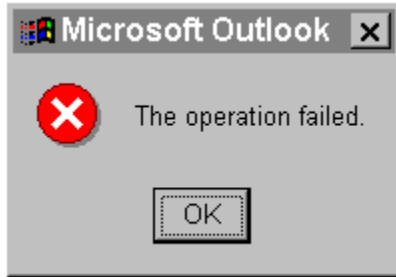
And this one is just insulting.

Figure 7. Error message from Microsoft Outlook.

Naturally, we've all seen messages like these:

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Cannot update the file
Cannot clear a class that is in use
Code page number is invalid
Drive specifier is invalid
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Wouldn't it be nice if the error message identified which name, operation, file, class, code page number, or drive specifier? I've been railing about this for years. The VFP team has taken my complaints to heart quicker than most groups at Microsoft, and if you haven't already noticed, messages from Visual FoxPro errors are getting better, and are going to continue to get better.

The third piece of information that an error message should include is what to do about it. For example, with the Corrupt Cabinet message, suggestions about rebuilding the cabinet, or building it on another drive (if it was corrupt because there wasn't enough room on the drive), or using a different media type would have all been good suggestions – and two of them both worked for me.

Here's a better example of an error message.

Figure 8. Error message while registering a DLL.

Of course, this assumes you know what "PView" is, but perhaps you shouldn't be using RegSvr if you don't know what PView is?

Still, it's a start. It identifies the item that's in trouble – MSVCR70.DLL – and offers both why it happened and what you might do about it.

I encourage you – no, implore you – to start paying more attention to error messages that don't help you deal with the problem. If you find particularly bad ones (just a screen capture, then save the capture in MS Paint as a 24 color BMP), and send them to me, along with what you were doing when you got the error, and we'll build a hall of fame, and try to nudge the manufacturers to improve.

You may not think it'll help, but some places really do listen. Around our house, we'll drive by Blockbuster or Burger King or Kohl's (a local grocery store), and more often than not, one of my kids will wistfully say, "I wish we could go there – but I know we can't, because they have bad customer service."

On the other hand, they'll often repeat the story of how another local video store made up for a grievous episode of bad customer service. The guy behind the counter ignored me for over four minutes, without even a "I'll be with you in a minute" greeting. Given that I was on crutches at the time, I was plenty

incensed, and finally left, tossing my crumpled membership card on the counter. The area manager called me the next morning, apologized for the poor service of the counter person, and then offered a dozen free rentals to make up for it.

If you complain properly and appropriately, you, too, can make a difference, and pretty soon messages like the one in Figure 9 (Visual FoxPro 5.0) will be history.
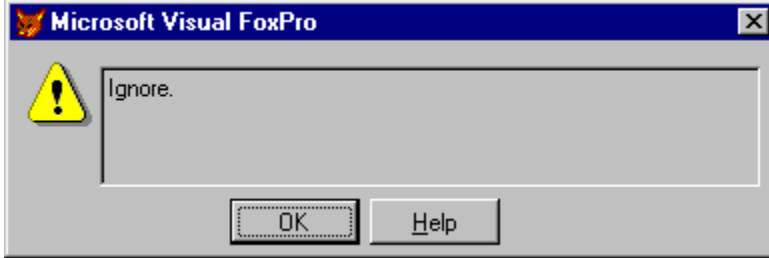

Figure 9. Error message from an old version of Visual FoxPro.