

Why does SHGetKnownFolderPath return E_FAIL for a known folder?

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A customer reported having problems with the `SHGetKnownFolderPath` function. I've left in the red herrings.

On Windows 7, I'm trying to retrieve the Internet folder with the following code:

```
if (OpenProcessToken(GetCurrentProcess(), TOKEN_ALL_ACCESS, &hToken))
{
    HRESULT hr = SHGetKnownFolderPath(FOLDERID_InternetFolder,
                                      KF_FLAG_DONT_VERIFY, hToken, &pszPath);
    ...
}
```

The call always fails with `E_FAIL`. What am I doing wrong? I tried passing `NULL` as the token, but that didn't help.

The reason the call fails has nothing to do with Windows 7 or the token. The call fails because `FOLDERID_InternetFolder` is a virtual folder—there is no path in the first place!

The reason is that the folder you are requesting is a virtual folder (`KF_CATEGORY_VIRTUAL`). Virtual folders don't exist in the file system, so they don't have a path. `SHGetKnownFolderPath` should work.

The customer appears to have misinterpreted this response in a way I wasn't expecting (but which sadly I've seen before):

I added the `KF_CATEGORY_VIRTUAL` flag, but I still get the same error back.

```
if (OpenProcessToken(GetCurrentProcess(), TOKEN_ALL_ACCESS, &hToken))
{
    HRESULT hr = SHGetKnownFolderPath(FOLDERID_InternetFolder,
                                      KF_FLAG_DONT_VERIFY | KF_CATEGORY_VIRTUAL,
                                      hToken, &pszPath);
    ...
}
```

Um, no, that makes no sense at all. `KF_CATEGORY_VIRTUAL` is a `KF_CATEGORY` value, but the second parameter to `SHGetKnownFolderPath` is a `KNOWN_FOLDER_FLAG`. You can't just combine unrelated values like that. It's like adding 3 grams to 12 meters.

And second, the `KF_CATEGORY_VIRTUAL` enumeration isn't something that you pass in to "override" anything. The point is that `FOLDERID_InternetFolder` is a virtual folder: It has no path, so if you try to ask for its path, you'll just get an error back because the thing you're looking for simply doesn't exist.

I never did figure out what this customer was trying to do. Maybe they figured, since they can't download the Internet, they could at least try to do a `FindFirstFile` on it.

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