

Possibilities for extending Windows Phone 7 functionality via Windows Phone Device Manager and TouchXperience

Version 1 – original pre-Mango version - August 2011

Version 2 – updated for WP7 7740 and WPDM 1.9 – February 2012

Version 3 – minor amendments for readability – May 2012

Background

Windows Phone 7 has a rather distinctive (read eccentric and in my view flawed) application model. Data is encapsulated within the app - there is no shared storage. This is all nice and secure, and sits well in the overall locked down and layered WP7 architecture. But there is no consistent model for the management of data inside the app; and, as a result, the application model leads to a lot of trouble.

Basically, every app does data management differently, including file/document management and syncing to the PC; the chaotic results of this cause fury among the user community. Except in a very few cases where the app developer has thought it through properly, there is absolutely no backup facility at all for an app's individual configuration. Also, the invocation of one app's functionality from another is seriously limited: each app has no access to the data stored within the other - the sort of nonsense this causes is exemplified by the inability to attach more than one Office document to the same email (because attaching an Office document has to be done by running Share against the document, not by hitting a paperclip and selecting the document from a list).

Users like me miss the traditional Explorer type interface, because you can't manage related documents of different types in one place. (The lack of USB sync for anything except music and videos doesn't help either, although this could be cured by better design of individual apps.)

Anyway, various people have suggested that an app called **Windows Phone Device Manager (WPDM)**, together with its partner 'phone app **TouchXperience**, is capable of resolving a lot of this by providing an Explorer interface (and direct USB file transfer), and that, once Microsoft officially supports non-Marketplace apps such as TouchXperience, this will be a real way forward for the sort of users (especially small business users like me) who are affected by the current limitations.

I am interested to know how far WPDM goes in genuinely resolving users' day-to-day problems (it isn't going to resolve the concerns of those who genuinely think Microsoft have no right to lock down their 'phone operating system, but I am frankly more interested in helping people use the 'phone in everyday life).

I couldn't find a proper review of WPDM in the context of business use of the 'phone, so here is an attempt at one. I have focused mainly on functionality whose current absence from WP7 is much bemoaned on the [WP7 Microsoft Answers forum](#); I have not concerned myself much with the user interface of either TouchXperience or WPDM.

Obtaining and installing the application

The first step is to 'developer unlock' your 'phone (not to be confused with the 'phone unlocking that lets you use another carrier's SIM card). This unlocking is essential, since without it no non-Marketplace application such as TouchXperience can be loaded ('sideloaded'). I unlocked my 'phone by registering as a developer, which involves an annual payment to Microsoft, and by then connecting my 'phone to my developer account, which unlocks it. (An [easier and much cheaper](#) developer unlock mechanism was temporarily available, fully supported by Microsoft (obviously necessary to most business users), but this was effectively a 'limited edition', and has sold out. It is not clear whether it will reappear.)

Neither registering as a developer nor unlocking the 'phone was trouble-free for me. There was a completely unnecessary (in my view) delay while Microsoft checked that I (or my company, or both - all very unclear) was a fit and proper person to publish applications (surely it would make more sense to do this when you actually publish one). Plus, I had to install the full Windows Phone 7 Developer Tools suite, which took a whole morning, and which is not apparently supported on XP, let alone Mac or Linux.

WPDM is available as a small free download from www.touchxperience.com (where donations are, however, welcomed). I used public beta version 1.9.

Once you have downloaded, installed and launched WPDM, connected your 'phone to your PC via USB, and started Zune (an undocumented requirement on my Samsung Omnia 7), WPDM connects to your 'phone and automatically downloads and sideloads the TouchXperience 'phone app. Thereafter you can connect your 'phone to WPDM using either a USB or a wifi connection.

On an **HTC** 'phone, Office documents stored in 'My Documents' can of course be opened and manipulated in the usual way, because they are where the Office hub wants them. PDFs stored in 'My Documents' will be visible in the Office hub 'Phone' location. Although you can't open them there ('Invalid file path'), you *can* share them to SkyDrive, and the SkyDrive copy will be openable from the Office hub, at which point Adobe Reader will, as usual, store it locally. (The attentive reader will spot that we now have three copies of the PDF, two on the 'phone and one in SkyDrive; or four (3+1) should we decide to download the PDF from SkyDrive.)

On **non-HTC** 'phones, 'My Documents' is the private storage of the TouchXperience app. When you copy Office documents and PDFs to 'My Documents' using WPDM, TouchXperience automatically duplicates them into the Office hub, at which point all the same remarks apply as for HTC 'phones. The files will still be present in 'My Documents' too, but changes made via the Office hub will not be reflected there, so it is best to delete these duplicates to avoid confusion (and indeed the possible presence of five (4+1) copies of each PDF).

One very useful thing this mechanism does allow (on any 'phone) is emailing the PDFs out from your 'phone (via Share from the Office hub 'Phone' location).

Access to other apps' data (HTC only)

Via WPDM **access can be obtained, though only on HTC 'phones, to other apps' private storage**. Though this functionality has to use an unsupported and manufacturer-specific 'back door', because it clearly breaks the rules of the WP7 application model as summarised above, this is a clear highlight from the business user's point of view, providing:

- the ability to **back up and restore individual Marketplace applications' private data** - as already mentioned, a glaring omission from WP7 as shipped;
- **direct USB transfer of files** between the PC and the relevant application's storage area, in both directions.

As I understand it, however, this access is limited to the Marketplace, sideloaded applications and the Office hub, and doesn't apply to other built-in applications such as Messaging - thus, even on an HTC 'phone, WPDM doesn't allow you to back up your text messages.

'Phone backups (all manufacturers)

WPDM provides a **full 'phone backup and restore facility**.

This is not for the faint-hearted. The backup takes a long time to run, has some fairly serious UI usability issues, and uses the same 'download mode' as the 'phone update process. It also requires installation on the PC of the Zune WMDU add-on, which is free but not that easy to find (the Windows Phone Support Tool includes it – the links below were obtained from a TouchXperience forum post). I have successfully taken a backup, but I must admit I have not yet had the nerve to try restoring from it (though, obviously, I have kept it on file for if and when I ever have to do a hard reset).

Windows Phone Support Tool links:

x86 <http://download.microsoft.com/download/1/5/4/15427EAF-AD42-4E4A-8179-9A3C5483E366/WPSupportTool-x86.msi>,
x64 <http://download.microsoft.com/download/1/5/4/15427EAF-AD42-4E4A-8179-9A3C5483E366/WPSupportTool-amd64.msi>.

As with the backups Zune produces when you update your 'phone, you can only restore to the same 'phone handset. However, while 'phone backups on demand remain unavailable via Zune, WPDM's backup facility provides a useful service.

Concerns

Obviously the need to developer unlock the 'phone is top of the list.

TouchXperience bypasses the published and supported API, using low level access to 'phone functionality (this is why it is not acceptable to Microsoft as a normal published application on the Marketplace).

Although I gather that this is mostly a Samsung Omnia 7 specific problem, both USB and wifi connections are ticklish to establish and maintain. After much experiment I now understand how it works well enough to be able to get a WPDM connection whenever I want one, but I would say WPDM 1.9 on the Samsung Omnia 7 was barely usable for busy non-technical people. The problems are worst at initial TouchXperience install time, but in many businesses I'd imagine the IT team would take responsibility for that element.

On top of the low level access already mentioned, TouchXperience uses 'back doors' that are manufacturer specific and which provide 'root' access to 'phone applications and data. It is not clear how much of the functionality uses these, but, even if we discount the information security aspect of all this, such routes are clearly not supported by Microsoft or by the manufacturers, and many business users may therefore not wish to use them; also, upwards compatibility to new 'phone models isn't guaranteed, and available functionality varies greatly between manufacturers.

WPDM is really intended for those who understand their 'phones well and who wish to tinker with them. Thus there is no ability to control levels of access to WPDM features. As shipped, WPDM provides some dangerous capabilities, such as the ability to boot the 'phone into non-standard modes, not to mention read/write access to operating system software on HTC 'phones. I would, however, imagine that it wouldn't be difficult for the developer to add controls of this sort.

Understandably for a free application, support is extremely limited, being provided via forums and the Facebook page. Rather more surprisingly, given the amount of functionality provided and the number of clearly delighted users, the developer seems to be expected to provide nearly all of the support himself, which understandably leads to delays.

Conclusions

I would suggest that business users, especially those with HTC 'phones, have a serious look at this application.

Although I can't take full advantage of the functionality because I don't have an HTC 'phone, I find WPDM and TouchXperience very useful, and use them frequently, especially the screenshot facility and 'My Documents'.

However, while I am personally prepared to live with the concerns listed in the last section, I feel that many business users would have difficulty with them.

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