

Windows
Phone

Windows Phone
Marketplace



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Windows Phone 7 Jump Start
Microsoft Corporation

Agenda

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Registering as a Developer

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Marketplace
Introduction

Marketplace Rules

- The Marketplace is the only way you can get executable content onto a phone
- Users can buy applications and deploy them onto their devices
- Developers can write applications and deploy them to their own devices for testing
 - Registered developers can use up to 3 devices
 - Student developers can use one device

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Applications for sale

- Applications can be free or paid
- You can also allow customers to use an application in “try before buy” mode
- Your application can determine which mode it is running in by calling a status API
- More detail on this later

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Free and Paid Applications

- Developers are limited in the number of free applications they can make available
 - Only five free apps per developer per year
 - Can publish further free applications at a extra cost of \$20 per application
- Developers can publish as many paid applications as they like

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Registering as a
Developer

Developer registration

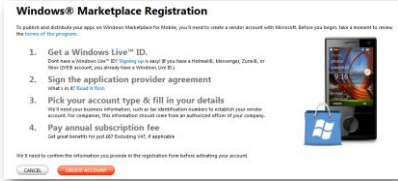


■ The starting point is the Windows Phone Developer page

<http://developer.windowsphone.com/>

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Registration process



■ The four steps are easy to follow

■ You must have a Windows Live ID to start

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Registration Types

- You can register as an individual, a student or a business
 - Individuals receive payment as personal income
 - Students who are registered with DreamSpark can create free Marketplace accounts
 - A business registration is made on behalf of a corporation, limited liability corporation or other legally registered company

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Validation process



- To register you will have to prove who you are
- This is done via GeoTrust who provide the code signing support
- It involves sending through some photo-id and taking a phone call on your home number

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Keys and Code Signing

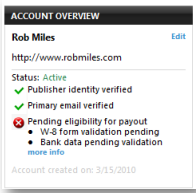
- Once you are registered you have your own CodeSigning setup
 - The distribution process takes care of the code signing aspects
 - No typing in of strange values to link things together
- Just submit the applications and this information is added to the XAP file which is deployed by Marketplace

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Developer dashboard

- Your developer dashboard gives you the status of your account
- I am sorting out my tax status at the moment...



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Getting paid

Show me the money

- You get 70% of the sale price of each application
- The money is paid directly into your bank account, less any tax deductions
- Payments are made each month, with a minimum payment of \$200
- Very good information on the developers site about this
 - Although some elements refer to Windows Mobile applications, which are different

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Worldwide payment



- If you are based in the green areas you can get payment

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Payments and Tax

- If you do not have a U.S. Employer Identification Number (EIN), then you must send the appropriate W-8 form to Microsoft This so you don't have tax problems later
- If you are based outside the US you may be able to make use of an income tax arrangement with your country so you don't get taxed twice
- Good help on this on the Developer Site

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Creating Applications

Trial Mode

```
if (CurrentLicense.IsTrial().Equals(true))
{
    // Application is in trial mode, so
    // upsell to full priced content
}
```

- The Implement IsTrial() API allows your application to determine if the program is being run in trial mode
- Find out more here:
[http://msdn.microsoft.com/en-us/library/ff462086\(VS.92\).aspx](http://msdn.microsoft.com/en-us/library/ff462086(VS.92).aspx)

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Apps around the world

- When you create your applications you should give thought to selling around the world
- The Marketplace will be useable from many countries and so you can maximise your market by incorporating multiple languages
- To this end you should build in the ability to operate in multiple languages and locales

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Localisation: Do's

- Do:
 - Consider localisation from the start of your project
 - Create resource only DLLs that contain your localizable resources
 - Leave room in display items for longer text than is required in the English language
 - Use the localisation features provided by .NET

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Localisation Don'ts

- Don't
 - Hardcode messages into the application
 - Build up messages by concatenating strings
 - Put text into image resources
 - Use ambiguous phrases like "Empty folder"
 - Empty can be translated as a verb or a noun in this context

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Localisation Resources

- Localisation is a non-trivial issue
- The best approach is to package multiple languages within the XAP file
 - Of which more in a moment.
- .NET 4.0 localisation resources are here:
<http://msdn.microsoft.com/en-us/library/w7x1y988.aspx>

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The XAP file

XAPs and Apps

The diagram illustrates the process of deploying an application. It starts with 'Tools' (represented by a grey arrow), which leads to a file icon labeled 'myapp.xap'. This file icon is depicted as a stack of documents and a film reel. An arrow then points from the 'myapp.xap' file to a Windows Phone 7 device, which is shown displaying a weather application.

- The XAP file brings together all the elements of your program application
- It is the item that is actually pushed onto the device when it is deployed

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XAPs and Apps

The diagram illustrates the process of deploying an application. It starts with 'Tools' (represented by a grey arrow), which leads to a file icon labeled 'myapp.xap'. This file icon is depicted as a stack of documents and a film reel. An arrow then points from the 'myapp.xap' file to a Windows Phone 7 device, which is shown displaying a weather application.

- Common format for all Windows Phone apps & games
- Declarative, manifest-based installation
- Integrated into security model of phone

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XAP file Anatomy

The screenshot shows a Windows Explorer window with the address bar set to 'Local disk (C:) > WindowsPhonePuzzle > Bin > Debug > puzzle'. The 'Organize' tab is active, and the 'Extract all files' button is visible. The main pane displays a list of files extracted from the XAP file:

Name	Type	Compressed size	Permissions
ApplicationIcon	PNG image	2 KB	No
AppManifest	XAML File	1 KB	No
WindowsPhonePuzzle.dll	Application extension	2,412 KB	No
WindowsAppManifest	XAML Document	1 KB	No

At the bottom of the window, it says '4 Items State: Shared'.

- The XAP file is actually a zip file
- It contains manifest files that describe the contents and the application

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AppManifest File

```
1. <Deployment
  xmlns="http://schemas.microsoft.com/client/2007/deployment"
  xmlns:x="http://schemas.microsoft.com/winfx/2006/xaml"
  EntryPointAssembly="WindowsPhonePuzzle"
  EntryPointType="WindowsPhonePuzzle.App"
  RuntimeVersion="3.0.40624.0">
2.   <Deployment.Parts>
3.     <AssemblyPart x:Name="WindowsPhonePuzzle"
      Source="WindowsPhonePuzzle.dll" />
4.   </Deployment.Parts>
5. </Deployment>
```

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WMAppManifest.xml

- The other manifest file is very important
- It identifies the services that your application wishes to make use of
- The Marketplace deployment mechanisms can use this to ensure that users know what an application is going to do

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WMAppManifest.xml

```
1. =<Capabilities>
2.   <Capability Name="ID_CAP_NETWORKING" />
3.   <Capability Name="ID_CAP_LOCATION" />
4.   <Capability Name="ID_CAP_SENSORS" />
5.   <Capability Name="ID_CAP_MICROPHONE" />
6.   <Capability Name="ID_CAP_MEDIALIB" />
7.   <Capability Name="ID_CAP_GAMERSERVICES" />
8.   <Capability Name="ID_CAP_PHONEDIALER" />
9.   <Capability Name="ID_CAP_PUSH_NOTIFICATION" />
10.  <Capability Name="ID_CAP_WEBBROWSERCOMPONENT" />
11. </Capabilities>
```

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[illegible]

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[illegible]

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Sharing your XAP files

- If you want people to run try your app but you don't want to give them the source you can distribute the XAP file instead
- They can then load it onto a developer device or the emulator
- They would use the XAP Deployment tool to do this

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Damagecalc

Demo

Demo 1: XAP Deployment



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Creating Beta Versions

- The Marketplace will also support the distribution of beta versions of your program
- Participants will receive a “deep link” to the application and authenticate using their Live ID
- Beta versions will expire after a short time

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Publishing Programs

Publishing Process



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Adding Products



- You will add products from your Developer dashboard
- You can go back to track the progress of them through the release process

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Using a phone for development

Using a "real" phone

- There is no substitute for a real phone
 - Touch input
 - Performance considerations
 - User experience testing
- Developers can target phones with applications that they have written
- To do this they have to register each device

Connecting your Phone

- The connection to the phone is managed by the Zune software
- This also contains the USB drivers for the phone



Zune software



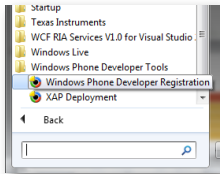
- You can use the Zune software to put media content on the phone
- It can also be used to link Visual Studio 2010 to the phone for application deployment

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Phone Registration

- There is a tool to register a phone so it can be used for development
- This is a once and only operation for a given device



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Phone Registration

- To register your phone you enter the Windows Live ID associated with your Developer account
- This allows your Developer profile to be updated with the phone details



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Phone Registration

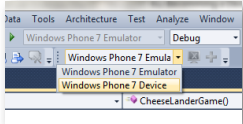
- Developers can register up to 3 devices
- Students can register just 1
- You can un-register devices
- Once a phone is registered it can be used with any instance of Visual Studio 2010



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Deploying to the phone



- Once you have registered the phone you can deploy programs to it from Visual Studio 2010
- Note that you do not use the Game Studio Device Center, as you would for a Zune or Zune HD

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Deployment Problems

- If the phone is displaying the Lock Screen the deployment will fail
 - You will get an "Access is Denied" error from Visual Studio
- You can solve this by setting the phone lock timeout to never display the lock screen

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Phone debugging

- You can put breakpoints into code running on the Windows Phone
 - Even when the program is running
- You can also view data values and step through your program
- It is exactly like debugging a program on the desktop

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Zune fun and games

- The Zune software must be running for the deployment to work
- However, some programs do not work correctly when the Zune software is running
 - Programs that use media do not work at the moment
- To solve this problem you can use the “Windows Phone Desktop Pass-Through” program

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WPDPTConnect

- There are different versions of this program for 32 bit and 64 bit Windows
- You run the program in place of the Zune software
- It allows Visual Studio to connect to the Windows Phone device

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Phone Programs

- Once you have deployed a program to the phone it is stored on the device
- You can then run it as you would any other program
- Silverlight programs are added to the applications
- XNA programs are added to the Xbox Live hub
- The icons for the programs are copied as well

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Review

- You must be a registered developer to write Windows Phone apps
- It costs \$99 per application to add them to the Marketplace
- Free applications cost \$20 to add to the Marketplace
- The XAP file is used by Batman in fights
- You can select the resources used by the phone application
- A customer must buy a paid for application to try it out
- A Developer can register up to 3 phones for application deployment
- The Zune software provides the link to Visual Studio

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Coming Up Next...

XNA Media

Silverlight Fun and Games

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