

Windows  
Phone

XNA and Media



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Windows Phone 7 Jump Start

Microsoft Corporation

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Agenda

Media and XNA

Displaying pictures

Playing music

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Windows  
Phone

Media and XNA

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## Windows Phone Media



- All Windows Phones have significant built-in storage
- This can be used to store a variety of media
  - Music, pictures, videos

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## Using the Media

- XNA games can get access to this media very easily
  - Song files, including album artwork
  - Playlists
  - Pictures taken on the devices
- The key to accessing this content is the `MediaLibrary` class

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## Getting a MediaLibrary

```
1. MediaLibrary library;  
2. ...  
3. library = new MediaLibrary();
```

- To get access to the media on a phone you just need to create an instance of the `MediaLibrary`
- You can do this in the `LoadContent` method when your XNA game starts running

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Displaying Pictures

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MediaLibrary properties

```
1. PictureCollection pics;  
2. ...  
3. pics = library.Pictures;
```

- The Pictures property of a MediaLibrary instance provides access to the pictures on the phone
- This access is managed in terms of a PictureCollection instance

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Finding a picture

```
Picture p = pics[rand.Next(pics.Count)];
```

- A PictureCollection instance holds a collection of picture references
- The code above picks a random picture out of the collection and sets the variable p to refer to it
- The game can then obtain the picture information as a texture

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# From picture to texture

```
pictureTexture =  
    Texture2D.FromStream(GraphicsDevice, p.GetImage());
```

- The Texture2D class provides a static method that will create a texture from a stream
- The Picture class provides a method that will return the texture content as a stream
- By combining these we can get the image from our picture as a texture

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## Picture Viewer

# Demo

Demo 1: Random Picture display

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# Using the draw color

```
1. GraphicsDevice.Clear(Color.Black );  
2. spriteBatch.Begin();  
3. spriteBatch.Draw(pictureTexture, pictureRectangle,  
4.                  new Color(255,0,0,10));  
5. spriteBatch.End();
```

- You can use the draw color to get fading and transparency effects when you draw images
- You can create very impressive effects with this

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Picture Viewer

Demo

Demo 2: Shades of Red

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 Windows Phone

Playing Music

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Getting a random track

```
1. private void randomPlay()
2. {
3.     if ( library.Albums.Count > 0 ) {
4.         int albumNo = rand.Next(library.Albums.Count);
5.         Album chosenAlbum = library.Albums[albumNo];
6.         if (chosenAlbum.Songs.Count > 0) {
7.             int trackNo = rand.Next(chosenAlbum.Songs.Count);
8.             if (MediaPlayer.State == MediaState.Playing) {
9.                 MediaPlayer.Stop();
10.            }
11.            MediaPlayer.Play(chosenAlbum.Songs[trackNo]);
12.        }
13.    }
14. }
```

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Random Tunes

Demo

Demo 3: Random Tune Player

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Album art

- You can also access the album art for each track in the device
- This has great potential for the creation of music browsers
- You can also use the art in games
  - You could create an album version of pelmanism..

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Album Shower

Demo

Demo 4: Animated Album Covers with shadows

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# Review

The MediaLibrary class provides access to phone media

Images can be drawn semi-transparent

Textures can be created from streams

You can only display one picture at a time

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# Coming Up Next...

XNA in 3D

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