

# Leopard features in iOnTV

# Introductions

Andrew Kimpton - [awk@awkward.org](mailto:awk@awkward.org)  
<http://iontv-app.com>

# Topics

- Tool Changes
- Things that made it
- Things that didn't
- Things for the future

# Tool Changes

- Xcode 3
  - Integrated debugging in the source window
  - Refactoring and 'conversion' functions
  - Mapping modeller for upgrading CoreData stores
  - 'New' linker

# Tool Changes

- Interface Builder
  - New look, new palette
  - Synchronizes with Xcode 3
  - xib file format
- Xray (Instruments)

# Things that made it

- Objective C 2.0
- ScriptBridge
- CoreAnimation
- NSGradient, NSSplitView, NSTrackingArea, NSOutlineView, NSPathControl, NSPredicateEditor, Bitmaps

# Objective C 2.0

- Properties == cut out a bunch of repetitive code:

```
- (void) setTitle:(NSString*)title
{
    [self willChangeValueForKey: @"title"];
    [self setPrimitiveValue: value forKey: @"title"];
    [self didChangeValueForKey: @"title"];
}

-(NSString*) title
{
    NSString* tmpValue;
    [self willAccessValueForKey: @"title"];
    tmpValue = [self primitiveValueForKey: @"title"];
    [self didAccessValueForKey: @"title"];
    return tmpValue;
}
```

becomes:

```
@dynamic title;
```

# Objective C 2.0

- **Fast Enumeration - No need for :**  

```
NSEnumerator *anEnumerator = [anArray objectEnumerator];  
while ((anObject = [anEnumerator nextObject]) != nil)  
    // do something
```
- **Instead:**  

```
for (id anObject in anArray)  
    // do something
```
- **Fast - internally optimized to be higher performance than enumerators, faster even than objectAtIndex:**



# ScriptBridge

- **Instead of :**

```
NSAppleScript *aScript = [[NSAppleScript alloc] initWithSource:
    [NSString stringWithFormat:@"tell application iTunes to add file %@", [songURL path]]];
NSAppleEventDescriptor* result = [aScript executeAndReturnError:&errorInfo];
// Now go get the track out of the result...
// Then start building more scripts to set the metadata
```

- **write:**

```
iTunesApplication *iTunes = [SBApplication
applicationWithBundleIdentifier:@"com.apple.iTunes"];
iTunesTrack *theTrack = [iTunes add:[NSArray arrayWithObject:songURL] to:nil];
theTrack.artist = songArtist; // And so on...
```

# ScriptBridge

- Good for any scriptable application (including yours)
- Build an Objective C 2.0 header using :  

```
sdef /Applications/iTunes.app | sdp iTunes
```
- Import the header and start using the classes
- Python & Ruby too !

# CoreAnimation

- **Just using [NSView/NSWindow animator]**

```
[[[self window] animator] setAlphaValue:0.0];
```

- **Resizing:**

```
[[mScheduleDetailsPopupWindow animator] setFrame:endWindowFrame display:YES];
```

```
[[mScheduleDetailsPopupWindow animator] setAlphaValue:1.0];
```

```
[[mScheduleDetailsContentView animator]  
setFrameSize:endViewSize];
```

# New AppKit goodies

- **NSGradient** - an alternative to CTGradient:

```
NSGradient *aGradient = [[ScheduleCell sharedGradient] initWithStartingColor:topColor  
endingColor:bottomColor];  
[aGradient drawInBezierPath:framePath angle:90.0];
```

- **NSSplitView** - an alternative to RBSplitview

# New AppKit goodies

- **NSTrackingArea**  
Better mouse tracking in portions of a view, supports different notification events, multiple areas per view.
- **NSPathControl**  
Nice graphical presentation of any path. Works out of the box for URL paths, easily customized for iTunes Store style bar.

# New AppKit goodies

- **NSOutlineView**

At last ! You too can have a source list !

Set highlight to SourceList

Set font size on TextField cell to 11

Set up the data source or bindings

Set a delegate and implement :

- (BOOL)outlineView:(NSOutlineView \*)outlineView shouldSelectItem:(id)item
- (BOOL)outlineView:(NSOutlineView \*)outlineView shouldCollapseItem:(id)item
- (BOOL)outlineView:(NSOutlineView \*)outlineView isGroupItem:(id)item

# New AppKit goodies

- NSPredicateEditor
- Bitmaps  
Get your standard looking images here !

# Things that didn't

- CoreData and SyncServices



# Things for the future

- NSOperation, NSOperationQueue
- NSViewController
- 64 Bit

# Resources

- Matt Gemmel - [Get rid of your code with Leopard](#)
- Scott Stevenson - [Objective C 2.0 Tutorial](#)
- <http://awkward.org> - My blog (these slides)
- <http://iontv-app.com> - iOnTV Site, source, binaries etc.