

Running and Porting Mono® System.Windows.Forms Applications

Peter Dennis Bartok
Software Engineer
Novell, Inc.

Jackson Harper
Software Engineer
Novell, Inc.



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Overview

- What is System.Windows.Forms (SWF)
- Where to get Managed Windows Forms (MWF)
- Status (current and where)
- Installation
- Sample Application
- What works/what doesn't work
- Future plans
- Pointers
- Q & A

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What is SWF

Microsoft .Net API for GUI programming

Provides classes for almost all Win32 controls and functions

MS' implementation mostly wraps native Win32 controls

Mono implementation is completely written in managed code, which is why we refer to the Mono version as Managed Windows Forms

Interfacing with OS is done through 'drivers', managed code P/Invoking native calls

Drivers exist for Win32, Linux and Mac OS X

Theming interface allows to get platform-native look

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Where to get MWF

MWF is distributed with Mono since release 1.1.4 and will be one of the main new features of Mono 1.2

Snapshots are in the dailies at www.go-mono.com/daily

Build from SVN. How to can be found at www.mono-project.com/contributing/compiling.html

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Status

Aproximiately 95% of the API is implemented

All controls are implemented except DataGrid and RichText

Color, Font, and File Dialogs are complete

Printing support (Dialogs and System.Drawing back end) is still missing

Needs more bug fixing and testing

Class status can always be found at <http://mwf.monoproject.com/class-status-System.Windows.Forms.html>

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Installation



Windows:

Ready to use after install, no special steps required



Linux:

Since X11 is used on Linux, an Xserver and the X libraries must be installed



Mac OS X

Starting with Mono 1.1.4 a native OS X driver is part of MWF. However, X11 is still required due to some font dependencies (freetype). Display will be done natively.

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Sample Application

Compiling under MS.Net

- `csc demo.cs /r:System.Windows.Forms.dll /r:System.Drawing.dll`

Running under MS.Net

- Execute 'demo.exe'

Compiling under Mono

- `mcs demo.cs /r:System.Windows.Forms.dll /r:System.Drawing.dll`

Running under Mono

- run 'mono demo.exe'
- For MWF applications, make sure DISPLAY is set

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Non-Portable Code

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The following things won't work with Mono or MWF:

- Classes using COM objects, for example Active X controls (AxHost class)
- P/Invokes to Win32 system calls (or any other native DLLs)

Example:

```
[DllImport  
("user32.dll", EntryPoint="GetSystemMetrics")]  
extern static int GetSystemMetrics(...)
```

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Future Plans

Completion of DataGrid class.

Compatibility improvements (More testcases, ensure MS compatible behavior)



Performance enhancements (Drawing, Controls)

Improve TextBox classes and text output (Pango)

Add .Net 2.0 support



Further Information

Mono:

MWF:

mwf.mono-project.com

Mailing list:

mono-winforms-list@ximian.com

Bugs:

bugzilla.ximian.com [Mono Class Libs]

Building Mono & MWF:

<http://www.all-the-johnsons.co.uk/mono/mono-compiling.html>

Latest Pre-Built DLL:

<http://mwf.mono-project.com/System.Windows.Forms.dll>

Q & A

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