ReactOS and Wine
Four Years Later

Presentation for Wineconf 2005

Overview of ReactOS

- It's a Windows Replacement (Clone is a Non-PC term)
- We replicate the Kernel design, Drivers, HAL, etc
- We take "innovative routes" of design

  - tcpip.sys and friends are the TCP/IP stack from OSkit-Mach/FreeBSD and shoe horned in to a driver

  - USB Stack is a port of the Xbox Cromwell Linux USB shoved in to a Windows driver

  - Most of the Win32 Subsystem user-mode comes from Wine libraries built as Windows DLLs

General Status

- **What works**

- Applications: OpenOffice, Putty, Abiword and many other FreeSoftware Win32 applications work

- Drivers: ATI, Nvidia (OpenGL), AMD and others load and work

- **What's in progress**

- Network layer

- True Windows style Plug and Pray support

- DirectX and OpenGL

- Syscall and return value checking, PSEH wrapping

What ReactOS Currently Lacks

- Security Subsystem (Skeleton in place)
- Printing Subsystem
- Network Services (Support exists but Samba and friends need to be ported)
- NTFS support

How ReactOS and Wine have worked together

- 45+ libraries shared with Wine
- 5+ applications and tools
- Lots of miscellaneous code shared
- Regression Tests
- Untold number of patches sent from ReactOS developers back to Wine
- Both are affected by Windows Genuine Advantage ™

Better ways of Wine and ReactOS working together

- Clear up licensing for shared code (ReactOS)

- Share more code! (Wine)

 - Abstract Wineserver and x11drv further to share more of user32 and gdi32

 - Forward everything we can in kernel32 to ntdll and share 99% of kernel32

More ways Wine and ReactOS could improve working together

- Develop better methods for patch submission
- Have Atomic commits to Wine code in ReactOS dropped in to a patch penguin for submission to Winehq (ReactOS)
- Develop a patch penguin on Winehq to track the status of patches that have been submitted (Winehq)
- Tinderbox Winehq CVS and have the patch penguins merge/test before submission (Wine/ReactOS)

Even more ways Wine and ReactOS could improve working together

- Tinderbox nightly builds targeted for mingw that ReactOS/Winelib developers can use (Winehq)

- Winetest and CXtest (ReactOS)

  - Report ReactOS Winetest data to Winehq to compare ReactOS and Wine

  - Tie Winetest and CXtest in to ReactOS Continuous Integration system

Demo of ReactOS, Crazy ideas, Question & Answer time

- What if we don't change anything about our development model?

 Pro: Does it work? If its not broke don't fix it.

 Con: Lag time in new features in Winehq making it in to ReactOS.

- What is the CIS System?
- How about using ReactOS under Xen rather than Wine?
- Demo Time!