

The GNOME 2 Desktop

A Free[dom] Software Solution

Bryan J. Smith

<mailto:b.j.smith@ieee.org>

*SmithConcepts, Inc.*TM

<http://www.SmithConcepts.com>

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Abstract

An introduction to GNOME Version 2 Desktop, a free[dom] software desktop computing solution for Open Systems, and cross-platform, open file format applications for both Open Systems and proprietary platforms.

\$Id: CTS_LEAP_Gnome2Desktop.lyx,v 1.6 2002/05/16 07:29:48 bjsmith Exp \$

Disclaimer

Throughout this presentation, concepts are categorized and itemized, labels are applied and referenced and definitions are made and used. This “terminology” is of original creation by the presenter (unless otherwise noted), and in no way shape or form should be considered the best for each.

Furthermore, only the most common or relevant of each are used, listed and/or defined. There are many, lesser used and/or recognized implementations of each in existence. Their omission, in part or in whole, in this document is not due to overall ignorance or naivety, but any such generalization is made for the sake of brevity and focus on the audience for whom the content is devised.

An additional, legal disclaimer and statement is provided at the end of this document.

Audience

This document covers some of the Graphical User Interface (GUI) applications available for the modern Freedom Software desktop, largely those developed for GTK+/Gnome. This includes free[dom], open source and select commercial software packages. The included software not only runs on UNIX and UNIX-like systems including Linux, but Darwin/MacOS X as well as Windows in many cases. As such, elementary references to open systems approaches, concepts and arguments may also be introduced along with the applications themselves. These discussions go a long way to explaining how Linux, freedom/open source and open system applications are developed, and how they can drastically improve corporate efficiency, reliability and throughput – let alone reduce dependence on, and tolerance of proprietary vendors who promote “lock-in.”

Given the aforementioned content, the primarily audience is the contemporary IT professional and corporate desktop user. It is the author’s argument that the modern Freedom Software desktop, which is an "user friendly" and most "cost effective" (using the PC’s economies of scale) version of the longstanding multiuser and network-enabled UNIX(R) operating system, is the most ideal platform for the majority of corporate computing resources. This argument includes the corporate desktop and this document introduces various applications.

Since this document also includes information on popular desktop applications, the typical desktop user is a secondary audience. This secondary audience should skip appropriate sections he/she has trouble following.

About the Presenter

- ✓ Employment History
 - ✓ AbsoluteValue Systems, Inc.
IEEE 802.11 Wireless LAN Development and Support
 - ✓ Theseus Logic, Inc.
Semiconductor IP / Fabless Design and Support
 - ✓ Coleman Aerospace Company, USAF 45th Space Wing
COTS Real-Time Systems/Software Development and Support
 - ✓ Hard Rock Cafe International, Inc., PBS&J, Inc.
Netware/UNIX/Windows Networks, SQL Integration and Application Support

- ✓ Publication History
 - ✓ Contributing Author, MacMillian/Sams SAMBA UNLEASHED (2000)
 - ✓ Various CMP and Ziff-Davis publications (1996-2002)

- ✓ Open and Freedom Software Adoption
 - ✓ StarOffice (1996+), Gnome (1999+), Evolution (2001+), LyX (1999+)

Contents

- ✓ Vendor Lock-in and 24x7 Commercial Support
 - ✓ Including Gartner Commentary
- ✓ GIMP ToolKit + (GTK+) Version 2
 - ✓ A Cross-Platform Software Development Toolkit
- ✓ GNU Network Object Model Environment (GNOME) Version 2
 - ✓ The new standard for UNIX and Open Systems
- ✓ GnomeOffice and GTK+/Gnome Applications
 - ✓ Gecko-Nautilus, Mozilla-Galeon, Evolution, AbiWord, Gnumeric
- ✓ OpenOffice 1.0 and StarOffice 6.0
 - ✓ The XML Standard Office and Universal Adoption

Gartner on Vendor Lock-in

- ✓ “Not Just System Infrastructure” – Gartner
 - ✓ End user **data format**, not underlying platform, **most important**
 - ✓ Unlike Novell and UNIX, [Linux] Free[dom] Software is server **AND DESKTOP**
 - ✓ Standardized, open, documented interfaces, **INCLUDING APPLICATIONS**

- ✓ “Users Must Remain Vigilant To Avoid ... Lock-In” – Gartner
 - ✓ Proprietary vendors never offer “way out”, “upgrade cycle” tie-in
 - ✓ Reverse engineering takes years, cannot keep up with “upgrade cycle”

“Linux works on a different model and that whatever gains they can achieve **will be dependent on the support relationships with vendors and the breadth of application software—not just system infrastructure**. Linux is being viewed as an opportunity to enable users to get out from under the yoke of proprietary platforms and high software license fees and into a much more flexible and evenhanded negotiating position. But vendors will always seek new opportunities to wedge users into proprietary solutions, **so users must remain vigilant to avoid past mistakes that led to lock-in.**”

– Gartner, 2001 October, “What is the Future of Linux” (1)

Commercial Distribution and Support

- ✓ Ximian RedCarpet – Vendor-independent OS and Software Updates
- ✓ Sun StarOffice 6.0 – OpenOffice for the corporation
 - ✓ \$75.95 (list) product includes **support/training as standard**
 - ✓ Additional 24x7 per-incident and site support options
- ✓ Gartner on 24x7 Linux/Free[dom] Software Support Options
 - ✓ “No major differences in ... Linux support ... compared with ... other operating systems” – Gartner
 - ✓ Gartner found twelve (12) world-wide, 24x7 support firms who support Linux

“There are **no major differences in the attributes of Linux support offerings compared with support offerings for other operating systems from the companies that offer support for multiple operating systems.** IBM appears to be the only company that prices Linux support above their support for the Microsoft server operating systems.” – Gartner, 2001 August, “Linux support services: Like any other operating system?” (2)
- ✓ **BONUS OPTION: FREE immediate help 24x7** via Internet Relay Chat (IRC)

GIMP ToolKit Plus (GTK+) Version 2

- ✓ GTK+ is a legacy-free, “clean-room,” 100% free[dom] software toolkit
 - ✓ 1997+ evolution out of next-generation user interfaces pioneered in the GNU Image Manipulation Program (GIMP)
 - ✓ Major influence: Steve Job’s NeXT Platform (**NOT** MS Windows)

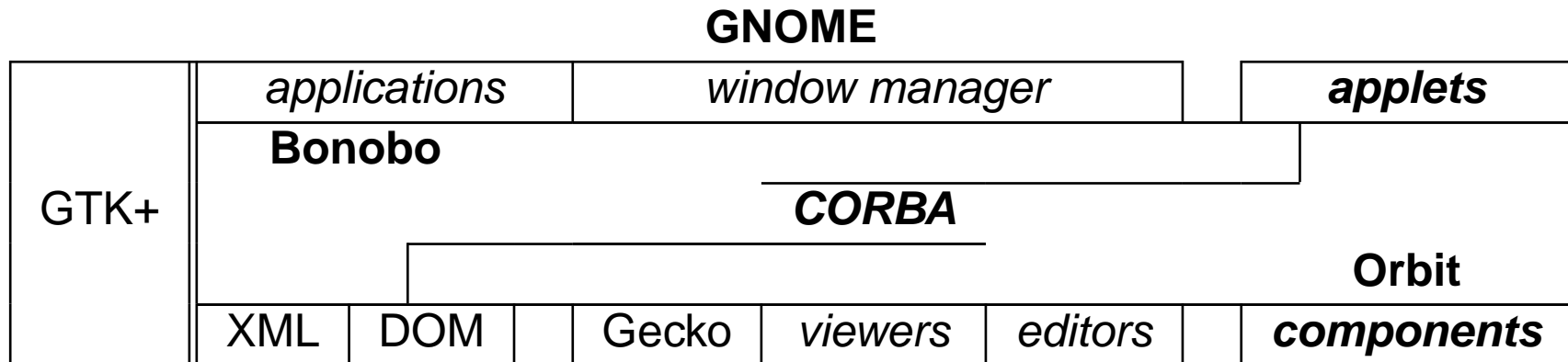
- ✓ Version 2
 - ✓ Pango: Full internationalization (ISO and Unicode)
 - ✓ Accessibility ToolKit (ATK), Font Anti-Aliasing
 - ✓ Library/GUI abstraction allows native ports, POSIX/X-Windows not required

GTK+ (C)						OpenGL
Inti (C++), Mono (C#), other APIs/libs						Postscript
Aqua	X-Windows 11		FB	GDI/DX	<i>GUI</i>	
MacOS X	BSD	SysV	GNU	Win32	<i>Lib</i>	
Darwin-BSD		UNIX	Linux	DOS/NT	<i>OS</i>	

GNU Network Object Model Environment (GNOME)

Version 2

- ✓ Common Object Request Broker Architecture (CORBA)
 - ✓ **Network-wide object linking and embedded**, not just “same-system”
 - ✓ Introduced in GNOME 1.4, fully integrated in 2.0 and 2.0 applications
- ✓ Ubiquitous Commercial UNIX Adoption
 - ✓ Compaq Tru64, HP UP/UX, IBM AIX, Sun Solaris, (opt) Apple Darwin
 - ✓ Replaces Common Desktop Environment (CDE) in many
- ✓ Modular application design – written to GTK+, calling GNOME only as needed



Browsing: Gecko-Nautilus

- ✓ Gecko Engine
 - ✓ 100% standards-focused, Open Source, Internet document processing
 - ✓ Developed within one year of Netscape 1999 source code release
 - ✓ Not a standalone, end-user application, but a reusable component
 - ✓ Modular, usable at and by the system, network or application level
 - ✓ Used by various Internet software, services and appliances

- ✓ Gnome (fka Eazel) Nautilus
 - ✓ Gecko core, CORBA file and document manager
 - ✓ Calls GNOME components as necessary
 - ✓ Equivalent to MS IE in Windows Explorer
 - ✓ But optionally enabled/preloaded, only called when actually used
 - ✓ Can use “home directory” as desktop
 - ✓ Simple, yet powerful when combined with distributed network filesystems

Browsing: Mozilla-Galeon

✓ Mozilla Project

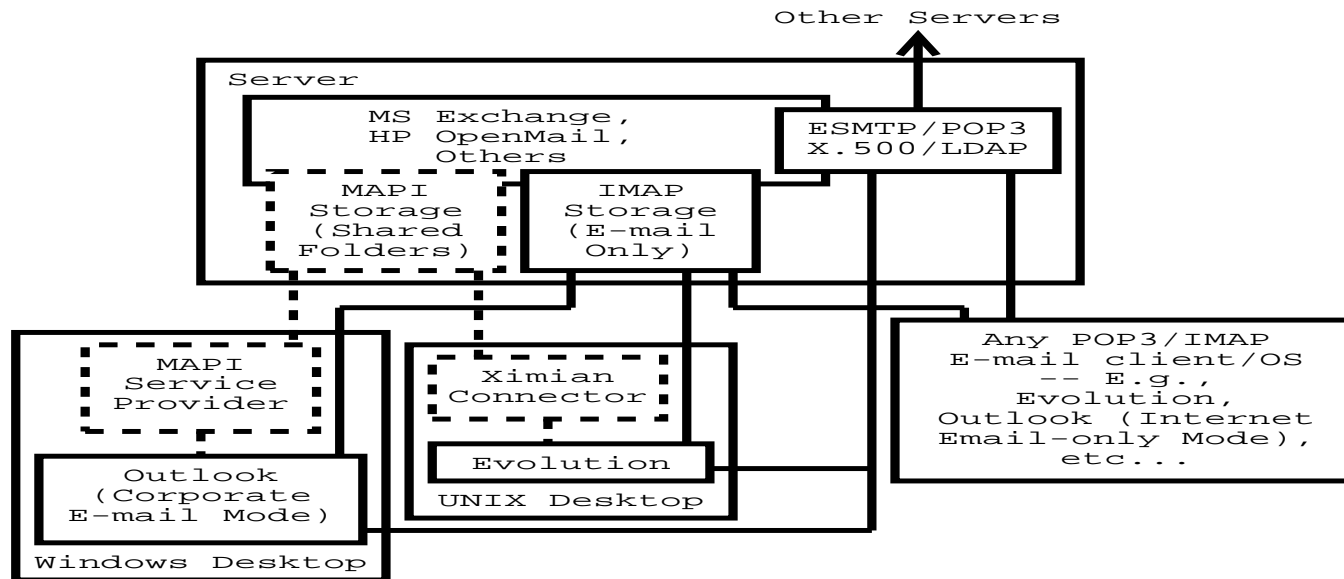
- ✓ Gecko-core, Internet suite: browser, mail, editor, news reader
- ✓ 100% Open Source (MPL), the **only suite that is 100% spyware free**
- ✓ Netscape 6.x is a (and all future Netscape releases will be) fork of Mozilla
- ✓ Standard browser for CompuServe, AOL appliances and planned AOL 8.0
- ✓ Supports all Netscape 6.x, most 4.x and even some MS IE 4.x/5.x plug-ins

✓ Galeon Project

- ✓ Gecko-core, using installed Mozilla libraries, Mozilla configuration
- ✓ Browser-only – “The web and only the web”
- ✓ Mozilla “recycle” allows complete focus on end-user usability enhancements
- ✓ Endless features: enhanced tabbed and full-screen browsing, middle/right-click context-specific navigation, popup/image annoyance management, extensive privacy options and cookie management
- ✓ Overwhelmingly preferred by most anyone who has tried it (even versus Opera)

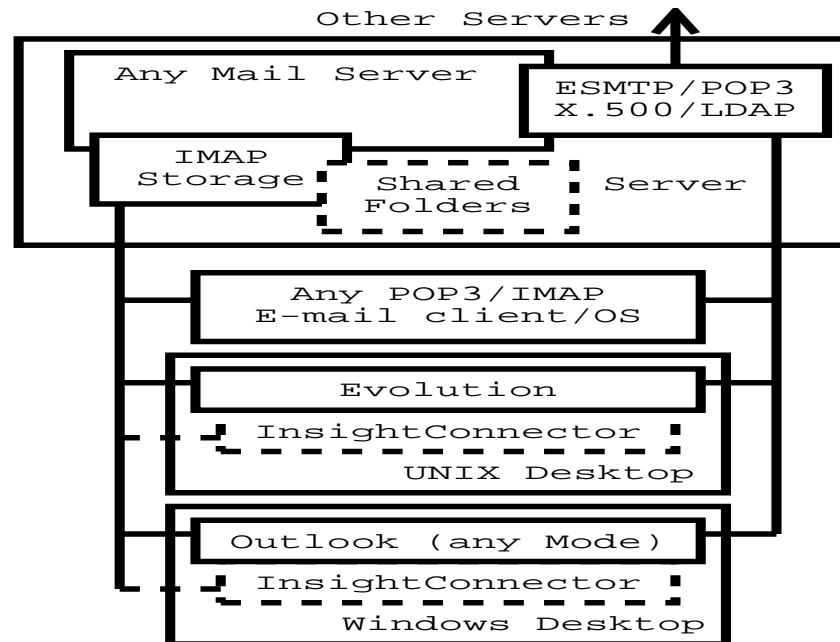
Collaboration: Evolution

- ✓ E-mail Client and Personal Information Manager (PIM)
 - ✓ 100% IETF standards, PKI c/o GnuPG/PGP and SSL/TLS, Full Palm Sync
 - ✓ **Only solution that fully complies with vCard and vCalendar standard**
 - ✓ Endless filtering options, powerful vFolders, *trust-no-one* by default *UNIX mentality*
- ✓ Ximian Connector for Microsoft Exchange – Proprietary *Shared Folders*
 - ✓ \$60-69/seat, in addition to Exchange CALs



Collaboration: Evolution (cont.)

- ✓ Bynari InsightConnector for Evolution – IMAP *Shared Folders*
- ✓ ~\$20-30/seat – CALs Optional (works with any IMAP server)
- ✓ Used in combination with InsightConnector for Outlook clients
- ✓ *MAPI emulation* drastically **increases Windows desktop reliability** over a *MAPI Service Provider* on the Windows client (e.g., MS Exchange, HP OpenMail and most others) at 1/3rd the CAL costs of Exchange



Applications: AbiWord, Gnumeric

- ✓ AbiWord Word/Document Processor
 - ✓ The most featured, wvWARE-based document translation core
 - ✓ Various Microsoft, Corel/WP, Gnome, KDE and other file format support
 - ✓ Traditional word processor, combined with documentation typeset features
 - ✓ Can import/export HTML/XHTML, DocBook/XML and \LaTeX
 - ✓ Designed for both end-users and programmers (e.g., vi/Emacs bindings)
 - ✓ Available for all major UNIX flavors, Windows, MacOS X, BeOS, many others

- ✓ Gnumeric Spreadsheet, Database Front-end
 - ✓ By far the most mature GNOME application
 - ✓ Extensive formula, macro set and the ultimate formatted text import
 - ✓ GNOME Guppi component for extensive charting/analysis
 - ✓ Standalone DB and GNOME-DB import/export capabilities
 - ✓ Excellent MS Excel and Lotus 1-2-3 import/export
 - ✓ Including mapping nearly all major formula and even some macros
 - ✓ “Better than MS Office” verbatim XLS formatting import/export
 - ✓ Experimental pivot table support, Gnome Basic available

Applications: Other

- ✓ Vector Graphics – SVG/XML, UML/XML, EPS, others ...
 - ✓ Dia – diagramming, UML, flowchart focused tool
 - ✓ Sketch, Sodipodi – free-form drawing programs

- ✓ Business Applications
 - ✓ Gnucash – personal finance manager
 - ✓ MrProject – Gantt chart, project management
 - ✓ Toutdoux – distributed project management using SQL back-end

- ✓ Internet Applications
 - ✓ GnomeMeeting – H.323/H.245 V/VoIP collaboration tool
 - ✓ Pan – news reader
 - ✓ Balsa, Sylpheed – e-mail clients

- ✓ Hundreds more ... see the GNOME homepage

OpenOffice 1.0: The XML Standard

- ✓ The Only Standard For 100% Documented XML Office Suite
 - ✓ Published XML DTDs, namespace, schemata, XSL/templates
 - ✓ Data in XML on its own is useless without these support files
 - ✓ LGPL licensed allows use in both commercial and free software
 - ✓ Quickly becoming the single format for all 3rd party applications
 - ✓ Runs on UNIX, Linux, Windows and MacOS X in development
 - ✓ Includes Word Processor, Spreadsheet and Presentation Graphics
 - ✓ Excellent applets for charting, graphics and 3-D visuals

- ✓ MS Office Compatibility
 - ✓ Reads even the latest MS Office XP formats
 - ✓ Often better at MS Office 95/97 import than latest MS Office XP
 - ✓ Forthcoming Mac version will offer “uncrippled” compatibility with Windows users

Sun StarOffice 6.0: Commercial Support

- ✓ Technical Foundation
 - ✓ OpenOffice 1.0 core, verbatim XML file format compatibility
 - ✓ Adds database front-end application to Adabas, Berkeley DB, SQL, etc...
 - ✓ Improved file filter import/export, especially Corel/WP formats
 - ✓ Added templates, clip art and wizards and 3rd party additions

- ✓ Commercial Support
 - ✓ Bundled with complete manual, web-based training and E-mail support
 - ✓ Per-incident and site 24x7 support options

- ✓ Licensing
 - ✓ Installable on upto 5 computers per user license
 - ✓ Home users can now use corporate copy again (**unlike** MS Office 97+)
 - ✓ Retail list \$75.95, \$50/user for 150+, \$25/user for 10,000+, Academic FREE

Links To More Information (1/8)

Free[dom] Software

- **GNU Network Object Model Environment (GNOME)**

- GNOME Homepage – <http://www.gnome.org>

- **GNOME Distributions**

- Ximian GNOME (Linux, Solaris, HP/UX) – <http://www.ximian.com/download/>

- GNU-Darwin (BSD/OSF1 UNIX / MacOS X) – <http://gnu-darwin.sourceforge.net/>

- **GNOME Software Lists**

- GnomeOffice Homepage – <http://www.gnome.org/gnome-office/>

- GNOME Software Map – <http://www.gnome.org/softwaremap/list>

- FreshMeat (announcements) – <http://freshmeat.net>

Links To More Information (2/8)

Free[dom] Software (cont.)

- **Common GTK+ and GNOME Applications**

- AbiWord Document/Word Processor – <http://www.abiword.org/>
- * wvWare Document Library – <http://www.wvware.com/>
- Dia Diagramming/Vector Graphics – <http://www.lysator.liu.se/~alla/dia/dia.html>
- Evolution Collaboration Manager – http://www.ximian.com/products/ximian_evolution/
- Galeon Web Browser – <http://galeon.sourceforge.net/>
- GnomeMeeting H.323 V/VoIP – <http://www.gnomemeeting.org>
- GFax Send/Receive Fax – <http://www.cowlug.org/gfax/>
- GNU Image Manipulation Program (GIMP) – <http://www.gimp.org>
- * for Windows – <http://www.gimp.org/win32/>
- Gnucash Personal Finance – <http://www.gnucash.org/>
- Gnumeric Spreadsheet/Database – <http://www.gnome.org/projects/gnumeric/>

Links To More Information (3/8)

Free[dom] Software (cont.)

- **Common GTK+ and GNOME Applications (cont.)**

- Mozilla Browser Suite – <http://www.mozilla.org>
- MrProject Gantt Chart/Project Management – <http://mrproject.codefactory.se/>
- Nautilus Browser/Manager – <http://www.gnome.org/projects/nautilus/>
- Pan Newsreader – <http://pan.rebelbase.com/>
 - * for MacOS X – <http://fink.sourceforge.net/pdb/package.php/pan>
- Sketch Vector Graphics – <http://sketch.sourceforge.net/>
- Sodipodi Vector Graphics – <http://sodipodi.sourceforge.net/>
- Toutdoux Project Management/Framework – <http://www.gnu.org/software/toutdoux/>

Links To More Information (4/8)

Free[dom] Software (cont.)

- **OpenOffice**

- OpenOffice HomePage – <http://www.openoffice.org>
 - * for MacOS X – <http://porting.openoffice.org/mac/>
- OpenWriter Word Processor – <http://sw.openoffice.org/>
- OpenCalc Spreadsheet – <http://sc.openoffice.org/>
- OpenImpress Presentation, Draw Graphics – <http://graphics.openoffice.org/>

Links To More Information (5/8)

Commercial Software and Support

- **Gartner Group (Industry Analyst)**

- Gartner Homepage – <http://www.gartner.com>
- (1) 2001 October, “What Is The Future Of Linux?” c/o Ziff-Davis – <http://techupdate.zdnet.com/techupdate/stories/main/0,14179,2819787,00.html>
- (2) 2001 August, “Linux support services: Like any other operating system?” – <http://www.gartner.com/DisplayDocument?id=336843>
 - * at Ziff-Davis: <http://techupdate.zdnet.com/techupdate/stories/main/0,14179,2808791-1,00.html>

- **Sun Microsystems**

- Sun Site – <http://www.sun.com>
- StarOffice Homepage – <http://www.sun.com/staroffice/>
- StarOffice Internet Portal – <http://www.staroffice.com/>

Links To More Information (6/8)

Commercial Software and Support (cont.)

- **Bynari**

- Bynari Site – <http://www.bynari.com>
- Free [Cost] and Demo Software – <http://www.bynari.net/downloads.html>
- InsightConnector 1.x – <http://www.bynari.net/bynari/insightcon.html>
- IMAP+Connector v. MAPI+Exchange – http://www.bynari.net/bynari/insightcon_features.html
- InsightServer/Client 3.x – <http://www.bynari.net/bynari/products.html>

- **Ximian**

- Ximian Site – <http://www.ximian.com>
- Ximian Desktop – http://www.ximian.com/products/ximian_desktop/
- RedCarpet Service – http://www.ximian.com/products/ximian_red_carpet/

Links To More Information (7/8)

Free[dom] Development

- **GIMP ToolKit Plus (GTK+)**

- GTK+ Homepage – <http://www.gtk.org/>
 - * for Windows – <http://wingtk.sourceforge.net/>
- Main, External Components
 - * GNU C Library (GLibC) – <http://www.gnu.org/software/glibc/>
 - * Pango Internationalization/Unicode – <http://www.pango.org/>
- Glade Interface Builder – <http://glade.gnome.org/>

- **GNOME Development**

- GNOME Development Homepage – <http://developer.gnome.org/>
- GNOME Bonobo – <http://www.ximian.com/devzone/tech/bonobo.html>
- GNOME Orbit Common Object Request Broker Architecture (CORBA) – <http://www.labs.redhat.com/orbit/>
- GNOME-DataBase/GNOME Data Access (GDA) – <http://www.gnome-db.org/>

Links To More Information (8/8)

Free[dom] Development (cont.)

- **Mono ECMA C# and .NET (Future GNOME Development)**

- Mono Homepage – <http://go-mono.com/>
- ECMA C# and .NET Standard – <http://www.dotnetexperts.com/ecma/>

- **Related Projects/Tools**

- GNU Compiler Collection – <http://gcc.gnu.org>
- Apple Darwin-MacOS X
 - * Apple Darwin – <http://developer.apple.com/darwin/>
 - * OpenDarwin – <http://www.opendarwin.org/>
- GNU for Windows
 - * RedHat Cygwin – <http://www.cygwin.com>
 - * GNUWin32 – <http://gnuwin32.sourceforge.net/>

About

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SmithConcepts(TM) was founded in 1992 by engineer Bryan J. Smith and specializes in system consulting, integration and public software redistribution. SmithConcepts has released various, modified RedHat distributions and repackaged numerous public domain, publicly licensed software in the popular, cross-platform RPM format.

About SmithConcepts, Inc.

SmithConcepts, Inc. (TM) is a privately held Florida corporation, incorporated in 2001 with a focus on engineering consultation and IT services. As traditional engineers, SmithConcepts, Inc. provides direct engineering and engineering support services to aerospace, civil, software and general systems engineering firms. As IT professionals, SmithConcepts provides heterogeneous and broad, cross-platform solutions for networked, automated and other, mission-critical production environments. These services and goods are provided at a nominal fee.

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