OpenOffice.org porting to OpenVMS

OpenVMS

Open Source

OpenOffice.org

Introduction...

- Member of the OpenOffice.org to OpenVMS porting team
- Several ICT jobs since 1983
  - mostly data center related
  - Capacity management (server, network, storage)
  - Platform independent
- Hobbyist since 1976
- No programmer....
- I Use OpenVMS, Open Source, OpenOffice.org
- Decus – NLCUG – Interexmember
- http://www.oooovms.dyndns.org/

Agenda

- Introduction Open Source, OpenOffice.org
  - OpenOffice.org, not only a word processor
- Open Source & OpenVMS
  - Porting Open Source to OpenVMS
- Why (porting) OpenOffice.org on OpenVMS
- Porting OpenOffice.org to OpenVMS
- What's next, road maps
- Tricks, tips, do's and dont's, links
- Questions?

Introduction
Open Source
&
OpenOffice.org

Our definition of “Open”

- (open) standards based
- Agreements
- Inter operative
- Platform independent
- Free to use protocols
- Described Interfaces
- Publication (Internet)

Open Source/Open Standards

- OSOSS

  Open Source als Onderdeel van je Software Strategie

- Demanded by government

  Motie Vendrik 2002

  Addendum 2 Archiefwet 2002 Nederland, simular situations in USA, EU, several countries, local governments

- Different cost structure

  license and maintenance cost versus cost of support

- Home users

  Internet is an enabler

  www.gnu.org, www.sourceforge.net, www.opensource.org, linux-distributions

OpenOffice
not only a word processor

OpenOffice.org 2.0

- Everything you need in an office productivity suite
  - ***Writer*** - a word processor for creating dynamic documents
  - ***Calc*** - a spreadsheet for analysing data
  - ***Impress*** - for designing eye-catching presentations
  - ***Draw*** - for producing dramatic illustrations
  - ***Base*** – database access made easy
  - supports standard XML (***OpenDocument***) and legacy (***MS-Office***) file formats
  - creates portable document format (.pdf) files
- and it's completely free!

The complete office suite

- OpenOffice.org was designed as a single package – not put together from a collection of bought-in packages
- Consistent easy-to-use 'look and feel'
- Open any document from any application
- Common 'learn once use everywhere' tools like the Help system, Navigator, and styles and formatting
- Information can be transferred easily between all the packages
- One single installation gives you all the office software you need – no hidden costs in the future

OpenOffice.org (v2.x) data formats

- ODF (Open Document Format)
  - Oasis (http://www.oasis-open.org)
  - ISO-approved
  - http://support.openoffice.org/
- Propriety formats (filters)
  - Microsoft office formats (95,97,...)
  - Wordperfect
  - RTF
  - Grafic formats (GIF, JPEG,TIFF,...)
  - Lotus 1-2-3, Quattro Pro
  - Etc ...

Open Source
&
OpenVMS

OpenSource
Available for OpenVMS

- Apache (AKA SWS), OSU, CERN, WASD
- Mozilla (AKA SWB), (LYNX, Netscape)
- SAMBA (CIFS,...)
- OpenLDAP (LDAP)
- MySQL
- PHP, Python, Perl
- OpenSSL,GnuPG,CDSA
- GTK+
- Lib* (*=IDL,PNG,XML2,JPEG,...)
- Freetype
- Kerberos
- Freeware archives on the internet f.i. Jouk's pages
- Many more on the OpenVMS freeware CD's
- Etc, etc, etc, ...

Porting Open Source to OpenVMS

Porting Open Source

- VAX (only traditional porting)
  - Many code patches needed
  - File system only ODS-2
  - CRTL gives you VMS-based behavior
- Alpha (starting with 7.3-2 better suited for porting)
  - All[1] possibilities available on VAX
  - UNIX-like file-handling based on ODS-5
  - Symbolic links
  - CRTL supports UNIX-like behavior
  - UNIX-like environment
    - GNV,porting library (shell, utilities, file-structure&names)

Porting Open Source

- Itanium
  - Platform is here to stay...
  - Industry standard hardware platform
  - Industry standard compiler suite, object format
  - All² possibilities of Alpha
  - UNIX-like file-handling based on ODS-5
  - Symbolic links
  - CRTL supports UNIX-like behavior
  - UNIX-like environment
    - GNV,porting library (shell, utilities, file-structure&names)

Why (Porting) OpenOffice.org on OpenVMS

OpenOffice.org on OpenVMS

- Do we need an office suite on a back-end system?
  - OpenVMS takes care of your data
- OpenVMS supports also desktop users...
- It's all about the data...
  - Present your data the way you want!
  - OpenOffice.org is not only GUI...
  - Batch processing your data, transforming it into information
- Porting OpenOffice.org is THE ultimate portability test
- We port, because we can, AND we like it!
- Hobbyists would like a office suite on OpenVMS (We do!)

Porting OpenOffice.org to OpenVMS

Porting OpenOffice.org

- Looking back
  - VMS 7.1, ODS-2 (2001)
  - At first it was not possible to unzip source tree...
  - VMS 7.2, ODS-5, Linux assisted...
  - Porting method: DCL code, code-analyses
  - VMS 7.3-2 DII COE
  - First UNIX-like porting efforts
  - Port DMAKE
  - GNV debugging (GNV 1.5-6)
  - Fieldtest VMS (8.2, GNV 1.6-2)

Porting OpenOffice.org

- Looking back (continued)
  - VMS 8.2, GNV 1.6-4
  - Searching for missing tooling (Perl, python, ...)
  - Writing porting guide
  - How-to's Java, Perl, Python integration with GNV
  - Fieldtest VMS (8.3, GNV T2.1-0)
  - Visited all OooCon's:
    - 2003 Hamburg
    - 2004 Berlin
    - 2005 Koper
    - 2006 Lyon

Porting OpenOffice.org

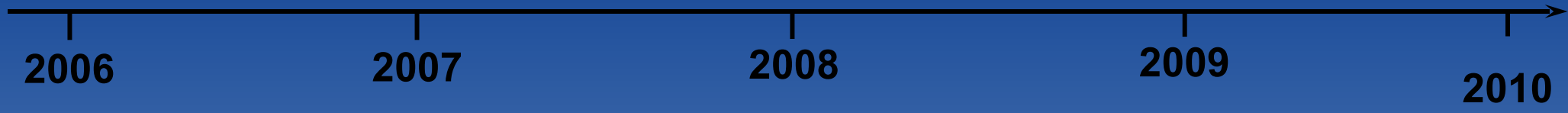
- Current status
  - Current porting environment: VMS 8.3, GNV 2.1-0
  - Using Alpha and Itanium
  - Bughunting in GNV (distribution has serious flaw)
  - Repairing GNV-features
  - Adding needed features to GNV
  - Updating integration of needed tooling (Java, perl, ...)
  - Updating porting guide
  - During fieldtest we processed 75% of the configure script (15.000 lines out of 20.000)

What's next
&
road maps

Porting OpenOffice.org

- What's next...
  - Expanding porting team
  - Improve porting environment (GNV, Perl, TCSH, ...)
    - If needed: more recent versions of GNV-components
    - Adding missing tools
  - Working with OpenVMS-engineering to improve Unix Portability
  - Publish updated porting guide
  - Bootstrap OpenOffice.org
  - Upload OpenVMS patches in Open Source projects

OpenVMS-UNIX Portability Roadmap



OpenVMS V8.2
Symbolic Links SDK
- CRTL APIs
- DCL support
- NFS support (in TCP/IP ECO)

OpenVMS V8.3
- Symbolic Links
- Byte range locking

POSIX Pathname SDK
- Support for OpenVMS 8.2-1 and 8.3
- GNV update

OpenVMS V8.4
- POSIX style pathname support
- Semaphores
- Shared write for stream files
- ioctl()
- GNV update
- Shared memory APIs

OpenVMS V8.x
- Ongoing enhancements

Porting OpenOffice.org

- roadmap
  - GNV 2.1-x, GNV 2.x, GNV 3.x?
  - BASH 2.x, 3.x, TCSH
  - Integration Perl, JAVA, X11-SDK, ... for Unix Portability
  - Demo bootstrap OpenOffice.org on OpenVMS at the OooCon 2007?
  - ODF (batch) processing (XML transformations)
  - Full OpenOffice.org port to OpenVMS

Tricks
Tips
do's and dont's
Links

Tricks, tips, do's and dont's

- Get connected!
  - Mail lists GNV, OpenOffice.org, perl, ...
- Use software and tell maintainers what you like or dislike
- Tell OpenVMS-engineering what you use and what you want
- Report bugs
- Join our team (we appreciate every contribution)
- Upload OpenVMS patches in Open Source projects
- Use the porting guide and report back your experiences
- Read the excellent book for VMS developers:

"The Minimum You Need to Know
to Be an OpenVMS Application Developer"

Tricks, tips, do's and dont's continued

DO

- Make your own root (f.i. sys$sysdevice:[gnu] BEFORE GNV installation
- Use GNV 1.6-2 + bash hack
- Use ODS-5 disks with hardlinks enabled
- Use standard compliant CRTL features as much as possible (Unix style)
- Give improvements back to the Open Source community

DONT

- Use defaults during GNV V2.1 installation
- Use VAX for Unix Portability development
- Use GNV 1.6-4 or 2.1
- Use ODS-2 disks for porting
- Rewrite Open Source the VMS way
- Keep good Open Source hidden from other users

Some links

- http://www.openoffice.org/
- http://www.oooovms.dyndns.org/
- http://www.4ovms.dyndns.org/
- HP OpenVMS Open Source Tools website
- http://www.gnu.org/
- http://www.sourceforge.org/
- SourceForge.net: GNU for VMS
- Open Source Initiative OSI
- Jouk's OpenVMS Freeware pages
- Alpha porting hardware Netherlands
- Alpha porting hardware USA

Get OpenOffice.org

- Download from http://download.openoffice.org/ or local mirrors
- Local CD-Distributors (see web site)
- Watch for magazine covers etc
- Ask your friends!
- included free in many Linux distributions

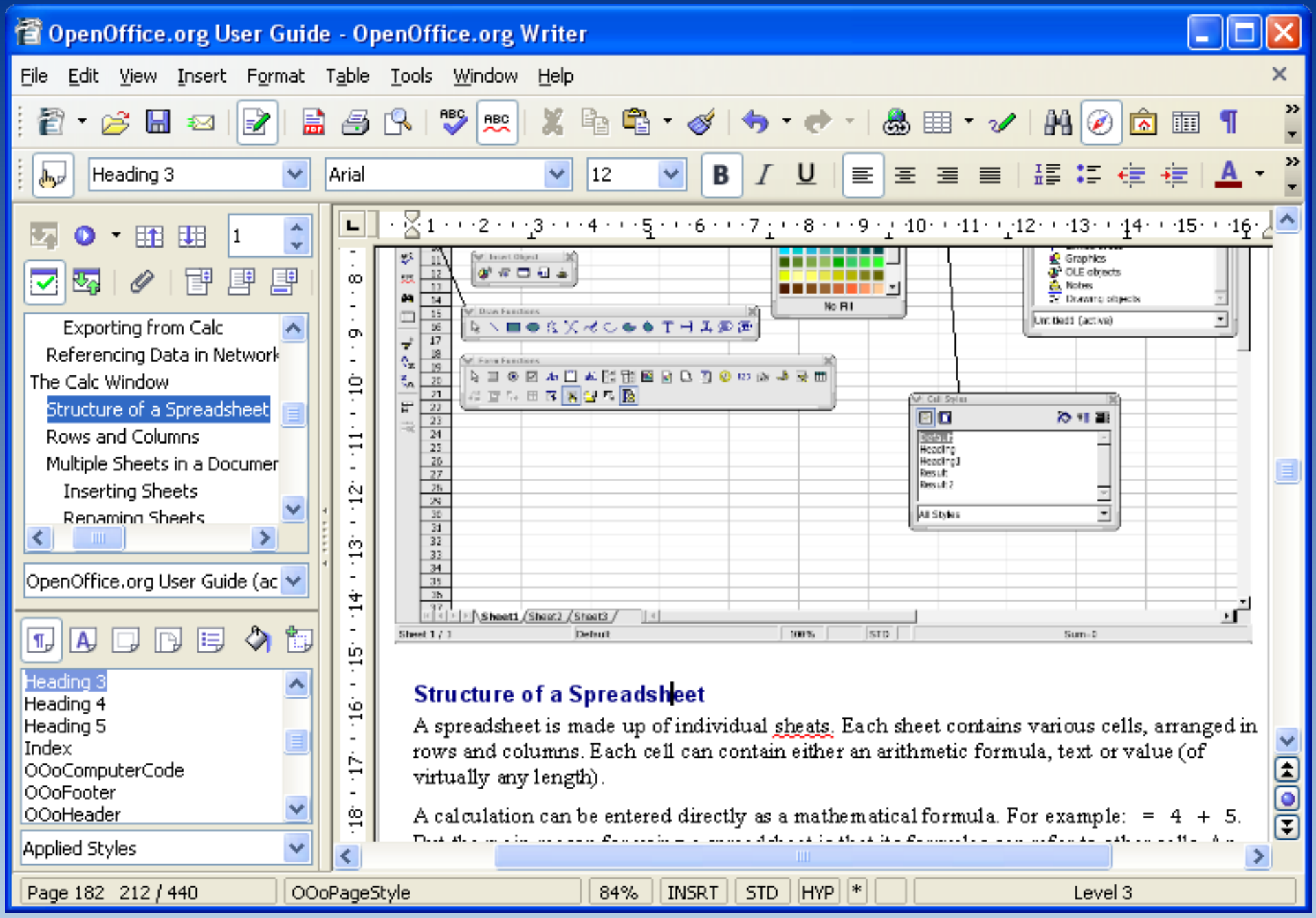
???
Questions
???

OpenOffice.org ***writer***

- The powerful word processor
  - *Wizards* to produce standard documents such as letters, faxes, agendas, minutes.
  - *Styles and Formatting* to put the power of style sheets into the hands of every user.
  - *AutoCorrect dictionary*, which can check your spelling as you type.
  - *AutoComplete* to make typing easy
  - *Text frames* and *linking* for newsletters, flyers, etc. .
  - *Table of contents*, *index* for complex documents
  - *OpenDocument* and *MS-Word .doc* format compatibile

OpenOffice.org
The Open Source Office Suite

OSI certified
OASIS STANDARD



OpenOffice.org
The Open Source Office Suite
OSI certified
OASIS STANDARD

OpenOffice.org ***calc***

- The full-featured spreadsheet
  - *Natural language formulas* let you create formulas using words (e.g. "sales - costs").
  - Hundreds of *spreadsheet functions* with built-in expert help
  - *Scenario Manager* allows "what if ..." analysis at the touch of a button.
  - Powerful *graphics* to extract the meaning from your numbers
  - Pull in data from external databases with *DataPilot* technology
  - *OpenDocument* and *MS-Excel .xls* file format compatibility

OpenOffice.org
The Open Source Office Suite
OSI certified
OASIS STANDARD

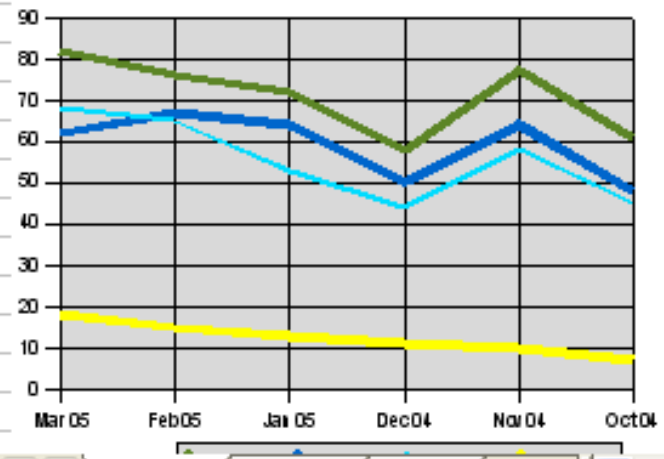
Web Site Stats - OpenOffice.org Calc

File Edit View Insert Format Tools Data Window Help

Bitstream Vera Sans 10

G14

	Month	Daily Avg				Monthly Totals				
		Hits	Files	Pages	Visits	Sites	KBytes	Visits	Pages	Files
6	Mar 05	82	62	68	18	332	22436	499	1703	2
7	Feb 05	76	67	65	15	303	21443	467	1687	2
8	Jan 05	72	64	53	13	293	19452	432	1661	2
9	Dec 04	58	50	44	11	214	14704	364	1380	1
10	Nov 04	77	64	58	10	222	17149	319	1743	1
11	Oct 04	61	48	45	7	162	13296	231	1397	1



Top 20 of 20 Total Countries - J

#	Hits		Files		
1	865	38.43%	774	38.64%	7
2	592	26.30%	512	25.56%	4
3	439	19.50%	402	20.07%	3
4	197	8.75%	175	8.74%	1
5	49	2.18%	45	2.25%	
6	21	0.93%	17	0.85%	
7	13	0.58%	13	0.65%	
8	12	0.53%	12	0.60%	

Old Site | New Site | Details

Sheet 1 / 3 | TAB_Sheet1 | 95% | STD | * | Sum=0

OpenOffice.org
The Open Source Office Suite

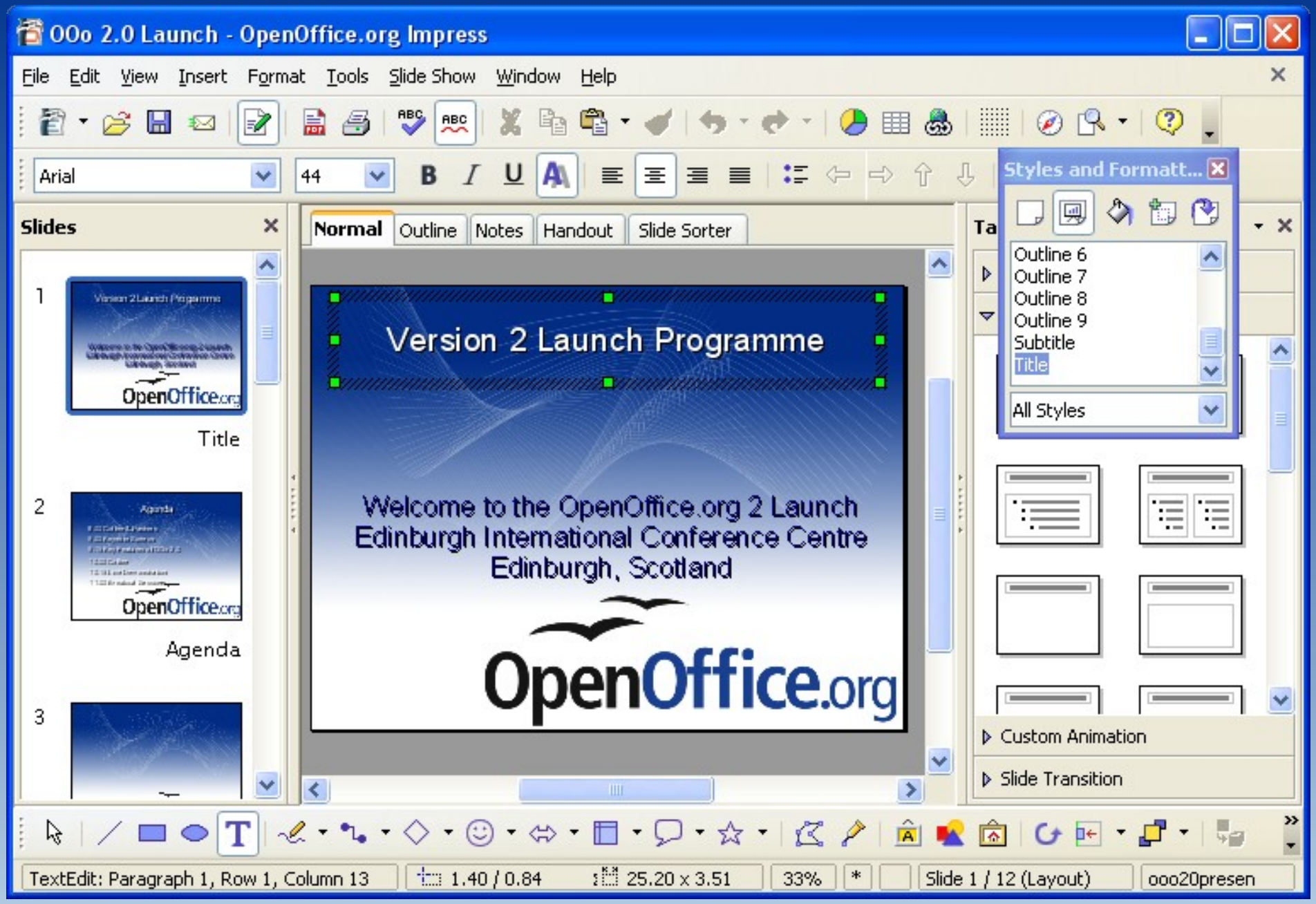
OSI certified OASIS STANDARD

OpenOffice.org ***impress***

- Impress your audience
  - *Master Pages* and *Layouts* simplify the task of preparing your materials.
  - Complete range of Views are supported: *Normal* / *Outline* / *Slide Sorter* / *Notes* / *Handouts* to meet all the needs of presenters and audiences.
  - Easy-to-use *drawing* and *diagramming* tools to spice up your presentation.
  - Slide show *Animation* and *Effects* to bring a presentation to life.
  - *Fontworks* provides stunning 2D and 3D images from text.
  - *OpenDocument* and *MS-Powerpoint .ppt* file format compatibility

OpenOffice.org
The Open Source Office Suite

OSI certified
OASIS STANDARD



OpenOffice.org
The Open Source Office Suite

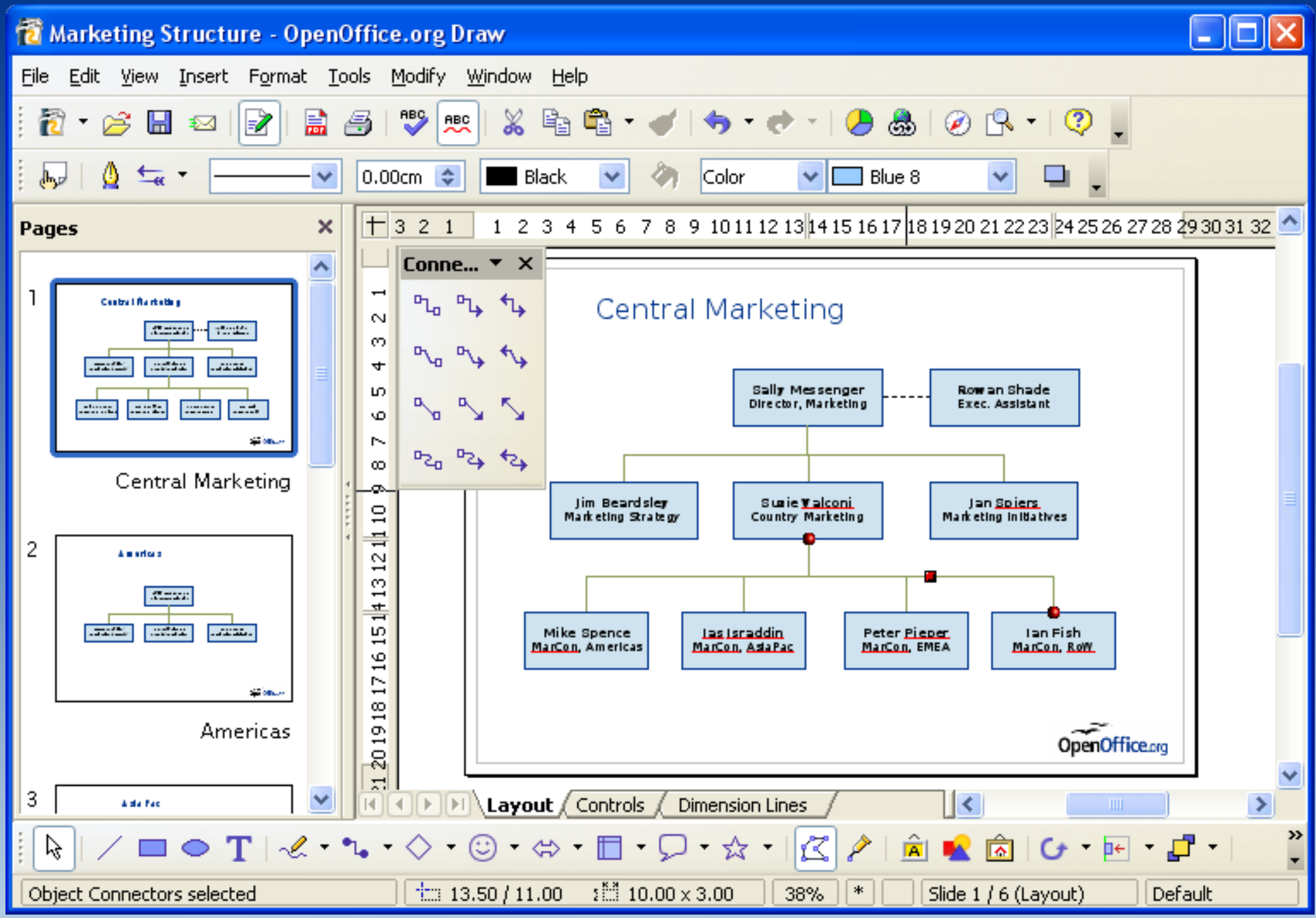
OSI certified OASIS STANDARD

OpenOffice.org ***draw***

- Stunning Graphics Tool
  - *Single click access* to common drawing objects
  - Arrange objects, rotate in two or three dimensions with the *3D controller*
  - *Smart connectors* for flowcharts, organisation charts, network diagrams etc
  - Sophisticated *rendering* for photorealistic images
  - *Import* graphics from all common formats (including BMP, GIF, JPEG, PNG, TIFF, and WMF)
  - store drawings in *OpenDocument* format

OpenOffice.org
The Open Source Office Suite

OSI certified
OASIS STANDARD



OpenOffice.org
The Open Source Office Suite
OSI certified
OASIS STANDARD

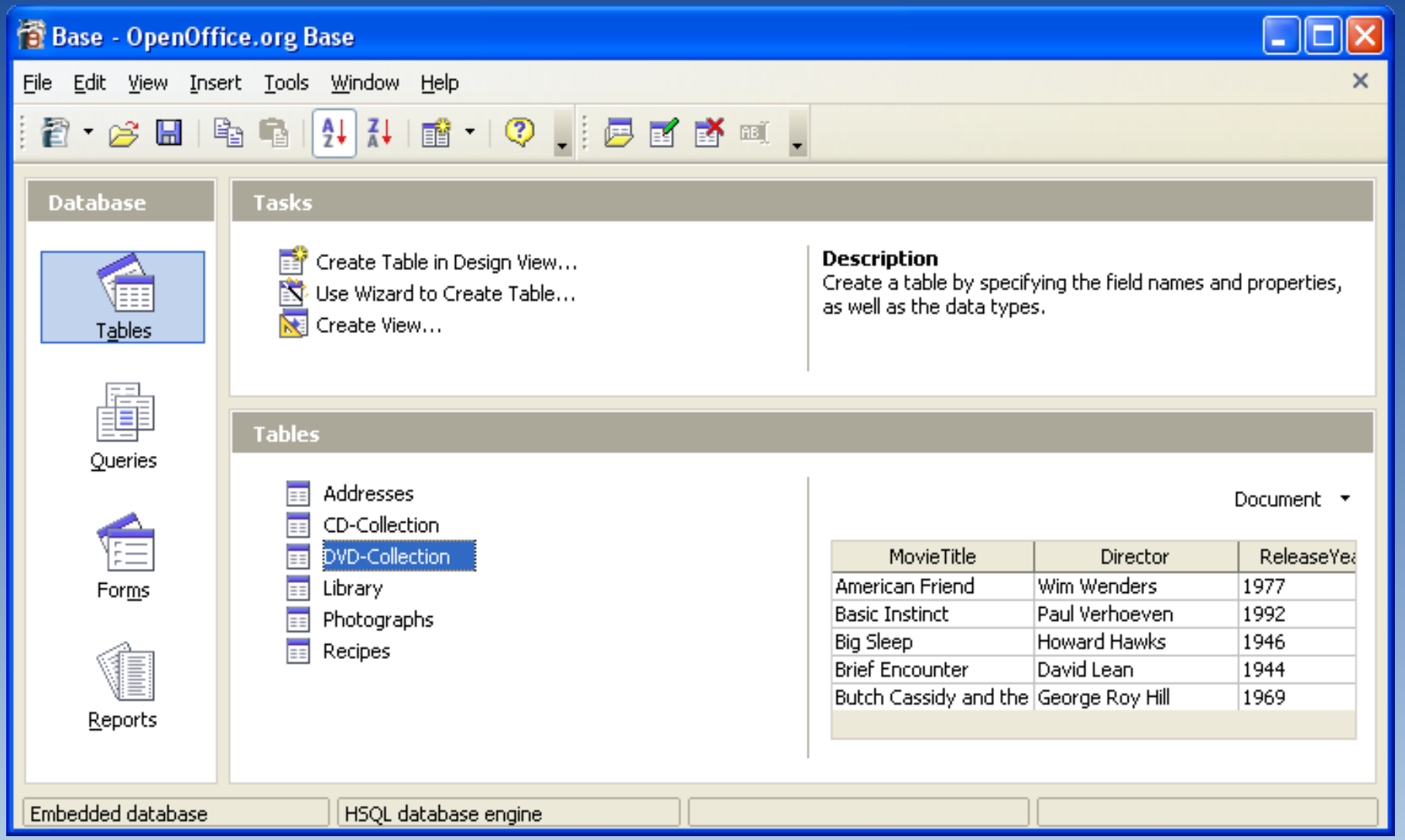
OpenOffice.org ***base***

- Database Access made easy
  - Use *Wizards* to create 'instant' database applications
  - View a table in an *editing grid* and add, change, and delete records
  - *Drag and drop* data into other OpenOffice.org applications
  - Create powerful *queries* to show your data in new ways, including summaries and multi-table views
  - *Create and modify* tables and indexes
  - Use the built-in *HSQLDB* database or access existing *ODBC* or *JDBC* compliant databases

OpenOffice.org
The Open Source Office Suite

OSI certified
OASIS STANDARD

OpenOffice.org ***base***



OpenOffice.org
The Open Source Office Suite

OSI certified
OASIS STANDARD

How free is ‘free’?

- Free to use - e.g. download via the internet
- Free from licence fees
- Free to give away to friends, family, employees, students...
- Free to choose the computers you use: Microsoft systems, Linux systems, Sun Solaris, and Mac OS X under X11
- Free up your hard disk - Microsoft Office format documents take up to twice the disk space!
- Free for developers to enhance with open-source code, published APIs and file formats
- You're free to use your legacy Microsoft Office files

OpenOffice.org
The Open Source Office Suite

OSI certified
OASIS STANDARD