

# *DFSee 9.xx overview, demo - Q&A*

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DFSee functionality overview

What is new in version 8.xx and 9.xx

Demos, Questions and Answers

**FSYS** - *software* **DFSee**

# *Presentation contents*

- Who am I
- DFSee 9.xx functional overview
- Version history, new in version 8 and 9
- Demo of several DFSee functions
  - DFSDISK procedure
  - Binary editor
  - File recovery (undelete)
  - Imaging
  - Whatever you like (and is doable :-)

# *Who am I ?*

## Jan van Wijk

- Software Engineer, C, Rexx, Assembly, PHP
- Founded FSYS Software in 2001, developing and supporting DFSee from version 4 to 9.xx
- First OS/2 experience in 1987, developing parts of OS/2 1.0 EE (Query Manager, later DB2)
- Used to be a systems-integration architect at a large bank, 500 servers and 7500 workstations
  
- Home page: <http://www.dfsee.com>

# *What is DFSee, functional view*

- DFSee is an OS neutral utility like FDISK, LVM, PQ-Partition Magic, PQ-Drive-Image Norton-Ghost, Undelete and more ...
- Main areas of functionality:
  - Backup and restore of partitioning information
  - Search missing partitions and recreate them
  - FDISK/LVM create and maintain partitions
  - Imaging, disk-areas to/from (compressed) files
  - Cloning, disk-areas to/from other disk-areas
  - FS-specific: Check, Display, Undelete and Fix
  - Disk data analysis and update (binary edit)

# *Managing partition info*

- Backup/Restore commands Psave/Prestore and the corresponding items in the FDISK menu
- BSFIND command to search lost partitions
- Integrated in DFSDISK procedure, preparing you for a partition recovery when needed.  
(Can be done 'post-disaster' as well :-)
- Recovery script usually made (and tested!) based on the DFSDISK result files

# *Create and maintain partitions*

- Use the CR/DELETE commands or menu items to manage the partition tables
- Use the LVM command/menu to create and update the OS/2 or eCS LVM information
- Use the Partition Table Editor (PTE) to directly manipulate table entries
- Use the various SETxx and FIXxx commands to change partition properties and fix errors

# *Imaging to/from files*

- Imaging is a process where DFSee objects like disks or partitions are copied into a regular (often compressed) image-FILE
- Can use 'smart' technology to skip unused areas
- The images can be restored to the same or to a different object at a later time, but always keep the SAME size!
- Imaging is used for backup and restore, including data transfer between systems

# *Cloning between objects*

- Cloning is a process where sectors from any DFSee object like disks and partitions are directly copied to another DFSee object
  - Disk-to-disk clone, as backup or recovery clone includes all partitioning and LVM info
  - Partition-to-partition clone, mainly for backup
- Special handling possible for bad sector areas
- Like imaging, can use 'smart' technology to skip any unused (freespace) areas in the object



# *File recovery and undelete*

- File recovery is the copying of file-data as a new file on another filesystem, retaining as much of the name, path and file properties as possible
- When targeting files that have been DELETED it is usually called 'UNDELETE'
- For 'normal' files it is often used to recover files from damaged or inaccessible filesystems
- Uses a SEARCH, DISPLAY, RECOVER scenario

# *DFSee versions and user interface*

- DFSee is available in an OS/2 (eCS), DOS, Windows-NT/W2K/XP, Linux, and now an experimental MAC OS-X version.
- It is a non-graphical text based program, can run from bootdiskette or bootable CD
- Most functions can be run from a MENU interface with additional dialogs
- Much more through a command-line
- Output can go to the screen AND a logfile
- Command scripting capability (recovery)
  - Being improved with many Perl-like features

# Major versions

- 1.xx 1994 HPFS browsing/fixing OS/2 16/32-bit
- 2.xx 1997 NTFS, FAT, FDISK, DOS-version  
Basic imaging, undelete, setboot
- 3.xx 1999 Windowed UI, BSFIND, NT-version  
Ptable save/restore, DFSDISK
- 4.xx 2001 Cloning, Scripting, freespace-wipe
- 5.xx 2002 Menu-system, dialogs, FS-resize
- 6.xx 2003 Linux version, Smart imaging
- 7.xx 2005 Installer, Mouse, new dialogs
- 8.xx 2006 JFS support, sector editor,  
FAT formatting, smart disk clone
- 9.xx 2007 Geo sniffing, more linux FS support  
enhanced scripting (RSN :-)

# *What was new in DFSee 8.xx*

- JFS filesystem support
  - Sector/cluster editor (binary)
  - Direct binary file editing
  - Much better progress reporting
  - FAT12/16/32 formatting capability
  - Better removable-disk support on OS/2
  - Smart imaging/cloning a whole disk
  - Reset bad-sector administration
  - Many small functional enhancements
  - Many bug-fixes
- See [DFSHIST.TXT](#) and [history web-page](#)

# *JFS filesystem support*

- Display bootsector and superblock information
- Display allocation information, allowing SMART imaging/cloning/wiping as well
- Sector Lookup Table (SLT) and CHECK
- File recovery and undelete including full path and filename (if FS is more or less intact :-)
- Permanently add redundant filename info to the Inodes to aid in later undelete/recovery

# *Interactive binary editing*

- Large window with HEX and ASCII sections
- Variable of lines and columns, user selectable
- Integrated SEARCH facility, highlighted result
- Variable item size, sectors, clusters ...  
(in any DFSee object, disk, partition etc)
- Editing of files of any size, with single byte size granularity, including insert and delete at the EOF position (use menu or DFSEEDIT script)

# *What is new in DFSee 9.xx*

- Contents based disk geometry (sniffing)
  - Using partition-tables and LVM information
  - Can be disabled using a '-geocalc-' switch
- EXT2/3 and ReiserFS basic support
  - allows disk-allocation map, 'smart' imaging/cloning but no file level displays and recovery yet
- GRUB detailed reporting and analysis
- Generate HTML menu-documentation
  - See DFSHIST.TXT and history web-page

# *What next for version 9 ?*

- Greatly enhanced native scripting capabilities
  - Will use 'C' and 'Perl' like expressions, variables and control statements like if-then-else and while
- More EXT2/EXT3 and ReiserFS support
- Lots of fixes and enhancements :-)
- Perhaps (graphical) spin-offs with reduced functionality that are much easier to use
  - All functionality mentioned above is tentative, and may change with or without prior notice :-)



# *Enhanced native scripting*

- Backwards compatible with existing .DFS scripts
- Much better error checking possible
- Direct access to many DFSee specific info, including disk sectors from a script
- Powerful expressions, variables and functions
  - Can be used from the DFSee commandline too
- Conditional and looping control will allow more intelligent and powerful scripts

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Questions ?

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# *DFSee 9.xx DEMO topics*

- Sector editor, sizing, undo, fill, search
- Binary file edit
- Create, format and use FAT32 partition
- JFS filefind, with SLT
- JFS recovery names
- Smart imaging (JFS)
- DFSDISK dialog
- Virtual disks, DFS -d-, add/remove media
- Recovery example, load .Pdx files
- Run a recovery script
- Using script variables and expressions