

DFSee concepts, demo and Q&A

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How to use the DFSee program more effectively by understanding its capabilities and some of the internal workings

FSYS - *software*



DFSee

Presentation contents

- Who am I
- DFSee functional and technical view
- DFSee architecture and working
 - Accessing 'sectors' in 'stores'
 - Different types of media
 - Virtual disks, for analysis purposes
 - Generic implementation plus FS (mode) specific
- Examples using DFSee ...

Who am I ?

Jan van Wijk

- Software Engineer, C, Rexx, Assembly
- Founded FSYS Software in 2001
- 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 comparable to FDISK, LVM, Partition Magic, 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

What is DFSee, technical view

- DFSee is a tool to examine and possibly modify data on a variety of storage media
- Types of storage supported:
 - Physical disks, as supported by the OS
 - Disk partitions on partitionable media
 - Volumes (driveletters on PC) or Devices on Linux
 - Regular files, like RAW images
- Data can be viewed RAW or formatted for:
 - FDISK usage, partition-tables bootsectors, LVM-info
 - Filesystem structures, FAT, HPFS, NTFS, JFS, EXT2 ...

DFSee versions and user interface

- DFSee is available in an OS/2 (eCS), DOS Windows-NT/W2K/XP and a Linux version.
- It is a non-graphical text based program, able to run in simple environments like a boot-diskette or bootable CDRROM
- 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

DFSee architecture

- DFSee considers all storage as a collection of sectors (typical 512 bytes) called a STORE
- Many generic commands are available to work any type of FS or disk (DFSCMDS.TXT)
- On opening, DFSee will analyse the first sector(s) and select a suitable mode with specific commands and menu selections
- For the 6.xx versions, the modes are: FDISK, FAT, HPFS, NTFS, JFS, EXT2 ...

The DFSee STORE concept

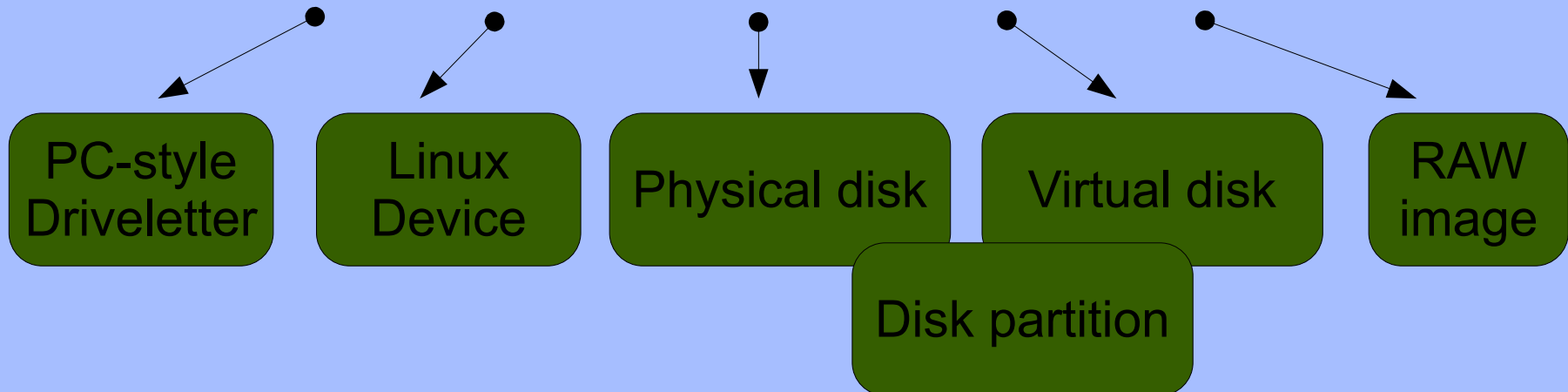
Open/Read/Write from DFSee functions



DFSee store nr 0 (system)

DFSee store nr 2 (alternate)

DFSee store nr 1 (default)
Collection of sectors 0 .. N



Store concept, details

- A store can be associated with a medium using an OPEN menu-item or command
- The store keeps additional information like the geometry and some statistics
 - See the **STORE** command/menu-item for details
- Partitions on (virtual) disks are supported by defining a non-zero 'base' sector number as the disk-sector considered to be 'sector 0'
 - See the **BASE** command/menu-item for details

Virtual disks in DFSee

- Exists in MEMORY within DFSee only
- Behaves (almost) the same as a real disk
- Can be created in 2 ways:
 - By specifying a size and/or disk geometry
 - By using a set of .Pdx files as a template
(often used with the DFSDISKI.* result files)
- Can be used to:
 - Learn DFSee commands and functions
 - Test recovery scenarios and scripts

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Questions ?

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