BeOS

an introductory overview

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A small introduction on the operating system BeOS. Although Be Inc. is not anymore, it is till worth to mention.

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1.0 introduction

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1.1 history

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BeOS is developed and distributed by/from Be Inc. CEO Jean Grasseacute; was employee at Apple in previous times and was co-developer of the famous MacOS. Back in 1986 - MacOS beeing only about two years old - Grasseacute already had an idea of BeOS, but he had to wait four more years to realize his idea. 1990 he foundet Be Inc. along with a hand full of other programmers and the first kernel and parts of the whole OS got shape.

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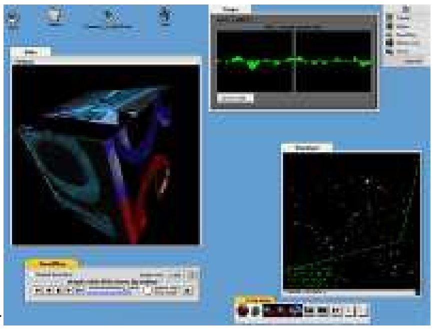
>mmpara_l.png" target="_blank">

Pic 1: high performance multimedia

2.0 features

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2.1 general

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BeOS plays a special role between the other OSs, cos it does not base on old stuff - MacOS, Windows and the diverse UNIXs suffer from code that have their origin in the late 60s, 70s and 80s. But BeOS has been developed from scratch and no one had to take a look on compatibility aspects of eventual earlier versions. Being a new star on stage offering all inclusive modern media capabilities, BeOS was not that exotic as one might think, no, BeOS is fully POSIX conform and is a strong UNIX look-a-like (there is even a build-in bash!).

Beside BeOS that new operating system is also entitled "Media OS", cos the lean architecture with low overhead allows fast processing - not only in a multimedia sense. It handles available resources with care making it a universal operating sys for miscellaneous purposes.

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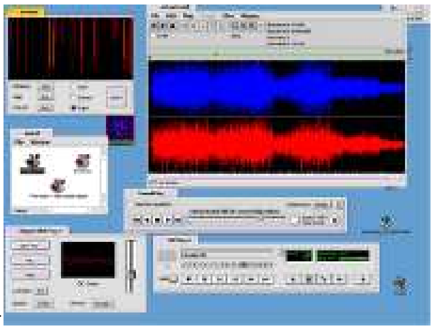
>mmrealtime_l.png" target="_blank">

Pic 2: BeOS' excellent realtime processing

The intention of BeOS is not to fight for the crown, as Microsoft and the Linux community do - no, BeOS wants to be seen as addition to existing ones. Thus it is no wonder that it is very cooperative. It can share a system along other OSs without problems; other file systems can be mounted into the Be File System BeFS (FAT 16, FAT 32, NTFS, HFS, HPFS, ext2fs, Reiser FS) what allows the user to cross-use data from other storage media / OSs.
>In a positive sense, the developers took a look beyond their desktops and observed other operating systems during the conception phase of BeOS. All those features that were found usefull, have been adapted to their system. As a consequence, you have a GUI similar that of Windows, KDE and MacOS (means excellent to handle and nice to see:-) but the internal features of UNIX (means string scripting features realized by an adaption of the Bourne Again Shell akka bash) bound with the stability of NT and UNIX.
>Of course, BeOS is not simply a mix of other OSs; more likely it has its own identity and ideas; but why not taking concepts from the outside instead of inventing the wheel from scratch?

Although DirectX had large problems at its beginning phase (most developers simply did not believe in it), it became accepted since version 3 that was quite powerfull. The success of Windows 95 strongly depended from DirectX.

2.2 cooperative OS

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- BeOS can be installed within an existing file system (since version 5.0) or can be installed within its own partition; if so, it can be booted via a bootmanager (e.g. the included Bootman; an adaption of Linux' LILO, since 4.5 an own development)
- external file systems can be mounted into BeOS, such as FAT (Windows), NTFS (Windows NT/2k), HFS (MacIntosh) and ext2fs/Reiser FS (Linux)
- standard file formats are supported; especially media files such as Audio Video Interleaved (AVI), MPEG, Wave, QuickTime (MOV), MIDI ecetera
- runs on Intel compatible (x86) or PowerMac platforms

2.3 high performance

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- truly multiprocessed / -threaded plus multiprocessor support (at least up to four CPU's per local system)
- lean kernel and minimal code overhead offer direct interfaces and low processing speed
- optimized use of available resources
- support of actual of accelerated hardware

(click image to enlarge)

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Pic 3: easy to handle hardware management

2.4 filesystem

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- 64bit journaled filesystem
- file identification via MIME types
- dynamic file attributes, may even be binary data (e.g. an image as attribute for a MPEG Layer 3)
- can be seen as a database (capable of creating tables and queries etc.)
- file and partition sizes up to some terrabytes; ideal for multimedia files of long duration
- other file systems can be dynamically be linked into (mounting)

2.5 communication

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- as common in UNIX, miscellaneous networking services are integrated into the system, such as ftp, http, telnet, nntp, smtp, pop3 and more

2.6 portability

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- BeOS application are binary compatible with Linux, Free~ Open~ NetBSD etc. (ELF); most sources of the named OS' can be compiled on BeOS using the GNU C/C++ Compiler gcc

2.7 miscellaneous

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On the other hand, BeOS has to suffer from well-known problems that also apply to Linux' X-Windows system: leak of drivers. Hardware vendors mostly create their drivers for Windows only and source code for them is rare.
>But: support for modern an common hardware is more or less guaranteed unless you call exotic or older stuff your property. For the future you can hope that support will grow analog to Linux. Linux is still growing and even commercial concerns recognize it; giving it more and more support. If drivers are developed for Linux, it it quite easy to modify them for BeOS. <p>

(click image to enlarge)

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Pic 4: office is not an alien thing to BeOS

Another problem is the little amount of BeOS users. In middle of 1999, the total number of private BeOS users has been estimated to approximately 1 million; that equals less than a third of private Linux users at that time. As a result, there is little software available - and the success of an operating system strongl depends on driver support and much more on excellent and common software, especially a profounded office suite compatible to the Microsoft products. Not to forget games...

Nevertheless, there already is pretty known software available and in development: Netscape Communicator, RealPlayer G3, Bryce 3D, Steinberg Nuendo (still on its way???) and more. Important games that are available so far: Quake2, Descent, Doom...

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