Windows 95

an introductory overview

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Windows 95 was the first kinda 32bit operating system for home users by Microsoft. This article is a small review of this successful and very discussed OS.

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1.0 introduction

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1.1 history

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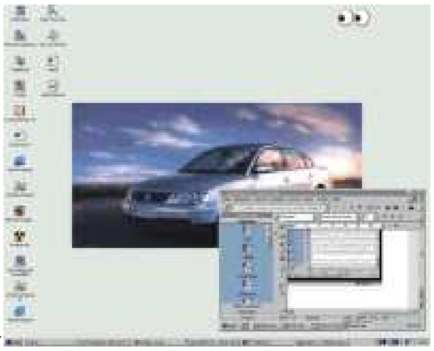
Up to 1995, Windows basically had not been improoved from a technical point of view (one of the greatest steps was Windows 3.11 for Workgroups; where a lot of vital components have been reprogrammed using assembler for more performance). This OS was still build up on 16bit tech (although there existed several 32bit extentions, such as harddrive access or later on the Win32s API) that caused much waste of speed, cos the hardware base could handle 32bit.

(click image to enlarge)

>desk_l.png" target="_blank">

Pic A: the new Windows 95 desktop

As a consequence, Microsoft needed a complete rebuild of Windows that offered an up to date architecture including a new API. Prior to 1992, the developers from Redmond commenced work on their new operating system called Windows 95, internally known as Chicago.

2.0 features

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2.1 general

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Beside of having a modern OS, one of the primary goals was to free the OS from a strong dependency of DOS. Microsoft did a lot of work to pretend that there was no underlying DOS (think of the start logo :-)); and in fact, they untied it from many old relicts, such as MSCDEx (Microsoft Compact Disk Extension for accessing a CD-ROM), EMM386 (Enhanced Memory Manager for x86 systems) and misc. other drivers such as mouse, video adapter and soundboard. But many people still maintined their system like their former Win3.11, thus having all the old drivers in autoexec.bat and config.sys causing the system to hang due to conflicts between DOS and Windows drivers. But that’s another topic...

Most parts of the new Windows 95 was optimized for 32bit, but still many parts were buld up from updated 16bit code, such as the GDI (Graphics Device Interface). So why did Microsoft this step, having the chance to publish a complete new OS?
>The reason was that customers demanded compatibility with their old applications. Thus MS had to develop a mixture of an almost ideal 32bit system and the old Win 3x. - And that included several security wholes and stability risks (think of shared memory, all apps in Win 3x could affect each other!). <p>

By trying to hide the DOS domain, there was one large problem left: fast multimedia support. The Windows GDI was much too slow for such stuff, especially for games. Thus, the Redmonders started to develop the Game Software Development Kit (SDK). This was quite surpising to many people, cos one of it’s benefits was really fast 2D scrolling, some peopl previously believed that dis was not possible under a Windows environment. But the Game SDK never had been released. A strong modifed and advanced version relabeled as DirectX has been published. Direct stood for fast and direct access to hardware and the X stood for all the dedicated tasks it was designed for, e.g. graphix, sound, controllers, network ecetera.

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.

(click image to enlarge)

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Pic B: the centralized device manager

2.2 user interface

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- sensible improved and user-friendly interface
- optical and technical upgrade (e.g. anti-alised screen fonts)
- centralized management menu, similar to Mac OS

2.3 hardware control

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- supported by hardware vendors, Windows 95 offers best hardware support available
- as a result, nearly best performance out of the hardware resource
- multimedia generic interface DirectX: offers high performance thru direct access to hardware and disabling of extended multitaksing support

2.4 32bit core

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- data processing with 32 bit width provides four times higher performance in much cases compared to Windows 3x and its predecessors
- but: many components were still build using 16 bit; thus performance-leaking compromise for compatibility for Win 3.x applications

2.5 compatibility

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- by using 16 bit modules, Windows 95 offered high compatibility for DOS and older Windows applications

2.6 stability

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- caused by those features above, Windows was quite instable, cos old mechanisms have been used

2.7 developer friendly

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- compared to the 16bit API, the new Win32 API was much more handy, stable and powerful

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