



Slick Plan Distribution List

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**Slick Plan (Win 3.1 + DOS 5)**

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## 1. Introduction

We have spent some time looking at combining DOS and Windows. Early efforts (called Captain) were halted by lack of OEM interest. A recent effort to create a retail upgrade for DOS+Windows (Slick), was killed in July '91 after project delays<sup>1</sup> and feature additions caused the project to miss its window of opportunity.

For OEM's who wish to ship both DOS and Windows, or preinstall DOS and Windows, Microsoft currently offers no easy solution. OEM's who wish to ship both DOS and Windows must either do their own preinstall, or simply throw both SDK's in with the machine. We realize that in order to achieve substantial OEM bundles and pre-installs, we must offer an easier solution. It is essential to our Windows everywhere strategy to make it trivial for OEM's to preinstall and bundle DOS and Windows.

This plan presents a proposal for projects to develop a packaged product and OAK for a combined DOS 5/Windows 3.1 (OEMSLICK), and to create a preinstall kit (PRESLICK) for OEM's who wish to preinstall DOS 5/Windows 3.1. The term SLICK is used to reference the combination of DOS 5/Windows 3.1.

The plan is organized into the following sections:

- OEM Input
- Reduction Cost Of Goods Sold (COGS - this is a consistent OEM wish)
- Preinstall
- Packaged Product

## 2. OEM Input

We have worked with several OEM's to better understand the issues with preinstalling and bundling of DOS and Windows. Product needs to be modifiable. The following items were consistently mentioned by OEMs:

- Reduced Cost Of Goods Sold (COGS)
- Need an OAK. Setup must be modifiable
- Need a tool to adjust system configuration (memory, video, printer) without user interaction.

<sup>1</sup> Resulting from team being defocused to work on DOS 5.0 PSS issues.

Several OEM's are interested with our preinstall approach and are anxious to get it. The OEM account managers want demo's to help sell it.<sup>2</sup> The following Sections describe the input we've received from each OEM.<sup>3</sup>

## 2.1. Compaq

In July, 1991, Compaq expressed serious interest in preinstalling DOS/Windows. At that time, their main concern was how to support manufacturing of a single machine which could end up in one of several countries. To preinstall, they need to have a setup which can be shipped to multiple countries. Specifically, they need French, German, Italian, Spanish, and English. They need it to fit on a 40Meg system, and the process for the user needs to be quick and painless.

Compaq is okay with our preinstall approach, but appears to be backing off the preinstall approach. They don't see a good business case for doing. Alexn is driving a plan to sell Compaq on the business case.

## 2.2. Olivetti

Olivetti is interested in preinstalling DOS and Windows. They need support for many languages on the hard disk. Most important initial languages are French, German, Italian, Spanish, and English. They also view Dutch, Swedish, Portuguese, and Norwegian as crucial.

The features they want most is a utility which can be run in batch mode to configure printers and install Windows. Windows 3.0 meets their modifiability needs.

## 2.3. Zenith, Unysis, Gateway, Texas Instruments, and AST

All of these OEM's expressed the same issues/needs. They need an OAK version of the combined software. They would include this with their preinstalled systems to use for a backup (except Gateway who may not preinstall).

Their most wanted feature is reduced COGS.

Volume estimates:

Zenith numbers not yet available.  
AST estimates 200K units for FY '92

<sup>2</sup> Prototypes for the graphical portions of both have been implemented. See sections on remaining work for more details.

<sup>3</sup> We have distributed more detailed questions (via the account managers) and expect more detailed input by the Sept 18 AM meetings.

Unysis estimates 100K units for FY '92  
Gateway volumes not yet available  
Texas Instruments volumes not yet available

#### 2.4. Dell

Dell already preinstalls DOS and Windows. They have a feature, DELL Librarian, which allows users to make backup diskettes of the preinstalled software. They would provide combined product only to users who requested the package (for additional cost).

They are very interested in reduced COGS and are concerned about yet another SKU. Whatever preinstall we implement must be easy for them to support with their Dell Librarian utility.

The feature they want most is a tool which examines the hardware and adjusts the configuration files and Windows Setup to reflect the correct files and the most optimal system settings. This utility needs to handle memory adjustments, video, monitor, networks, and pointing devices. They also need to handle preinstall of applications.

Volume estimates not yet available.

#### 2.5. German OEM's (Vobis and Schmitt)

Raghavk has proposed that we target these two German OEM's to lead movement for preinstalling of Windows. These OEM's need a preinstall which includes 3 languages (user picks desired language). Low end target machine has 40meg hard disk.

European OEM team believes we need to provide all important documentation online.

Volume estimates not yet available.

#### 2.6. Tandon

Needs drastic reduction in size requirements for shipping multiple language versions of DOS and Windows. Also wants to make it easier for user to install international version of DOS and windows. They also are frustrated with the amount of effort required for OEM's to customize international versions of DOS and Windows (would like all versions in one source tree).

They have CMOS words which specify the language. They've implemented a multi-lingual install utility which their Master Data Pacs.

Consider it important that DOS (BIOS and Utilities) and Windows 3.1 FASTDISK drivers consider removable disks like their Data Pacs. They have several other feature wishes for Windows.

Volume estimates not yet available.

### 3. COGS Reduction Options

The number one concern expressed by the OEM's is reduced COGS. We've considered several options to help here. Our recommendation is to do the following (this would require 4 additional writers and additional Editor for the DOS User Ed group; It is essential to DOS 6 that the existing team not be pulled to do this):

- Develop a combined (DOS+WIN), condensed, User Guide. This would require 8 writer man-months and 4 editor man-months. If started 10/1/91, would be ready 2/91.<sup>4</sup>
- Develop very basic (minimal graphics/hyperlinks) online documentation for Windows and DOS, using WinHelp. This would require 12 writer man-months and 6 editor man-months. If started 10/1/91, would be available 3/92. Goal would be to fit entire help system in .5 to 1 Meg of disk space.

NOTE: Both of these will also require substantial work for international to localize.

- Provide feature like Dell Librarian to support making backup copies of software installed on the hard disk. With this feature, OEM's could avoid shipping diskettes, simply requiring the user to create backup diskettes prior to using the system. This approach is currently under investigation.

### 4. Preinstall (PRESLICK)

The most simplistic approach to this (put copies of all the setup files for all the languages on the hard disk) would require too much disk space. An idea was developed to use the resource compiler (RC) to *change* files from one language to another, shipping only the relatively small .RES file. Utilizing this approach, the incremental disk usage for adding localized versions of both DOS (1.5Meg/language) and Windows (2.3 Meg/language) is only 3.8 Meg! The elapsed time to configure the system after powering it on is approximately three minutes. For the default language (presumably US), the

<sup>4</sup> We considered using existing trim books from MS-PRESS, Doanally, or Phoenix, but none of them have Windows 3.1 versions. We could go that route with less resources, but we wouldn't have a product till later.

elapsed time is expected to be only a few seconds. We believe 5 languages can be accommodated on a 30Meg hard disk.

We have developed a graphical prototype for the preinstall based on the Windows Applications Setup Toolkit. This prototype shows how a system can be setup so that when the user picks their language when the system is powered on. This demo will be presented to the OEM account managers on September 18. The prototype handles copying and expansion of the files, but doesn't yet support the RC step (this will require a modification to the Setup Toolkit). There are other minor adjustments which will also need to be made to convert the prototype into a final product. Details on the remaining work are provided in the next section.

#### 4.1. Estimated Fixed Disk Requirements for Preinstall

Current estimates are that PRESCLICK will require 10 Megabytes for the first language (assuming this language is shipped uncompressed). Each additional language will require an additional 3.8 Megabytes. In addition, a small scratch area will be required (2 meg or less). The size requirements are based on using DOS 5.0/Win 3.1 file compression. These size estimates are based on the Windows 3.1 Beta build. These sizes are derived as follows:

##### Windows:

7.2Meg for 1 language (including 2 Meg of .EXE's which can be RC compiled with localized .RES and 2 Meg of .EXE's which don't need to be localized)

2.3Meg for each additional language (including localized .EXE's and .RES files to convert other .EXE's to localized file)



DOS:

2.8Meg for first language and 1.5Meg for each additional language.

Thus, size for five languages is:

DOS: 2.8 + (4*1.5)	=	8.8 Meg
WIN: 7.2 + (4*2.3)	=	16.4 Meg
BARE WIN dir	=	1.4 Meg
Work Area	=	1 Meg <sup>5</sup>

Total for five languages: 27.6 Meg

#### 4.2. Remaining Work to Create A Preinstall Kit

A graphical prototype of the preinstall program has been developed. This prototype starts with a choice of language. From that point on, user is working in the chosen language. The program displays a gas-gauge while it expands and copies the files. The following changes are necessary to finish the product:

- Use RC to *compile* in .RES files. This involves getting a version of RC which is a Windows app or DLL. We believe we can use the Quicck version for this purpose. It also involves modifying the Apps Setup Toolkit to support (a couple of days work) invoking RC. This feature will also need to replace the winstub message for the EXE (prints "you need to run Windows to use this program")
- Remove Cancel and Exit buttons and remove Close option from System menu (these all require modification to the Toolkit).
- Support replacing master boot record (MBR) and DOS boot files.
- Use LZ Compression (to be consistent with DOS and Windows; toolkit currently uses the Hafman variant of LZ).
- System adjustments after Setup (exit, remove unwanted files, and reboot).
- Change background bitmap from Windows Setup to whatever we want.
- Write a very small Getting Started Guide.

Ideally, a batch mode program should also be implemented which adjusts installed configuration files and windows image to work on the correctly and optimally on the hardware (eg adjust RAMDRIVE, SMARTDRV, windows Network support, video, pointing device, language settings, etc). Development estimates for this program are not yet available.

The following issues still need to be thought through:

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<sup>5</sup> Scratch area is a rough estimate. Actual size may vary.

- How will we clean off the machine? What if the user chooses the wrong language?
- Do we need to support hardware where the keyboard/display is not known when the software is put on the hard disk? If so, we'll need to deal with this. We could probably do this with some adjustments to the configuration program mentioned above.
- Will disk fragmentation be an issue?
- Do we need to take any steps to reduce the likelihood of software piracy? Having all of these localized versions of Windows on one machine could make it easier for piracy.

## 5. OEMSLICK (OEM Packaged Product and OAK)

During the Slick Upgrade project, an OEM version of the installation was thought to be a hard problem (It was being considered in terms of enhancements to retail Slick). However, upon further research, we have discovered that the OEM Setup is much easier than the upgrade Slick. Since the OEM Slick doesn't need to support uninstall, nor does it need to deal with updating old hard disk formats without requiring the user to repartition, it can be implemented with very little work by utilizing a chopped version of the DOS 5.0 OEM Setup program (merely makes hard disk accessible/bootable, then spawns Windows Setup program) in conjunction with a slightly modified Windows 3.1 Setup program (which handles the rest of the DOS file copying).

This approach offers many benefits. The majority of the work is already done (Window Setup) and with very minor changes this could be ready at Win 3.1 announce.

A prototype of the Windows Setup portion of this has been developed using the custom applications feature of the Windows Setup program. The next section describes the work which needs to happen to finish the product.

The remaining work to convert this prototype to a finished product are discussed later in this session.

### 5.1. Remaining Work to Create OEMSLICK

The following changes are required to Windows Setup to support a combined install for new hardware<sup>6</sup>:

- Query for and set Date/Time, system keyboard, country, and Code page (and modify Config.sys to set).
- Support addition of WIN line to AUTOEXEC.BAT (auto start on boot)

<sup>6</sup> More work would be required to support a generic upgrade. The amount of work would depend on the feature set (uninstall, disk adjustments, etc.).

- Support copying of DOSSHELL files (depending on display type, different files are copied into DOSSHELL.\*).
- Include DOS directory in PATH statement in AUTOEXEC
- Adjust/remove introduction screens
- Support to not reinstall HIMEM.SYS if DOS portion of SETUP already did it.

The following changes to the DOS 5 OEM Setup program are required to support the combined install:

- Modify introduction screen to reflect DOS and Windows
- Modify Setup to only handle disk partitioning, formatting, and making bootable. Leave file copying to Windows.
- Remove other DOS Setup screens
- Pass switches to and spawn Windows Setup.

ISSUE: Do we need to handle DOS Only or WIN Only install?

## 6. The Retail Slick Project

The Slick (DOS 5/Win 3.0) Upgrade was a non-trivial project which involved about 4 man-months of development. The work to implement that project involved rewriting the character mode portion of Windows 3.0 Setup and modifying Windows 3.0 GUI Setup to support DOS 5 upgrade (including disk adjustments and uninstall). In addition, some other enhancements to the Windows setup were made (such as switch to copy and expand all files to prepare a server for network install).

The project was killed when it was realized that it wouldn't make the fall marketing season. Since Windows 3.1 Setup is mostly new code, the work on Slick based on Windows 3.0 is of little value for a DOS 5/WIN 3.1 retail product. However, the major issues with doing a retail version of the product are well understood and documented in the Slick specification.