

## METHOD OF SOFTWARE INSTALLATION AND SETUP

### FIELD OF THE INVENTION

This invention relates to a method of software installation and setup, and more specifically to a method for reducing the time required by a computer manufacturer to install software onto a hard disk drive, and for reducing the time required by an end user to setup a disk operating system and a graphical user interface in a user selected language.

### BACKGROUND OF THE INVENTION

#### Computer Manufacturer Installation

A computer manufacturer typically pre-installs a plurality of software programs onto a hard disk drive of a computer system before the computer system is shipped to a reseller or end user. At a minimum, most computer manufacturers pre-install a disk operating system (DOS) and a graphical user interface (GUI). Currently, a majority of computer manufacturers pre-install Microsoft Corporation's version of a disk operating system called MS-DOS and Microsoft Corporation's version of a graphical user interface called Windows. Furthermore, more and more computer manufacturers are "bundling" a variety of additional software programs onto their computer systems to make them more attractive to the end user.

Although other versions of disk operating systems and graphical user interfaces are available, the terms DOS and Windows are used throughout this disclosure to refer to all types of disk operating systems and graphical user interfaces.

Since a diskette-by-diskette installation of each individual software program onto each hard disk drive of each computer system takes far too much time to complete, computer manufacturers implemented a faster method of installing a plurality of software programs onto the hard disk drive.

Basically, the computer manufacturer takes a particular model of a computer system that is to be shipped with a particular pre-installed bundle of software programs, and manually installs all of these programs diskette-by-diskette onto the hard disk drive, ensuring that all of the configuration files are properly modified.

It is well known in the art that certain software programs need to make certain modifications to what are known as configuration files, such as AUTOEXEC.BAT and CONFIG.SYS files in DOS, and SYSTEM.INI, PROGMAN.INI, and WIN.INI files in Windows, in order for the program to run properly. Other programs need to add certain files to certain directories in order for the program to run properly. Some of these changes are based upon specific hardware components that are present in the particular model of the computer system, such as a specific type of video card, or sound card, etc. Therefore, modifications made to the configuration files for one computer system model may not work if duplicated for use in another computer system model. The term "changes" is used to encompass additions, deletions, and modifications resulting from the installation of a software program.

Once the manual installation process is completed, the computer manufacturer then creates a compressed disk image file using an industry standard compression program called PKZIP, which is produced by PKWARE Inc. The compressed disk image file represents all of the properly installed software programs, properly modified configuration files, and properly added files, on the hard disk drive.

The computer manufacturer then uses this disk image file to rapidly duplicate the installation process on other computer systems by decompressing or "exploding" a copy of the compressed disk image file onto the hard disk drive that is installed in similar computer system models with the same bundle of software programs.

If the compressed disk image file for one computer system model is exploded and downloaded onto the hard disk drive of another computer system model, the configuration files may not be properly modified to work with the different hardware components present in the other model. Therefore, a different disk image file must be created manually for every different hardware and software configuration. This did not pose an immediate problem since many of the computer system models being shipped contained the same set of hardware components and software programs, and thus, the creation of only a few distinct disk image files were required. The use of a disk imaging method, as described above, greatly reduced the amount of time required by computer manufacturers to install predetermined bundles of software programs onto large numbers of similarly configured computer systems.

However, the disk imaging method did not provide enough flexibility, and as a result, created certain disadvantages. Computer manufacturers began shipping a large number of computer systems with different hardware and software configurations, and thus had to create a large number of distinct disk image files, thereby reducing the efficiency of the disk imaging method.

For example, in an effort to meet the needs and desires of each individual customer, computer manufacturers now offer what seems to be an endless combination of various hardware components and various software programs. The more combinations that the computer manufacturer offers, the less number of times that a particular disk image file is used, and the more number of times that a manual diskette-by-diskette installation has to be performed for a new combination.

Therefore, a better solution is required that provides the computer manufacturer with a fast, yet flexible, method of installing software onto the hard disk drive of various computer system models comprising various hardware components and software programs.

#### End User Setup

Computer manufacturers follow a different procedure when installing software programs onto hard disk drives for computer systems that are being manufactured for shipment to foreign countries. Since DOS and Windows are available in various foreign languages, resellers and end users in France, for example, prefer that a French version of DOS and Windows be pre-installed on the computer system, and resellers and end users in Germany prefer that a German version of DOS and Windows be pre-installed on the computer system, etc.

For computer manufacturers that ship computer systems to many different foreign countries where the end users speak many different languages, it becomes a burdensome task to control inventory such that all computers being shipped to France are pre-installed with the French version of DOS and Windows, and that all computers being shipped to Germany are pre-installed with the German version of DOS and Windows, etc. Therefore, computer manufacturers pre-install every desired foreign language version of DOS and Windows onto every computer system that is being manufactured for shipment to foreign countries. This reduces the amount of time that the computer manufacturers