memory means. The advantage is that the user will be able to work with the user program on any computer. A external memory means may also be connected with a computer before it is powered up. Upon power up, the computer detects the presence of the pre-OS application program of the external memory means and proceed to boot the pre-OS working environment. Application data of pre-OS application programs are preferred to be stored in the external memory means so as to enhance security control of the application data.

The major difficulty in providing speedy access of application program before fully booting a computer is that the OS actually is required to set up the computer before full-featured application program can be run. For example, before an OS is booted, the computer may not be able to response to mouse or touch pad movements. The computer screen is set at the lowest resolution available. Modem and network card access are not available. Other communication ports such as the serial port, parallel port, infrared port and the popular USB port are not accessible. Audio function is not ready. Many of these basic functions are not available, not to mention the advanced features provided by the latest Windows and Apple OS.

Close research of different notebook using habits reveals that over 90 percent of the task performed by the OS, although preferable, are not necessary to perform the personalized applications defined by this research. A lot of features can be compromised in exchange of the convenience of quick access to the personalized applications. In a first application embodiment, a personalized telephone directory program can be provided to work at VGA resolution, a low 8 bit color setting, no sound capability and without accessibility to any external communication ports. The next step is to run the application program before booting the OS.

Different methods had been studied to enable running personalized application program before booting an OS. The first method is to provide a compact application program in a removable diskette. Most BIOS of notebook computer enables the computer to access a boot up diskette before booting the OS. This feature was provided to obtain start up control of the computer in case the OS is corrupted. When the computer is to be normally booted, the diskette containing the application program is removed from the diskette drive. When quick access to the personalized application program is required, the diskette containing the software is inserted into the diskette drive before power is turned on. Several difficulties had been discovered during the research of this direction. Firstly most notebook computers provide only a floppy diskette drive. The 1.44 M memory capacity of the floppy diskette is too small for a reasonable application program. This capacity is also too small for storing the personalized data. Secondly, there is an increasing trend that new notebook computers are provided with a CD drive instead of a floppy drive. Even though the capacity of CD drive is high enough for most personalized programs, it is not suitable for this invented application because the personalized data cannot be stored on a regular CD. Although CD R/W is capable of storing user data, it is also not perfect for this application because the CD is easy to be scratched. It is less reliable and difficult to handle as compare with a floppy diskette. In addition, the speed of a CD R/W is too slow especially in writing mode. Higher capacity Zip drive is perfect for this solution. Unfortunately the Zip drives, although popular, was not able to replace the floppy diskette drive to have a widely accepted installed base in notebook computers.

Another approach tried in the research is to modify the BIOS for setting up a removable external miniature drive so that this drive can be accessed before the OS is booted. Portability and durability of the external drive is important. Accordingly, any electronics devices not configured to provide memory storage for computer data as it's major field of service, such as portable DVD player, digital picture frames, cell phones, digital cameras, scanners, iPOD are excluded from the definition of external memory means. Two different kinds of devices are qualified in the search for suitable products to be used to provide a suitable embodiment of the invention. They are the miniature portable hard drives and solid-state flash memory devices that make use of the PCMCIA slot, fire-wire or USB ports of the computer.

Another method to access a personalized application program before booting an OS is to modify the BIOS such that it is responsive to certain hot keys on the keyboard during power up. When a key is depressed during the power up period, the computer is directed to a personalized application program installed in the hard drive.

Many users and computer manufacturers may feel hesitate to modify content of the BIOS as it is difficult to handle and may cause serious problems very difficult to be fixed. Accordingly another solution is obtained from the research. A control program is provided in an external memory means that directs the computer to run an application program of the computer.

Alternately the control program can be stored inside the hard drive of the computer. The BIOS is provided with instructions to access the control program before starting to boot the primary OS. The control program may be configured to detect hot keys before or during the booting sequence. Alternately the control program may help to define the functions of the hot keys, or the keys of the computer keyboard, so as for a user to decide which application program to be launched after the booting process. The control program may also provide a screen to prompt the user to decide which personalized startup application program to be selected or to proceed for booting the primary OS.

The very primitive setup of the computer before booting the OS may be too limiting for some personalized application program. For example, the resolution of the screen may be desirable to be enhanced for better displaying pictures or a spreadsheet. Accordingly the application program or the control program previously discussed may comprise codes to set up the display screen to provide more colors or higher display resolution. The process of setting up a better working environment is actually part of the job of the full feature primary OS of the computer. Providing some fast set up and configuration task simpler than the primary OS for quickly supporting the personalized application program is defined as the task of a pre-OS. The primary OS, or simply OS is defined as the full-featured OS normally operated by a computer such as Windows. It should be noted that the computer may comprise only the primary OS if a pre-OS does not exist. It should also be noted that a consolidated OS may be designed to provide the functions of both the pre-OS and the primary OS; in this case the consolidated OS may also be termed as a primary OS or simply the OS of the computer system.

Another further objective of the invention is to provide a computer system suitable for the user to access the personalized application programs both before the OS booting process and also during the normal operation mode after the OS is booted. For an example, it is desirable to provide an application program that allows a user to input some notes with a primitive notebook application program without booting the OS, and at a later time, using a full feature word processing software to copy or edit the message entered. Since the working environment is very primitive and many supporting devices are not ready before the OS is booted, features of the