

TITLE : DYNAMIC HIBERNATION TIME IN A COMPUTER SYSTEM

ABSTRACT OF THE DISCLOSURE

A dynamic hibernation time apparatus monitors and ensures that battery packs in a computer system have sufficient energy capacity to sustain a proper saving of the hibernation file into the hard disk drive. The invention determines the memory size of the computer and adds the storage space needed to store the chip register contents to arrive at the determination of the hibernation file size. Next, the time necessary to save the hibernation file on the disk data storage device and the hibernation energy required to operate the disk data storage device to completely save the hibernation file are determined. When the battery capacity drops within a range of the previously computed hibernation energy, a warning message is generated at the user and the hibernation file is saved. The computer is shut down after the hibernation file has been properly saved. Thus, by determining the total memory size to be saved in the hibernation file, by determining the time and the energy required to completely store the hibernation file into the disk drive, and by sensing either the battery capacity or requesting that the smart battery sends an alarm to initiate the hibernation file saving process, the present invention ensures that sufficient energy exists in the battery packs to properly save the hibernation file onto the hard disk drive before system shut down occurs due to low battery capacity without wasting energy by determining the set point based on a maximum memory configuration.

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