

What is claimed is:

1. A method of installing an operating system on a data storage device of a computer system wherein the method comprises the steps of:

selecting an operating system for installation on the computer system wherein the operating system is a software platform that schedules tasks, manages storage, controls the communications between peripherals and runs other programs referred to as applications;

reading a plurality of storage characteristics of the data storage device to determine number, size and boundaries of the existing partitions on the data storage device;

identifying the selected operating in an installation rules database on the computer system wherein the installation rules database contains an installation characteristics and rule set for each of the operating systems residing in the database;

retrieving an installation characteristic and rules set for the selected operating system from installation rules database of the computer system, wherein the installation characteristic and rules set including the characteristics and rules, including the size and boundary requirements of a partition required to install the selected operating system on the data storage device properly;

comparing storage characteristic of the data storage device with the retrieved installation characteristics and rule set;

modifying the size and boundaries of a partition so that the selected operating system can be properly installed on the data storage device, if the two sets differ by one or more of the characteristics wherein the modification can include moving one or more of an existing partition, resizing an existing partition, and establishing a new partition; and

installing the selected operating system on to the data storage device.

2. The method according to claim 1, wherein the storage characteristics set additionally includes identifying an operating system a file structure present in each partition, and available space in each partition wherein the operating system installation characteristics and rule set additionally includes a file structure with which the operating system is compatible.

3. The method according to claim 1, wherein the steps of comparing, modifying, resizing, and establishing additionally includes steps of relocating data into at least one moved and resized partition.

4. The method according to claim 1, wherein following the step of comparing the storage characteristics of the data storage device with the retrieved installation characteristics and rule set of the operating system, steps of generating a list of the modifications to be made to at least one of the partitions of the data storage device, displaying the list of modifications to be made, and making the modifications upon receipt of a user affirmation signal are performed.

5. The method according to claim 1, wherein when the storage characteristics of the data storage device and the identity of the selected operating system or the retrieved installation characteristics and rule set for the operating system to be installed indicates that the selected operating system to be installed is an updated version of the operating system that already exists in an existing partition on the data storage device and where one or more files are required from

the existing operating system performs the steps of comparing, modifying, resizing, creating a new partition, copying the required files to the new partition and installing the operating system in the new partition.

6. The method according to claim 1, wherein when the storage characteristics of the data storage device and the identity of the selected operating system or the retrieved installation characteristics and rule set for the operating system to be installed indicates that the selected operating system to be installed is an updated version of the operating system that already exists in an existing partition on the data storage device and where one or more files are required from the existing operating system performs the steps of comparing, modifying, resizing, creating a new partition, copying all the files to the new partition and installing the operating system in the new partition.

7. The method according to claim 1 further comprises a step of alerting a user when the two sets differ by at least one predetermined storage characteristic.

8. The method according to claim 1, wherein a step of determining a strategy for modifying number, size and boundaries of partitions of the data storage device storage device based on a set of predetermined weighting factors and parameters required to install the operating system properly installed prior to modifying the storage characteristics of the data storage device is performed.

9. The method according to claim 8, wherein prior to modifying the storage characteristics of the data storage device performing the steps of:

determining the priority and rank of the each strategy for modifying the partitions of the data storage device based on the predetermined weighting factors and parameters of each strategy; and

displaying the priority and rank of the each strategy for modifying the partitions of the data storage device in accordance with the strategy that corresponds a selection made by a user.

10. The method according to claim 8, wherein a critical characteristic is calculated by subtracting the minimum space requirement needed to properly install the operating system from the total available space on the data storage device.

11. The method according to claim 8, wherein a critical characteristic is the difference between the magnitude of available space on the data storage device and the size of the partition used for an incompatible existing operating system less than the predetermined minimum space required for the operating system to be installed.

12. The method according to claim 1, wherein the data storage device can be either a magnetic or a optical disk drive.

13. The method according to claim 1, wherein the selection of the operating system to be installed is result of a signal received from a user interface.

14. The method according to claim 1, wherein the installation rules database is present on the data storage device onto which the operating system is installed.

15. A computer system that installs an operating system on a data storage device of a computer system comprising: program logic configured to select an operating system for installation on the computer system wherein the operating system is a software platform that schedules tasks, manages storage, controls the communications between peripherals and runs other programs referred to as applications;

program logic configured to read a plurality of storage characteristics to determine number, size and boundaries of the existing partitions on the data storage device;