WCE DISK IMAGING UNIT
TERMS AND DEFINITIONS

This unit describes how WCE installs software on refurbished computers. The process we use is called disk imaging. It allows us to quickly copy lots of data and programs onto many computers at one time. To better understand how this is done it will be helpful to be familiar with the words and terms below.

Cloning – is the process of making an exact physical copy of a computer data storage device.

Data storage device – any hardware device that can hold digital computer information. Hard disks, Floppy disks, solid-state drives, USB drives and magnetic tape have all been used as data storage media. Telephones and iPods can also be used as data storage devices.

Disk Drive – is a data storage device with one or more magnetized disk plates that hold digital data. An electromagnetic "read & write head" controls the flow of data onto and off the disk platters. Disk drives were invented in the 1950s and are becoming obsolete and replaced by solid-state drives.

F**ile System** – A file system is a software structure that has 2 parts; a mapping structure that puts location marks on a data storage device and a table of contents where the name and location of each file is recorded. A data storage device must have a file system in order to hold data. A file system must sit inside a partition. When a file system is created (or written) onto a partition, it is called "disk formatting." Each partition can only hold one file system.

There are many file systems that work on a variety of different operating systems. Microsoft Windows uses the NTFS file system. The Unix / Linux operating systems use ext (versions 2, 3, and 4) ReiserFS, UFS and XFS, to name a few. Apple / Macintosh computers, tablets, telephones and iPods use BSD and APFS but can recognize many other file systems.

Imaging is the process of disk cloning by taking the intermediate step of creating an image file.

Partition – A partition is a data container created on a data storage device. Data storage devices must have at least one partition, formatted with a file system in order to hold data. A data storage device can be segmented or divided into many separate partitions to help with organization, performance or to accommodate different file systems or hold different operating systems.

SSD – A Solid-State Drive is a data storage device that uses integrated circuits and "flash memory" to hold data while the computer is running or turned off. Flash memory circuits can be electrically erased and rewritten. Solid-state drives are like very large capacity USB drives. They can access data much faster than disk drives that use mechanical disks and read / write heads. They also last longer because they have no moving parts or motors. Disk drives are being replaced by SSD's