FAQs on the RCMP Hard Disk Overwrite Software (DSX)

How do I get a copy of DSX?

The distribution and use of the DSX software is restricted to federal and provincial government departments and agencies. As we have established contact with many organizations to date, you may want to check with your respective security office (DSO, CISO, CSO or CIO) to verify if your department or agency already has a copy of the software. Otherwise, please direct your security office to contact us at the following address: TSB-ClientServices@rcmp-grc.gc.ca

Why do I need to sign a User Agreement before receiving and using DSX?

The user agreement outlines topics such as conditions of use, limitations to distribution, and the responsibilities of both parties (RCMP and requesting party). The agreement must be signed and returned to us before the software will be sent.

How will I receive my copy of DSX?

In most circumstances we send you the files via E-mail (files are compressed into a WinZip file and sent as an attachment). Depending on the configuration of your firewall/E-mail gateway, it is often necessary to change the file extensions from .exe to a non-recognizable extension to prevent filtering.

How do I use DSX?

First and foremost, you should read the DSX User Guide provided with the DSX software. Next, you will need to create a DOS bootable floppy diskette (Version 6.22 or higher), copy the .exe files (DSX.exe, IDE.exe and DV.exe) to the floppy and then write-protect the disk. The following is a summary of the steps you should take to overwrite a hard disk:

   a. Use the bootable floppy disk to boot the PC. Make sure the PC BIOS is set to boot from floppy before other devices in the boot sequence. For SCSI hard disks, make sure the SCSI BIOS is enabled on the SCSI controller card.
   b. Run the IDE program to verify correct reporting of hard disk geometry. If you prefer, edit the autoexec.bat file to start this program immediately after boot.
   c. As an option, run the DV program to view the contents of the hard disk prior to the overwrite process.
   d. Run DSX, select the 'MBR Zero' option and reboot. Run DSX and select the overwrite option.
   e. After the overwrite is completed, run the DV program to visually verify that the hard disk has, in fact, been overwritten.

What is the latest version number?

Version 1.40.

What changes were made compared to the previous version?

Compared to version 1.39, the following changes were made to version 1.40:
- The detection scheme was modified to determine the highest readable / writable sector, and to prevent excessive disk write errors reported at the upper bound.
- The MBR zero function was added to prevent the PC's BIOS from reporting incorrect disk geometry.
- The verification pass was enabled for the last pass only.
- The software was slightly modified to allow for compatibility with larger hard disks.
- The hard disk is reset following a high-cylinder auto-probe operation.
- The software was modified so it now detects returned logical block access (LBA) values (it previously detected unreliable cylinders, heads and sectors (CHS) values).

What is "IDE.exe"?

The IDE program is issued to you with DSX. IDE should be run prior to DSX. The purpose of the program is to gather hard disk identification information directly from the hard disk, independent of the PC's BIOS functions. You can use this information to compare the reported information with manufacturer's specifications. Further technical information is available in the DSX User Guide.

What is "DV.exe"?

The DV program allows you to view standard hard disk and diskette media independent of file system structure. The DV program is issued with the DSX program to provide the ability to inspect the contents of media prior to, and following, overwriting. Further technical information is available in the DSX User Guide.

What size of hard disk can DSX overwrite?

Under 'ideal' conditions, the software is compatible with hard disks up to 120 GB. However, considering the numerous combinations of system BIOS and hard disk firmware, you may experience situations whereby the DSX software does not function properly on hard disks smaller than 120 GB.

What exactly does DSX do?

The DSX software writes new information to every sector of the hard disk starting at sector 0. When a triple pass option is selected, binary zeros (0s) are written on the first pass, binary ones (1s) are written on the second pass, and finally, an ASCII text pattern composed of the DSX version number and a date/time stamp is written on the third pass. Upon completion of the third pass, the software then performs a verification pass. If the single pass option is chosen, the process is identical to the third pass of the triple pass overwrite (including verification).

Why does DSX sometimes appear to "freeze up" after I enter a password?

In version 1.40, once you have entered the password, DSX initiates a detection scheme to determine the highest sector it can read and write on the disk. Earlier versions did not perform this detection scheme. This process was added to version 1.40 to prevent excessive disk write errors at the upper bound, and to prevent the potential of the last readable track failing to be overwritten.

How long will it take to overwrite a hard disk?

The size of the hard disk has a direct impact on the total time required for a complete overwrite. For example, a 6 GB hard disk could take up to five hours to complete a triple pass with verification.

What level of security is DSX recommended for?

DSX is recommended for overwriting hard disks containing information up to "Protected A", "Protected B" (protected) and "Confidential" (classified). If the hard disk is to be reused within the department or agency, the 'single pass option' is sufficient. For hard disks to be sent to external organizations, such as Industry Canada's Computers for Schools Program or a computer equipment recycler, the 'triple pass option' is recommended.

What operating system can I run it on?

DSX is a 16-bit application designed to run on DOS. DOS Version 6.22, or higher, is recommended. Also see "How do I use DSX?"

What file systems will DSX overwrite?

The existing file system (or previous operating system) on the hard disk does not have any impact on how the DSX software functions. In most circumstances, if you can boot the system with a DOS bootable floppy, you can use DSX to overwrite the hard disk.

How much does DSX cost?

The DSX software is available free of charge to federal and provincial government departments and agencies.

Can I make copies of the software?

Yes. However, you may want to obtain permission from your department/ agency-assigned DSX administrator before you make copies of the software. In most cases, you may want to make several boot disks to increase the efficiency of wiping out several hard disks simultaneously (in separate machines). However, for security reasons, you will definitely want to keep track of where all the copies are.

Whom can I distribute it to?

Once again, please check with your departmental/agency (DSO) DSX administrator before distributing the software to other personnel within your organization. If you need to provide the DSX software to a third-party, such as a contractor, please refer to your "DSX User Agreement" for further stipulations and restrictions.

Will it work on SCSI and/or IDE disks?

Yes. DSX accesses the hard disk via the BIOS Int_13 interface. Therefore, it will operate on both SCSI and IDE hard disks. For SCSI hard disks the SCSI BIOS must be enabled at boot time.

Will DSX work on RAID systems?

DSX was designed to operate with one hard disk at a time. The simplest solution when dealing with RAID configurations is to break the array, or mirror, and work with each disk individually (RAID 0). A second option is to use a standard, non-RAID SCSI controller (such as an Adaptec 2940) and connect one disk at a time.

What is the MBR Zero option and when should I use it?

In some cases the system BIOS can gather information from the MBR regarding hard disk geometry instead of interfacing with the disk itself. The MBR's zero function inserts zeros in the MBR (requires a reboot upon completion) thus forcing the BIOS to gather information from the hard disk directly. It is recommended that this option be selected before initiating an overwrite.

Will I automatically receive updates to the software?

At the present time we do not alert current users when a newer version becomes available. However, we recommend users to visit this site regularly to stay informed on new version releases and updated FAQ information.

Is DSX better than similar commercially available products?

There are many other commercially available software and hardware products on the market designed to overwrite hard disks. Most reputable products will conform to specifications such as the US Department of Defense (DOD) 5220.22M. However, at the present time, no department or agency in Canada is mandated to evaluate and approve such products.

Whom do I contact if I still have DSX questions?

If you have further questions please E-mail us at:
TSB-ClientServices@rcmp-grc.gc.ca