UNIVERSITY OF Hull

born-digital archives

Idiot Guide No 1:
Forensic Workstations

Introduction

A key element to dealing with born-digital archives is the ability to receive and process material without making changes to the underlying metadata including date created, date accessed etc – data that researchers will be looking to use and rely on. In our role as custodians it is critical that we treat the material carefully and appropriately - fortunately there is hardware and software that help us with the authenticity of born-digital material.

A forensic workstation is a computer through which material can be safely captured following a clear process, in-effect replicating the isolation room for receiving paper material. This allows us to make a careful check that the born-digital material is what we expected or agreed to take, including the ability to generate a manifest of the material (using *Karen's Directory Printer* – see *Idiots Guide No 4*) and that the files do not include viruses etc.

Due to the range of media we expect to handle we currently have two forensic workstations that can handle a range of media through the use of internal and external drives and the use of write-blockers (see *Idiots Guide No 2*).

Media formats	OLD workstation - HAROLD	NEW workstation - DAWN
5 ½ inch floppy disk	No current means of access	No current means of access
3.5" Floppy disks	Use internal drive with write-protect tabs engaged	Use external USB floppy drive with Write-blocker 1
Amstrad disk	No current means of access	No current means of access
CD/DVD	Use either CD/DVD drive	Use either CD/DVD drive
ZIP disk	Use internal drive; write-protect with TOOLSNT software	Use external Zip drive with parallel port-USB adaptor and Write-blocker 1
PC Hard drive	Use Write-Blocker 2	Use Write-Blocker 2
Laptop hard drive	Use Write-Blocker 2 with adaptor kit	Use Write-Blocker 2 with adaptor kit
USB device - external hard drive / pen drives	Use Write-blocker 1	Use Write-blocker 1

Software currently in use

DROID (file formats) http://sourceforge.net/projects/droid/
Karen's Directory Printer (file manifests) http://www.karenware.com/powertools/ptdirprn.asp
FTK Imager (disc images) http://accessdata.com/support/adownloads
Quick View Plus (file viewer) £40
http://www.avantstar.com/metro/home/Products/QuickViewPlusStandardEdition
MS Office, Thunderbird (email)
MUSE – e-mail visualisation tool (beta) http://mobisocial.stanford.edu/muse/

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Updates

Each time that you use the forensic workstations, ensure that you check for new updates for

AVG Free

Download latest signature files from: http://free.avg.com/gb-en/download-update and save to Forensic workstation USB stick. Then load on workstation. In AVG click Tools> Update from Directory and navigate to the folder containing the updated signature files. AVG will detect them and will do the rest for you.

DROID

We are currently unable to download new signature files manually from the DROID Sourceforge pages. When a new set of signature files is released we need to update the signature files on a connected PC or laptop before manually extracting the files from **G:\.droid6\signature_files** and copy it to the same folder on the forensic workstations.

Forensic Bridges / Write Blockers

Tableau T35es eSATA	connects to SATA and IDE hard drives
Tableau T8-R2 Forensic USB Bridge	connect to any USB device - pen drive/external hard drive etc
Tableau TDA5-18 adapter kit	allows use of T35es bridge with 1.8" notebook IDE hard disks
http://www.tableau.com/	UK Supplier - http://www.dataduplication.co.uk/

Hardware Specifications

Name:	HAROLD	DAWN
Operating System:	Windows XP SP3	Windows 7 (tbc)
Chip:	Intel Celeron 2.66 Ghz	
Hard disk drives:	80GB	500GB SATA (OS & programs) 2x 2TB SATA (data)
RAM:	1.25GB	4GB
Floppy disk drive:	Yes	No - External USB floppy drive
CD/DVD drive:	Yahama CD drive (Read/Write) Sony DVD drive	22x DVD Writer
Internal drives:	Iomega Zip250 drive	None
External options:		Iomega Zip250 drive (parallel port)
USB ports:	2 front 4 rear	6 (tbc)
Notes:		Includes support for USB3