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**Tips to improve and maintain   
e-Learning laptop performance**

Information System – e-Learning

Last Revision: Feb 6th 2012

Audience: Toshiba e-Learning Students

One of the most common concerns with SAIT e-Learning laptops is the general operating speed and boot times. SAIT strives to provide its students with the latest in emerging technology to enhance the learning experience. For this reason, every first year student entering an e-learning program is issued a brand new Toshiba laptop. These laptops are not inherently slow, in fact most of these laptops are considered well above industry standard. Below are some tips and tricks to keep your laptop running the way it should and a few reasons as to why the laptop may appear to be slow.

## **What affects the speed of a laptop?**

## First things first, what is the standard amount of time a computer should take to load? The answer is depends on a number of key variables such as:

## The hardware or base electrical design of the laptop.

## Network connectivity, (fixed or wireless) and the volume of other user around you.

## The software on the system.

## Updates for Windows and software, including Sophos antivirus.

## The software you have added to your laptop. (i.e., home printer, games, language packs, productivity software, torrents, and visual customizations).

## On a new SAIT issued laptop, it has been found that some load as fast as 20 seconds and others take as long as 3 to 4 minutes. This is entirely dependent on what is required to load upon startup, and what services the laptop needs to connect to (i.e., licensing services, O: - H: drives, software, etc.)

## Below are a few common issues and some suggestions on how to eliminate these known complications.

## **Malware/Toolbars/Rootkits**: Malicious software often poses as a benefit to you or your computer experience. Rootkits can install itself undetected and monitor your computer habits often reporting to parent advertising companies or even hackers. For example: fake antivirus, mp3/YouTube rippers, free TV & movie websites, some advertisements or applications on social media sites, torrents, newsgroups, or adult websites.

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## The saying goes: “nothing in life is free”. A substantial percentage of TV/movie streaming sites, advertisements, software and torrent downloads are full of malicious software. This “Malware” can run undetected by even the best Antivirus suite usually because you accept the terms of this software during installation. Avoid clicking next on any install until you have read exactly what the program is asking or offering to install. If you do not know what it is, DO NOT install it. The best practice is if you would not install this on an employer’s computer, then you should not install or navigate to it on your laptop. The laptop is a tool provided for your program and should be limited to school related material. Malware is the number one problem that SAIT computer helpdesks see when a customer complains of slow startup times and program operation. If you know, or suspect your system is infected, it is a good idea to back up your files and attend one of the SAIT computer helpdesks for further diagnostics and repair.

## **Network connectivity options**: All SAIT laptop students are issued a fixed network connection or they have an option to access the wireless. One of the most common issues technicians encounter is that students have connected the notebook to both fixed and wireless options. This causes the laptop to become confused as it attempts to connect via two competing connections.

## Students should turn off wireless connectivity when plugged into the fixed connection. On most Toshiba laptops this can be accomplished by holding the FN button and pressing F8 on the keyboard to toggle between on and off power states.

## **Wireless vs. Fixed connectivity**—Wireless networking connects to nodes that share resources with hundreds of users. During peak times (11 am—2 pm) and in concentrated areas such as the library or study halls, connectivity can suffer both in speed and reliability depending on the volume of devices connected. Remember everything from gaming devices, cell phones, tablets and radios now connect via wireless.

## To ensure connectivity during peak times or high volume areas use a fixed internet connection. These ports are located on almost every table, in study halls, in classrooms and even under the tables at the Gateway! If wireless is a must it is suggested that the student move to a less populated area if they are experiencing slow load times or lack of access.

## **Suspending & Hibernating**– Suspension or hibernation of a laptop is something every student will encounter on a daily basis. Shutting the lid of the laptop computer and walking to the next classroom can contribute to speed and program crash issues if not executed correctly. The reason for this is that the system must allocate all open programs to memory before going into a low power state. If a large or active program is suspended it may fill or even run out of memory causing the entire hierarchy of the operating system to come toppling down. In simple terms the stability of the whole system can be compromised by this one action. This is essentially how the term “crashing” was coined.

## First ensure all active programs and internet browser windows are closed (not minimized). Ensure nothing is loading and that the cursor icon is not showing as an hourglass. Shut the lid and wait for the system to enter standby before putting it in the bag. The LED status light should fade in and out and fans should not be spinning. It is suggested that you shut the system down with no power attached at least once a day to ensure any updates are installed and the system refreshes its RAM memory state. If the system is acting slowly, a shutdown and restart will often clear up any abandoned or unstable program threads.

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## **Files on your desktop**– Saving a large quantity of files to your desktop can impede load times as the system must first load (cache) your files into memory each time the desktop is displayed. This is especially true when a student first loads into Windows.

## Save files to one central location. Put all school work in organized folders under “My Documents”. If you no longer require the file or program uninstall or delete it. ALWAYS backup your important files, hard drives are mechanical devices. When they die so does your precious data! Flash media, cloud storage, external hard drives or DVDs are all viable backup solutions. Students are responsible for their own data.

## **Third party antivirus**– SAIT laptops are designed and equipped with each diploma program in mind. This means that any software required for the program will be loaded onto the system prior to pick up. This includes an antivirus for preventive security protection. Often students feel the need to install other antiviruses on the system, sometimes going as far as trying to remove Sophos antivirus and installing another title. This is not necessary or suggested as measures are in place to automatically push our antivirus back to the computer even if it is removed.

## Students should not uninstall or overlap the antivirus software provided. This can cause the antivirus to fault detect or attack each other grinding the system to a halt. Furthermore, if Sophos is successfully removed it will be pushed upon next restart increasing load times substantially.

## **Unapproved software**– SAIT understands that third party programs may need to be installed to facilitate a better learning experience. We ask that students follow the guidelines they have signed for in the contract or e-Learning Participation Agreement.

## Section1. Paragraph D. states

## *“Not download, distribute, store 1, install or use programs including (but not limited to): unauthorized software obtained by unlawful means; any file known (or suspected) to contain a virus; interactive real-time network games2; “push-technology” such as “PointCast” (for example), or any form of streaming audio or video which does not serve the specific needs of the students course of studies at SAIT and that could (intentionally or otherwise) cause damage to the computer or its software, or consume limited network resources thus adversely impacting the availability of those resources to other clients, or cause other clients harassment;”*

## *1Note: Where reference is made, anywhere in this document, to “storing” of files or data, this applies not only to the student’s assigned computer, but to any SAIT network server to which the student has access. 2Note: standalone games installed on the hard drive or run from CD ROM or floppy by the user may be permitted provided that: (a) these games are not run in the classroom, docking station, library, or other designated study areas thus distracting other learners; (b) these are legitimate source copies; (c) user bears any responsibility for potential damage to the Operating System, or any other software or hardware; (d) user will remove the game if it is hampering the educational function of the computer and (e) the games do not result in the exposure of offensive material to other learners in the environment.*

## The essence of this paragraph suggests not installing anything that you **do not** need for your program. This includes network games/clients, torrent download clients, pirated software and plugins for TV/movie streaming sites. Installing this software opens the laptop up to many potential problems such as the software requesting ports that are not available at SAIT (Slowing the computer down, increased load times) or worse, opening the system up to potential attacks. When a student uses the laptop for school and not for personal entertainment they decrease the risk of potential problems with bloatware, spyware, viruses or network complications.

## **Where can I go for help?**

SAIT has a number of helpdesks and support options in the event a student requires assistance, or has concerns surrounding the SAIT issued laptops.

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| **Schools / Programs** | **Room** | **Location** |
| e-Learning Helpdesk | MB004 | Heart |
| e-Learning Helpdesk | G130 | Crandell |
| Business / Hospitality & Tourism | NN910 | Burns |
| Construction Helpdesk | NK206 | Burns |
| Helpline | - | 403.284.4357 |