

A Standard Operating Environment for Personal Computers

This document provides a specification for up to three contracts of personal computer, which establishes a range of systems to be purchased for general-purpose use: a Tier 1 desktop PC, a Tier 1 or Tier 2 desktop PC; and a range of Tier 1 laptop products. It does not cover Apple Macintosh computers, although the application set is intended to be consistent where possible.

The document establishes policy for the Standard Operating Environment¹ and will be the basis for contractual purchasing processes. For establishing a contract, a vendor² is required to meet specified requirements and specify service based responses specific to La Trobe University³. This SOE specification will be revisited on a regular basis by the SOE Working Group⁴.

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¹ Standard Operating Environment is referred to as SOE in this document.

² Vendor is referred to as a manufacturer or a manufacturer/reseller partnership.

³ La Trobe University is referred to LTU in this document.

⁴ The SOE Working Group consists of representatives from key areas across LTU.

1. SOE Vendor Classification

Due to different levels of design, quality and value added services to meet LTU's economic requirements, the University has defined Tier 1 and Tier 2 classifications of vendor as follows.

1.1 Tier 1

- Major global manufacturing, distribution and support infrastructure.
- Major global client of leading component manufacturers with design level collaboration or a leading global supplier of components.
- Offering a range of value added services.
- Demonstrated record of government endorsement, supply to education and standards compliance.
- Large in-house multi-level support resources with demonstrated ability to provide any level of support at a local level.

Typical examples of Tier 1 classification is advanced leading edge design of hardware and the ability to design and supply exclusive products to the consumer and corporate markets internationally.

1.2 Tier 2

- At least local manufacturing and assembly facilities in Australia.
- Direct client of leading component manufacturers.
- Considered a local "volume" supplier by component manufacturers.
- The ability to offer a range of value added services.
- Cost competitive when compared to Tier 1 vendor.
- Demonstrated record of government endorsement, supply to education and standards compliance.

Typical examples of Tier 2 classification is volume sourcing of components for local assembly, distribution and support and the inability to supply exclusive products to the consumer and corporate markets.

1.3 LTU Selection

LTU reserves the right to appoint suppliers in any combination of Tier classifications or products that meet the SOE specification. No single contract precludes another.

2. Operating System and Applications

This section applies mostly to internal procedures at LTU. However, vendors please note the imaging requirements. The Operating System and Applications will be part of an image that is replicated onto new systems via CD, ghost or RIS.

2.1 Software Images

1. Vendor Image (see 2.3): Operating System and vendor supplied utilities
2. SOE Application Standard Image (see 2.4): O/S and vendor utilities plus SOE applications
3. Specialised Image (see 2.5): Typically based on SOE Application image with extra specific programs and configurations for a lab or other requirement.

2.2 Standard Image Costs

LTU expects the Vendor and SOE Application Standard images to be made available free of extra charge. These images will be kept up to date by Information Technology Services⁵ in conjunction with the vendor.

2.3 Vendor Image

The base Operating System Licence only is required (apart from drivers) from the vendor. The chargeable OS should be a base Windows licence (eg: Windows XP Home). Where 3rd party device software is supplied by the vendor, it must be generic to reduce the requirement of re-imaging if components are changed.

2.4 SOE Application Standard Image

The intention for the selection of SOE applications is to maximise the existing LTU investment in the Microsoft/CAUDIT contract and other site licenses. ITS will upgrade any additional licencing under LTU licence agreements. If the vendor requires proof of OS and other licences they can be made available. The SOE images will have the final OS and applications licenced by LTU.

The SOE Operating System and Applications are:

(Note: Minimum version listed, latest versions will be used subject to compliance with core business systems, testing, training material and availability)

Operating System

Windows XP Professional

Latest updates: Windows OS and Application Critical Updates, Service Packs.

Web Browsing

Internet Explorer 6 (SP1)

Mail/Calendar Client for Exchange

Outlook 2003 (default)

Outlook Express 6

Portable document reader

Acrobat Reader 6

Media Players

RealOne Player 6 V2

Windows Media Player 9

QuickTime 6.5

⁵ Information Technology Services at LTU is referred to as ITS in this document.

DVD software and player (supplied with DVD drive)
CD Writing software (supplied with CD writing drive)
Anti-Virus
 Sophos updated from central server
Word Processing/Spreadsheet/Slide maker/Database access
 Microsoft Office 2003 Pro
Web page development
 Microsoft FrontPage (included in Office 2003)

Other optional applications recognised as standard. Some of these are:

 Terminal program: TeraTerm with SSH 2.3
 SAP SAPGUI 6.2
 Netscape 7.1
 Eudora 6.0 (Unregistered version)

2.5 Specialised Image

The Specialised Image may be developed and supplied on an as required basis. Application licences for specialised software will be supplied separately by the area concerned.

2.6 Support limitations

Applications not covered in the SOE Standard Image or Specialised Image is the responsibility of the end-user to install, configure and run. Where the application is causing the computer to fail or misbehave, then the vendor, ITS or local support staff cannot ensure the correct running of the computer unless the original image is reapplied. In cases where repair, reinstallation or other work is required on a computer then the user must backup their data first. No guarantee for saving or recovery of any information on the hard disk can be made.

2.7 Laptop Image

While laptops remain a lower volume product over desktop systems and a diverse selection is purchased by LTU to meet individual portable requirements, it is unlikely an LTU image will be maintained and applied. LTU reserves the right to establish and apply an image at any time during the contract.

3. General Manufacturer/Reseller Requirements

3.1 LTU Partnership

The vendor must be of a size and status that allows LTU to partner with it without diminishing the prestige of the University. The vendor must be able to work in partnership with LTU to ensure that all needs, present and future, can be met. The partnership must enhance the ability of LTU to take advantage of future developments and new technologies in its planning. The vendor must be a high volume manufacturer that can provide added value, with an authorised reseller if required, so that a total and consistent package is presented to LTU. The vendor should preferably produce computers at all levels: desktops, laptops and servers. Industry leaders in their level (such as laptops) are the exception. Vendors considered as resellers only, with no manufacturing capacity will not be considered for this contract.

3.2 TCO

The PC must be capable of supporting Total Cost of Ownership (TCO) technologies and the vendor must supply software that enables these features. The vendor must also be able to provide support for the full deployment of these technologies.

3.3 Technology and BIOS

The vendor must ensure changes in technology (eg: chipsets) are consistent with LTU requirements as specified in this document and does not introduce a negative impact to LTU. The vendor must ensure the latest possible BIOS version is tested and supplied.

3.4 Software Image

The vendor will be required to install an LTU image on all of the machines it supplies according to the image plan presented in sections 2.2-2.3. The vendor will be required to provide ITS with an up to date system of each type (low-end, high-end, etc) to allow these images to be created. The system should be on "permanent loan" until the next change in technology or lifecycle requires a new model. For each image supplied by LTU, the vendor must re-engineer that image when the vendor changes components in that model. LTU requires advance notice of any resultant change or delay.

3.5 Product Scope

The successful tenderer may provide a range of systems and products available under this contract, provided that they are fully compatible within the scope and with the provisions of this document. Any products that are outside the scope of this specification and not obligated by contract must be clearly stated as such in any advertising material or on-line services.

3.6 Special Requirements

Departmental needs may dictate special configurations and the University reserves the right to purchase outside the contract if these needs cannot otherwise reasonably be met by a chosen supplier. Purchases outside of the forward purchasing contract must be pre-approved by the LTU SOE Working Group established for that purpose.

3.7 On-Line Services

The vendor must provide on-line price lists enabling efficient price updates for LTU. The on-line service must facilitate systems, options and accessories with order tracking and LTU delivery ETA.

3.8 Delivery

Systems are to be delivered to the Faculty or School throughout LTU as specified on each purchase order.

3.9 Asset Management and Reporting

The vendor is to provide an LTU asset service through the application of asset labels or compliance with LTU contracted leasing vendor asset management processes. The vendor must also make available monthly reports to the SOE Working Group of configurations and quantities of systems purchased.

3.10 Components

Components must be industry standard and matched so that they work well together and do not create performance bottlenecks or failures. The Tier 1 vendor should have its own research and development facilities and Tier 1 and Tier 2 vendors have a close association with component manufacturers to ensure matched and stable component configurations.

3.11 Case Design and Access

The PC case must be easily opened and closed and must be capable of being secured with a cable anchor point to suit a physical locking device. The design of cases or stands must have feet or contact points that cannot scratch desk surfaces through normal installation or maintenance. Upgrades must be easy to perform and the machines must be well engineered. For example, memory must be easily accessible, disks must be easily upgradeable, and all cables in the case must be tethered and tidy. Training must be available to allow LTU staff to install components without voiding warranty.

3.12 Warranty Response and Support

General requirements outlined below, site specific service must be provided in response to section 4.1.

The warranty period should be quoted for 3 and 4 years with full on-site (to all campuses) labour and parts included and 8 and 4 hour response options for business days. Laptop warranty should be 3 and 4 year at each major campus or otherwise to the nearest international service base if overseas. Laptop support can be free courier pickup and return (for return to base) or on-site (preferred). On-site warranty is essential where a laptop is the primary system used. The vendor must have hot line hardware support, preferably 24 hour. Mean time to completion of repair or to replace must be less than two working days. An option of four hour to repair or replace for individual need should be available. The same or better (except where compatibility is essential) equipment must be available for replacement even for the entire warranty period.

3.13 Drivers

The PC must not use components that require unusual drivers. All drivers must be obtainable and easily identifiable from the vendor's web site. The vendor's web site must have a knowledge base for troubleshooting. Access to the database for purposes of download to our Help Desk system is of added value.

3.14 Staff Purchases

Under this contract, the vendor can offer contracted systems to staff for personal purchase where staff desire consistency in hardware between work requirements and personal use.

4. Manufacturer Responses

The vendor must respond to the following requirements for LTU to establish expected service levels and performance criteria.

4.1 Supply and Support Service Levels

The vendor must be committed to a service level of supply and support across all major campuses. For each of the campuses listed below, vendors must submit their capacity for the following:

- a. Delivery time from receipt of an LTU purchase order
- b. Response time for replacement components
- c. Response times for service technicians (or on-site turn around)

Major LTU campuses are:

Metropolitan (Bundoora, Melbourne City)	Bendigo
Shepparton	Mt Buller
Beechworth	Wodonga
Mildura	

Alternatively LTU may consider submissions for supply and support of the SOE systems on a regional basis.

4.2 Lifecycle Transitions

The vendor must specify processes or strategies applied during model lifecycle transitions to ensure continuity in supply. This is to include frequent product roadmaps, supply of new models for image preparation and a service level ensuring continued supply of contracted systems during the transition.

4.3 Lifecycle Options

For the change of lifecycle services, the vendor must present the cost, if any, for the following options:

- a. Installation services, to install and configure a system on-site.
- b. Data transfer, to transfer any user data/configuration between systems.
- c. Removal of all packing materials.
- d. Lease transfer, to cater for preparation of leased systems for return to lease vendor.

4.4 Component Supply

The vendor must specify contingencies or strategies utilised to minimise disruption to system shipments should a component shortage threaten the supply of systems to LTU.

4.5 Track Record and Partnership

The vendor must provide a detailed company track record and that record must be exemplary. A reseller forming a vendor partnership with a manufacturer must be nominated in the Tender Response.

4.6 Special Image Charge

Where an LTU department requires the vendor to install a specialised image as specified in section 2.5, the vendor must present the cost, if any, in the tender.

5. Hardware Specifications and Options

The specifications contained in this document are provided as a basis for evaluating tenders so comparisons can be made and where international or generally recognised open standards are applied to the computer hardware. It is assumed that actual specifications of systems will evolve over the life of the contract.

	Desktop Personal Computer		Portable Computer	
	Standard Volume Configuration	Standard Low Volume Options	Standard Configuration	Options
Case	Desktop or Mini-tower	Small Form Factor		
CPU and Chipset	Current Intel Volume Entry level P4 CPU.	Intel Celeron at Highest speed. Intel Pentium 4 at all other current speeds.	Intel Celeron at highest speed. Intel Pentium M at all current speeds.	
	Current Intel Chipset matched to CPU and speed.		Current Intel Chipset matched to CPU and speed.	
Memory	At least 4 memory module sockets		At least one memory module socket, preferably 2 sockets (subject to memory bus technology)	
	512 MB RAM		512 MB RAM	
Slots/Disk Controller	PCI-Express		PCI-Express	
	At least 2 free PCI slots		Two Type I/II or one Type III on PCI	SD Card or Smart Card Reader
	Serial ATA		Express Card Slot	
Networking	Ethernet can be on motherboard or a card in a slot (note free slots, above). Ethernet 10/100/1000 with Wake-on-LAN, Alert-on-LAN. Drivers supplied.	V.90 (or greater) 56K modem card.	Ethernet 10/100 on board with Wake-on-LAN, Alert-on-LAN. V.90 56K modem on-board. Drivers supplied.	Wireless (Centrino or 3 rd party solutions)
Audio	Audio should be on the motherboard, with option to disable in BIOS. Minimum Soundblaster Pro compatible, 16-bit, Full duplex, with Internal speaker support. Drivers supplied.	Quality external speakers. Microphone/headphone headset.	Audio should be on the motherboard, with option to disable in BIOS. Minimum Soundblaster Pro compatible, 16-bit, Full duplex. Internal speaker and microphone. Drivers supplied.	Microphone/headphone headset.

	Desktop Personal Computer		Portable Computer	
	Standard Volume Configuration	Standard Low Volume Options	Standard Configuration	Options
Video	Video can be motherboard integrated or card in PCI-Express slot.	3D hardware acceleration. Dual Head video card. Digital Video interface.	Range from standard chipset video to accelerated 3D video.	
	Supports video formats to at least UXGA 1600 x 1200 at 70Hz		Supports external video formats to at least UXGA 1600 x 1200 at 70Hz	Monitor stand (integrated with dock or separate).
	PCI-Express, DirectX, DirectShow compatible, minimum 32 MB RAM or integrated chipset memory, DDC-2B/VESA resolutions/power compatible. If DVD supplied then must be compatible with DVD video. Windows XP drivers supplied.		Windows XP drivers supplied. TV out (composite and/or s-video), Must be compatible with DVD video. Windows XP drivers supplied.	
I/O ports	25 pin parallel port. At least one 9 pin serial port.		25 pin parallel port. At least one 9 pin serial port.	Docking Solution to accommodate all I/O ports.
	Analogue or combined Analogue-Digital Video port	Digital Video port	Analogue Video port	Digital Video port
	At least four 4 pin USB 2.0 ports with two mounted on front panel.	Four free USB 2.0 ports if USB keyboard or mouse supplied.	At least two 4 pin USB 2.0 ports.	At least four 4 pin USB 2.0 ports for legacy free systems.
	Mouse Port PS/2 mini-DIN. An optical wheel-scroll mouse (USB or PS/2) to be supplied.		Keyboard/Mouse Port PS/2 mini-DIN. Mouse should be trackpad or TrackPoint (both preferred).	A USB optical wheel-scroll mouse. Bluetooth mouse for laptops with built in Bluetooth.
	Keyboard port PS/2 mini-DIN with 104-key keyboard	line out, line in, mic ports (with front access preferred).	Infrared 4 MBPS (IrDA) port side or front mounted	Bluetooth built in.
	Audio line out, line in, microphone ports (with front access preferred).		Audio line out, line in, microphone ports (with front or convenient side access preferred).	

	Desktop Personal Computer		Portable Computer	
	Standard Volume Configuration	Standard Low Volume Options	Standard Configuration	Options
Disk Drives/Bays	3.5" Floppy disk. (unless not required for security or other reasons)	USB Memory Key, all available capacities (manufacturer to specify).		USB or integrated 3.5" Floppy disk. USB Memory Key, all available capacities (manufacturer to specify).
	DVD/CDRW EIDE Combo Drive. With drivers and utility software	CD-RW Drive DVD ROM Drive DVD Writable Drive	DVD/CDRW Combo Drive. With drivers and utility software	Integrated/interchangeable options for the following: CDRW Drive DVD ROM Drive DVD/CDRW Combo Drive DVD Writable Drive
	Hard disk drive Serial ATA based on volume entry level (manufacturer to specify), typically 40Gb.	Upgrade options to all available sizes (manufacturer to specify).	Based on volume entry level (manufacturer to specify), typically 30Gb.	Upgrade options to all available sizes (manufacturer to specify).
	One free 3½" half-height bay and one free 5¼" half-height externally accessible bay in full desktop or midi-tower.			
	BIOS support of Wake-on-LAN, Alert-on-LAN		BIOS support of Wake-on-LAN, Alert-on-LAN	
System Management	Open to Value Added services offered by supplier		Open to Value Added services offered by supplier	
	ACPI V2 compatible		ACPI V2 compatible	
	BIOS features: boot sequence control (including CD booting), remote update capability, remote administration capability, PXE boot capability (under WfM interface)		BIOS features: boot sequence control (including CD booting), power control, PXE boot capability (under WfM interface).	
Power	At least 200 watts for desktop and 240 Watts for mini-tower, auto switching power supply, 90-265VAC with AS approved Power cables supplied.	From 180 watts for small form factor.	Lithium Ion battery with not less than 2.5 hr usage (according to BAPCO SYSmark Benchmark test). Auto switching power pack, 90-265VAC with AS approved Power cables supplied.	Additional battery. Additional power pack.

	Desktop Personal Computer		Portable Computer	
	Standard Volume Configuration	Standard Low Volume Options	Standard Configuration	Options
	Built-in overload and surge protection. ACPI support		Built-in overload and surge protection.	
Security	Chassis intrusion detection (through Alert-on-LAN and DMI polling)			
	Metal u-bolt or tag for cables/padlocks (simultaneously prevents case opening).	Locking cable kit to suit. Automated Asset ID system.	Slot for security cable.	Portable locking cable to suit.
	BIOS password control at power on and administrator, floppy lockout, hard disk password, anti-virus control (boot sector change).		BIOS password control at power on and administrator, floppy lockout, hard disk password, anti-virus control (boot sector change).	
Operating System	Microsoft Certified for Windows XP. Base Windows License supplied will be upgraded by LTU under MS/CAUDIT agreement.		Microsoft Certified for Windows XP. Base Windows License supplied will be upgraded by LTU under MS/CAUDIT agreement.	
Additions	Drivers for all devices, on CD preferable, with pointers to appropriate web sites.		Drivers for all devices, on CD preferable, with pointers to appropriate web sites.	
	Operating System delivered in official Microsoft packaging with Certificate of Authenticity.		Operating System delivered in official Microsoft packaging with Certificate of Authenticity.	
	Manuals for system and all components or peripherals, with a Quick Start Guide.		Manuals for system and all components or peripherals, with a Quick Start Guide.	
	Ability to preload a system image either through the reseller or manufacturer.		Nylon padded carry case	Leather/hard padded carry case Larger capacity carry case
	On-site delivery	Initial setup (unpacking, connections and power up).	On-site delivery	Initial setup (unpacking, connections and power up).
	3 year on-site 8 hour response warranty	4 year on-site 8 hour response warranty	3 year international warranty with return to reseller or to base if international.	4 year international warranty with return to reseller or to base if international. 3 or 4 year on-site warranty for primary user system.

	Desktop Personal Computer		Portable Computer	
	Standard Volume Configuration	Standard Low Volume Options	Standard Configuration	Options
Monitor	15" TFT colour monitor with analogue or digital interface, XGA 1024 x 768 native resolution.	Option to purchase with no monitor. Range of high quality CRT monitors from 17" with analogue interface. Range of TFT LCD monitors from 17" with analogue or digital interface.	Range from 12" to 15" TFT LCD built-in display, XGA 1024 x 768 minimum resolution to latest high resolution technology (manufacturer to specify).	
	VESA standards compliant, Energy Star/VESA DPMS compliant, DDC-2B compliant, MPR II compliant, ISO9241 part 3 ergonomics compliant. Universal power supply with auto or manual switching. Option of no monitor is required.			
Weight	Weight of system with standard components or monitors must be provided.		Weight must be specified for each product offered in range. Both the net weight of Laptop and gross weight including media devices and power adapter.	