

## Students' Guide for using the IT resources within the E&IE laboratories

### Purpose

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This document is intended first of all for the undergraduate students, but has useful information for all those who intend to use the laboratory's software and hardware resources.

Main items presented in a do-it-like-this manner are the following:

- instructions on how to access the operating systems and computing environments available in the laboratories
- quota of disk space and printing
- general rules of access and behavior for undergraduate use of laboratories in school of E&IE.

### 1. Laboratories

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The information presented in this guide regards the PCs installed in the following laboratories used by undergraduate students:

- **424** - Digital Systems Lab
- **417** - Communications Lab
- **330** - Control Systems Lab
- **F108** - Digital and Electronics Lab
- **F126** - IT Lab
- **630** - Network Lab

### 2. Operating Systems Installed on Lab PCs

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The operating system installed on PCs is Windows2000 Professional.

All PC systems in the undergraduate laboratories have a network card to enable them to be connected to the main undergraduate network: EELAB.

Most PCs are connected the eelab network and have access to Netscape Communicator and Internet Explorer, latest versions.

### 3. Logging in

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After the computer starts the Windows login applet will be displayed and you will be prompted to enter your login name and password.

On our system we use the same login name as your "**intranet**" **user name**, which should have been printed on your confirmation of enrolment form. If you have forgotten this name and do not have the form with you please ask a demonstrator for help.

The password used on the Electrical Engineering computers is not shared with any other networks within the University.

For each student we have set **your initial password to be the letter "p" followed by your student ID** number (which is printed on your student card).

Example:

Your name	Ima Student
SID number	0128932
Intranet login name	istu2941 ( printed on the confirmation of enrolment form).

in the Windows2000 applet enter:

User name	istu2941
Password	p0128932

then select "OK".

Name	SID	Intranet login name	Username	Password
Ima Student	0128932	istu2941	istu2941	p0128932

If the username and password are correct you will be logged to Windows.

If this is your first login you should change your password .

You should choose a password that you can easily remember, but cannot be easily guessed by someone else.

✓ Ideally a password should be a combination of letters and other symbols (numbers or punctuation). Your favourite aunt's house address might do (something like 32aJohnSt).

If you mistype the login name or password you'll be notified that the user does not exist and you should restart the whole process.

#### ***4. Changing the Password***

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The users are invited to change their password during their first session.

##### ***To change the password:***

**CTRL + ALT + DEL → Windows Security Applet → Change Password**

and follow instructions.

#### ***5. PC Desktop Standards***

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When you log on to Windows you have access to different applications and SW packages by means of drive mappings .

Click on **My Computer** to see:

- Drives **A-E:\** are assigned to **local disks**
- Drive **H:\** is your **home directory on diesel server**
- Drive **K:\** is mapped to **application files**
- Drive **T:\** is for **free software**, lecture materials and other material that can be freely copied by students on diskettes.
- Open Start → Programs to see the applications available to you.

It is assumed that the students will store their data back to their **HOME directory (H:\ drive)** before logging out.

The users will have full read/write access to their home directories.



**Don't forget to save your data on drive H:\ before exiting the session, because otherwise you may not find it again.**

**Keep copies of your files backed up on floppy disks.**

At the end of the session **logout** by using the following procedure:

Start → Shut Down → Restart

This will prevent the next student having access to your home directory.

## ***6. Tutorials and On-line Help***

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For the first time users of Windows2000 or beginners

- left click on Start Menu → Help
- Start Menu → Programs → Tutorials →

For MSOffice applications and Engineering Packages On-line Help Tools please see Section 12.

## ***7. The Internet and the World Wide Web***

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The **Internet** is a worldwide collection of thousands of interconnected computers. The **World Wide Web** (WWW from now on) is the universe of network-accessible information, an embodiment of human knowledge. It is the fastest-growing service of the Internet today. It offers an almost unlimited potential for organizations to market their products and services, as well as communicate more easily and effectively with each other's.

It has a body of software, and a set of protocols and conventions. The WWW uses hypertext and multimedia techniques to make the Web easy for anyone to roam, browse, and contribute to.

Web pages are written in **HyperText Markup Language (HTML)**, a text-based language. HTML is a way of adding various attributes to plain text files, which are published on the WWW. HTML lets you mix graphics with text, change appearance of text, and create hypertext documents, which interact with the user.

To write pages for the WWW either you learn the HTML language or use one of the existing **Web Editors: Microsoft FrontPage, Internet Assistant, HotDog, Macromedia Dreamweaver** and others.

To see the Pages published on Web you have to use **Web Browsers** like **Netscape Communicator**, **Microsoft Internet Explorer** and others.

! The difference between an HTML document and a word processing document is that the same HTML document can be read on many different computer platforms, for example PC, Macintosh and UNIX.

## What's a URL ?

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A URL is a **Uniform Resource Locator** . Think of it as a networked extension of the standard *filename* concept: not only you point to a file in a directory, but that file and that directory can exist on any machine on the network, can be served via any of several different methods. URLs can also point to queries, documents stored deep within databases, the results of an Internet utility command, or whatever.

*In essence the URL concept is this: "if it's out there, we can point at it".*

URLs are of more types. The most common types are the following:

- **File URLs:** have the form:  
**file://domain\_name/directory(ies)/file**
- **HTTP URLs:** HTTP stands for HyperText Transport Protocol and is the standard format of the WWW documents.  
**http://domain-name/directory/...directory/file.htm(html)**
- **News URLs:** for accessing newsgroups and change information between the subscriber of different newsgroups.  
**newsrsc://news\_server\_domain\_name**

the domain name for the university news server is:

**newsrsc://news.usyd.edu.au/**

## E-mail and E-mail Addresses

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To communicate with anyone on the Internet you must have an e-mail address of the form: [login\\_name@domain\\_name](#)



Your email address is on your enrolment form and has the format

**username@mail.usyd.edu.au**

You should be able to view and send email by opening the Netscape browser and entering **intranet.usyd.edu.au** in the address field. The Netscape messenger program should also work, but you would be advised to use the WWW interface since other networks within the University cannot access the mailboxes that Netscape Messenger stores on our local server.

What you see when you start the Netscape Browser is a Web Page created with an HTML Editor .

The Electrical and Information Engineering Web Home Page address is:

**http://www.ee.usyd.edu.au/**

## Tutorials on the Web

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From any EIE Web page select Tutorials Anchor from the WebTeaching pull down menu

Web Teaching → Tutorials Anchor

<http://www.ee.usyd.edu.au/help/tutorials.htm>

Browse the tutorials uploaded on our web servers under a few categories:

- Digital Systems:
  - Laboratory Introduction Tutorial : an Introduction to the basic instruments used within the first year laboratory,
  - Matlab Tutorials
  - LabVIEW
  - The Spice Page - general purpose circuit simulation program
- Languages & Systems:
  - C, C++
  - Ada95 tutorial for real-time
  - Unix, Linux
  - Links to Programming Languages Tutorials
- Web Technology
- Other Recommended Resources

## 8. Software Packages

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The user has access to all SW packages that will be displayed as icons from the **Start Menu → Programs → *installed applications groups***

The students will be advised by their lecturer about which SW packages to use at each stage.

All the packages have on-line help and tutorials.

## 9. Disk Space Quotas

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Students have to share the server hard disk to save their data.

Therefore depending on the year of study the allocated disk space quota varies. The disk slice allocated for users in EE1 and EE2 is of about 10MB. For EE3 and EE4 the disk quotas are 10MB and 25MB respectively.

When the allocated space is all used a message like:

*“Insufficient disk space reading device NETWORK”*

will be displayed, and the user has to delete some of his/her files in order to continue.



to see your available disk space

Start Menu → Run → cmd

and use the **dir** command from DOS: **h:\ > dir <enter>**

## **10. Printers**

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Printers are resources shared by all the students in a laboratory. As their number is generally maximum 2 per laboratory, the students are expected to use them very rationally and **to double check (using a printing preview)** before starting to print.

Print by clicking on the appropriate print icon from within the applications.



After the print command, please allow a delay of about 30 seconds before the physical printing starts. ***Do not hurry up to click on the printer icon again before the time delay has elapsed.***

### **Printing Quota**

The printing quota is decided at the start of the semester. For most students it is set to **100 pages** per semester.

You can check your print balance at <http://www.ee.usyd.edu.au/pq.html>.

## **11. Use of Laboratories and all the IT Devices Included**

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The Department of Electrical Engineering extends the privilege of using its networked computing resources for the following two main purposes:

- assist students to complete the subjects within the degree
- encourage the exchange of information and knowledge



***Under no circumstances may students use the resources in a manner that would offend others or cause damage to the interests of others.***

***Students may not use the facilities for any form of cheating in relation to their studies at this University.***

The following activities are among those that will be interpreted as **breaching the trust** that the Department places in you:

- ✘ attempting to discover the password of another user, whether on this network or any other
- ✘ attempting to read or copy information for which you do not have permission - discarded printouts included
- ✘ deliberately disrupting the normal operation of this network or any other computer system
- ✘ making unauthorized copies of copyrighted software
- ✘ publishing or transmitting material likely to offend others
- ✘ using the computer resources for commercial purposes.

✘ installing unauthorized SW packages is illegal and will be punished. If you really need to install a certain application DISCUSS the problem first with your lecturer.

✘ no games are admitted on PCs

Generally all laboratories will allow you to use the computer resources subject to the following **constraints**:

✓ Scheduled classes have priority to use the laboratories - any student not time tabled in that scheduled session may be asked to leave the laboratory at any time.

✓ If no class is scheduled you may be allowed to use the computer resources during the laboratory working hours.

✓ Anyone not engaged in activities related to the degree course might be asked to leave so that others may make more productive use of the resources.



All students are required to read and observe the

### **Laboratory & Safety Regulations at**

<http://www.ee.usyd.edu.au/guides/LaboratoryRegulations.htm>

and all web documents linked to Laboratory Regulations under **Resources**;

- Conditions of Use of Computing Facilities  
<http://www.ee.usyd.edu.au/help/conditionsofuse.htm>
- Computing Security <http://www.ee.usyd.edu.au/help/security.htm>
- Internet Usage <http://www.ee.usyd.edu.au/help/internet.htm>
- How to Avoid Viruses <http://www.ee.usyd.edu.au/help/avoid-virus.htm>
- EELab Network Notes  
<http://www.ee.usyd.edu.au/help/eelabNET2004.htm>

## **12. Summary of Main Electrical Engineering Packages**

### **Microsoft Office 2000**

is a collection of applications that work alike and work together as if they were a single program. The applications in Microsoft Office have standardized toolbars and consistent menus, commands and dialog boxes. Once you learn one application, it's easy to learn the others.

*The major applications that make up Microsoft Office:*

**Microsoft Word** is a full-featured word processor that includes automatic formatting, easy-to-create tables, and the ability to create and position graphics. It has powerful features like AutoCorrect that automatically fixes typos, wizards that build newsletters and tables, and step-by-step Mail Merge.

**Microsoft Excel** is a comprehensive spreadsheet application that lets you manage, format, chart, and analyze data. TipWizard suggests more efficient ways to accomplish a task, TestWizard arranges imported data into cells and rows, and PivotTable Wizard helps you create sophisticated summary reports.

**Microsoft PowerPoint** is a complete presentation graphics package that lets you create fully formatted presentations or slides in only minutes. It provides everything you need to produce professional presentations, including text formatting, outlining, drawing and graphing.

**Microsoft Access** is a relational database management system that lets you store, organize, and easily retrieve information. With it you can make queries and create forms, reports and macros with simple drag-and-drop editing.

### **Learning by Using MSOffice Online Tools**

Each application has on-line tools to help you learn the application.

### **Additional Tools used with Office Applications:**

**ClipArt Gallery** lets you combine all clip art from each Office application into one location, or gallery, for easy insertion into your documents.

For information about using ClipArt Gallery, search for **previewing pictures** in Office on-line Help.

**Microsoft Organization Chart** lets you quickly create an organization chart in PowerPoint or any other application.

For more information about creating organization charts, open Microsoft Organization Chart and press **F1**.

**Equation Editor** lets you add fractions, exponents, integrals, and other mathematical elements to a document.

For more information about it, search for **Equation Editor** in Word on-line Help.

**WordArt lets** you create interesting text effects, such as 3-D and unusual alignments, to enhance documents.

For more information about WordArt, search for **WordArt** in Word on-line Help.

**Graph** lets you create eye-catching charts from tables.

## **PSpice A/D**

Is a powerful software system for Circuit Analysis in Windows environment.

**Electronics Workbench** is much like a real workbench for electronics with everything you need to build and test circuits.

For more information choose Help from **Workbench Digital** or **Workbench Analogue**.

Use **Probe** from Design Tools Windows to view simulation results in graphical form.

Use **Schematics** to draw and view your schematics.

## **TurboCAD**

Is a powerful CAD (Computer Aided Design) program for preparing two-dimensional drawings and three-dimensional models. It provides a full range of drafting tools that lets you create accurate, realistic images to meet the ANSI standard of drafting. These tools allow you to complete all phases of design projects, from concept through delivery, as efficiently as possible.

### **13. Network Operations**

#### *Reading your emails from your home computer*

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Detailed instructions are available on the University Intranet help pages at <http://helpdesk.usyd.edu.au/faqs.html>.

Briefly, you should use the WWW interface or place these entries in a program like Eudora, Outlook or Netscape Messenger:

- **POP\_SERVER = pop.usyd.edu.au**
- **SMTP\_SERVER = as advised by your ISP**, (smtp.usyd.edu.au if you are using the University computers or modems).
- **USERNAME = your intranet username**