

11. INFORMATION TECHNOLOGY

This section

- (a) sets out a sample specification (for e.g. hardware/software & Internet connectivity);*
- (b) provides a glossary of computer terms;*
- (c) outlines software training requirements;*
- (d) introduces the Youth Information Website and the Citizens Information Database.*

Introduction

At the end of 2000, the Department of Education & Science (Youth Affairs Section) gave a substantial grant to Youth Information Centres to enable them to provide public access to information technology and, in particular, to the Internet.

In technical terms, the guideline specification supplied was designed to meet the following objectives:

- I. To establish a peer to peer fast ethernet network with up to four PCs, and facilitate simultaneous Internet access for all PCs on the network, via a fast Internet connection, with firewall security and, ideally, the ability to cache data and devise a web-site block list;
- II. To facilitate access to Microsoft Office 2000 (or later) applications etc. together with file/printer sharing and a basic backup solution.

Proposals should be requested from at least three suppliers for a comprehensive all-in-one solution to include complete programme management, installation and configuration, as well as a service/ maintenance contract with online technical support and next business day response (with engineer on site) over a three year period.

Suppliers

Essentially, you are looking for suppliers who can supply quality equipment to the right specification at the right price. Suppliers should also be capable of completely installing and configuring the network and working closely with a third party in the Telecoms/ISP business to organise Internet connectivity. For peace of mind, their ability to provide telephone support and next business day on-site maintenance contracts is of vital importance. The Golden Pages lists

suppliers under 'Computers', but a useful tip could be to look for the suppliers who are also mentioned under 'Computer Maintenance & Repair'.

Network Specification (December 2000)

PC Specification

- ◆ 800MHz Intel Pentium III Processor (with 256KB Level 2 SDRAM cache)
- ◆ 128MB 133MHz SDRAM expandable to 384MB
- ◆ 20GB hard drive
- ◆ 17inch Monitor
- ◆ 8MB SDRAM Graphics Card
- ◆ 40x CD ROM (8x DVD ROM Drive & Software £99 extra)
- ◆ 16bit full duplex sound card and speakers
- ◆ 3.5" 1.44Mb Diskette Drive
- ◆ 10/100 PCI network interface card
- ◆ Desktop or Tower Chassis with Keyboard and Mouse
- ◆ Microsoft Windows
- ◆ 3-year part replacement warranty with free on-site service for the first year.

Note

- *Costings for these specifications are available on request from the National Youth Information Co-ordinator;*
- *Norton Anti-Virus Software (with regular updates) is supplied through the National Youth Information Co-ordinator.*

Backup Solution

- Internal CD-ReWriter (650 Mb capacity) - with BURN (Buffer UnderRuN) proofing

Application Software

- MS Office 2000 Professional (Student/Educational Version)

(Office 2000 Professional includes Word, Excel, Access, Powerpoint, Publisher & Outlook)

(Office 2000 Premium additionally includes Frontpage [Web Editor] and Photodraw)

Network Printer Options

Laser printers are recommended for more economical printing, with minimum 600dpi print resolution and at least 6ppm (pages per minute). Ideally, they should be network ready or at least network capable (requiring an optional external print server for networking). Select a reliable make with readily available and affordable toner cartridges.

Network Hub & Cabling

- 10/100 Hub – 16 port
- Cabling of Office with Cat 5 Cable

(Includes 8 double network points, cable, termination and testing)

Internet Connectivity

- ISDN line connection and rental
- ISDN Account with an ISP (Internet Service Provider)
Note: Emerging technologies such as Eircom Net ADSL and, most notably, cable access through Chorus (Powernet) or NTL will offer faster and 'always on' access to the Internet.
- Domain name registration (through your ISP)
- Web Ramp 410I (Router & ISDN Terminal Adapter)
- C Proxy (or) Wingate Software
- Maintenance for above

(including unlimited telephone support & on-site service - 4 visits)

Installation

- Daily rate engineer (x 2 days)

Hardware Maintenance

(Next business day - on-site - 3 Years)

- Workstation
- Printer
- Hub

GLOSSARY OF TERMS

DVD (Digital Versatile Disc)

A step up from the CD, the DVD is a fast, high capacity (4.7GB) digital storage medium that may contain video, audio or any other type of digital data. In addition to being able to read DVD films etc., the DVD-ROM drive can read existing CD-ROMs and music CDs.

CD-RW (Compact Disc-Rewritable)

Ideal as a backup solution and as a means of storing and distributing data, a CD-RW drive can write about 650 megabytes of data to CD-RW media (blank CDs) an unlimited number of times, or write once to CD-R media which are cheaper.

Local Area Network (LAN)

Two or more nearby computers connected together to share programs, documents, peripheral equipment such as printers etc.

Peer-to Peer Network

A network of computers that look to each other for services and shared resources rather than looking to a dedicated server. A small local area network doesn't really require a server.

Server

A computer that is dedicated to the task of providing one or more types of data or services on a network. The dedicated server is reserved for network work only and cannot be used as a workstation.

Ethernet

The most common standard for transmitting data over a local network. One increasingly popular variation is 100BaseT also known as Fast Ethernet.

10/100BaseT

Ethernet Network Adapters and hubs that can operate at both 10Mbps and 100Mbps using Category 5 cables and RJ-45 connectors.

Mbps

Megabits per second, the data transfer rate or bandwidth.

Network Adapter Card (or) Network Interface Card (NIC)

When installed inside a computer, the network adapter card enables the computer to be connected to the network via RJ-45 connectors, Category 5 cabling and a hub.

Hub

If you have more than two devices to connect to your ethernet network, you will need a hub with an adequate number of ports. Every computer, network printer and other network device plugs directly into the hub. A 10/100BaseT hub is the most flexible.

Network Software

Before network communication can begin, you must set up network software supplied as standard with the Microsoft Operating System.

ISP - Internet Service Provider

A company that provides users with a connection to the Internet through a regular modem, ISDN modem, ADSL or Cable connection.

Modem

Short for *modulator/demodulator*. A device that transmits and receives digital signals over telephone lines by converting them to and from analog signals. The current standard is the 56k modem.

ISDN

Integrated Service Digital Network. A type of high-speed communications service used for connecting computers to the Internet. A single ISDN line has two digital channels; one channel can transmit data at 64kbps; both channels used simultaneously (two telephone calls) can transmit data at 128kbps. An ISDN Terminal Adapter, effectively an ISDN modem, is required.

ADSL

Asymmetric Digital Subscriber Line. Faster than ISDN, this telephone-based alternative for Internet connection is due to be offered shortly in Ireland. An ADSL modem is required, and is always connected to the Internet.

Cable Modem Internet Access

Cable companies such as NTL and Chorus both offer cable modem Internet access at 512kbps. A cable link is always connected to the Internet and charged at a flat rate per month, with single user and LAN accounts. Where your building/area is not already cabled, wireless access can be offered.

Webramp

ISDN Terminal Adapter and Router. Also known as an ISDN Router.

ISDN Terminal Adapter

An ISDN terminal adapter is effectively an ISDN modem.

Router

A hardware device that allows all of the computers on the local network to share a single network connection. ISDN Routers such as the Webramp include an ISDN terminal adapter.

Proxy Server

Computer software that allows all of the computers on the local network to share a single network connection. Examples include C Proxy (supplied by EircomNet) and Wingate. This software also provides firewall security and the ability to cache data and devise a web-site block list.

Firewall

A firewall provides security for your network by blocking access for unsolicited Internet traffic.

BASIC TRAINING REQUIREMENTS

An introduction to information technology for youth information workers should, at least, include an introduction to Microsoft Windows, covering Windows Explorer and aspects of the Control Panel used in installing new software and hardware. Training in applications software should include the basics of Microsoft Word, Excel and Internet Explorer (incl. Outlook Express). An outline of such training is given below, most, if not all, of which is covered in the ECDL (European Computer Driving Licence) Course, with training manuals available at reasonable cost from most good bookshops.

While an understanding of networks is useful, the responsibility for installing, configuring and troubleshooting the network remains with the supplier and is, therefore, not included here as part of a basic training programme.

Microsoft Windows

- Starting (PC Power Button), shutting down and restarting a PC (Start/Shutdown);
- The Windows Desktop, incl. Start Button & Taskbar (Switching applications), Icons;
- Use of a mouse (Cursor, Point, Click, Double Click, Right Click, Click/Drag/Drop);
- Starting Applications (Start/Programs or Double Click Icons on Desktop);
- Windows, Scroll Bars and Control Buttons (Close, Maximise, Minimise, Restore);
- Title Bars, Menu Bars (Pull Down Menus) and Toolbars, Dialog Boxes.

Windows Explorer

- Starting Windows Explorer (Start/Programs/Windows Explorer);
- Viewing Files, Folders and Drives (A: Floppy, C: Hard Drive, eg. D: CD-Rom);
- Emphasis on the My Documents Folder as a place to store your documents;
- Folder Operations (Creating, Renaming, Copying, Moving, Deleting, Restoring from Recycle Bin);
- File Operations (Renaming, Copying, Moving, Creating Shortcuts, Deleting, Restoring from Recycle Bin);
- Searching for Files or Folders (Start/Find/Files or Folders);
- Formatting a Floppy Diskette;
- Backing Up and Restoring Data using e.g. Zip Drive (Start/Programs/Accessories/System Tools/Backup).

Installing New Software

- Close down all software applications before installing new software.
- Insert the CD-Rom or floppy disk containing the software into the relevant drive.
- Choose Start/Run and click the Browse button. Select the relevant drive, and find the file that begins the software installation - typically this is called Setup.Exe or Install.Exe - and double click this file.
- Usually a series of dialog boxes will appear with instructions on how to proceed. Follow the instructions until the installation is complete.

Installing New Hardware

- Following instructions supplied, connect the device by cable to the computer.
- Install the device driver, which is a small program supplied on floppy diskette or CD-Rom that controls a hardware device such as a printer or scanner. You cannot use the device without first installing the appropriate driver as above.

Printers

- Loading Paper;
- Paperfeed problems;
- Changing Toner/Ink Cartridge(s).

Microsoft Word

As this is the application you are likely to use most often, basic initial training in Microsoft Word should cover most of the common features and bring you to a relatively high level of competence.

- Start and Exit Word (File/Exit);
- Familiarisation with Word Menu Bar and Standard/Formatting Tool Bars;
- Creating (File/New), Naming and Saving a New File (File/Save As);
- Opening (File/Open) and Closing an Existing File (File/Close);
- The Text Cursor;
- Entering and editing text;
- Using the Spacebar, Shift, Backspace, Del, Arrow and Tab Keys on the keyboard;
- Using Words ruler to insert (by clicking) and change tabs;
- Working with Paragraphs, Wraparound and the Enter/Return Key;
- Spelling & Grammar Checker;

- Copying & Pasting Text within and between documents (Copy, Cut & Paste from Clipboard);
- The Undo Button;
- Formatting Text (Selecting/Highlighting Text, Fonts & sizes, Bold, Italic, Underline);
- Aligning Text (incl. Left, Centre, Right, Justify buttons);
- Bullets and Numbered Lists;
- Page Setup, Margins, Paper Size (File/Page Setup);
- Print Preview & Print Document (File Print).

Slightly more advanced features:

- Using the Character Map (Start/Programs/Accessories/Character Map);
- Inserting Tables (Table/Insert Table);
- Adding Borders including Text, Paragraph and Page Borders (Format/Borders & Shading);
- Insert Pictures from Clipart or Image file (Insert/Picture);
- Headers & Footers incl. Page Numbering (View/Header & Footer);
- Mail Merge Helper (Tools/Mail Merge..);

Once you have mastered some of these features, it can be useful to prepare some of your own document Templates (File/New/Create New Template). A template is used when creating a new document. It is a file that can contain ready-made text, formatting and page settings etc. An example of a template might include a letterhead for your Youth Information Centre (using Headers & Footers) or a Curriculum Vitae (CV) Template. Once saved these templates will appear as icons on the File/New Dialog Box.

Microsoft Excel

Basic initial training in Microsoft Excel should simply familiarise you with how to use the YIC Statistics Workbook, enter data, create charts and print the results.

- Start and Exit Excel, saving changes;
- Opening and Closing the Query Returns Workbook;
- Familiarisation with items on the Menu Bar and Tool Bars;
- Familiarisation with the Workbook and its Worksheets;
- Moving between Worksheets (Worksheet tabs);
- Parts of a Worksheet (Cells, Columns & Rows, Active Cell, Cell Reference/Name Box);
- Selecting a cell, entering, editing and deleting text and numbers;
- Using Excel's Chart Wizard to create charts;
- Print Preview and Print Document.

Internet Explorer

- Start and Exit Internet Explorer/Connect to the Internet;
- Familiarisation with Menu Bar and Tool Bars;
- The Back, Forward, Stop, Refresh, Home, Search, Favourites and Mail Buttons;
- Entering an URL (Website Address);
- Finding Information on the Web
ie. Search Engines (eg. www.yahoo.ie) and The Youth Information Website (www.youthinformation.ie);
- Storing your Favourites for future reference;
- Setting the Home Page (View/Internet Options..);
- Downloading files (eg. virus protection updates)
(Files that are available for download are displayed as links, click on the link, this displays Save As dialog box, select folder you want file to be saved to, name the file, then click save);
- Setting up a web based e-mail account (e.g. www.hotmail.com);
- Printing pages from the Web.

Outlook Express

- Start and Exit Outlook Express;
- Familiarisation with Menu Bar and Tool Bars;
- Compose Message, Reply to Author, Forward Message, Send and Receive, and Delete Buttons;
- Composing a Message, Entering E-Mail Address (eg. Tools/Select Recipients) and Subject Matter;
- Inserting Text;
- Inserting a Signature (To set up select Tools/Stationery/Signature..)(To insert select Insert/Signature);
- Insert File Attachments;
- Send (To Outbox);
- Send and Receive Button;
- Address Book, Adding Contacts and Groups;
- Print out an e-mail, including attachments.

Useful Off-line Databases

CID: Citizens Information Database - Comhairle

Career Directions/Gairm: Careers Database - FÁS

Qualifax: Colleges & Courses in Ireland - IGC/NCTE

UCAS: UCAS Directory on CD (for use with Internet Explorer)

ECCTIS: Colleges & Courses in UK

User Friendly Resources

- ECDL The Complete Coursebook by Brendan Munnely (Gill & Macmillan)
- Microsoft Office 6 in 1 (Que Publications)
- The Little Network Book by Lon Poole & John Rizzo (Peachpit Press, California)

The first two publications include information on Microsoft Windows and Microsoft Office applications including Word, Excel, Access and Powerpoint. The ECDL book also includes information on Microsoft Internet Explorer and Outlook Express. The Little Network Book is an excellent introduction to networks covering e.g. setup, Internet access, sharing printers and files, troubleshooting and more!

In case of problems, you should also be aware of the technical support arrangements within your organisation and, externally, through e.g. the Technical Support Helpline provided by your computer supplier.

THE YOUTH INFORMATION WEBSITE

www.youthinformation.ie

Description

As well as providing information on the national network of Youth Information Centres, this website provides links to a wide variety of websites of interest to young people and those who work with them. Subjects covered include Education & Work, Travel & Migration, Health & Social Services, Sport & Leisure, Money, Social & Political Issues and The Regions. Links are also provided to European Youth Information sites. A Search facility allows for ease of navigation.

This website will be of interest both to young people, themselves, and to those who work with them e.g. parents, teachers, youth workers, guidance counsellors.

How to Use

As you will see on the HomePage, there are 3 main sections, as follows:

1. Ireland: In this section, you will find details of Youth Information Centres in Ireland and the structure of the national youth information network. For instance, under **List** you can download a mailing list of Youth Information Centres or click on a particular Centre to bring up its webpage. Clicking on a particular section of the **Map** will also open the webpage for the Centre in that location. Under **Publications**, you can download a copy of the booklet *Standards for Youth Information Centres*.

2. Europe/International: This section contains links to Youth Information websites in other European countries (listed alphabetically) as well as links to ERYICA (European Youth Information & Counselling Agency), Eurodesk, and INFomobil, which is an ERYICA web-based product providing information for young people moving around Europe.

3. Essential Links: This section contains links to a wide variety of websites of interest to young people and those who work with them. The links are arranged under eight categories and sub-categories, as follows:

- **Education & Work** (*Careers, Education, Training & Work, Youth Work*)
- **Travel & Migration** (*Ireland, International, European Issues*)
- **Health & Social Services** (*Health, Social Welfare, Support Agencies*)

- ***Sport & Leisure*** (*Sport, Leisure, Arts & Culture*)
- ***Your Money***
- ***Regions***
- ***Social & Political***
- ***Other***

(Click on the main category to bring up a list of sub-categories).

Search Facility

The search facility can be activated by clicking on ***Search*** on the top right - hand corner of every page. It currently contains about 130 keywords under which the website can be searched for links to websites on particular subjects. Clicking on a particular keyword (*e.g. careers, youth work*) brings up the page where you will find website links on the selected topic.

Homepage

Clicking on the youth information logo on any page will return you to the Homepage.

THE CITIZENS INFORMATION DATABASE (CID)

The Citizens Information Database (CID), produced by Comhairle, makes available the complete Citizens Information filing system on computer, using a user-friendly and intuitive software application known as Lotus Notes. There is an annual subscription for use of the database, which comes on CD, initially, and is easy to install. Full instructions are supplied, as well as a CID User Manual. Once installed, the system can be updated online as frequently as required. Ideally, this should be done on a weekly basis to keep right up to date and cut down on download times.

Please note that this database can also be accessed via the Internet at www.cidb.ie. Depending on usage, it may be more economical to access it online, rather than by paying the annual subscription for the CD.

The Citizens Information Database contains information under 15 main categories including:

1. *Travel & Communications*
2. *Justice*
3. *Education*
4. *Employment*
5. *Family*
6. *Health*
7. *Housing*
8. *Social Welfare*
9. *Taxes*
10. *Consumer & Environment*
11. *Insurance & Finance*
12. *Agriculture*
13. *Miscellaneous*
13. *Voluntary/Youth Sector*
14. *European Union*
15. *Government*

Additional categories include:

16. *Relate*
17. *Rights Column*
18. *Media Scan/Dáil Reports/Press Releases*
19. *Relate (Temp)*
20. *Local Information*

Starting the Citizens Information Database

The easiest way to start the Citizens Information Database is to double click the Comhairle CID icon, which was installed on your Windows Desktop during the

installation process. Alternatively, you can click on the Windows Start Button, select Programs, then select Comhairle CID and then Lotus Notes.

- This will open the Lotus Notes Workspace. Then you will need to select and open the Citizens Information Database by pointing and double clicking on the large Comhairle Live System on Local Button.
- Next, click on the screen which says Citizens Information Start to reveal the Citizens Information Database with all its various options.

Once you are in the Citizens Information Database, you will notice that it is organised very much like a website, where you can simply point and click to select from a range of options, all of which are clearly laid out on screen. The layout of the database screens are all similar and contain the following elements:

- The Database Navigator is a frame to the left of the screen, which gives you a choice of options/views by clicking on the button of your choice.
- The frame to the right typically includes a list of categories, which can be expanded by clicking on the little pointer icon to reveal sub-categories/files and ultimately their documents.

Ways of Accessing Information

There are a number of ways in which you can retrieve information from the system. The main ones are:

1. **Contents View:** - This is effectively a numerical index where you can browse through each category and sub-category, and select from the documents contained.
2. **Index View:** - This is an alphabetical index linking search terms to some of the more important associated documents.
3. **Word Search:** - This key feature allows you to search, speedily, through the entire database for documents that contain a specific word or phrase. The best way to access this feature is from within the Contents View by simply typing the word or phrase into the Lotus Notes Search Bar near the top of the screen, and clicking the Search button. Double click on the Reset button to clear search results from the screen and return to the Contents View.

There are a number of other views which you can also explore, including a **Key Topics View** which is a selection of key information areas e.g. Unemployed,

Lone Parents, bringing together in one place the most relevant information in these categories and providing a framework for dealing with such queries.

Once identified as useful, documents can be printed (File/Print) or exported (File/Export) to, for example, Microsoft Word. If you only want to print a portion of a document, the best advice is to highlight the portion, then copy and paste it into a new Microsoft Word document and print it from there.

To leave the Citizens Information Database and close down Lotus Notes, from wherever you are in the CID, press the Esc key on your keyboard which will take you back to the Lotus Notes Workspace, then click on File - Exit Notes from the menu.

Updating the CID - Replication and Indexing

Replication is the term used for updating the information. When your PC connects to the Comhairle Server, new information items are put into your copy of the CID, old ones are removed and changes are made to some documents. When you have finished the replication process, you must carry out one more step called Full-Text **Indexing** to arrange the new material so that you can search it.

There are a number of steps in the replication process:

1. First connect to the Internet by, for example, double clicking on the Internet Explorer icon on the Windows Desktop.
2. Once connected to the Internet, open the Lotus Notes Workspace, as described above, and select the Replicator tab near the top right corner of the screen.
3. Select the Comhairle Live System and press the Start Button.
4. If you have not done so already, you will be prompted to enter your password.

When the database tells you that it has finished replicating, you can disconnect your Internet connection. Next you will need to update the Full Text Index. To update the Full Text Index, return to the Lotus Notes Workspace, click once on the 'Comhairle CID on Local' button, then from the File menu, select Database, then Properties. From the Dialog Box displayed, select the Full Text tab, then select the Update Index button. When indexing is complete, a message is displayed on the message bar at the bottom of the screen.

Resources: Citizens Information Database User Manual (Comhairle)