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Deadlines for the next issues

RM User 12.4	20 October 1997
RM User 12.5	December 1997

The date shown above is the *latest* date for copy for the magazine. You will normally receive the magazine about 2-3 weeks after the date shown.

Missing a Magazine?

Back issues of the magazine are available from the editor - please contact me for more details. I am delighted to announce that through the kind assistance of Tim Clark, we now have the URL www.rmug.org.uk. Diana Rolf has been helping to reorganise the site and I am sure she will be grateful for any feedback. There is a list of phone numbers of the suppliers who have been reviewed in the past, contents pages and a few articles.

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Advertising in the Magazine

Full and half page advertisements can be placed in the magazine and details can be obtained from the Advertising Manager. We also take classified ads and members may place free ads for surplus equipment in MicroMart.

Rates

Back Cover £60 Inside Cover £50 Full Page £30 Half Page £20

These rates assume black-on-white, camera ready copy. Please avoid dot-matrix output. Typesetting is charged at cost and is additional to the above rates. Please make cheques payable to *RM User Group*

NEWS AND EDITORIAL

NB

Please remember that it is now very close to the training weekend. There are references to it throughout this issue and a form in the middle should you need it. I cannot say too often how good this event is in terms of value for training and (equally, if not more important) therapy!

Walter Mitty II

I am very fortunate in that I travel quite a lot and have visited a wide variety of schools. If I may make a huge generalisation, there are two kinds of Heads. The first kind uses IT and understands its value. As a consequence, they value their IT staff and allow them the time and resources to develop and maintain efficient services to the school community. They also allow time and funds to research and develop new ideas. The second kind of Head does not use IT at all and pays a notional lip-service to the idea that it is important. They set up committees to discuss what to do about IT. (One of the Dilbert management principles is that 'the problem is not a lack of resources, it is a lack of meetings' do you recognise it?) They spend a single lump sum on computers and are convinced that now that issue is "sorted". They allow little or no time for maintenance but they do make a point of showing prospective parents the computers that they have spent all that money on and expect you to enthuse about the school's approach to IT. I fantasise of behalf of the IT manager who works for the latter type of Head on a conversation on the lines of:-

"Well MrX, I'dlikeyouto produce a new scheme of work reflecting your priorities vis-a-vis IT across the curriculum. Naturally as well as detailed notes on subject matter, it should include risk-assessments and a system where each student will have a dossier showing their IT uses and attainment levels in different subject

5

areas. By the way, will you make sure you fix my secretary's machine on the way out."

"Certainly your Headness, now I would like you to lead us in such a way that we are all inspired with enthusiasm to such a point that we can't wait to get to work in the mornings. I am quite sure I will be able to fulfill your wishes as soon as you fulfill mine."

Now you see it ...

I have been lucky enough to get some new kit recently. I did have some trials and tribulations and found it very hard to get through to get them sorted - until I managed to reach Alison Sharman at the Stockport office. I don't know how much they are paying you Alison, but it isn't enough! She sorted out all the problems in a very short space of time. One interesting problem that I managed to fix myself concerned a station that I am planning to use for multimedia work - specifically for importing video into avi files. I ordered a super graphics card which would allow this and also speed up the Windows display. I was sent an ATI 3D card. It came with a CDROM to install its drivers etc. I followed the instructions offered by the setup program which gave me a button to click in order to start up (what I thought was) Windows own "Add new hardware" window. I selected the right card from the list, restarted the machine when told and then tried to use the card. Black screen! I can't remember (selective amnesia) how many times I went around the loop and how many times I had to restart the machine but eventually I found the solution - I had to run the "Add new hardware" program from outside the setup program and do all the same things and it worked perfectly. I still don't knowwhy and I don't know if the setup program was running its own version or if there was something about it that stopped the data from reaching the registry but I pass on the tale in case it helps you. Another snippet that may just save some sanity is that there appears to be a bug in the latest Word - but only if you try to run it in 800x600 screen resolution. If you do have this problem, the crashes are apparently very severe so be warned!

Virtual Hardware

Have you heard about shardware? Apparently 1,800 people rushed to download a "free hard-disc" from the internet when it was offered by some joker! They sat through the hour and a half it took to download this "revolutionary new way to distribute kit".

Due Credit

The graphics in the last issue (and hopefully in this one too!) are cartoons drawn by an exstudent and friend, David Kenyon. He is happy to discuss new commissions and you can contact him through me if you are interested.

Fonts

This issue is set in Minion Condensed. Because this is a condensed font, the type is slightly larger than usual but can fill the same space. It was designed by Robert Slimbach for Adobe. The headlines are VAG Rounded Black, a condensed sans serif font which was designed for VW in 1979.

Easter Eggs

Windows 3.1

The egg: Display the names of the development team members. How to find it:1. Press Ctrl-Alt-Shift. Hold down the keys throughout the egg hunt.2. Select About Program Manager from the Help menu.3. Double-click one of the colors in the Windows logo in the upper left corner of the dialog box, and then click OK.4. Repeat the second and third steps, clicking a different color. Watch the

bottom of the window for an animation.5. Repeat steps two through four again.6. Repeat steps two through four as often as you like using different color combinations to create variations on the developer list.

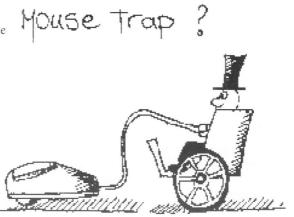
Windows 95

The egg: See the developer credits swoosh by in a nice multimedia presentation, complete with theme song. It runs for more than 15 minutes!

How to find it:1. Right-click the Desktop.2. Select New/Folder.3. Name the folder with this text exactly as it appears: and now, the moment you've all been waiting for4. Right-click the folder, select Rename, and type in this text: we proudly present for your viewing pleasure5. Right-click the folder, select Rename again, and type: The Microsoft Windows 95 Product Team!6. Now double-click to open the folder.

Welcome back!!

I am delighted to say that I have not one but two articles from Steve Rochford in this issue. I am sure you will have missed his contributions as much as I have. I also feel that this issue is more - dare I say - focused than the last one and would like to thank ALL the contributors. Please keep the articles coming in.



RM CONNECT AN ADMINISTRATOR TRIES TO BREAK IT!

by Steve Rochford

Windows 95 is a joy for those who like to tinker with computers and a nightmare for administrators; there are just so many things which can be altered to "make things better". RM Connect tries to make it easy for the user to get on with what they need to do and for the administrator to stop them doing anything else. In this article I'll try to look at some of the features which RM have built in to allow this to happen.

The first thing you notice when you go to logon is that the logon box is very different from the normal Windows 95 logon screen; you can't just press Escape to bypass the logon screen and get to a default Windows installation. When you have logged on and chosen the appropriate Topics you are shown a desktop which looks pretty familiar (unless the administrator has made radical changes). When you start to look around, however, things are very different. Clicking on My Computer opens the window as you would expect but does not reveal the normal range of playthings instead it's completely empty.

The next port of call for many fiddlers is changing the colours and wallpaper. To do this in a normal Windows 95 setup you would simply right click on the desktop and choose properties. Choosing properties here, however, just gives a message that the system administrator has cancelled the display properties control panel. The other way of changing colours etc is to go directly to the control panel which is on the settings entry of the start menu – except, of course, there is no settings option when you run Connect. The

hardened fiddler will now turn to help; one of the powerful features of Windows 95 help is that the help files contain little arrows which are links to other programs. Trying this gives the same message about the nasty system administrator! Without going through every help topic I can't be certain that there are no loopholes left but RM have done a pretty thorough job of stopping people getting where they shouldn't be! (Incidentally, for those of you who are trying to do something similar on a standalone machine, you should know that much of this can be done with System Policy Editor; it's not a terribly friendly program and it's possible to lock yourself out if you're not careful but it can give good security to a system).

Right clicking on most objects gives the opportunity to explore them; this has also been tidied up in Connect – in particular, right clicking the start button does not give an option to Explore the start menu which effectively gives users complete access to drive C: (the trick which allows users to close the Start button still works so I'll not mention any more about that here!) It's also possible to change "My Computer" to something else but this is reset as soon as the next user logs on.

Word worries many administrators because of the ease with which macros can be written which access applications which are not supposed to be available to the user. Word 97 makes this even easier to do by prompting the user with the correct syntax for the macro but, fortunately, RM have been there and blocked access to most "problem" programs – the

obvious one that most kids try is command.com and this gives the old "your administrator won't let you play with that" message!

Part of the power of Windows 95 applications is the ease with which users can manage files. Using File Open or File Save in any of the modern applications gives access to most of the tools needed to manage files. You can rename, copy, delete and generally tinker with files but you can't really do any damage outside your own user area. I tried renaming a couple of folders, expecting dreadful things to happen, especially as Windows was warning me that the folder was read-only and that renaming it would affect some registered programs. Once I'd clicked the final OK and thought that I'd changed the name of the Windows folder I found that nothing had actually happened. This is File Protector kicking in; it sits in the background and makes sure that you can't mess up any files that shouldn't be messed up! It can be quite disturbing; as part of my experiment I tried to delete format.com; I was warned that the file was read only but I said that I did want it deleted - I knew that it was only going to the recycle bin so I could get it back. Format.com duly went from the screen and I went to the recycle bin to get it back but it wasn't there. Looking back in the original directory showed that it had been automatically put back! File Protector makes Windows believe that a file has been deleted but actually doesn't allow this to happen.

Pressing Ctrl Alt Delete on a Windows 95 machine allows you to close any program; it's particularly useful if a program has frozen because you can close that one faulty application and carry on working. The same facilities are present in Connect but, once again, that nasty old administrator has blocked the closing of important programs such as Explorer.

There are many other features which make life easier for the administrator which the end user will never get to see. Some of these may never affect you - I got by using Net LM for years without ever worrying about the group desktop facility so Topic Selector is just another distraction as far as I am concerned but there are features like the RM Application Wizard which are just amazing. If you've ever installed an application on a standalone machine you'll know that it can be quite traumatic. Installing it on 20 or 30 machines could be a real nightmare. Application Wizard basically looks at the state of your machine before you install the program and then lets you install it. It then compares the new state of the machine and works out what's happened. It assembles all these changes into a package which can then be automatically distributed to any machines - a real life saver!

It is possible for a user to mess things up (but this isn't the place to disclose them) and when this happens one of the most useful features of Connect comes into play – RM Smart Build. This allows the administrator to reinstall Windows 95 and all associated applications almost automatically. A demo I saw took less than 15 minutes, most of which was spent waiting for files to copy so you could be getting on with something else while that happened.

I was very impressed with the time I spent in connect; the system worked without problems even though I was trying to make it fail. The lack of distractions (like colour and wallpaper changing) help to keep users focussed on the work they should be doing and the inability to run programs other than those authorised also makes sure that little damage can be done.

FRIDAY	5p.m. onwards Registration.				
	Dinner followed by Keynote Speaker - Jim Wynn (RM Secondary Marketing				
	Manager, formerly Head Teacher of Chaucer Technology School)				
	Α	В	С	D	E
9.00-10.30	RM UPDATE	ACCESS	KS3 I.T. TEACHING AT THE	CAD	WEB PUBLISHING
10.45-12.15	RM Hands On Consultancy	ditto	RIVERBANK	ditto	ditto
LUNCH 12.30					
SATURDAY 1.30-3.00	RM INTERNET for LEARNING	WORD & EXCEL	KEYBITES (was Babbage) for KS3	DTP with PAGEPLUS	INTERNET ACCESS
3.15-4.45	Hands On	ditto	ditto	ditto	ditto
SATURDAY 5.00-6.00	OPPORTUNITY TO PRACTISE				INTERNET ACCESS
6.00-7.00	ANNUAL	GENERAL	MEETING	OF RM	ИUG
DINNER 8.00					ns)
SUNDAY 9.00-10.30	LOTUS APPROACH	MULTIMEDIA AUTHORING	MODELLING	CONTROL	INTERNET ACCESS
10.45-12.15	ditto	ditto	ditto	ditto	ditto
LUNCH 12.30	3	2			
SUNDAY 1.30-3.00	OPEN FORUM	Your opportunity	to ask an RM panel	l any general qu	estions

If a certain Software Company built Cars...

Every time the lines on the road were repainted, you'd have to buy a new car.

Occasionally, your car would die for no apparent reason and you'd have to restart it. This you would accept without question.

You could only have one person in your car at a time, unless you bought a car 95 or a car NT – but in these situations you'd have to buy more seats.

There would be no ignition system, just a Start button.

If the windscreen wipers refused to work, the garage would recommend that you reinstall the engine and electrical system.

To prevent anybody developing an independent identity for their car, all models would simply be dubbed 'My Car'.

All the useful bits like headlights, handbrake and steering wheel would come in an optional Plus pack.

A Good Quote:-

"ASCII a stupid question and get a stupid ANSI"!



THE NEW BOY

by Pete Richards

- a series of articles tracing the successes and failures of a newly appointed IT Head of Department

'Could you pop in and see me at lunch time?' How many of us have had that message from the Head and then sweated for the morning wondering what was up. It happened to me a couple of months ago. I'm Head of Geography and IT Co-ordinator at the moment and IT has been suffering from my lack of time and the fact that it is taught at Key Stage 3 as a six week module in Technology by a variety of non specialist staff.

'Given the choice, which would you prefer -Geography or IT?' The lunch time interview had begun. And to think that only a few months ago I had been looking forward to retirement in a couple of years. Thanks John Major and our caring sharing pension scheme! To cut a short story shorter a new Head of Geography has been appointed and from September I am Head of IT at a large urban comprehensive in South Wales. IT will be timetabled as a discrete subject in KS3, two GCSE groups will run in Years 10 (no compulsory IT at KS4 in Wales) and cross curricular work is expected to be developed throughout the school. Some encouraging resources will be directed at hardware allowing a partial migration to NT using RMConnect.

'Handbook and Schemes of work need to ready for September' 'You will be teaching it'. (We have an inspection in March!). Some of you may recognise this scenario and many will now have excellent, well thought out KS3 schemes of work. As I walked out of the Head's office panic began to strike. Not only would there be the framework, progression, content, differentiation, etc. but also all the assessment and recording for 700 pupils - and that was just for KS3. What about KS4 and the cross curricular and post 16 and GNVQ...!

Surely I could get this subject to work for me. This was an obvious case for the use of Information Technology but where was the software? What did I want? An evening's thoughts suggested I needed interactive software that:

- would network on our system RM NetLM2 and Connect with a variety of RM machines 386 and upwards including Windows 95 Pentium stations
- would enable pupils to work independently or in pairs (I would be teaching groups of 30+ on a maximum of 15 machines).
- would cover all the aspects of KS3 IT as given in the Welsh NC

- would provide tests and assessments which were automatically marked
- would provide reports on each pupil
- would remain in the control of the teacher i.e. he/she could control the progression line of individual pupils
- would be attractive and stimulating to pupils
- · would be easy to manage
- would provide activities/homework which did not require access to machines
- would cope with the wide range of ability that we have in mixed ability classes
- would allow for future developments both in the school and in the subject matter.
- would not cost the earth!

To be honest, I saw no reason why such a piece of software could not be written but I doubted its availability. Interactive software is well established in the games market and yet in education there seems to be little development. Our school uses Successmaker which RM have provided for some time having 'anglicised' the US product. Generally this has been received very well and certainly has had some remarkable successes with pupils at the upper and lower limits of ability in our Learning Support department. But what else is there? Perhaps I have not read all the press carefully enough but the big growth seems to be in CDROM but much of this is of questionable quality. But where was the skills based software aimed at IT itself rather than using that IT in other curriculum areas? However, like many of you I received a flyer from Summerfield Publishing in Evesham

introducing 'Babbage'. Like Successmaker Babbage has its roots outside Britain. It was developed in Holland where it is the mainstay of their IT curriculum and has now been 'anglicised' for the UK market.

I sent for a demo pack which arrives on two discs together with a demonstration booklet. Following the simple instructions this installed very easily on my stand-alone machine. You get two sections to the package - Babmenu and Babsetup - neither of which are complete in the demo. Babmenu is what the pupils see and consists of Units A to Q -Unit A is a introduction to the basics of a computer and the units develop through topics such as Databases and Spreadsheets to Assessment tests. Pupils can cease work at any time and through a password system return to the same point in the exercises on return to the programme. Pupil names can be imported in a variety of formats - e.g. from Simms. Performance and assessments are recorded and a brief report on each student's successes is generated. In Babsetup the teacher has a degree of control over the way in which the programme is presented to individual pupils. Speed, degree of support, mark weighting etc. can be adjusted as well as which aspects of the programme the pupils can access. The demo only gives access to part of unit A and most of Unit J but it gives a good taster of what is to come.

There is support material in the way of a teacher's handbook, a pupil's handbook and

worksheets, some of which do not require access to a machine and therefore can be used for homework and those lessons where the machines refuse to boot!

After giving the demo a pretty good bashing on my stand-alone I decided to get the Technician to install it on the network to see how it behaved under multi use. Here the problems started - 'it gives open read/write access to drive P!' came one of the horrified calls from the holy heights of the server room. Summerfield recognised the problem and agreed to work on it. It took a while to get the network to accept the software but once it did, it behaved well and I was reasonably impressed. So much so that I placed a bid for special funds before our finance committee which was accepted and now I am about to place an order. Realistically I doubt if it will satisfy all the criteria I set but I have yet to see anything that promises more. Have you?

I'll let you know how I get on with this and the rest of my new department in a future issue.

Babbage is not cheap. A site licence is available on a sliding scale from £375.00 for a school of less than 350 pupils to £1125.00 for a school of over 1851 pupils. Two levels are available - Standard or Plus. Whichever you purchase the other is available for £75.00. By the time you read this Babbage will have been renamed for US copyright reasons - now KeyBytes.

Contact:Summerfield Publishing Ltd, PO Box 16, Evesham Worcestershire, WR11 6WN

Tel: 01386 831642, Fax: 01386 831932

E-Mail: 106031.2607@ compuserve.com

If you want to see and have hands on experience of the software in action come to the RMUG weekend in October. There will be two sessions and an open access stand.

Whilst writing - have you seen the **Student Handbook for IT by Gareth Williams**. An excellent straight forward reference for KS3 and KS4 which is up to date and provided you buy a few costs only £1.95 post free with some free copies. I have bought some and will be trying them out next year.

Pearson Publishing Chesterton Mill, Frenchs Road Cambridge, CB4 3NP Tel: 01223 350555 Fax: 01223 356484

THE CONSTITUTION OF THE USER GROUP

Objectives

The objectives of the group are to promote the interchange of information and ideas between users of microcomputers manufactured by RM plc, to encourage the formation of regional and other specialist groups of users of the above-mentioned microcomputers, and to represent the views of users to RM plc. To this end, the elected committee shall, if possible, be representative of a cross-section of RM users.

Membership

Membership of the Group shall be open to institutions and individuals who are actual or intended users of RM plc computers. An annual membership fee will be charged. This fee will be decided by the committee and ratified at the AGM.

Committee

The committee shall consist of Chair, Vice-Chair, Secretary, Treasurer and Membership Secretary, who shall be elected officers. Up to a further five officers may be elected and the committee shall have the power to co-opt members as it deems necessary. The posts of Advertising Manager, Software Librarian, Editor, Information Officer and Events Organiser to be filled by elected or co-opted members of the committee. The editor shall receive a remuneration decided by the committee and ratified at the AGM. Elections shall be held for all posts on the committee at the AGM. With the exception of the co-opted members, no member shall serve on the committee for more than five years in any one continuous period of seven years. The position of co-opted members shall be reviewed annually by the committee. The committee may invite RM plc to nominate representatives to attend its meetings.

Activities

The committee will handle the day-to-day business of the Group. An Annual General Meeting shall be arranged each year. The committee will be responsible for arranging such other meetings as it deems necessary.

Publications

The secretary shall be responsible for the publication of a broadsheet from time to time. This shall contain information on the activities of the Group and such other items as the executive deems fit. The committee may publish such other journals from time to time as it deems fit, the editor having responsibility for the content, production and publication of these.

Changes to the Constitution

Changes to the Constitution shall be agreed by a simple majority vote at the AGM or at an Extraordinary General Meeting. An EGM shall be called by the committee only at the written request of at least twenty members. Proposals to change the constitution must be received in writing by the secretary at least two weeks before an annual or extraordinary general meeting.

A GLOSSARY OF IT TERMS

From ST JULIAN'S SCHOOL

Access to try to gain entry into a computer system

Admission to gain access into a system and be able to use it

Authorised formal permission to use a system

Back-up a backup of a file is another copy of it usually kept in case of problems

Back-up media types of storage devices to hold back-up data

Batch processing a method of processing data where the data is gathered into batches before being processed

Bit map graphics an electronic graphic file where each dot in the graphic picture is represented by a single bit of information in the file. A picture with 8000 bits of information would produce a 1000 byte file. These filed cannot be scaled in the same way as a vector file

Capture use software and peripheral devices to get photographs/pictures onto a computer

CD-ROM compact disc read only memory

Central Processing Unit the main part of the computer, where all the processing takes place

Character one of the symbols that can be represented by a computer. Characters include A top Z and 0 to 9

Computer a computer is an automatic information processing machine which accepts inputs then processes it and outputs data under the control of a stored program

Control interface box the hardware that provides the interface between a computer and the control system it is looking after

Data numbers or character strings

Data capture data capture is the collection of data prior to input. Data capture can be on-line eg POS terminals for stock keeping or off-line (questionnaires)

Data processing computers input, process and output data, in commerce this is known as data-processing

Database a database is a collection of structured data (files, records, fields) and the software to allow the user easy access to the data

Data logging the use of sensors to measure environmental conditions, with a computer to determine when the measurements are made and to record them

Desk Top Machine a computer which is small enough to be placed on a desk or table for use

Desk Top Publishing (DTP) combines graphics and word processing in a format typical of a new spaper

Disk magnetic disks are a backing storage medium. Most microcomputers use floppy or hard disks. Mainframe computers use disk packs which are larger and which can be fixed or exchangeable

Dot matrix printer an impact printer that forms text or graphic images by pressing the ends of pins against a ribbon

15

Electronic mail a paperless method of sending mail i.e. letters, files from one computer to another using a communications network

Facilities items required for a specific activity

Feedback feedback occurs when a sensor detects a situation that causes the computer to initiate action that alters the data collected by the sensor

Field a field is an item of data within a record

File a file can be stored on backing storage. It may contain a collection of similar and related records

File server a computer attached to a network, whose main function is to enable network stations to access files on its hard disc

Flow chart a graphical representation of the flow of data through a computer or an algorithm

Font a set of consistently shaped characters. This text is in Minion Condensed font

Gender the term used to say whether it is a boy or a girl, a man or a woman

Graphics pictures or symbols which can be processed by a computer. They can be displayed on the screen, saved on disc, imported into DTP software

Hard copy printout

Hardware the parts of a computer you can kick.

Image A picture or photograph

Information data that is meaningful to us

Information Technology the use of computer

based technology to store, process and transmit information

Information Systems the organisation of human and other resources, including IT, into a coherent system for the storage, processing and transmitting of information

Interface the interconnection between two different systems

Laser printer a page printer that works by etching a stencil of a page to be printed on an electrostatic drum. Print is of high quality and used for camera ready art work

Line printer a printer that prints one line at a time

Local Area Network (LAN) a network with permanent links between all the hardware connected to the network, probably within one building

Mainframe computer a large, fast computer, probably having a variety of peripherals, including a high capacity backing store and many terminals

Manual (Computing) a book containing instructions about how to use

Manual do something without the use of IT

Mail merge the merging of a data file and a standard letter

Memory the part of the CPU that is used to store the programs while they are running and data while it is being processed

Menu a list of tasks which can be carried out by a computer program. The user selects a task from the menu

continued next issue

SOME MORE COURSEWORK IDEAS FOR EXCEL

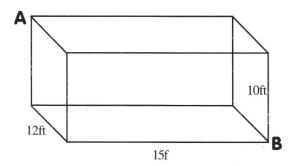
By Glenn Taylor

1. The Spider and the Fly

A rectangular room measures 15ft by 12 ft and is 10ft high. A spider in corner A starts walking to corner B by walking in a straight line across any wall or ceiling on its route.

What is the shortest route for the spider?

Harder problem: The spider starts at the mid-point of a top edge and walks to the mid point



of the opposite bottom edge.

This problem should be suitable for a middle ability group. The solution to the harder problem is not obvious although both problems are trivial if a net of the room is constructed!

2. Rugby Union Conversions

In Rugby Union, a team scoring a *try* is given the opportunity to *make a conversion*. This is a free kick which attempts to get the ball between the goal-posts and above the 3m high crossbar. The player taking the kick is free to choose where he takes it from, provided it is along the line at right-angles to the goal line which passes through the point where the try was scored (in other words line TP for a try scored at T).

please turn to page 24 for continuation & diagram

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R M User Group 20th Annual Training Weekend October 24th - 26th 1997

Please indicate your session choices below using the session letters A to E from the program on page 24

		on page 2.		
	Saturday Morning 9.00 - 12.15	Saturday Aftern 1.30 - 4.45	Sunday Morning 9.00 - 12.15	
First Choice				
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IT INSET DON'T MISS

THIS CHANCE TO BOOK YOUR TRAINING!!

Make sure you book your place to catch up on that software you would love to use but never have time to get to grips with in school time. Lovely venue and very good accommodation.

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if you can bring any hardware, please let Howard (number at front of mag) know.

Keynote Speakers are:

Jim Wynn (RM Secondary Marketing Manager) Phillip Fox (UCLES Development Officer for IT Qualifications)

Training Weekend Presenters include:-

Russell Prue

Co-Presenter RM Connect Workshop

Iane Wilson

Co-Presenter RM Connect Sessions & RM Contact For Training Weekend

Simon Hughes

RM Network Manager

Neil Harding Simon Williams RM - Web Publishing Presenter Multimedia Authoring Presenter

David Coates

Microsoft Access, Excel, Word Presenter

Hugh Wilding Glenn Taylor

RM Net 3.1 Surgery Modelling Presenter

Steve Rochford John Harris

KS3 IT Teaching Presenter **CAD Designview Presenter**

Roy Kendall

Keybites (formerly Babbage) Presenter

Julie Cosgrove

DTP (Pageplus) Presenter

David Hawley

Control Presenter

All committee members, RM staff, presenters and other attendees are happy to discuss IT matters, problems etc from an understanding viewpoint - which is not always available at work!!

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Trial selected software titles free for 7 days with our new Software Lending Library!

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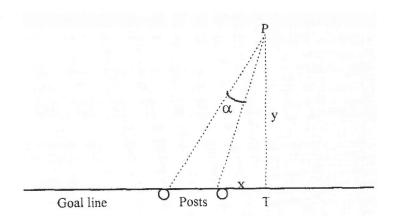
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* Note: if all copies of the requested title are on loan, we will add your details to our Library Waiting List and inform you accordingly.



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Since angle changes with y, what value of y should be chosen to maximise the chances of scoring a conversion?

Notes:

This problem can be made harder by considering the angle of elevation needed to get the ball over the crossbar: a maximal angle may occur at a position very close to the posts and requiring an unreasonably steep angle of elevation.

3. The Ploughed Field

A rectangular field measures 120m by 50m. A rambler wants to cross the field from one corner to the corner diagonally opposite and has a choice of walking diagonally across the field; walking around the edges or by walking part way round the edge and then cutting across to the corner.

The rambler's normal walking speed is 2m/s, but because of recent wet weather and the fact that the field has recently been ploughed it is only possible to maintain this speed around the edge of the field since cutting across the muddy field reduces his speed to 1.5m/s.

What route should be taken to cross the field in the least time?

This problem has been attempted successfully by a second set Y9 group and others and demands knowledge of Pythagoras' Theorem and distance/time formulae.

In order to reinforce the need for analysis of the problem before using the computer, problem 5 was done as a joint activity with the teacher (i.e. me) in order to outline the steps to be taken and the way

that the write-up should be structured.

Some care needs to be taken if you decide to change the speeds since it is possible to have a situation where walking around the edges of the field is always the quickest option.

4. A Different Field

A field has straight sides of length 70m, 80m, 90m and 100m.

What is the maximum possible area of the field?

This problem is not easy and requires trigonometry and knowledge of the Sine or Cosine rules when solved by "trial and improvement" methods. There is a neat analytic solution for the case when the four sides are in arithmetic progression.

5. The Seaside Race

Easton-super-Mare is a seaside resort with two piers stretching out to sea at right-angles to the sea-wall. The piers are 500m apart, one being 100m long, the other being 180m long.

Every year a race is held (at low tide!) in which the contestants must start from the seaward end of one pier and run to the seaward end of the other pier, the only rule being that during the race every runner **must** touch the sea wall at any point of his or her choosing.

What is the shortest distance a competitor can run under these conditions?

TALES FROM THE RIVERBANK

by Steve Rochford

It's a long time since I've managed to write one of these; somehow 168 hours to the week doesn't seem quite enough but I've just got a new notebook so now I can sit with it in front of the TV and do some work while I watch Coronation Street.

I regularly read a number of computer magazines and papers and I'm getting more irritated by some of the scare stories. Some of them, of course, are important but I do think we're getting to the "cry wolf" situation where we hear things so many times that we just ignore them. I think that the millennium problems are some of those; I know that for many people there will be serious problems caused on 1 January 2000 but for most of us the worst thing that will happen is that the date will need resetting on the computer when it's first switched on. The fact that companies like Hewlett Packard are now having to issue statements to placate users who are worried that their printers may stop working just indicates how mad the situation has got!

There are serious issues with Internet security. When your computer is connected to the Internet, even via a modem, there is a two way connection set up. In theory, any malicious user could access your computer while you're looking for new information on your favourite soap opera. In practice this is really unlikely; more worrying is the software that you can download from the web that may cause havoc

on your machine. This sounds far fetched but a recently discovered problem with Internet Explorer showed that a page could contain a link to a command on your own hard disc which perhaps deletes files. ActiveX is a technology which is attractive - it allows programs to easily extend and enhance the functionality of a web browser - but carries with it its own set of risks. An ActiveX component is just another Windows program which has full access to all the resources of your machine. There is a security signing process for these components but it's all too easy for people to download a control without understanding the possible really consequences. Java seems to offer a far more secure way of working (Java programs cannot do things like deleting the whole of your Windows directory because they simply don't have that sort of file access) but it doesn't seem to have Microsoft's whole hearted backing and so isn't being pushed as hard as it could be.

Viruses are an ever present problem; I've been very lucky in school because we've had very few with the exception of the Word Concept macro virus. This is not particularly destructive (it adds a few macros to every document and forces you to save files as templates rather than documents) and no data should be lost. Microsoft have made available a template for Word 6 and Word 95

which will clean any existing files and prevent the virus being loaded in the future. I suspect that macro viruses will be the biggest cause of problems for most users in the future; Visual Basic for Applications which now provides the macro facilities in all Microsoft applications has functions to do just about anything.

One of the things which has kept me busy this year has been an upgrade of my school network. I've now got Windows NT Workstation running on a large number of stations all linked in to my old RM Net LM 1.0 network. It's been hard work getting it all going but I think I'm winning! There's a real shortage of information with NT when you buy it. You get a single CD ROM with no paper documentation although there's quite a lot of information on the disc. The Resource Kits are well worth having but are not really bed time reading. They're also very expensive; it's worth looking at a company called Bookpool (®HYPERLINK http://www⁻) who will ship books from the States at very reasonable rates (Bookpool generally charge less than the cover price whereas most books arrive in the UK with the dollar sign replaced by a pound sign and a few pounds added on.).

I've just started using Office 97; it's quite a shock having done most of my work in Word 2 for the past 5 years. There are lots of features which I like and others which I'm not so sure about. One of the problems with most big software is that users don't find out all the things which they can do. Office 97 does various things to help – when I typed the

hyphen in this sentence, Word automatically replaced it with an en-dash. (Did you even know that there was such a thing as an endash? It looks better than the normal hyphen and you can easily insert it even in an old version of Word if you know its ASCII code but this is just so much easier). If you do something which is long winded then it's quite likely that an Office Assistant will pop up with a little yellow light bulb. This shows you that there's a tip to look at which might save you time. I like the idea of the tips but I just find the Office Assistants irritating (it's a bit like Teletubbies; they're fine for three year olds but I don't want them on my desk!)

Tables are one of those things which people just don't seem to use in Word; I suppose it's because they don't match the way you would write something on paper and they're certainly not the way you would work with a typewriter and yet they are amazingly useful. Word 97 now defaults to putting borders on the grid which has to be worthwhile - I've got really fed up with people telling me that they've drawn a table but it doesn't print! One of the most wonderful features is a rubber; you can just rub out any borders which you don't want. This is a completely obvious way of working and yet it's taken years to add it to Word. You can also rotate text in a table cell so that if you want narrow columns with big headings you just put the headings vertically. This brings me onto one of my rants about Office 97. Over the past few years Microsoft have worked very hard to make their applications look and feel similar; if you can get used to working with Word you should be able to move to Excel and so on. Generally this has worked quite well but there's obviously a complete lack of communication in parts of the teams. Excel has been able to rotate text like this for as long as I can remember, Word has just acquired the ability but Access (where it would be really useful) still cannot do it! I can think of so many situations where I want to have a table of information which would be so much better with vertical headings and I can't do them.

Office 97 is, at last, controllable by a network manager. Both Windows 95 and Windows NT support the idea of a centrally managed policy; this can set all sorts of things concerning what a user can and can't do with a workstation. Office 97 has a set of policies available which allow you to specify things like the default save directory (which can be set to an environment variable such as the home directory), and save format (so that if you have a mixture of Word 6 and 97 you can set the new machines to save in the old format, making file transfer much easier). There's even a possibility to point to a converter for the next version of Office files when they become available.

The one thing which Office 97 doesn't make easier is specifying a machine; it will work on a machine with 16Mb of RAM but is happier with at least 32Mb. I know that RAM is now cheaper than ever but it still seems strange that I'm typing this on a machine which has 3 times more RAM than the PC186 I once used to edit RM User had hard disk space!

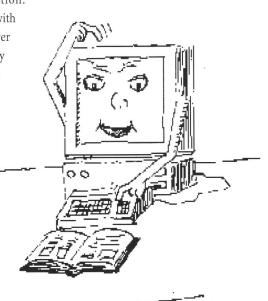
One of the most surprising things I found in Office 97 was Outlook. I'm not very good at using organisers - either paper based or computerised - and I'm quite convinced that it's only organised people who benefit from organisers. Outlook is, I think, designed to help people like me. Without doing anything (apart from installing it) it seems to have decided to keep a diary of everything I do. Whenever I open Outlook it shows me the names of documents on which I've worked and when I did the work. This means that you can go into the journal and say things like "I want to carry on with the word processing that I did last Wednesday morning but I've no idea what I called it or where I saved it" The journal shows you all the files you worked on arranged in chronological order (or any other order you choose) and allows you to find this file very quickly. Big Brother really is watching you now!

As I write this, we're coming to the end of another academic year and so it's time for me to look back and consider what I've achieved. I'd like to think that some kids have gained some new skills but I know that I've completely failed with others. I still get very depressed when I see a child working on a spreadsheet get out their calculator to add up a column of figures or work out an average and I've no idea how I manage to get them to remember that that's what a spreadsheet does! Some of these children are very clever; I know that they will go on to get a string of GCSEs and yet the skills which I think of as quite basic they never quite master. Other children will never

ever get more than a few low grades and yet quite happily grasp some of the IT concepts. I wish I could tell what it was that helped them learn so that I could then pass it on to the others. I'm absolutely certain that we shouldn't be using rote learning in IT because that will definitely create children who can solve the problem they were taught but cannot generalise and apply their knowledge to another situation but equally it is important that users can get to the point where they just know what to do in order to achieve certain results. Perhaps the Office Assistants will help with this - after all, it's the only time most people get observed on a one-to-one basis by an expert while they're working.

We're just about to allow pupils to use the Internet from any network station. Technically there are no real problems with this (Microsoft Proxy Server on a server and Proxy Client on the station) but my real worry is to do with controlling access; how do I make sure that the little darlings are not mis-behaving? ACITT has a draft of an acceptable use policy which I've adapted for use in our school. I intend to give _ parents a letter which describes the Internet and why their children might want or need to use it. It then asks for them to sign an agreement which regulates what the child will and will not do. This UH? Whot's HEMORY FACURE?

things which they shouldn't but does at least make sure that parents know what their child should and shouldn't be doing. I'd be interested to know how other schools are getting on with this kind of scheme. I'm still sceptical about the whole Internet business; although there is now a phenomenal amount of information out there I suspect that the majority of it is garbage and the problem is sorting the stuff which is worth having from the rest!



obviously won't stop them from doing

RMUG A.G.M. Saturday, 25th October 1997, at 6 p.m. De Vere Hotel, Swindon

Calling All RMUG Members!

YOU are invited to attend the Annual General Meeting, which will be held during the Training Weekend at the De Vere Hotel, Swindon at 6 p.m. on Saturday, October 25th.

We hope that members who are not participating in the Training Weekend will be able to attend the A.G.M. This is your opportunity to express opinions, question the committee or make suggestions about improving the services provided to members.

The committee is aware that some members are unhappy that the A.G.M. takes place during the Training Weekend, but recent experience of severely declining attendance at A.G.Ms held in the spring, forced the change of date.

We need YOUR help! As usual, new committee members are urgently needed. Why don't you volunteer? Within the next two years, several experienced members will be required to stand down after completing the maximum five year stint. The group belongs to the members. It's YOUR User Group!

About 6 or 7 committee meetings are held each year at a variety of locations. Travel expenses are reimbursed. Meetings are focused but friendly. You would have the opportunity to help in shaping the programme for the Training Weekend, the content and format of the magazine and gradually learn a great deal more about how RMUG functions.

Even if you can't attend the A.G.M., don't hesitate to volunteer. You can be nominated by a member who is present. If you would like more information, please contact the Secretary, Edith Todd (see inside back cover for details)



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Telephone Frances Stacey 0181 395 2346 Email frances.stacey@virgin.net

PRINTER'S PIE

by Peter Harris

THE DIGITAL DARKROOM

There are Fairies at the Bottom of our Garden



SHERLOCK HOLMES is probably the single most popular literary character in the world. The German dictionary has the word "sherlockieren" meaning to deduce. Arsène Lupin, the great French fictional criminal character, had an encounter with "Holmlock Shears." 22B Baker Street is searched for by many English as well as foreign visitors to London.

Sir Arthur Conan Doyle himself regarded the detective stories as "a lower stratum of literary achievement." On his gravestone he is recalled as a "Knight, Patriot, Physician and Man of Letters."

In addition he is also well remembered for being fooled by the "Cottingley Fairies" apparently playing in a Yorkshire dell-in 1907 two schoolgirls drew the fairies in sepia on card, pinned them to toadstools and took the pictures with a cheap box camera, admitting the hoax only decades later.

A Transforming Friendship

The recent tragic deaths of Princess Diana and Dodi Fayed have opened our eyes to the vast amounts of money photographers can make from selling just one picture. Sometimes certain sections of the press alter pictures to compete with genuine photographs, but they use computers and Adobe Photoshop not a photographic darkroom. One front-page fake picture of Princess Diana and Dodi Fayed featured as "the picture they all wanted" was in fact electronically enhanced to make it look as though they were about to kiss.

The Sunday Mirror, which carried the original genuine pictures after winning the auction for them, increased its circulation by 300,000, despite increasing its selling price by 5p.

Anything you can do, I can do better

THE TIMES, in an attempt to convince its readers of the ease with which photographs can be faked, showed a progression of three photographs.

The first photograph - a suitable one for manipulation - showed the Princess, a crew member and Dodi Fayed. Using Adobe Photoshop the crew member was taken out of the picture and the background detail enhanced, thus producing the second photograph. In the third photograph the couple have been moved closer together so that it looks as though they were about to kiss.

Et tu, Brute

Time apologised in June 1994 for a front cover photograph of O. J. Simpson which differed from an identical original used by Newsweek in that he appeared darker and with more stubble.

In December 1994 the London Evening Standard removed a beer bottle from a picture of John Prescott and his wife; and The Guardian tampered with a picture of Gordon Brown on Budget Day to remove one of the apprentices who had made his red box. Eamonn McCabe, Guardian picture editor, admitted "we've been caught with our fingers in the electronic paintbox." The Editor, Alan Rusbridger, dismissed it as "an example of over-enthusiasm."

At our level it is amazing how many local councillors insist on our printing the same photograph that we used to print their election leaflets five years earlier. Perhaps their motto is: "This photograph was taken when I was much older than I am now!"

We look before and after; We pine for what is not



Angela's mother discovered the above photograph of Angela as a baby at the bottom of a drawer, and she was distressed that it had become bent and disfigured.

When Angela (our Financial Controller) showed the photograph to me it seemed an ideal subject for restoration. The process is time-consuming and demands practice and patience, but it is simple to explain what to do.

Using the Rubber Stamp Tool in Adobe Photoshop you paint over the damaged part of the picture using pixels that you have selected from an undamaged part.

The finished photograph below is a very creditable improvement.



The thing impossible shall be

There is a true story told by a graphics service bureau concerning a customer who rang saying that she wanted a poster made from a colour slide. It was a picture of her recently-deceased father with a couple of his fishing friends in a boat.

The woman explained that there was a slight problem with the photograph: her father was facing away from the camera. Could the

bureau flip the negative so that his face could be seen?

When it was explained that this would only produce a mirror image of the back of his head she became irate and screamed down the phone: "If you can take the pimples off those glamour girls, why can't you put a face on my father?"

And after all, what is a lie? 'Tis but the truth in masquerade

For those of you who have never used an image-manipulation programme, perhaps a brief and simplified explanation of how to alter photographs would be in order. Wedding groups containing unwanted relatives seem to be favourites for amendment.

As in most computer software programmes, before you can change anything you have first of all to select it - but because you are selecting pixels not words or figures, there are in fact at least four ways of doing this. Adobe Photoshop is a complicated programme and there are more than 50 cursors.

The Marquee tools enclose a rectangular or elliptical area, and are depicted on screen by a moving marquee.

The Lassoo tool is used to enclose an irregular shape, and again is depicted by a moving marquee. You trace round the desired shape using the mouse. With the caps key down the cursor becomes a crosshair, which is much more precise. A 21-inch monitor is also a big help!

The Magic Wand tool is used to select areas of the same colour wherever they may be in the picture. For example, if you wish to select all the pieces of blue sky seen through the leaves of a tree this tool enables you to do so.

However, in order to achieve the

transforming effect that The Times photographs showed, a much more accurate means of selecting is needed. The outline of Dodi Fayed has to be carefully traced, turned into a selection, "floated" to a new position, and then the layers flattened. The empty space that was left has then to be filled by cloning or by selecting from another photograph of a similar shot.

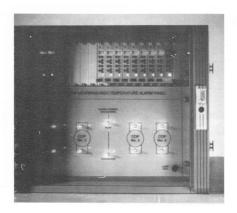
In Adobe Photoshop accurate paths are traced using the Pen tool - and all paths in Photoshop are Bézier (pronounced bayzee-ay) paths, meaning that they rely on the same mathematical curve definitions that make up the core of the PostScript printer language.

Photoshop originally was a custom programme used by George Lucas's firm "Industrial Light and Magic" which was responsible for the special effects in the STAR WARS trilogy.

Bézier curves were developed for use by the design departments of the motor car industry. In 1960 the mathematical theory was based on the use of conics – nonrational polynominals with vector coefficients. Mathematical theory now includes B-splines and NURBS. Those of you who have used drawing programmes such as CorelDraw will be familiar with their ability to be amended until an exact fit is made.

The Bézier curve model allows for zero, one, or two levers to be associated with each point in a path. The levers are called Bézier control handles or more usually just handles.

You can move each handle in relation to a point, which means you can bend the curve to where you want it to be - just like a piece of soft wire.



Sharper than a serpent's tooth

Unsharp Mask is an unusual name that comes from a traditional film technique that highlights the edges in an image by combining a blurred film negative with the original positive. In Photoshop it is a filter which increases the contrast between neighbouring pixels, thus enabling you to compensate for image elements that were photographed or scanned slightly out of focus. The effect is similar to what you see when you adjust a camera to bring a scene into sharper focus.

In practice when we have scanned an image and brought it into Photoshop the first thing we do is sharpen the image. This is because a slight blurring is inherent in the act of scanning.

In the above photograph we first of all sharpened the image; but in order to prepare it for printing we have to adjust the way it looks - how do we adjust the brightness and contrast?

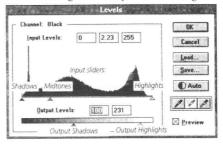
Everybody needs a Histogram

The major inkjet printer suppliers such as Canon, Epson and Hewlett-Packard are all advertising photo printers that can achieve output that is comparable to real photographs. Using special matt or glossy paper a typical 8-inch by 10-inch colour print can be

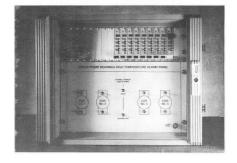
produced for around £1.60.

As a rule-of-thumb, digital cameras produce the same quality as ordinary cameras if you pay four times as much for them. Unless you prepare a lot of images for use on the Internet, a conventional camera and a good scanner would probably be better buys at the moment.

However your image is brought to the computer screen, after it has been sharpened the next thing to do is to produce a histogram:



This is a graphical representation of the image's brightness values. The darker pixel values are shown at the left and the lighter ones at the right. The triangle slider in the middle is known as the *gamma*, and by adjusting this you can make the midtones lighter or darker – as with most skills, experience is a good taskmaster. The picture below shows the improvement that can be made.



Adobe Photoshop has 75% of the professional market for image manipulation.

SHOPTALK

by David Palmer

A no-brainer

One of the (many) things I have never understood is how software evolves. I am sure you will be pleased to hear (and may well have already known the solution) that I have solved the little connundrum I offered you in the last issue-the way that pictures were appearing in Works as either < Picture > placeholders or as a stamp-like icon with the name of the original file next to it. This odd behaviour applied to printouts as well as on the screen. I could find no reference in Help but poking around the many tabs of the preferences I found a switch that says "Enable DDE". When I unchecked it, a small measure of my sanity was restored as the images appeared as normal in my file. The things that baffle me are (1) why is this set as default - this was a brand-new machine, and (2) why would anyone want to work in such a mode? I understand the value of DDE but surely you still want to be able to see the image and have it print out? If I am missing something really obvious here, please let me know!! I was reminded once again of the simple elegance of Clarisworks and wonder why it has not taken over this market. Right from Version 1 (we are now using V4) it offered seamless integration of words and graphics. If you are working in a wp file and want, say, a box you just click on Window, Show Tools and a graphics palette appears at the side of the screen. You can then draw your box immediately on your document, resize it, fill it, move it into the background or whatever. No extra applet running on the top to exit from, no delay, WYSIWYG all the way!! When you add to this ease-of-use the fact that the original (and still very useful) program takes

up a staggering 1.7M of hard-disc space - which includes the full Works set of tools, wp, db, ss, comms and graphics - you must surely wonder why we still insist on using bloatware! By the way, in case you were wondering, Version 4 takes up more of your disc space. . . . 2.9M!

Web tips

Glenn (our leader) gave me these URL's - he knows I am a fan of Interactive Physics and thought I would be interested in Lightbox.

Interactive Physics Demo (v2 Win 3.1) www.krev.com/ed/ip Lightbox for Windows www.banjax.demon.co.uk

I also heard that there were interesting things going on at wwwe.bigscience.com; to wit, a project to interpret data gathered for the SETI (Search for Extra Terrestrial Intelligence) project through use of a screen saver. The idea is that you download their screensaver and a 1M block of data. Whenever your screensaver kicks in it will go to work crunching the numbers. When it has finished, it will ask you to log onto their site again to upload the results and get another block. Sounds good to me! They plan to extend the project to work on things like DNA strings too.

Of course, some of you will feel that we should perhaps spend more time looking for Terrestrial Intelligence first..

GOT A PROBLEM?

One of the main functions of the RM User Group is to assist members who are having problems with either hardware or software, no matter how trivial or complex that problem seems to be. Members of the committee have a wide range of experience in the use of RM equipment, including systems no longer in production, and can be contacted in the evenings or at weekends...times when you are most likely to be mulling problems over and when RM's own Customer Support lines are unavailable.

RM themselves do not claim to have extensive knowledge of products which they don't produce themselves (such as Excel or Page Plus), and although they can tell you how to install such packages on their equipment and how to get started, they cannot be expected to give you in-depth support in using them. On the other hand, the RM User Group has a membership drawn almost exclusively from teachers using these products on a daily basis and consequently have probably "been there, done that, bought the T-shirt" and most likely even "made the jigsaw" too.

So do get in touch with a member of the Committee (see elsewhere in the magazine for contact details) if you are experiencing some difficulty or other or want some advice. If we can't solve the problem ourselves then we probably know someone who can, and if even that fails we can publicise the problem in the RMUG Magazine.

GOT ANY HINTS AND TIPS? GOT ANY GOOD TEACHING IDEAS INVOLVING IT?

If so, your magazine needs you! Look...it's like this: the RMUG magazine is entirely dependent upon contributions from members to fill its pages. This means you! We know for a fact that some members shy away from contributing articles because they feel themselves not to be experts. Don't kid yourselves: if you've done an interesting lesson in your subject from an IT point of view, then you're an expert and we'd like to hear about what you did. What you write doesn't have to have high "nerd appeal"...in fact, forget the "anoraks" completely because most members are normal people like you. Honest.

The editor welcomes all manner of items from "one-liners" to classroom ideas and software reviews, so get writing and make his day (he'll even pay £5 per printed page if he likes it.....Just think: two two-page articles and you've got your annual membership fee back.....).

If (If? When, surely?) you do write an article then the best thing is to submit it to the editor as a disk file in Word for Windows or Windows Write format. He's a reasonable chap so other word processor formats are probably OK too, but it would be worth checking first in case he hasn't got a copy of Edlin Lite for Windows 95. Alternatively you can e-mail it to him or sharpen a few goose quills (but please **not** carrier pigeons: they just make too much mess).

Membership Form Please use capitals Mr/Mrs/Miss/Ms Job title (if appropriate) Address Postcode Telephone I enclose a cheque payable to RMUG/order for £20. If you are not enclosing a cheque then please send an official order, indicating clearly to whom the invoice should be sent. In order to serve our members better we like to know something about them and what they do with their computers. The information you give is confidential. Are you involved in education? If yes, with what age range do you work: below 11 Do you use a computer at home? If you object to your details being passed on to other members of the user group, please check this box Please send your form and payment to: RMUG, FREEPOST, Esher, Surrey, KT10 0BR

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You have almost certainly had something in the post - now see it for real at the RMUG Weekend in October Or contact Sally Nightingale for a demonstration pack

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