That's Life

Tim Nott invites you to play the *fascinating* game of Life.

The past couple of months have been redolent with the heavy breathing of VBScript and the Windows Scripting Host, so let's take a break with something a little more light-hearted. In the June column, we had the world-shattering disclosure of the IE4 Easter Egg. So, sticking firmly with the trivial, this month it's time to dig out the Windows 98 egg [Fig 1]. Here's what you do:

☞ **Double-click** the clock in the system tray or open Control Panel, Date/Time and turn to the Time Zone tab.

☞ **Hold down** the Control key and drag Memphis, Egypt over to Memphis, Tennessee. Release the mouse button, then click again and drag Memphis, Tennessee over to Redmond, Washington.

☞ **Release** both the Control key and the mouse button.

And, lo and behold… But in my case, nothing happens, even with the aid of a large atlas. I am assured it works for some people, though, so hitherto I have consoled myself with the words of my English teacher who maintained that 'a good grasp of geography is a sign of a second-class mind'.
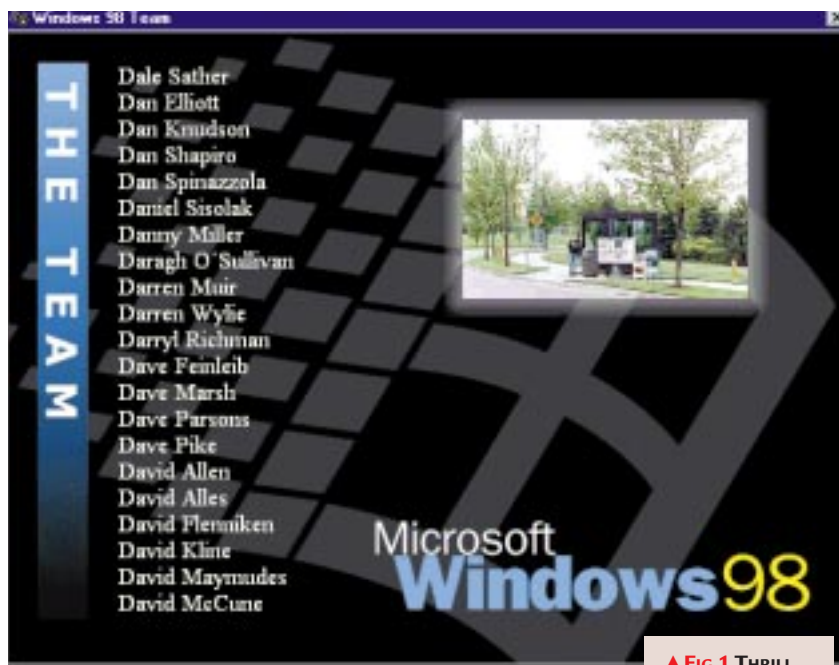
Anyway, diligent research has unearthed another way:

☞ **Create** a new shortcut on the desktop and, for the command line, browse to 'C:\Windows\Application Data\Microsoft\Welcome' and select WELDATA.EXE.

☞ **Finish off** the wizard, then right-click the new shortcut and select properties. At the end of the target, type a space after the closing quotes, followed by You_are_a_real_rascal (*do not put this in quotes but do include the underscores*). Then, in the Run box you should select Minimised.

☞ **OK out** and double-click the new shortcut: a new window will open, a jolly tune will play, you'll be treated to a list of the development team and a miniature slideshow of sights around the Microsoft campus and Seattle.

Advanced Windows detectives may note that this window is actually an

HTML page, and that the pictures are stored in a file named Membg.dll.

■ Getting a Life

Moving on to the slightly less trivial, my first serious business computer, an Amstrad 8256, also had an Easter Egg tucked away on one of the two diskettes which contained the entire operating system and word processing application.

Although you did not get a list of names, and views of Brentwood in glorious black-and-green, you did get something far more interesting: the game of Life. This was invented by the mathematician John Horton Conway and Life is played, or rather plays itself, on a rectangular grid of cells.

The game advances by discrete, universal, generations. Each cell has eight neighbours and can either be on (alive) or off (dead). Any live cell with two or three live neighbours will stay alive at the following generation — more or fewer and it will die. Any dead cell with exactly three live neighbours will become live at the next generation — more or fewer and it remains dead.

This simple model can lead to hugely complex patterns

This simple model can lead to hugely complex patterns and is a serious piece of mathematical research, building on Prof. Alan Turing's work on abstract computers and Von Neumann's cellular automata. It has bearings not just on mathematics but on evolution theory as well. And it's also great fun to play with, which is why I'm writing about it.

Taking a simple case, the block of four cells to the top left of Fig 2 survives unchanged, as each has three live neighbours. No surrounding cell has more than two neighbours, so no cells are born. The horizontal row of three behaves in a cyclically stable way: the end cells die, the centre cell remains alive but those above and below it are born, as they have three neighbours.

In the next generation, these in turn die and the dead cells to the left and right of the centre are reborn, so we have a 'flasher'; a bar of three which oscillates between the vertical and the horizontal. A more complex oscillator is shown to the right of this — the 'billiard table' where the contents bounce around inside a stable frame.

More interesting is the pattern of five cells to the right of the billiard table. This changes in such a way that in every four generations it repeats the initial pattern, but shifted one cell diagonally. It is known as a 'glider' but really it doesn't so much glide as waddle across the screen. A more elaborate mover, the 'dart', is shown beside it.
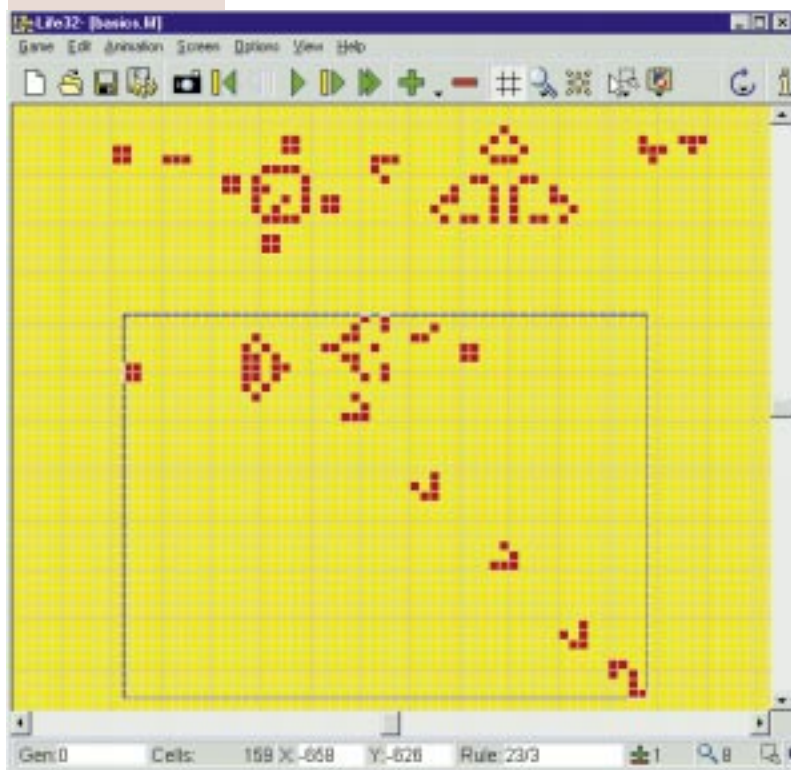
Other simple patterns, such as the 'rabbits' to the right of the dart, will continue to breed in a seemingly random manner. In fact, this pattern stabilises after 17, 331 generations.

More complex starting patterns can form 'glider guns' which spew out a steady stream of gliders and a simple seven-cell shape 'eats' gliders while itself remaining unchanged. An example of the former 'feeding' the latter is shown in Fig 2, inside the blue rectangle.

I didn't find this tucked into a Windows Easter Egg. Instead, it's a freeware program developed by Johan Bontes. You'll find Life32v110.zip in the *Hands On Windows* section of this month's cover disc. You'll also find Lifep.zip, a collection of starting patterns put together by Alan Hensel as .LIF files.

▼**FIG 2**
LIFE32 IS ON THIS MONTH'S COVER DISC

READERS' TIPS

As we've noted previously, closing by pressing Control + Alt + Del and then ending Explorer, cancelling the Shutdown dialog, then clicking 'End Task' from the next dialog will reload Explorer — the Windows shell.

☛ **As a means** of updating certain changes without rebooting, the above can sometimes be useful . Other times, you do not even have to do this, as Explorer will fall over by itself. In either event, this has the unfortunate side-effect of losing all the icons in the system tray.

To get these back, log off and then on again, either from the Shutdown Windows confirmation (W95) or from the Start Menu (W98).
• *Thanks to Douglas Muirhead for that tip.*

☛ **Further** to the mystery of jumbled icons, particularly on the Quicklaunch bar, Alex Nicholl and Ben Tisdall *(not the former PCW editor)* both pointed out that there is a permanent cure. You need to open the registry and go to: HKEY_LOCAL_ MACHINE\Software\ Microsoft\Windows\ CurrentVersion\explorer. Then add a new string value:

```
"Max Cached Icons"
="2048"
```

There's further information on this in a Microsoft Knowledgebase article, document number Q132668.

☛ **Another** quick tip on the subject of Autorun — this time from Andy Fraser: 'I had the same problem as Henry Brown (*Hands On,* April). Audio CDs autoran but not CD-ROMs. In my case it had been caused by installing Easy CD Creator Deluxe. I emailed Adaptec in the hope of there being an easy solution and the company suggested TweakUI — and there it was, under "Paranoia/ Things That Happen Behind Your Back".'

☛ **Life32** [Fig 2] is a brilliant program, despite a few display bugs, and I can only scratch the surface of what can be

done. Looking at the glossary of shapes, there are spaceships which glide cleanly across the screen, puffers that leave trails of debris, and rakes whose debris trails consist solely of gliders or spaceships.

You can vary the pace of generations and zoom in and out, you can draw starting patterns with the pen tool or copy and paste with the select tool. Note that as well as loading the .LIF files, you can copy and paste patterns notated

The 'rabbits' will continue to breed in a seemingly random manner

with dots and asterisks directly from text or help files — first use the select tool to define an area to contain them.

One thing you might want to try is using a different set of rules from Conway's original 2,3/3; change it to /2. All cells live for just one generation but empty cells with two live neighbours become alive. Place the simple four-cell block in here and the effect is a huge, ever-changing, explosive pattern.

Questions & *answers*

Q My home PC is currently installed with Windows 98 and the multiple user setting is enabled. I would like to know whether it is possible to force users to log on by disabling the Cancel button, so preventing them from creating new users at logon.

CHRIS KONIECKO

a *Yes, if you go to Control Panel, Networks (you don't need to be on a network) you can set the primary logon as Microsoft Family Logon. This is a Windows 98 feature which works in combination with user profiles to prevent anyone from gaining access to your computer unless you have configured a user profile for them. There is not enough space to go into this here in detail but the Windows Resource Kit Online book (on the CD-ROM) gives the full story.*

Q I recently downloaded the Sonique MP3 player from the internet and every time I load an audio CD the Sonique player comes up. How can I get the standard Windows CD player to appear as before?

GARY MCLAU

In Explorer, go to View, (Folder) Options, File Types. Select AudioCD from the list. Hit the Edit button. There should be one Action; Play. Highlight this and edit it. To get the default CD player back it should be: C:\WINDOWS\cdplayer.exe/play. Leave the DDE box empty. OK and Close back through the dialogues.

a I have changed the viewer of JPG files in the folder options to IE4, and that is what it says there, but the icon is still the 16-bit Quick-time viewer icon and double clicking still runs that. Is there any .INI file hanging over from 3.1 that could contain this? It's so annoying. I've tried the Paint Shop Pro demo, Adobe Photo-Deluxe, and iPhoto Plus 4, but nothing changes. Does this mean anything to you?

WILLIAM THOMPSON

a *You've practically answered your own question. 16-bit applications will probably put entries in the [Extensions] section of the file WIN.INI. The registry regularly updates its own associations from here so any changes you make in Explorer will be over-written. You need to edit WIN.INI (a plain text file) and remove the offending lines or, better still, comment them out by putting a semicolon at the start of the lines.*

Q I read somewhere that Windows 95/98 will not use memory above 64Mb. Does this mean it is a waste of money buying a 128Mb machine?

ALISTAIR SWANN

a *No, that isn't true. Possibly this is a confusion with the fact that certain older Pentium motherboards can only cache 64Mb of memory. If you're handling large files, such as sound or bitmaps, 128Mb should show a distinct improvement over 64Mb.*

Q How can I change the 'My Computer' icon in

▲**FIG 3 CHANGING THE DESKTOP ICONS**

Windows 98? I have renamed it but have acquired a deep loathing of the icon itself — clicking on Properties just brings up the Control Panel/System stuff.

MARIANNE PRYOR

a *Right-click on an empty bit of the Desktop, then choose properties. Go to the Effects tab and all that you desire will be revealed* **[Fig 3]**.

Q While surfing the internet I tried to save a small graphic which has now become stuck to the middle of my desktop. I can neither select nor right-click it. How on earth do I get rid of it?

ADRIAN LOTT

a *It sounds as though you have set it as your wall-paper — this is one option away from 'Save Picture As...' on right-clicking a graphic in IE4 and, in my opinion, is an unnecessary pain in the fundament. Right-click on the desktop, go to Properties/Background and select a wallpaper other than 'Internet Explorer Wallpaper'.*

Q Can I use the Windows Paint program to create icons? If so, how do I get an icon that is not square?

MARK LEEMING

a *You can use any BMP file (the Windows Paint native format) as an icon. Select 'All files' in the icon browse dialogue, then choose a BMP and Windows will resize the icon to suit. If you want more control you can start Paint and set Image Attributes to 32x32 pixels in colour (assuming that's your default icon size). View, Zoom, Custom to 800 percent and tick the 'Show thumbnail' and 'Show grid' options. Create the image and then Save with the .ICO extension (or rename it later) and you will then see it in the icon browser without having to switch to 'All files'. Saving the best bit for last, the colour of*

▲**FIG 4 DO-IT-YOURSELF ICONS IN WINDOWS PAINT**

the left top pixel sets the transparency for the entire icon: in Fig 4, not only will the icon be eye-shaped but the desktop will show through the transparent pupil.

PCW CONTACTS

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