

subject will admit to having heard or read my theories, or comment favourably or unfavourably on my theories or competence.

In particular, nobody with accreditation in electromagnetic theory will admit to having heard of, or comment on, the Catt Anomaly (*EW + WW*, September 1987), on which I rest my case.

As a result, the question of whether text books and college courses should be modified cannot be addressed.

This is why I am setting up the Classical Electromagnetic Theory Defence Fund as an attempt to break the log-jam which has persisted for more than a decade. I am donating £100 to the fund.

The idea is to pay three accredited experts in electromagnetic theory if and when they attend a meeting where they defend the classical theory against the Catt Anomaly. The meeting will be tape recorded and each defender given a copy of the tape. They will be paid whether or not they succeed in their defence. Critics of classical electromagnetism will not be paid.

Before the meeting, suitable institutions such as the IEE and Institute of Physics will be asked to authorise the three experts as appropriate defenders of the classical theory. Donors to the fund will also have a say in who the experts are.

If, as I suspect, nobody with proper accreditation can be found to defend against the Catt Anomaly and the fund gradually builds up over the years, then classical electrodynamics will take its proper place alongside poltergeists and other idiocies.

Ivor Catt  
St Albans  
Hertfordshire

## Diabolical waves

On the subject of light, Martin W Berner's letter (*EW + WW*, January) repeated the often-asked question "Waves of what?". A substantially correct answer was given by James Clerk Maxwell in 1865: "Light is an electromagnetic [em] disturbance propagated through the em field according to em laws."

In the wake of more than a century's developments, I brought Maxwell's theory up-to-date in 1983 in "On Maxwell's Ether" published in *Lettere al Nuovo Cimento*. This paper suffers from the drawback that it was written in such a way as not to offend too much of the post-1905 sensitivities (otherwise it would have not been published). Nevertheless, it clarifies some of the fundamental issues.

Einstein maintained that relativity

did not overthrow the classical theories (of Newton and Maxwell), but instead generalised and improved on them. That this is incorrect is demonstrated thus: if an experimenter measures the speed of light and obtains the value  $c$  (about 300,000km/s) with respect to the source, one would be entitled to say that this is a particle behaviour. If an experimenter measures the speed of light and obtains the value  $c$  with respect to a medium of propagation, one would be entitled to say that this is a wave behaviour. But if one postulates that  $c$  may be referred to any and every coordinate system,

that would be a truly diabolical behaviour!  
T Theocharis  
London

## A case of blurred vision

Martin W Berner asks in "Read shift" (*EW + WW*, January 1993), for an explanation of the cosmical red shift Doppler effect in terms of the invariant, relativistic velocity of light basic concept.

The sad message is that no explanation seems to exist on this basis. And, from a lack of reasonable alternatives, cosmologists have introduced imaginary expanding effects of space and the universe.

However, from a clear physical point of view, there may exist two possible reasons for a Doppler effect to appear: a true Doppler effect if a light ether exists; or a false Doppler effect if light is pure particles.

In the first case the true Doppler effect is associated with an active light ether medium.

If  $w\lambda$  = wavelength as produced on

## Entering the SpiceAge

Your reviewer John Anderson did an excellent job on our product *SpiceAge for Windows* (*EW + WW*, April 1993). The few criticisms that he made have nearly all been made independently by our users and have now been dealt with.

He is quite correct in pointing out the continuous nature of the program's development and indeed the current version of *SpiceAge for Windows* is 2.059 with the manual now on its third release. Because all our customers have been updated free of charge "from birth" right through to version 2.027 (the penultimate release), it has been necessary to ensure that the manual paper costs are kept reasonably low.

To answer a specific criticism, the component ribbon at the foot of the edit window has its prime purpose in accessing the hypertext help system for that component and it is not intended as a means for entering a component. To use a component's key

letter for help implies that very knowledge and rather defeats the purpose.

Also, the edit window in v2.059 can now be placed on top of the analysis windows.

The scaleable fonts of *Windows 3.1* can result in very small text when windows are contracted but are always clear on full screen windows. The alternative, which Graham Baxter removed in response to user's requests from earlier versions, is to disable the text when it becomes smaller than a threshold size.

A point that Baxter and I would like emphasised is that *SpiceAge* is not *Spice*, Baxter built it from the ground up on entirely original code. The compatibility with *Spice* is provided for convenience but *SpiceAge* is entirely free of the constraints of *Spice* and will develop accordingly.

CJT Clarke  
Those Engineers  
London

## Share...

The product review, "Ranger 2: the shareware worth the layout?", (*EW + WW*, April 1993) misapplies the term "shareware". True shareware comprises the complete program and documentation, which is not the case with this version of *Ranger 2*.

Shareware is one of the most interesting phenomena in all of personal computing. Seetrix is not the first marketer to attempt to change the shareware concept to suit its own marketing plans. I doubt it will be the last.

Therefore, I am very careful about which program gets called "shareware" in *EDN*. MicroSim has always had the good grace to call the reduced capacity version of *pSpice* their "educational" version. Another acceptable term is "demo" version.

Charles H Small  
EDN Magazine  
Newton  
Massachusetts  
USA

*Editor's note: The whole point of shareware is to give people a chance to try out a working version of a program before deciding whether or not to buy the full version. If shareware always contained the complete program and documentation, there would be no incentive for users to pay up and register. That is why most shareware has key features, such as the ability to save, disabled, or alternatively has annoying "please register" messages popping up at inconvenient times.*

## ...where?

First of all, thank you for your generous review of my software *CC4 Calculus Calculator* (*EW + WW*, March 1993). Your readers should know, however, that this software is not supported as shareware.

Three years ago I sold my work to Prentice Hall, but I forgot to tell my beta testers not to distribute their copies. Some of them released the product to their local bulletin boards thinking that it was still shareware. From there it has spread as far as the UK..

I don't mind if it circulates this way, since I gain more in publicity than I lose in sales, but the free version is not the final one.

The final version is sold as *X(Plore)*, and it comes with a 250 page manual from Prentice Hall. The cost in the US is around \$30.

Your readers should also know that Prentice Hall sells a version of the manual without the disk, and they can avoid purchasing that version by specifying the ISBN number (0-13-014226-3) or demanding the book with disk.

A Macintosh version of *X(Plore)* will appear in January.

David Meredith  
Department of Mathematics  
San Francisco State University  
USA

the transmitter side with the receiver at rest,  $w_r = \text{wavelength as measured on the receiver side with the transmitter and receiver moving}$ ,  $w_o = \text{the wavelength as measured when the transmitter and receiver are at rest}$ ,  $f_t = \text{frequency of the transmitter}$ ,  $c = \text{propagation velocity of wave in ether relative to the ether}$ ,  $v_t = \text{velocity of the transmitter related to the ether}$ ,  $v_r = \text{velocity of the receiver related to the ether}$ , and  $dt = \text{time interval between two transmitted pulses}$ :

At transmitter side

$$w_t = dt \cdot c - dt \cdot v_t = w_o / c \cdot (c - v_t)$$

At receiver side

$$w_r = w_t$$

giving

$$w_r = w_o \cdot (1 - v_r/c)$$

Frequency at the receiver side

$$1/f_r = w_r / (c + v_r)$$

$$f_r = (1 + v_r/c) / w_r$$

$$f_r = (1/w_o) \cdot (1 + v_r/c) / (1 - v_r/c)$$

$$f_r = f_o \cdot (1 + v_r/c) / (1 - v_r/c)$$

Hence for the other wave:

$$w_r = w_o \cdot (1 - v_r/c)$$

$$f_r = f_o \cdot (1 + v_r/c) / (1 - v_r/c)$$

In the second case of light as a particle or matter wave, light is transported by pure particles. Velocities of those particles are determined by the output velocity at the source and the velocity as measured by an observer by adding the source velocity in relation to this observer.

For the transmitter side

$$w_t = d_r \cdot (c + v_t) - d_r \cdot v_t = d_r \cdot c = c / f_o = \text{constant}$$

On the receiver side, the time for an interval to pass the receiver moving with velocity  $v_r$  in relation to a common reference (the same as for the transmitter) is:

$$t_r = w_t / (c + v_r - v_r) = 1/f_r \text{ from that}$$

$$f_r = f_o \cdot (1 + (v_r - v_r)/c)$$

For light as matter wave

$$w_r = w_t = c / f_o$$

$$f_r = f_o \cdot (1 + v_r - v_r)/c$$

Hence, if light is a stream of particles, the Doppler shift is a false effect, giving only a shift in frequency.

The Doppler effect in the particle case is received because of an invariant in transmitting velocity in relation to the receiving system, hence making Einstein's concept useless. And because even the ether concept is inhibited in Einstein's theories, it is impossible to see any reasonable cause or reason to the cosmical red shift described in relative terms. Only the pure old Newtonian method seems to remain.

Ove Tedenstig

Märsta

Sweden

## Clocking on

In answer to RMW Quail's letter (EW + WW, February) on the French long wave station *France Inter*, the

station uses a very sophisticated microprocessor-driven clock which was described in the French version of *Elektronik Electronic*. A kit is also available from Selectronic (Lille, Tel: 20 52 98 52 Fax: 20 52 12 04).

Signature unreadable

Carrières

France

## UK's stifled innovation

Phillip Darrington's article

"Pursuing a lost course" on Captain Heinz Lipschutz (EW + WW, May 1992) and the ensuing correspondence highlights a problem faced in this country by many inventors and theoreticians. It is a problem which needs to be seriously addressed by manufacturers and, I'm sorry to say, the paper committees of some professional journals.

I have written a number of papers in an attempt to transfer technology from the air transport to the shipping industry, where it was, and still is, very badly needed. Most of these appeared in the proceedings of the *Ship Control Systems Symposium* held in this country and abroad, although some appeared in the journals of the Institute of Navigation and the IERE.

But publication only came about after manufacturers in the UK, particularly in the shipping industry, rejected them for illogical and obscure reasons. In one case I am confident that the rejection was to protect a monopoly.

In every case my proposals were ultimately taken up, mainly by foreign competitors, with zero financial rewards to me.

I have found that patenting, unless you are prepared to manufacture yourself, is a waste of money. Patents can easily be broken. And some firms hire a small team to see how patents can be legally breached.

Paper committees on professional journals are little better. I served on one and saw excellent articles rejected because of a tendency to scorn work in an attempt to display one-upmanship. Some reviewers love to make cutting remarks scrawled in red ink across the submission.

This stifles innovation and has a knock on effect on industry. Obviously, some articles should be rejected, but the importance of unbiased reviews cannot be overstressed.

WH Canner

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