113 New Haw Rd
ADDLESTONE
SURREY
KT 15 2DA

? 1/5/88 ?

Dear Ivor,

I take Wireless World from time to time — but not always. I have read with interest much of the stuff against and for Theory H. I am surprised at the errant nonsence written by much of the opposition.

Anyway I thought I'd play with using theory H on all sorts of peculiar delay line configurations. — just for fun. Some led to ~~peculiar~~ strange results — but the strange results turned out to be experimentally correct.

It is obviously stupid when dealing with pulse work to use fourier transforms + that was clear to me long before I met you. It was quite clear too to A.D Blumlien — who I believe to be one of the greatest

It is not quite so clear however
if one is dealing with signals that are –
at least very like – one waves

The problem I now have is
that of dealing with aerials – with
radiating devices. I am not finding
it easy to use Theory H to calculate
the properties of aerials. It is just
for an intellectual exercise – but I would
like to master it. Any suggestions?

I think, on reflection, that I
am not too clear about Theory H.
Before expanding on this I might say
that – once retiring – I have studied
a lot of Philosophy. I had an idea for
concocting "intelligent programs". But the
question is what is thinking any way. So
I thought philosophy might help. I doesn't
of course. In practice – it seems to me –
Philosophers tend to start with a belief – and
then to "prove it" by finding a suitable
set of postulates from which – by using
logic – they can prove it.

The trouble is that logic is tautologous — empty. The postulates that can be used — given logical analysis — to "prove" the belief are in fact only another form of the belief. Mathematics is a branch of logic!! .

Back to theories N and H.

The apparently simple difference is

N   Electric Current causes T.E.M

H   T.E.M causes Electric Current

But maybe — in a sense — neither causes either.

I believe that what you believe is that all is Energy — and that ~~Energy~~ T.E.M is Energy flow. What is clear is that TEM can exist without current

I am a bit worried about the T.E.M (transverse ~~electric~~ electro magnetic wave) I would rather call it E.F for energy flow.

What it seems to me that it implies is

1). There is energy.

2) That energy is dynamic, i.e. that when energy is trapped — say in a condenser — it is flowing to and fro.

3) That a ~~wire with current~~ a conducting material is itself a form of trapped energy

4) That energy reacts with energy.

Item 4 is difficult, in that when two E.F beams coexist in the same free space they do not interact with each other

~~I believe~~ you believe that space itself (what ever that is) takes on different forms, and that EF behaves differently to different forms of space. i.e EF (T.EM) interacts with changes in the forms of space.

Yours aye

Ted Newman

P.S With the aerials — I use a sequence of pulses — the problem I have is calculating transmission efficiency, and beam shape, using only the properties of EF — T.E.M, as with the delay line case

3.5.86

Ted Newman,
115 New Haw Rd.,
Addlestone,
Surrey KT15 2DA

Dear Ted,

Thank you for your letter of around 1 5 86.
I haven't pursued Blumlein as much as I should have after
all the times you spoke for him to me.

I suppose that I'll be like you after retirement, when I
should be contemplating the sunrise or the tulip, I'll still
plug away at e-m. I like your last four points, nos 1 to 4,
on your last page, best. I wonder whether you kept a copy.
I'll repeat them here.

1   There is energy
2   That energy is dynamic, i.e. that when energy
    is trapped - say in a condenser - it is flowing
    to and fro
3   That a conducting wire is itself a form of
    trapped energy
4   That energy reacts with energy.

These four are good statements of parts of my position.
I also go along with your further statement;

    I believe that you believe that space itself
    (whatever that is) takes on different forms, and
    that EF behaves differently to different forms of
    space i.e. EF (TEM) interacts with changes in
    the forms of space.

However, this last item I would modify somewhat. I have
absolute space, all with fixed velocity c and fixed impedance
377. However, xxx if some space contains a crystal (which is
a trapped, standing (wave) array of energy currents (what you are
calling EF), then that space appears to be a space with a slower
c and a lower than 377 impedance. So all space is identical, but the
presence of a crystal can make the space accomodating the
crystal appear to be space with modified impedance and
velocity.

Your previous nxx point (4) points to the frontier of our
knowledge. We know very £ well how two energy currents (TEM waves)
interact when they collide frontally (- they hardly interact at
all; superposition applies largely). However, we seem to know
nothing about how two energy currents interact if they collide
at an angle. The information was presumably presumed to
be in Maxwell's Equations, but it is not. We just do not know.
Experiments could be performed in this area, but support to this
most important research will not be forthcoming.

Xx Turning to the aerial. (The charge on a cloud, leading to
lightening, is a trapped oscillating, vacillating, wave of
energy current in the space between cloud and earth.)

Near an aerial is a standing, or reciprocating, wave of energy current. This interacts with the standing wave on the receiver aerial. However, since we do not know how two energy currents colliding at an angle interact, we are stalled at this point, until the decisive breakthrough is made. As I said before, there is and will be no funding or other support for this work for a number of decades. The whole subject is totally blocked throughout the world. I will not do the experiments without funding. The trouble is, it will take decades before it comes to be accepted that Maxwell's Equations xx give no information on this issue.

If I delay this letter until I've said all I want to xxx say, it will not go off for some months. Better to fire off this xxx little bit right now, to show willing.

Yours sincerely,
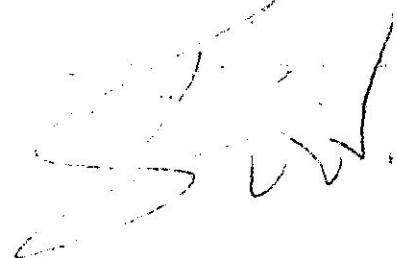
113 New Haw Rd
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Dear Ivor,

many thanks for the stuff you sent me. Very interesting.

I presume you are involved with Wafer Stack from anamatic — since you invented it all! May it be a resounding success.

The supercomputer looks to be very interesting. good luck with it

I should have written to you earlier but I wanted to think a bit. I've written a lot — but I'm not satisfied with it. I've decided to put it on my ~~sup~~ computer so I can change it more easily

I was given James Jeans in 1935 (Electricity & Magnetism) — and I've re read it. I expect you have read it. If not — The book is claimed to follow (roughly) Maxwell's Treatise

A1 Hard and soft discipline. I've written a lot about this but will send it when I've written my. what I want to say!

B) I think it would be easier to get ~~practical~~ practising engineers on your side died university ~~teachers~~ teachers. They could then be outflanked

Electronic Engineers — in my view — either ~~design~~ design by guess and by ~~god~~ god — or else they calculate using computational methods based on your ideas of viscosity. Blumlein did not put forward your theory directly but he did use design methods, ~~handle~~ handle pulse work, and deal with delay lines in almost exactly the same way as you would. Teams stuff (and hence Maxwells) is quite useless for its job.

One might think that ~~radio~~ J and M would be more helpful in the design of aerials and radio communication. But I don't think this is so. I ~~false~~ believe this area is almost entirely designed by trial and ~~error~~ error. Rough sums are of course used — and it is not really a good way of doing

The question is — would a design system be worked out — based on your theory — be used in the radio communication area.

I would like to see the ~~answer~~ answer on

1. Given a feeder and ~~dipole~~ consisting of two wires

Ted Newman
C Feb 1990
2 pp

Power Oscillator
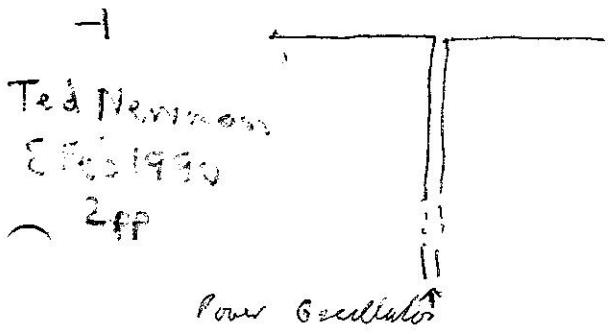
a) Changing state immediately after switch in.

(b) stable state

? How much TEM ~~step~~ trapped how much radiated into space

I've left diameter of wires, spacing etc free

[although results of course depend on sizes]

2. as I but no ~~oscillator~~. Drive is as below

┤ and off feeder.

2. as I put no oscillatory. Drive is as below

End of feeder
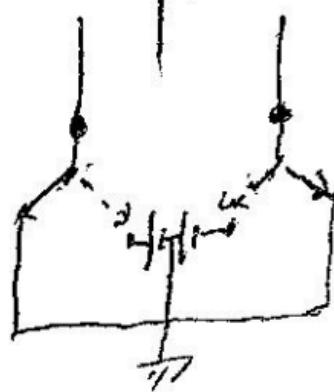
2 pole shortish

This is the Jeans
Electrostatic case

[although its very]
   dynamic

Jeans only gives an end point situation
The system is not 'charged' then instantly fully" charged?
p.10