

The Ofcom Saga

Why Ofcom is not fit for purpose — the PLT issue

Text in blue are quotations from the OFCOM document 2.9.2009.

Ofcom's PLT statement of 2nd September this year (www.ofcom.org.uk/radiocomms/ifi/enforcement/plt/) is a prime example of why it is not fit for purpose as a spectrum regulator and protector. Almost every line contains things that are economical with the truth, irrelevant, or spin – that is, when they are not blatant misdirection, or just plain insulting. Let's look at a few quotes from it...

“Ofcom has exercised its enforcement functions under the EMC Regulations. Ofcom has investigated alleged breaches of the EMC regulations resulting from the supply of Comtrend PLT apparatus by BT..... On the evidence, Ofcom has not so far found that there is a breach of the EMC essential requirements. Ofcom has therefore decided against taking further enforcement action at this time”

But what “evidence” are they talking about? Of the technical evidence submitted in formal complaints by the UKQRM group (www.ukqrm.org) and by the RSGB, Ofcom has refused to respond to any of it.

By all accounts Ofcom has undertaken no technical tests or examined the Comtrend PLT devices (the ones that are the subject of all Ofcom's complaints of interference from PLT devices) against the points made in these complaints.

The RSGB's complaint (published on their website, www.rsgb.org) was made on 31 July, just four weeks before Ofcom's PLT statement. That's hardly sufficient time for them to consider the evidence in detail and then write their response, if they could actually have been bothered to do so. Which they weren't.

Indeed, their response does not even mention the two central points of RSGB's complaint:

- a) Comtrend's PLT products emit conducted noise at levels way above the limits in EN55022, the most relevant EMC product standard
- b) They rely for their EMC Declaration of Conformity on a discredited CISPR committee draft (CISPR/I/89) – simply a committee paper – never a published standard – which anyway was withdrawn several years ago.

Either of these plain and obvious facts should be enough to have their products immediately withdrawn from the entire EU market. That Ofcom have not done so brings the whole process of Single Market Compliance and CE marking into disrepute.

“Over the past 12 months Ofcom has received 143 individual PLT interference complaints; all from radio enthusiasts... There are many other users of the HF Band including long range aeronautical and oceanic communications, the Ministry of Defence and international broadcasters. Ofcom has not received complaints of interference to these services.”

Ofcom are apparently suggesting that complaints from radio enthusiasts are not as important as those from professional radio users. Would Ofcom have acted differently if there had been complaints from the professionals? The EMC Directive and the UK's corresponding 2006 EMC Regulations do not discriminate in this way, and in fact the EMC Directive's Recitals make it clear that Member States must actually protect amateur radio from “electromagnetic disturbance”.

Although professional radio users may not have complained of interference from PLT yet, you can be sure that they have been telling Ofcom how worried they are that it may happen!

As for being economical with the truth, Ofcom's statement just happens not to mention that the total number of complaints they have received about PLT interference, in just over a year, is already their 4th highest after complaints about lighting equipment; thermostats and aerial pre-amps which have been accumulating for several years.

Their statement also just happens not to mention that the *rate* at which they are receiving complaints of interference from PLT is far higher, per million units sold, *than from any other technology.*

“Evaluating the complaints received and the evidence so far obtained, Ofcom has concluded that there does not at present appear to be significant public harm arising from this situation.”

Perhaps Ofcom could point to the place in the 2006 EMC Regulations where it says that the number of interference complaints are a factor in determining whether something meets the Essential Requirements or not? And perhaps they could also point to the place where it says that professional radio users are more important than mere enthusiasts?

And where does the test of “significant public harm” arise in the EMC Regulations? None of these issues exist anywhere other than in the fevered brains of Ofcom's spin-doctors, who hope to convey the impression that they have some meaning – some relevance to the issue of interference from PLT, which of course they do not.

Ofcom has managed to get BT to sort out many of the 143 reported problems with Comtrend PLT products. (BT sell the Comtrend devices bundled with their “BT Vision” product, so that customers don’t have to trail Ethernet cables from room to room, causing unsightly lumps in the carpets).

But the point is that the interference complaints are caused by the fact that these PLT products have a non-EMC-compliant design. If the PLT devices were compliant in the first place, they would most likely not have caused any interference.

“It is recognised that EMC compliant equipment may still, in certain circumstances, have the capacity to cause interference to other radio communications equipment. This may happen due to the manner in which it is installed or operated.”

Well, yes, but this is irrelevant. This is not a situation where a compliant device happens to cause interference to a radio receiver. Comtrend PLT devices are designed in such a way that they are almost certain to cause interference when operated in the vicinity of an HF (short-wave) receiver.

And as to “the manner in which they are installed” – how is this even possible? All you do is plug them in – how wrong can you get that?

“Is there an EU harmonised standard for PLT?
No. The EU has not yet published a suitable harmonised standard for this type of apparatus.”

There is no standard specifically for PLT, but PLT is quite clearly already covered by EN 55022 – whose conducted emissions limits the Comtrend devices exceed by about 30dB. And as for creating “a suitable harmonised standard for this type of apparatus” – it seems that this may prove to be impossible (see later).

“Are existing EU harmonised standards for other products helpful?
Existing harmonised standards are helpful only to a limited extent because they are not specifically intended for this type of equipment.”

Well, the information technology (IT) EMC standard, EN55022, *does* cover PLT (as mentioned above), because PLT devices are simply another kind of IT device. But what the PLT industry lobby wants is a standard that says that *simply because a product is PLT*, it is permitted to emit 1,000 times more radio-frequency noise into the mains network than anything else is legally allowed to emit.

If such a standard was created, you can be sure that other powerful industry lobbies would very quickly insist on having their own EMC standards that allowed *them* to emit 30dB more noise into the mains distribution too.

After all, if PLT products can emit noise at this high level and yet enjoy a presumption of conformity to the EMC Directive, why not their products? Then they could remove all their mains filters and save a very great deal of money.

“Ofcom believes the electromagnetic disturbance

produced by this technology is an inevitable by-product of its operation and not attributed to poor design or manufacturing.”

This is a perfectly correct statement! Only not in the way that Ofcom wants it to appear to the reader.

The Comtrend PLT design is not at all “poor” and neither is their manufacturing. Both are perfectly competently done. It is just that the design of Comtrend’s PLT products is *intended* to put signals onto the mains distribution network at 1,000 times the maximum level required to protect the radio spectrum from interference. So *of course* “the electromagnetic disturbance produced by this technology is an inevitable by-product of its operation”!

Aren’t Ofcom’s spinmeisters clever? One has to be impressed!

But since Ofcom are employing such clever people, why doesn’t it employ them to do something a little more useful, perhaps something that contributes to Ofcom’s legal duty of protecting the radio spectrum?

For example, they might apply their huge and powerful brains to noticing that Comtrend’s EMC Declarations of Conformity are complete eyewash.

“Would the development of an EU standard for PLT help?

Yes. At present, testing and assessment takes place against a backdrop of wider technical uncertainty than is normally the case and there is an increase in the take-up of this apparatus across Europe.

The development of such a standard would be an important step. The standard could be used by manufacturers and Notified Bodies to assess performance against recognised benchmarked values. If the apparatus complied with the harmonised standard under the Regulations, there would be a legal presumption that the apparatus met the essential requirements.”

There is work ongoing in CISPR/I to try to create a product-specific standard for PLT devices, but it suffers from huge difficulties because the opposing factions (PLT manufacturers versus almost everyone else) are each determined to get their own way, and there is no middle ground.

Either PLT emits at 1000 times the emissions limits, or it complies with those limits and doesn’t work.

(At least, this is the entrenched position taken by the PLT industry, although recent work has shown they can emit at the limits given in EN 55022 (the “CISPR limits”) and still achieve data rates that would satisfy the vast majority of their market. But the PLT Industry appears to believe that because it spends so much on lobbying, it should be able to get just exactly what it wants. Unfortunately, because the way the European Commission operates, this is quite a reasonable belief.)

Anyway, an “EU standard for PLT” is a complete *non sequitur*. There is no need for any product to declare compliance to *any* standard. A technical assessment for EMC compliance purposes

can use Harmonised Standards, or not, as the manufacturer sees fit. So why all this fuss about standards?

Ofcom states that it believes that the electromagnetic disturbance is an inevitable by-product of the operation of PLT devices – which is actually an admission of non-compliance! Since they don't appear to understand this basic point, we suggest Ofcom bothers to actually read the Essential Requirements in the UK's EMC Regulations – where they will see that apparatus is simply not permitted to be designed/constructed in a way that interferes with other equipment, and especially not with radio reception.

The fact is – as many have said – broadband PLT (“Greedy PLT” as it is coming to be known) such as the Comtrend products, uses an inappropriate technology. It deliberately produces a lot of electromagnetic energy, then tries to couple it into an unknown impedance of unbalanced, unscreened cables (i.e. the mains distribution network in a house). Any radio engineer would call that a recipe for disaster. And it is.

This is why there is all this fuss about creating an “EU standard for PLT”. Such a standard would effectively authorise the Greedy PLT industry to claim presumption of conformity and legally affix the CE marking to their horribly noisy (by design) products, even though they could not possibly comply with the Essential Requirements.

A final piece of nonsense and obfuscation:

“The EU Commission is aware of concerns resulting from the proliferation of PLT in the EU and in response, issued a mandate (M/313) to the European Committee for Electrotechnical Standardisation (CENELEC) to produce a PLT harmonised standard”

M313 is *totally irrelevant* to the compliance of PLT devices. In fact, it specifically excludes them. Instead, M313 concerns the compliance of complete data *networks*.

Spin, once again. Or is it obfuscation? Whatever, it is intentionally misleading. It is also offensive and/or insulting, because it assumes that readers are so ignorant that they can't tell the difference between a network and a device that connects to it.

M313 has been worked on for 10 years with no signs of success. There has been some further work on it recently, but agreement looks as far off as ever, and even then many commentators suggest that it could never be applied to PLT networks, simply because – by their very nature – most mains networks pre-date the EMC Directive and were never installed for the purpose of carrying data in the first place.

Should we be surprised by all the spin, smokescreening, whitewash, eyewash, hogwash and (no doubt) many other kinds of wash, in Ofcom's PLT statement of the 2nd September 2009? Well, probably not, because Ofcom is manifestly unfit for purpose. We should probably expect that – given its contradictory roles – something had to give, and the PLT statement is just a result of that failure to reconcile opposites.

Ofcom was conceived and created to fill the role of a single

regulator to oversee the apparently converging fields of broadcasting, telecomms and spectrum protection. As far as spectrum protection is concerned, Ofcom is required to be both poacher and gamekeeper. What has happened is that the needs of telecoms and broadband (the spectrum poaching role) have prevailed over proper management of the spectrum (the gamekeeper role).

Someone who has long worked in Government in the UK, and who shall remain nameless (for obvious reasons), wrote the following in a private email recently:

“Having worked in Ofcom I know how that works too. Created by the present Government, it is rather like an out-of-control child that sometimes attacks its own parents and ignores anything it doesn't like. It is dominated by media luvvies and telecoms economists, with spectrum management coming a poor last (just one fact, out of many: they have reduced EMC enforcement/interference staff by 60% since taking that duty over from the Radiocommunications Authority). And it has its own effective spin machine that – like the whole organisation – is not accountable to anyone, which is not surprising when you realise that both of its Chief Executives have been No.10 spin-doctors themselves!”

The only real, sustainable, sensible answer is to remove all EMC regulatory duties from Ofcom and give them to a separate, independent Regulator, who is able to focus on managing the radio spectrum without being dominated by big business interests.

More reasons why Ofcom are not fit for purpose, they refuse to answer questions... Why?

As if the PLT fiasco was not enough, Ofcom have now got themselves into a quite bizarre position over something else.

You may have recently read in Daily Mail Online that Ofcom field staff tracing interference to air traffic control from an oscillating aerial amplifier detected it was integral with the indoor aerial of a lad's TV in his parents' house. The full story is at <http://www.dailymail.co.uk/news/article-1223307/Plane-madness-Schoolboy-TV-aerial-confiscated-Government-officials-interfering-aircraft-signals.html>

Having heard that antenna pre-amps were a major cause of interference to air traffic control it seemed obvious we should ask Ofcom to clarify the situation. And in particular under what powers were they operating.

Once purchased and in use, the EMC Regulations would not apply and we were not aware of any interference Regulations made under the Wireless Telegraphy Act which covered antenna pre-amps.

The email thread that follows gives an accurate account of the Ofcom response.

Sent to Sherington Gaskin OFCOM 29.10.2009

I was interested to see the interference case reported at Mail Online Thursday 29th October. Link below. I am looking to write this up in more detail in The EMC Journal. www.theemcjournal.com

In order that I can be certain of accuracy can you please advise **“under what powers and in which parts of the legislation available to OFCOM, were your staff operating in this case?”**

Thank you in anticipation of your assistance.

Sent to Sherington Gaskin 5.11.2009

I would appreciate a response to my email sent 29th October.

Received from Rhys Hurd 08.11.09

Alan, Your question regarding the faulty booster aerial story has been forwarded on to me. In response, this case of interference was conducted without invoking any of our legislative powers, and was concluded through the co-operation of the user of the faulty aerial.

Sent 08.11.09

Thank you Rhys for your response. I am certain you appreciate that this scenario has raised some interesting questions.

Whilst I fully understand that it is preferable to resolve these matters without resort to legislative powers, I assume OFCOM staff must have been working with the backing of some legal power, especially for interference

to a safety service.

What would happen in a similar case if for example, the householder was not co-operative or was away. **Please advise... under what powers and in which parts of the legislation available to OFCOM, your staff would operate?**

Look forward to your response. Just for the record what is your position within OFCOM.

Received 09.11.09

Alan, Apologies, I'm a communications manager at Ofcom.

I really don't want to get drawn into a hypothetical discussion on this – and would rather deal in facts only.

Let me know if I can help with anything else.

Sent 09.11.09

Rhys, why do think you are being drawn into something (you are not)... you are being asked to answer a perfectly reasonable question. Something I would have thought well within the capabilities of an OFCOM Communications Manager. I would still like an answer to the question please... under what powers and in which parts of the legislation available to OFCOM, your staff would operate? I am struggling to understand your reluctance to answer

Received 09.11.09

Alan, As I said, I'm not willing to discuss hypothetical's.

If I can help with anything else, please let me know.

Sent 09.11.09

Rhys, This is not hypothetical it is a perfectly reasonable question, please explain why you do not consider it as such. I am surprised that OFCOM refuse to answer a question from the Press. Is your stance supported by the senior Management of OFCOM?

Received 09.11.09

Alan, I'm not comfortable answering hypothetical scenarios like the one you've presented.

Sent 09.11.09

This is not finished. You are wrong, you should be prepared to answer what is a perfectly reasonable question (assuming of course you know the answer) if you do not, then please forward my request to someone who does. I want this question answered.

This was unanswered.

Sent 18.11.09

Rhys, I am just about to put the Journal to bed. In order to ensure there is no misunderstanding. Will you please confirm you are not prepared to answer my question. Alternatively you could answer it.

Received 19.11.09

Alan, my position has not changed on this.

Your first question was based on a specific case. My answer to that question was very clear: "this case of interference was conducted without invoking any of our legislative powers, and was concluded through the co-operation of the user of the faulty aerial."

Your second question was hypothetical. And as I keep saying, I am not willing to discuss hypothetical's.

I trust this will be accurately represented.

Sent 19.11.09

Yes, it endorses the fact that OFCOM are not fit for purpose.

Watch this space.

Frankly we find it quite appalling that Ofcom would not answer a simple question of fact from the Press. Why?

It so happens we read in RSGB's magazine RadCom for December, an item about interference from plasma screen TVs and cited a non-interference condition in the TV licence. Coincidentally, their story also touched on the same question of radiating pre-amps. Even though it looks clear to us both... that the Communications Act specifically allows them to act under this TV licence condition, Ofcom apparently denied they had any powers to act here.

Could these be the reasons why?

1. Ofcom don't know what powers they have, so they are covering up.
2. They have no powers and have as much legal authority as the man in the street to stop interference to safety services, but they don't like to admit it.
3. They've got themselves in a mess over the law, including the TV licence condition, and don't know what to say.
4. Something else, but they won't tell.

From our perspective it simply endorses our opinion that Ofcom... is not fit for purpose.