

MELCARNE Fabrizio (ENTR)

From: Richard Hankins [g7rvi@richard-hankins.org.uk]
Sent: mardi 23 septembre 2003 16:00
To: BREFORT Thierry (ENTR)
Subject: PLT submission

Thierry,

I understand you are gathering views for and against the use of Power Line Telecommunications (PLT) for provision of broadband internet services. These are my arguments against adopting it.

1. Access PLT, where data is fed to subscribers' dwellings and businesses via the mains power distribution network has been shown to have excessively high levels of RF radiation throughout the HF spectrum (1.6 - 30MHz), as is evident from various tests and reports in the public domain. The HF spectrum is used by a large number of services, including defence, navigation (air and sea), broadcasting, time and frequency standards and amateur radio. These are all in danger of receiving excessive levels of interference from PLT operations, which may render their services unreliable or at worst, unusable.

2. Companies trialling PLT technology have so far argued that the existing EMC emitted interference limits (under the EC EMC Directive) should be scrapped for their benefit. They are thus confirming the interference potential of their technology, and are stating that the HF spectrum is expendable to allow their commercial business to proceed.

3. Mains distribution to individual premises in many areas (including UK) is via overhead lines, rather than underground shielded cables. These overhead lines will act as very efficient radiators, now only to surrounding properties and facilities, but also via skywave propagation to other parts of Europe. The aggregate effect of many PLT installations via skywave propagation has barely been considered to date.

4. Not only will PLT cause unacceptable HF interference to other users, little appears to have been done to deal with any interference that broadband via PLT customers may suffer from licensed and properly operating HF transmitters. Licensed amateurs for instance may transmit at power levels of 400W into aerials with 6dB gain, thus producing radiated powers of over 1kW. Field strengths of well over 1V/m are likely at a distance of 100 metres, and it is far from clear that PLT services can operate correctly in such fields.

5. Broadband access is technically possible via other means than using power line cables that were not designed to carry HF signalling. These other

means, including ADSL, cable, FWA and satellite, are all proven and available technologies. Furthermore none of them have the interference problems of PLT. There can be no possible technical argument for the use of PLT in preference to these alternative means.

6. The only possible case for PLT is a commercial one, where it may be cheaper than the proven alternatives. However, I believe any company receiving approval to deploy PLT should also be made liable for the consequential loss of other HF services. I would thus expect the company to compensate me, if my use of the HF amateur bands were to be disrupted by their PLT service. I suspect if such compensation were written into any licence granted to such companies, then they would find that case for PLT would become very much less attractive.

best regards

Richard Hankins

Richard Hankins
(Holder of a full amateur radio licence in the UK, callsign G7RVI)
Cawdor House
Cawdor
Ross-on-Wye
Herefordshire HR9 7DN
UK
Tel: +44-1989-769654
Email: [trh01 @richard-hankins.org.uk](mailto:trh01@richard-hankins.org.uk) <<mailto:trh01@richard-hankins.org.uk>>