

PA CONSULTING GROUP

UNDERSTANDING THE LIKELIHOOD AND EXTENT OF RF INTERFERENCE CAUSED BY IN-HOME PLT DEVICES

Meeting No 1: Full Team Kick-Off Meeting

Ofcom, Riverside House, London

Thursday 13th August 2009
10:00 - 11:30hrs

MINUTES OF MEETING AND ACTIONS ARISING

Note: The following people have actions against them in the minutes: please read these minutes and ensure you carry out your actions in a timely fashion: [X] s.40, [X] s.40, [X] s.40

Item	Action Leader	Action by
1. INTRODUCTIONS		
The attendees introduced themselves and explained their project role.		
[X] s.40– Ofcom (Programme Manager)		
[X] s.40– Ofcom (Spectrum Policy group)		
[X] s.40– Ofcom (Investigation Policy Manager)		
[X] s.40– Ofcom (International Broadcasting Co-ordination)		
Graham Warren (GW) – Ofcom (Head of Broadcast Technical Policy)		
[X] s.40 – PA (Partner in Charge)		
[X] s.40– PA (Programme Manager)		
[X] s.40– PA (Scenario definition and technical analysis)		
[X] s.40– PA (Scenario definition and technical analysis)		
2. CLARIFY OFCOM'S REQUIREMENTS		
[X] s.40 presented the study objectives, work items and potential victim receivers to be considered as suggested by Ofcom's ITQ.		
[X] s.40 confirmed that this study is more future looking than the PLT related complaints currently being dealt with by [X] s.40. The study should be looking ahead to the situation over the next 5-10 years and will be driven by consumer trends over this timescale and choices made between PLT and alternative technologies.		
[X] s.40 commented that another factor to consider might be how in-home networking will increase if fibre to the home deployment becomes widespread in the UK.		

[X] s.40 also commented that the only real complaints about PLT have come from the Radio Amateur community. There has been concern about PLT from the broadcast community but they have yet to produce evidence of interference from PLT devices. The only complaints of interference in broadcast bands have been against radio amateurs rather than PLT.

[X] s.40 commented that AM broadcasting is not as strongly followed in the UK as it once was as many listeners now use the Internet instead. However, if we hope to have BBC World Service received in other countries around the world we should ensure that SW radio listeners in the UK are protected from potential interference sources.

It was agreed that the study scope would only cover in-home networking PLT devices and that broadband powerline access to the home is out of scope.

On study work items, [X] s.40 commented that the real focus of the study was on the last two work items i.e. developing scenarios covering possible future deployment densities of PLT and the modelling activity to quantify interference effects of PLT in each scenario.

There was much discussion around the victim systems to be considered in the study and their relative priority. A rank of importance was assigned to each victim receiver on a 0-5 scale as follows (5 is most important and 0 is excluded from the scope):

- 5 • Emergency communications
- 1 • Short wave broadcasting
- Land stations for trans-oceanic aviation and offshore marine
- 5
- 3 • Military and diplomatic communications
- 4 • Amateur & CB radio
- 1 • Frequency references and time signals
- 2 • Scientific research, including radio astronomy
- 0
- On-site paging
- 0
- Analogue cordless phones

Discussion on this list of victim systems included:

- Analogue cordless phones were not mentioned in the original Ofcom ITT as these are being phased out and so not a

concern.

- Emergency communications are important and cover the ITU spot frequencies for applications such as ship to shore and mountain rescue.
- Amateur radio – Amateur radio is a relatively high priority as most of the complaints about PLT have come from this group.
- The land stations for trans-oceanic aviation and offshore marine provide an important service and so is high priority. However, it was thought that these sites would generally be in remote areas and not be likely to have PLT nearby. Further research has found a land station at Shannon in the Republic of Ireland to be the only one used for transoceanic aviation. This victim receiver type will be covered in the study to find a suitable “keep out” area around these sensitive sites for PLT devices.
- Military and diplomatic – It is difficult to obtain information on the military and diplomatic bands.
- ADSL & VDSL – There was some discussion about whether PLT would affect ADSL and VDSL as there was some overlap in frequency range. The PA study will keep this in mind and report any feedback from stakeholders about potential interference with this service. However, ADSL and VDSL will not be modelled in detail as with other victim receiver types.

Action: PA to review if MOD are concerned about PLT in HF bands.

PA

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3. CONFIRM PA'S APPROACH

[§] s.40 gave an overview of PA's approach to the PLT study including a project plan, deliverables and an introduction to the study team.

The study deliverables were agreed as proposed to be a draft final report after approximately 3 months, the full final report in 4 months and the interference model used in the study.

[§] s.40 and [§] s.40 confirmed that PA would not have to give out briefing sessions to industry groups. However, [§] s.40 offered to provide contact details for UKQRM and RSGB and PA offered to contact them as part of the study, being clear as to the research nature of the study.

Action: [§] s.40 to provide contact details for UKQRM and RSGB and PA to contact these groups

1/9/09

[§] s.40
& PA

[§] s.40 gave some background on how Ofcom is currently dealing with complaints about PLT devices. He confirmed that the vast majority of complaints are based on interference from BT Vision installations.

There is currently only one long term case of PLT unresolved. The other cases have been easily fixed either by replacing the PLT devices with a short Cat-5 Ethernet cable (where using PLT was overkill) or updating the PLT device to one that uses notches. Comtrend has learnt from early complaints and the latest devices from them include notching.

Action: [§] s.40 to provide details of Ofcom investigation into PLT complaints to date. [§] s.40

1/9/09

[§] s.40 confirmed that Ofcom is more concerned about the effect of PLT on other spectrum users rather than direct compliance with harmonised European EMC specifications. Hence the focus of this study should be on the potential to cause interference rather than EMC testing.

[§] s.40 indicated that he had figures for the sales of PLT chipsets and would be able to provide these to help the forecast the uptake of PLT devices in the study.

Action: [§] s.40 to provide PLT chipset sales figures

[§] s.40

1/9/09

[§] s.40 indicated that UPA is less efficient in standby mode compared to Homeplug devices. David added that ETSI has been looking into standby modes of various PLT devices and [§] s.40 offered to provide details of this group.

[§] s.40

1/9/09

Action: [§] s.40 to provide details of ETSI group examining PLT device standby times

[§] s.40 indicated that BIS had measured emissions from 25 PLT devices and offered to provide this report to PA to consider in the study.

[§] s.40
& PA

1/9/09

Action: [§] s.40 to provide BIS report detailing PLT testing

21/8/09

Action: PA to provide a request to Ofcom listing documents and contact details that would be of assistance to the study

4. UPDATE ON PROGRESS TO DATE

This agenda item and the corresponding slides were not discussed in detail due to lack of time in the meeting.

On the interference model outline, [§] s.40 questioned the validity of modelling interference from an OFDM source in a narrowband receiver as white noise.

Action: PA to investigate the interference of a wideband OFDM signal when it is received in a narrowband victim system. Can this be likened to AWGN?

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5. DISCUSSION, ACTIONS AND NEXT MEETING

[§] s.40 asked if PA could disclose that they were undertaking this study for Ofcom. [§] s.40 confirmed this was OK, subject to it being made clear that the study was a research project..

[§] s.40 asked if Ofcom could gain access to the ITU G.hn standard.
[§] s.40 offered to obtain a copy of this.

Action: [§] s.40 to provide PA with a copy of ITU G.hn (ITU-T G.9960) [§] s.40 1/9/09

[§] s.40 gave background on the situation in Europe with regard to PLT regulation. He indicated that in 2005 the Commission of European Communities urged regulators to monitor the situation with PLT devices and remove unjustified regulatory barriers to these devices. The Swedish regulator has been the first to consider prosecution a PLT device manufacturer. Similar action is being considered by Ofcom in a similar case. In both cases the “essential requirements” of EMC directive will be key to a decision.

Action: [§] s.40 to provide more information actions being taken against PLT manufacturers at a European level. [§] s.40 1/9/09

An exact date was not set for the next meeting, but it was agreed that it should be in approximately 6 weeks time.