

NOT FOR DISCLOSURE OUTSIDE THE TWG**RA Technical Working Group Compatibility of VDSL & PLT with Radio Services In the Range 1.6 to 30 MHz****Notes of the Final Meeting held 8th April 2001 at DTI Headquarters, 1 Victoria Street, London****Present:**

Bob Barron	RA2/STU	Chairman
Robin Donoghue	RA2/STU	Secretary
Bill Martin	RA3/ERU	
Colin Wooff	RA3/RTCG	
Mike Lipscomb	RA EPU/RA3	
John Long	DTI/CII	
Dave Clarkson	Oftel	
Keith MacLean	Scottish & Southern Energy	
John Ryan	Electricity Association	
Trevor Morsman	BT Exact Technologies	
Dave Standley	BT Exact Technologies	
Darren Carpenter	BT Exact Technologies	
Bob Siu	Home Office	
Andy Heap	Fujitsu Telecoms Europe	
John Newbury	Open University	
Paul Brown	White Box Solutions	
John Mettrop	CAA	
Andy Rook	Merlin Communications	
Martin Davies	MoD	
Mark Budd	Kingston Communications	
Dave Willis	CIL	
Nick Astley-Cooper	Radio Authority	
Nick Moldon	RA BPMU/RA2	
Kevin Foster	BT Exact Technologies	
Les Humphrey	BT Exact Technologies	
Chris M ^c Sweeny	QinetiQ	
Chris Elliot	Pitchill Consulting	
Paul Fonseka	RA2/SPES	
Robin Page-Jones	RSGB	
Hilary Claytonsmith	RSGB	
Jonathan Stott	BBC R&D	
David Eardley	Marconi	
Garry Stansfield	Infineon Technologies	
Clive Dawkin	RA2/SPES	

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1. Opening and Apologies for Absence

The Chairman opened the meeting, welcomed all present and asked for apologies for absence. Apologies were received from Anthony Lole of Scottish and Southern Energy. In Antony's absence, Keith Maclean represented SSE.

The Chairman stated the purpose of the final TWG meeting was to review the draft Final Report. He referred to three documents; the agenda TWG (07)01; the notes of the previous meeting TWG (07)02 and the current draft Final Report TWG (07)09. All had been posted on the TWG server and sent by e-mail.

2. Notes of previous meeting

The Chairman proceeded to review the notes of the previous meeting held on 26th November 2001 and a number of corrections were notified:

Section 4 paragraph 2: John Long requested "for all communication." be removed from the last sentence.

Section 5 paragraph 3: "Compared" is to be substituted for "determined" in the second from last sentence.

Section 6 last sentence: "the contribution" is repeated as a grammatical error.

Section 8.1: An additional sentence should be included to state, "The chairman thanked Hilary Claytonsmith (RSGB) for her account and reminded the meeting that the RA was responsible within SE35 for advising the official UK administration view which may not always necessarily accord with that of other independent UK members".

Section 8.2: Kevin Foster stated "masts" should be replaced with "masks" and the last sentence should be "The target date for revision to both standards is September 2002".

With these amendments, the minutes were accepted as a true record of the previous meeting.

Action: Secretary to place revised version of minutes on TWG server

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3. Final Report

The Chairman presented **TWG (07)03**, a Powerpoint presentation describing the approach adopted to developing the draft Final Report. He outlined the various chapters and identified contributors and members of the drafting group. He reminded the meeting that the main body of the report must remain factual. A number of organisations represented in the TWG had provided separate submissions outlining their respective positions and these had properly been included as annexes at the discretion of the originators. The RA was the responsible editorial authority for the main text, that is chapters 1 to 9 inclusive.

3.1. Overview of report

The Chairman advised that the conclusions to the final report, which formed chapter 9, were not yet fully agreed by the TWG drafting group. A drafting group meeting is scheduled to follow this meeting and the conclusions will be posted on the website once agreement has been reached in the drafting group. Additionally, because the main body of the report, chapters 2 to 8 inclusive, consisted of contributions from a number of authors, there remained some variations in style, which would need addressing. Some grammatical and typographical errors were also still evident because proof reading had not been completed. Members were asked to accept the current draft on this basis and the meeting was requested to review chapters 2 to 8 of the report for completeness against the stated terms of reference of the TWG.

Robin Page-Jones commented that not all appendices were available to the whole TWG, as some had not been posted on the RA website. Also, the list of appendices in the draft report did not identify them by TWG paper number.

Action: ***Secretary to ensure all appendices are posted on TWG server and that the final draft report identifies the TWG papers correctly.***

3.2. Review of draft Final Report

The Chairman invited a discussion and review of each of the chapters, 2 to 8 inclusive. These had been sent to members and placed on the TWG server as **TWG(07)09**.

3.2.1 General

Paul Brown stated he had submitted a paper concerning "comments on measurements". He requested this be listed as an appendix.

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Action: *Secretary to add to list of appendix and ensure report is on the website.*

Chris Elliott stated he had prepared a document describing the "legal case" concerning regulation of these technologies and requested this be considered for inclusion.

Action: *Chris Elliot to forward paper to secretary for RA3/EPU to consider.*

Keith MacLean asked if the OneLine appendix could be replaced. The Chairman advised that the reference to OneLine in the report was only minor and was intended to show that repeater technologies for PLT existed. It was relevant to discussion in chapter 3 of the report. He felt that there was no problem in principle, in replacing the OneLine text with description of another proprietary system but Roger Marshall who had supplied the original text was not present today. The Chairman said that he would therefore need to speak to Roger to confirm that he was content with the contribution being omitted or replaced.

Secretary's note: *All other drafting changes proposed in this section were minor, and unanimously accepted for inclusion in the final document.*

3.2.2 Chapter 2 – Introduction and background

Kevin Foster stated that there needed to be text on VDSL forums.

Action: *Kevin Foster to supply text to the Secretary.*

There was a discussion on the description of standards bodies. John Newbury felt that the current drafting of chapter 2.6.3 was insufficiently balanced and focussed too heavily on WG4 activities. John advised that most of the activities of WG4 were concerned with frequency bands below 1.6 MHz and therefore questioned the need for this information to be included. Also, he felt that further text was required for all other WGs to provide a more complete account. The Chairman agreed that the text on WG4 must be rationalised, noting that WG4 is yet to commence work in respect of filters at HF.

Action: *John Newbury to send proposed text for section 2.6.3, to the Secretary for consideration in the final draft.*

Action: *RA to add text on EMC Directive and note the work of SE35 are doing for the radio spectrum up to 3 GHz.*

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Secretary's note: *All other drafting changes proposed in this section were minor and unanimously accepted for inclusion in the final document.*

3.2.3 Chapter 3 - Description of wired broadband technologies

There was a discussion on the deployment of PLT in Germany. Robin Page Jones stated that the RSGB had received some feedback that NB30 was not being met in all installations. Keith MacLean agreed this possible.

Jonathan Stott stated that paragraph 3.4.2 needed to expand on polling rates. Robin Page-Jones suggested a “hot and cold start” paragraph should be included, similar to that in the VDSL chapter 3.4.1. Paul Brown agreed.

Action: *Paul Brown to draft paragraph on Hot and Cold starts for PLT networks.*

Secretary's note: *All other drafting changes proposed in this section were minor and unanimously accepted for inclusion in the final document.*

3.2.4 Chapter 4 – Description of spectrum considered

Secretary's note: *All drafting changes proposed in this section were minor and unanimously accepted for inclusion in the final document.*

3.2.5 Chapter 5 – Description of radio services using spectrum considered

John Mettrop stated that there are International Aeronautical Agreements on protection of services that cover frequencies beyond just search and rescue.

Action: *John Mettrop to supply text for chapter 5.1, on protection of frequencies covered by International Aeronautical Agreement.*

Robin Page-Jones stated that the frequencies listed in the military section 5.4, were not the military allocation, but rather the frequencies the military have access to.

Secretary's note: *All other drafting changes proposed in this section were minor and unanimously accepted for inclusion in the final document.*

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3.2.6 Chapter 6 – Summary of stated radio protection requirements

There was a discussion on the inclusion of both FCC and cable TV regulations. The Chairman noted there is a requirement for text to clarify the distinction between enforcement and compliance standards. John Mettrop stated that the FCC may prosecute, where interference is caused to an aircraft, even when an emission limit is being met. Paul Brown stated that wireless to wireless interference remains an issue.

Action: *RA to add text explaining in general terms, the distinction between enforcement and compliance limits.*

Secretary's note: *All other drafting changes proposed in this section were minor and unanimously accepted for inclusion in the final document.*

3.2.7 Chapter 7 – Field measurement programmes

There was a discussion on the test methods utilised in both the VDSL and PLT tests. Colin Woof stated that the text needed to highlight more, the shortcomings of the measurement system, and clearly state that the graphs indicate the measurement system noise floor only.

There was discussion on the inclusion of results of emissions under fault conditions. The Chairman advised that the drafting group had agreed that the results of tests where faults had been deliberately introduced should not be included, as they were unrepresentative and could be misleading.

John Mettrop felt that observations should be made in paragraph 7.2.1, from the PLT measurements taken above the street cable runs, the cumulative effects from these cables is as significant as the radiation from dwellings and commercial premises.

There was a discussion on regression. Dave Clarkson stated there were significant differences between results shown in different parts of this report that are not simply the difference in near and far field theory. Paul Brown stated that the tests conducted were limited and only a snapshot. Robin Page-Jones agreed, stating that the uncertainties were many.

Secretary's note: *All other drafting changes proposed in this section were minor and unanimously accepted for inclusion in the final document.*

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3.2.8 Chapter 8 – Cumulative effects

Jonathan Stott suggested that assumptions should be stated at the start of this chapter. Paul Brown advised this was problematical as there are many variables and uncertainties. He further questioned the assumptions listed at paragraph 8.4.2. The Chairman asked the CAA to review.

Action: ***John Mettrop to review assumptions at Chapter 8.4.2 and send comment to the Secretary.***

Hilary Claytonsmith questioned whether this report should concern itself with other non-intentional radiators. The Chairman stated it must, not least to state the current radio environment. John Long reminded the meeting that the mathematical models proposed in this chapter, required validation and other non-intentional radiators provide a possible opportunity to do this, as they are already widely utilised. The Chairman agreed with this proposition, stating that the TWG tests were limited, with consequent uncertainties. Kevin Foster agreed that the input parameters to the models were a best estimate only.

Mark Budd felt that it would now be practical for example, to undertake a practical test of the cumulative effects of noise from a number of ADSL lines in an attempt to determine the validity of a model.

The Chairman advised that the style of chapter 8 is such that it effectively summarises the stated positions of a number of TWG interests based on individual contributions concerning cumulative effects. John Mettrop felt that the chapter 8 papers must be judged in the conclusions.

There was some comment on the assumptions claimed in various submissions. The Chairman stated that there will be introductory text added to indicate what particular authors were attempting to show. Also, there will be a conclusion that the input parameters to all models are uncertain.

Action: ***RA to draft additional text to summarise what the particular authors were attempting to show.***

Secretary's note: ***All other drafting changes proposed in this section were minor and unanimously accepted for inclusion in the final document.***

4. The Way Forward

The Chairman stated the timescale for submission of the final report to the UK Spectrum Strategy Committee (UKSSC). He added that it is unlikely that the

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report will be completed and proof read prior to the UKSSC meeting later this month. However, a summary of the conclusions agreed by the drafting group and relevant Government departments would be provided for information. It was expected that any official UK policy proposals would be developed subsequently through a dialogue between interested departments. Such policy would need to be endorsed by the UKSSC before being submitted to Ministers for agreement. This was unlikely before the latter part of 2002.

The Chairman added that it was nevertheless intended that the report would form a UK input to CEPT SE35, on the understanding that it did not represent an official UK administration policy view.

It was agreed that RA, taking account of the actions from this meeting would complete the final drafting. The complete final draft report, including conclusions and executive summary, would then be placed on the TWG server. Members would be allowed two weeks, following placement on the server, to comment.

Action: *Secretary to co-ordinate responses to actions at this meeting, complete drafting and place final draft report on TWG server, notifying all TWG members once this had been done.*

Action: *All TWG members to provide secretary with final comments on draft final report within two weeks of it being placed on TWG server.*

5. AOB

The Chairman confirmed that the RA will be the final editorial authority for the TWG Final Report and make any decisions needed in the event that the TWG fail to agree particular issues and where there were conflicting comments on the final draft.

The Chairman thanked all those who had taken part in the TWG, especially those who had helped in the practical testing and the drafting of the final report.

**Science & Technology Unit (STU/RA2)
Radiocommunications Agency
May 2002**

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