



Dr Ross Patterson
Telecommunications Commissioner
Commerce Commission
44 – 52 the Terrace
Wellington

By email to: ross.patterson@comcom.govt.nz

30 June 2008

Dear Ross

VDSL IMP Rules

On 7 November last year, the Commerce Commission ('Commission') made a Standard Terms Determination under section 30M of the Telecommunications Act 2001 ('the Act') for the designated service Telecom's unbundled copper local loop network ('UCLL STD'). The New Zealand Copper Local Loop Interference Management Plan ('IMP') is a term of the UCLL STD. The IMP manages interference between services using Telecom's copper local loop network. At paragraph 446 of the UCLL STD, the Commission required Telecom to complete the inclusion of VDSL in the IMP by 30 June 2008, or sooner if practicable. The Commission requested that Access Seekers and the TCF work with Telecom to achieve this date.

Background

On 7 March 2008, in response to a request from the Commission, Telecom provided an update on the UCLL STD requirement to include VDSL in the Interference Management Plan ('IMP'). We noted that the Australian process had tracked more slowly than anticipated and asked for feedback from the Commission on the possibility of delaying the introduction of VDSL to ensure consistency with Australia.

The Commission sought the views of the industry. Orcon, Vodafone and CallPlus submitted that it was essential to maintain the existing timeline for including VDSL in the IMP; implicitly, the submissions accepted a decoupling from the Australian process. TelstraClear also indicated that it would accept VDSL rules formed independently of the Australian process.

On 24 May, the Commission wrote to Chorus stating that, in the light of industry submissions, it would not be appropriate to amend the date for inclusion of VDSL in the IMP.

Technology Standards Based Approach

The IMP has adopted a basis system minimum performance methodology, aligned with the Australian approach. Australia is unique in specifying a "performance outcome based" rule set for spectral management. Most other jurisdictions manage Spectral Compatibility by defining technology specific configuration and deployment limits. This more common methodology is technology standards based and requires that the technology is configured within the defined limits for the corresponding deployment guidelines. Performance

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predictions under this approach become informative rather than normative in the spectral plan. Normative technical parameters for each technology class include:

- Power Spectral Density
- Aggregate Transmit Signal Power
- Deployment limits where appropriate

This approach will shift the normative IMP focus from minimum worst case bit rates for a technology class to standards based configuration limits for VDSL.

The Draft VDSL IMP Rules

On 16 June, we distributed to the TCF a draft of the IMP amended to complete the inclusion of VDSL (‘the draft VDSL IMP’).

Submissions on the draft were received from Vodafone New Zealand Limited (‘Vodafone’), Orcon Limited (‘Orcon’) and Telecom Wholesale. Chorus amended the draft VDSL IMP to accommodate comments from Access Seekers and Telecom Wholesale. A table setting out the submissions, and the Chorus response, is attached with this letter.

On 26 June, the TCF held an audio meeting to discuss the submissions and Chorus’ responses. In attendance were representatives from Chorus, Vodafone, Orcon and Telecom Wholesale. The minutes of the TCF meeting, and subsequent related correspondence are also attached with this letter.

Chorus understands that the amendments it has made to the draft VDSL IMP have met the concerns of Access Seekers and Telecom Wholesale.

The IMP including VDSL

Attached with this letter is the IMP amended to complete the inclusion of VDSL. With delays in the Australian process, and the consequent change to a technology standards based approach, it was not practical for Chorus to complete the inclusion of VDSL in the IMP sooner than 30 June. We should note that we have only added text and have not altered any of the text as determined in the UCLL STD. The IMP documents are marked-up to demonstrate the amendments.

Our understanding is that once the Commission has acknowledged the receipt of this letter, the documents attached in Appendix 2 will be the IMP. We seek confirmation from the Commission that this understanding is correct.

Proposed details of the VDSL soft launch are set out in an Appendix to this letter. The exact details will be confirmed after further discussion with interested Access Seekers and Telecom Business Units.

The IMP Change Mechanism

In the process of amending the IMP to complete the inclusion of VDSL, Chorus identified a number of non-technical errors in the IMP. Clause 47 of the UCLL STD General Terms provides a change mechanism for the IMP. Chorus intends to discuss these errors with the TCF before proposing any changes under the terms of clause 47.

Should you have any queries, please do not hesitate to contact me or Sean Mosby on (04) 382 5223 or at sean.mosby@chorus.co.nz.

Yours sincerely

Handwritten signature of Sean Mosby in black ink, written in a cursive style.

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Chorus

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Appendix 1 – Soft launch for VDSL

In its letter of 16 June, which accompanied the draft VDSL MP, Chorus proposed that VDSL technologies be deployed on the Chorus local loop network in the following manner:

- (1) Access Seekers or Telecom Business Units provide evidence of successful vendor or user trials for the VDSL equipment they wish to install;
- (2) VDSL be introduced with a soft launch period of two months following initial deployment of equipment. The soft launch would be limited to a single exchange agreed between Chorus and the first Access Seekers and Telecom Business Units wishing to deploy VDSL technology;
- (3) Service levels would apply during the soft launch period, but service level penalties would not apply; and
- (4) Within 15 working days of the conclusion of the soft launch period, Chorus will provide a soft launch report to Access Seekers and Telecom Business Units who have deployed VDSL technologies during the soft launch period.

Chorus sought comment from Access Seekers and Telecom Business Units on this proposed process for deploying VDSL technologies on the Chorus local loop network.

Vodafone submitted that the soft launch should include five exchanges: Ponsonby, Mt Eden, Airedale St, Mt Albert and Ellerslie. Vodafone also queried what evidence Access Seekers would be required to provide of successful user trial for the VDSL equipment they wish to install. Orcon has also provided Chorus with a list of proposed exchanges.

We have considered the submissions from Access Seekers and Telecom Business Units, and have revised the details of the soft launch to accommodate their requirements. Our preliminary view, pending further discussion with Access Seekers, is that the scope, objectives and criteria for the VDSL Soft Launch should be:

Scope

- 1) Provide a launch of VDSL services at five exchanges throughout Auckland to test a variety of cable characteristics; and
- 2) The exchanges selected will provide a representative sample of copper line types.

Objectives

- (1) Gain an understanding of the effects VDSL has on other technology based services;
- (2) Gain an understanding of the effects VDSL has on other End Users of broadband services;
- (3) Check compliance against the IMP;
- (4) Confirm the validity of the IMP, including calculated a and b parameters
- (5) Check compliance to Radiocommunications Regulations; and
- (6) Ensure the involvement of, and determine the affects (if any) on, other interested parties.

Criteria

The proposed criteria for the soft launch is set out below. The exact criteria and the appropriate testing method will be confirmed in discussions with Access Seekers. Testing methods will be subject to the ability of participants to test these criteria.

Test	Pass criteria	Action if failed
Level of RF radiation emitted within exchange, and from outside plant.	Compliance with the Radiocommunications Act 1989, and the Radiocommunication Regulations 2001 (administered by the MED)	Cease service and refer to the Commerce Commission
Impact on existing ADSL and ADSL2+ customers. Test average line performance at start and end of soft launch by all Access Seekers and Telecom Business Units.	Average performance reduction of less than 5%	Refer to TCF and Commerce Commission for changes to IMP. Cease VDSL service until resolved
PSD equivalence at the MDF. Measure PSD on test lines.	Equivalence of PSD within 5%.	Review issues causing discrepancy including the underlying basis for calculation of "a and b" parameters. Refer to TCF and Commerce Commission for changes to IMP.
Compare upstream bit rates for lines within the reference length, against calculated rates from the IMP tool	Achieved bit rates exceed those calculated for 99% of lines.	Refer to TCF and Commerce Commission for changes to IMP.

The soft launch will be implemented in the manner described below:

- (1) The soft launch will be a period of two months following the initial operation of Access Seeker or Telecom Business Unit equipment in VDSL mode;
- (2) The soft launch will be limited to five exchanges. Chorus is currently in discussions with Access Seekers to determine the exact five exchanges that will be used in the soft launch;
- (3) The Service Levels set out in the Service Level Terms of the UCLL and UCLL Co-location STDs will apply during the period of soft launch, but the Service Level penalties will not apply;

- (4) During the course of the soft launch it is expected that Chorus, the Access Seekers and Telecom Business Units will maintain an open dialogue to resolve any issues found.
- (5) Within 15 working days of the conclusion of the soft launch period, Chorus will provide a soft launch report to Access Seekers and Telecom Business Units who have operated equipment in VDSL mode during the soft launch period; and
- (6) Following the release of the soft launch report, Chorus will meet with Access Seekers and Telecom Business Units to resolve any outstanding problems that have been identified in the report.

Exact implementation details of the soft launch will be determined in discussions with Access Seekers and Telecom Business Units, and will include other interested parties, such as the ham radio community. Those discussions will commence as soon as possible.