ACIF G618:2004

AUSTRALIAN COMMUNICATIONS INDUSTRY FORUM

INDUSTRY GUIDELINE

Approval of Non-Deployment Class Systems under ACIF C559 Industry Code

Industry Guideline –***Approval of Non-Deployment Class Systems under ACIF C559 Industry Code***

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1 INTRODUCTION

1.1 Introduction

1.1.1 ACIF C559 Unconditioned Local Loop Service (ULLS) Network Deployment Rules Industry Code provides an alternative compliance path for Non-Deployment Class Systems which may not meet the requirements of the Deployment Classes in ACIF C559.

1.1.2 In order to prove compliance of Non-Deployment Class Systems, the Spectral Compatibility Determination Process detailed in Part 2 of ACIF C559 must be followed.

1.1.3 Telstra has provided through ACIF a software tool for calculation of the crosstalk scenarios in ACIF C559, and documented results from that tool may be used as supporting evidence for registration. Telstra provides the software tool free of charge to affected parties when they register and accept the conditions in the Licence Agreement.

1.1.4 This Guideline describes the process for proposing Non-Deployment Class Systems and gives detailed requirements for the information which must be submitted by the proposer.

2 BACKGROUND

2.1 How to Propose a Non-Deployment Class System

2.1.1 ACIF C559:2003 gives the requirements in Clause 8.4.3 of Part 1 for operation of a Non-Deployment Class System. These are summarized as follows:

(a) The parameters of the Non-Deployment Class System must have been provided to ACIF and the Access Provider.; and

(b) The Non-Deployment Class System must comply with the parameters given. (i.e. the user must have a test laboratory report demonstrating compliance with the parameters); and

(c) The Non-Deployment Class System must be compliant with the Unacceptable Excess Power and Unacceptable Interference into a Basis System performance requirements of the Code. That is, the relevant parameters must be used in a calculation based on the Spectral Compatibility Determination Process to demonstrate compliance.

2.1.2 While the test report must be retained by the user of the Non-Deployment Class System, the proposer must provide the parameters as defined in Clause 8.4.4 of Part 1 of the Code and the details of the calculations that demonstrate compliance to the ACIF and the Access Provider. These calculations may be based on the ACIF spectral compatibility software tool.

2.2 The Parameters Supplied

The registrant must provide a set of parameters with which its equipment must always comply. The list of required parameters, given in 8.4.4 of Part 1 of ACIF C559:2003, are:

(a) Maximum transmit Power Spectral Density (PSD) masks for each direction. These masks should represent upper bounds which all real systems should meet. It is not acceptable to measure the transmit PSD and use this as the mask, as the mask must take into account all variability in the modems. Where the requirements of 8.4.4(1)(b) of Part 1 of the Code are used for a filtered version of a Deployment Class system, only the minimum attenuation mask for the filter and the Deployment Class need to be specified. In order to facilitate checking of the compliance of the parameters in the ACIF Spectral Compatibility Tool, the PSD should be provided at 4.3125 kHz intervals up to at least 2208 kHz as in the input fields for the Tool OR as a mathematical formula which is easily entered in Microsoft Excel; and

(b) Maximum total average power in each direction. Note that this may include a power cutback specification, if required to satisfy the requirements of ACIF C559; and

(c) Proposed maximum Deployment Limit (attenuation in dB at the reference frequency and in equivalent km of 0.4mm PIUT cable) which is measured from the Deployment Reference Point given below, and the reference frequency to be used for the attenuation; and

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Note: The reference frequency should be sensible for the technology used and would generally represent an approximate centroid of the transmit spectrum, such as half of the baud rate for SHDSL or 300 kHz for ADSL.

(d) The proposed pair separation at the network end from Deployment Class 1 b systems.

Note: Pair separation only applies to this particular type of legacy system and should only be invoked when there is unacceptable interference into the E1 Basis System. Pair separation from other Basis System types cannot be used as a means to ensure spectral compatibility of otherwise incompatible systems.

(e) Locations of Deployment Reference Points for Deployment State A and Deployment State B.

Note: The Deployment Reference Point is usually placed at the Highest NRP (e.g. the local exchange MDF). In some circumstances, it may be possible to meet the requirements of the Code with other locations of the Deployment Reference Point.

(f) For spectrally asymmetric systems (like ADSL) the Lowest Asymmetric Feed Point from which the downstream signal may be transmitted. While this is normally at the Highest NRP, it may be placed at a lower NRP if the Code requirements can be met with that location. The Lowest Asymmetric Feed Point for a proposed Non-Deployment Class System may be expressed as a range of possible lower NRP locations at which the system may be deployed (measured in dB from the Highest NRP at the reference frequency); e.g. Up to 14 dB (at 300 kHz) from the Highest NRP.

(g) Maximum longitudinal output voltage masks for network equipment and customer equipment. These should be similar to those specified for existing Deployment Classes.

(h) Minimum longitudinal balance masks for network equipment and customer equipment. These should be similar to those specified for existing Deployment Classes.

2.3 The Test Report

2.3.1 The proposer should prepare documentary evidence demonstrating compliance with the parameters 1, 2, 7 and 8 of the list above before operating the Non-Deployment Class system under the Code and then retain this documentary evidence while any of the relevant Non-Deployment Class Systems are in operation.

2.4 Evidence of ACIF C559 Compliance

2.4.1 The proposer must provide detailed results of calculations which demonstrate compliance with the Unacceptable Excess Power and Unacceptable Interference into a Basis System performance requirements of the Code. Outputs (with inputs) from the ACIF Spectral Compatibility Software Tool may be used to support the application.

2.4.2 It is essential that the proposer complete all of the cases for all Basis Systems as required by the Code. In every case, the proposer must provide comparisons with the Benchmark I performance for every Basis System. This covers all Deployment State A situations. In addition, if the Deployment Reference Point remains at the Highest NRP in Deployment State B (e.g. the

system is only deployed from the Highest NRP), then only the Benchmark I comparisons are required. However, if the proposer intends to deploy the system from a remote (e.g. RIM) location in Deployment State B, then both the calculations for Benchmark I performance in Deployment State A and those for the Benchmark II performance in Deployment State B must be completed. This requirement is independent of the separate obligation to agree bilateral arrangements with the Access Provider on how to transition an Exchange Serving Area from Deployment State A to Deployment State B.

2.4.3 In performing these compliance calculations, the Code specifies that the transmit PSD masks for each direction (these are upper bounds used for compliance) must also be used in the crosstalk calculation. One exception to this requirement (that the transmit PSD masks for each direction must also be used in the crosstalk calculation) is when the Non-Deployment Class System is a linearly filtered version of a Deployment Class. In this case the Code permits the filtered version of the Group A mask to be used for crosstalk compatibility calculations (instead of the filtered Group B mask).

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3 THE APPROVAL PROCESS

3.1 Action by ACIF

3.1.1 On receiving a proposal for a Non-Deployment Class System, ACIF will perform the following actions:

(a) Within 5 working days of receipt of the application with complete information and supporting calculations as required, should inform industry (e.g. the ACIF Network Reference Panel and its relevant Working Committees plus those who have registered interest with ACIF to be informed of Non-Deployment Class Systems) and the Access Provider of the application and circulate details of the relevant masks and limits as provided.

(b) Should invite interested parties to review the supporting evidence, with the option to object only on the technical ground of non-compliance with the Code.

(c) Once there has been a reasonable time for review (e.g. four weeks, longer if it overlaps a public holiday period), should either:

(d) inform industry that there are no technical objections OR

(e) call a meeting of subject matter experts to resolve any technical objection. All known ULLS Access Provider/Seekers should be invited to nominate a subject matter expert to ACIF.

(f) If the experts find the proposed system to be compliant/non-compliant then the application should be accepted/rejected and the industry informed of the finding.

(g) If there is no objection or the experts find the proposed system to be compliant ACIF should allocate a code number to the Non-Deployment Class, informing both the Access Provider and the Access Seeker.

3.2 Action by the Access Provider

3.2.1 On receiving a proposal for a Non-Deployment Class System, the Access Provider will perform the following actions:

(a) It may first check the compliance of the proposed system parameters.

(b) It should inform ACIF of any objection which may only be on the technical ground of non-compliance with the Code.

(c) Once the Access Provider is satisfied the system parameters are compliant, it should allocate the code number in its systems, apply the specified deployment limit(s) in its service qualification systems and proceed with deployment.

(d) The code number may be withdrawn and deployment halted by the Access Provider if, at any time, the Access Provider determines that the system parameters are non-compliant. Should that occur, all deployed systems of that type must be removed in accordance with bi-lateral arrangements agreed between Access Provider and -Access Seekers for the operation on non-compliant systems.

3.3 Non-Compliance of a Non Deployment Class System

3.3.1 If anyone performs a calculation that demonstrates non compliance of a Non Deployment Class System and then notifies ACIF of this non-compliance along with evidence of the calculated non-compliance then ACIF will convene a meeting of industry technical experts to verify the claim.

3.3.2 If the claim is verified then the Non-Deployment Class System will be withdrawn and can no longer be deployed.

3.3.3 Any reinstatement of a non-compliant Non-Deployment Class System would require the submission and industry assessment of new information to support the reinstatement.

4 ACRONYMS AND DEFINITIONS

4.1 Acronyms

For the purposes of this Industry Guideline, the following acronyms apply:

ACIF	Australian Communications Industry Forum
NRP	Network Reference Point
PSD	Power Spectral Density
ULLS	Unconditioned Local Loop Service

4.2 Definitions

For the purposes of this Industry Guideline, the following definitions apply:

Code

means the *ACIF C559:2003 Unconditioned Local Loop Service (ULLS) Network Deployment Rules Industry Code*

Access Provider,

Access Seeker,

Basis System,

Deployment Class,

Deployment Limit,

Deployment Reference Point,

Deployment State A,

Deployment State B,

Exchange Serving Area,

Highest NRP,

Lowest Asymmetric Feed Point,

Non-Deployment Class System,

Spectral Compatibility Determination Process,

Unacceptable Excess Power, and

Unacceptable Interference

have the respective meaning given in *ACIF C559:2003 Unconditioned Local Loop Service (ULLS) Network Deployment Rules Industry Code*.

5 REFERENCES

Publication	Title
Industry Codes	
ACIF C559:2003	Unconditioned Local Loop Service (ULLS) Network Deployment Rules Industry Code
Industry Documents	
Software Tool	ACIF Spectral Compatibility Software Tool

ACIF is an industry owned, resourced and operated company established to implement and manage communications self-regulation within Australia. ACIF's role is to develop and administer technical and operating arrangements to foster a thriving, effective communications industry serving the Australian community through

- the timely delivery of Standards, Codes and other documents to support competition and protect consumers;
- widespread compliance; and
- the provision of facilitation, coordination and implementation services to enable the cooperative resolution of strategic and operational industry issues.

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