



Office of the Director of  
**Telecommunications  
Regulation**

**DECISION NOTICE**

## Local Loop Unbundling - Copper Loop Frequency Management Plan

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**Oifig an Stiúirthóra Rialála Teileachumarsáide**  
**Office of the Director of Telecommunications Regulation**  
Abbey Court, Irish Life Centre  
Lower Abbey Street, Dublin 1, Ireland  
Tel. +353 1 804 9600 Fax. +353 1 804 9680 E-mail [info@odtr.ie](mailto:info@odtr.ie)

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## 1 Introduction

The “local loop” is the copper pair connecting an individual telephone subscriber to the nearest point of interconnection with the main telephone network at the local exchange. Known as the ‘last mile’, this part of the network is accepted to be the most difficult for new entrants to replicate. “Local Loop Unbundling” (LLU) requires the network owner to provide access to this copper pair, so that new entrants can offer their services across the local loop directly to the customer. In particular, new entrants can offer the new range of broadband services even if the incumbent operator has not chosen to offer such services.

At the Lisbon summit of March 2000, it was agreed that Local Loop Unbundling was required as a matter of urgency and by the end of 2000, the European Parliament and Council had adopted Regulation 2887/2000 on unbundled access to the local loop, the “LLU Regulation.” Recognising the importance of Local Loop Unbundling, the ODTR has issued various documents<sup>1</sup> and supported industry initiatives in order to assist the implementation of LLU in Ireland.

The first agreements for collocation, allowing other operators to place their equipment in eircom exchanges, have now been signed. The time for service introduction is near. Therefore completion of the Copper Loop Frequency Management Plan (CLFMP) is an urgent priority.

The CLFMP is essentially a list of rules to which all parties must adhere to when providing services over the access network. The network is a valuable resource which has been built over many years, and it is obvious as to why it must be protected. The importance of network integrity is evidenced by the fact that it is one of only two criteria set out in the LLU Regulation by which requests for LLU can be refused.

In the Irish context, an industry subgroup convened under the LLU Forum has been meeting since May 2000. This consists of representatives from eircom and from Esat on behalf of the industry. Whilst there has been a significant amount of agreement on this very specialised subject, the ODTR regrets that the subgroup has not been able to agree on some of the key aspects of a CLFMP. Following escalation to the LLU Forum, the ODTR understands that the positions of the parties are final positions and no further negotiation appears possible.

Therefore the Director has decided to intervene on her own initiative in order to resolve the issues which are hindering completion of the CLFMP. Decisions relating to Deployment Limits and Subloop Deployment are set out in this document and a timescale for publication of the CLFMP is set. This Decision Notice also provides for Eircom and the industry to meet on March 12<sup>th</sup> 2002 to agree product and process issues arising from this Decision Notice. The Director reserves her rights to intervene further as appropriate.

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<sup>1</sup> See [www.odtr.ie](http://www.odtr.ie) for documents 00/99, 01/01, 01/15, 01/21, 01/27, 01/35

## 2 Background

### 2.1 Relevant Legislation

Regulation 2887/2000 of the European Council and of the Parliament on unbundled access to the local loop was adopted on 18<sup>th</sup> December 2000.

Article 3(1) requires notified operators – which in the case of Ireland is eircom – to publish from 31<sup>st</sup> December 2000, and keep updated, a reference offer for unbundled access to their local loops and related facilities. Under Article 3 (2), the notified operator must also from 31<sup>st</sup> December 2000 meet reasonable requests from beneficiaries for unbundled access to their local loops and related facilities, under transparent, fair and non discriminatory conditions.

The Annex to the Regulation lists the minimum items to be included in a reference offer to be published by notified operators. Section A “Conditions for unbundled access to the local loop” requires eircom to publish:

*A3*

*‘technical conditions related to access and use of local loops, including the technical characteristics of the twisted metallic pair in the local loop’ and*

*A4*

*‘Ordering and provisioning procedures, usage restrictions’*

The LLU Regulation also confers certain powers on the NRA, which in the case of Ireland is the ODTR. Article 4(2) states that the NRA shall have the power to (a) impose changes on the reference offer for unbundled access to the local loop and related facilities, including price, where such changes are justified and (b) require operators to supply information relevant for the implementation of this Regulation. Furthermore Article 4(3) provides for the NRA to, where justified, intervene on its own initiative in order to ensure non-discrimination, fair competition, economic efficiency and maximum benefit for users.

In interpreting the legislation, the Director has made use of the Commission Recommendation and Communication documents on Unbundled Access to the Local Loop of 26<sup>th</sup> April 2000 and also notes the principles of implementation and best practice (PIBs) as adopted by the Independent Regulators Group in January 2002. These have been devised by the IRG to assist in the process of harmonising implementation and NRAs are committed to implement these principles wherever possible. The relevant PIBs are

*7. In-cable spectral management (and where relevant in-pair spectral management) may not lead to a delay of introduction of LLU.*

*8. Development of in-cable spectral management (plan) is a joint responsibility of beneficiaries (including the notified operator). The notified operator should consult beneficiaries when developing a spectral management plan. NRAs may facilitate the discussion and may take decisions if beneficiaries cannot reach agreement within a reasonable period of time.*

*9. Limitations as a result of in cable spectral management must apply equally to all beneficiaries including the notified operator.*

*10. In-cable spectral management should include clear procedures for allowing new systems/masks.*

*11. Existing deployment should not automatically be given protective status.*

## **2.2 Progress to date**

### *2.2.1 Work of the ODTR*

Local Loop Unbundling has been afforded much attention by the ODTR. As well as facilitating the work of the industry groups, the ODTR has issued several documents such as Documents 00/99, 01/01, 01/15, 01/21, 01/27 and 01/35. The ODTR, with the production in particular of 01/21 D5/01, 01/27 D8/01 and 01/35, facilitated the framework for the introduction of LLU in Ireland during 2001. The Director also notes the current court challenge in respect of D8/01 which eircom have lodged.

The Director is pleased that her Office has supported the conclusion of two agreements for collocation in the past number of weeks and looks forward to the number of exchanges for LLU being accelerated over the next number of weeks.

### *2.2.2 Industry Groups*

Since May 2000, industry working groups have been meeting to agree arrangements for implementation of various forms of LLU. These groups, which continued after the adoption of the Regulation, have accomplished much in their work. There have been a number of subgroups tasked with, in the first instance, defining and agreeing work packages, and more recently in refining these. The process and technical subgroups have completed their current work plans and have made their report to the LLU Review Forum. On February 4<sup>th</sup> 2002, the LLU Review Forum formally agreed revised LLU documentation. The revised eircom Access Reference Offer, the ULMP/Line Sharing process manual, and the collocation process and technical manuals are now agreed by industry and hosted on the eircom website.

However the Copper Loop Frequency Management Subgroup have reported to the LLU Review Forum that they cannot agree the Copper Loop Frequency Management Plan. The issues outstanding were escalated to the LLU Review Forum of February 4<sup>th</sup> 2002 and the positions of the parties have been maintained.

The ODTR have met numerous times with both parties and tried to broker a solution. However this has not been achievable. Both parties have agreed that intervention by the ODTR is required.

Given the length of time that the CLFMP issues have been rehearsed at industry and the importance of this to commence delivery of service, the Director has decided to intervene under Article 4(3) of the LLU Regulation.

This decision was issued in draft form on 14<sup>th</sup> February 2002 and both parties were given opportunity to comment on the draft decisions prior to publication of this Decision Notice.

### 3 The Copper Loop Frequency Management Plan

Operators who wish to offer services across the local loop need to have a high level of confidence that their services will operate as expected, both at the time of the deployment and in the future. Therefore, operators need to minimise the level of interference<sup>2</sup> which may affect the access network. In order to control interference within an access network, and so produce a predictable environment so that operators can make deployment decisions, it is necessary to have some form of frequency plan to which all deployed services conform. This is referred to as the Copper Loop Frequency Management Plan (CLFMP). At its simplest, it is a list of rules governing the use of the access network. It also should not be overly restrictive as it needs to aid the deployment of innovative services.

Eircom and the remainder of the industry have two main areas of disagreement in respect of the Copper Loop Frequency Management Plan. Each of these is explained, discussed in detail and the views of eircom and of the industry set out. Decisions appear in bold type.

#### 3.1 Deployment Limits

##### 3.1.1 Importance of Deployment Limits

The CLFMP Subgroup have agreed that the CLFMP should be based upon agreed Power Spectrum Masks and associated deployment limits. The subgroup have agreed to the definition of deployment limits (based upon a definition of lines as Short, Medium or Long – S/M/L) in terms of line attenuation at 300kHz. In this way an acceptable and pre-determinable noise environment based on mutual interference can be assumed.

##### 3.1.2 Views of Respondents

As stated, the CLFMP subgroup have agreed to the definition of deployment limits (based upon a definition of lines as Short, Medium or Long – S/M/L) in terms of line attenuation at 300kHz. The difficulty however is that in certain circumstances the attenuation data may not be available and there needs to be an agreed mapping of other, more readily available data to the attenuation. Inevitably, in some circumstances the derived attenuation and associated line category of S/M/L will be less accurate than working from measured data. The difference of views between eircom and the industry is associated with the way this problem is best handled.

Eircom believe that a reasonable accuracy can be derived from the radial distance of the customer from an exchange. They have offered to work with Industry to agree a mapping of this parameter to S/M/L definition and propose that Access Seekers use this parameter to define the appropriate characteristics of the line. Eircom propose that in the event that the characterisation is later found to be inaccurate as a result of more accurate data becoming available, the Access Seeker should be required to change the categorisation. The view of Industry is that whilst this mapping may be necessary when alternative data is not available, this should be the exception rather than the rule as more accurate data should often be available. Furthermore, when a mask has been defined using the best data available, an

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<sup>2</sup> Interference arises when deployed systems couple with one another within the shared access cables (binder groups); this is generally referred to as cross talk

Access Seeker should not be required to reclassify it without agreement as such a reclassification could be service affecting.

In addition, the industry are concerned that the use of information by eircom, whether for use in definition of line length or not, which is unavailable to access seekers would appear to be discriminatory. Eircom state that this information is not held for every line in the access network and will be incomplete or unreliable in many cases.

### *3.1.3 Director's Position*

The Director recognises that it is in the interests of both eircom and the rest of the industry to have confidence in the deployment limits so as to make informed decisions about service provision.

She considers that it is appropriate for eircom, as the network owner, to categorise lines, as the lines are requested for LLU and advise of the deployment limit appropriate for those lines. The information which eircom use to define the category of line should be the most appropriate information at the time the lines are requested for full unbundling or line sharing. It is a matter for the industry to define the most appropriate information used to categorise lines.

Eircom, for each line requested for LLU, shall provide to the access seeker a statement as to the category (S/M/L) of that line. The access seeker can then make choices as to which technology to deploy within the available deployment limits. The Director considers that the classification provided by eircom shall be deemed as definitive unless otherwise agreed by eircom and the access seeker.

#### ***Decision 3.1***

***Pursuant to the powers under the Regulation 2887/2000 Article 4(3) I direct that eircom shall define the categorisation of lines, as they are requested for full unbundling/Line Sharing using the most appropriate data available at the time and that such classification shall be deemed as definitive unless otherwise agreed by eircom and Access Seeker.***

In relation to provision of line specific information to an access seeker, the Director recognises the concern of the industry and agrees that as a principle, access seekers should have access to the same information which eircom holds on a line. Whilst the ODTR has not seen any evidence of discriminatory intent it is important that eircom recognise that the availability of various types of data could aid in the efficient deployment of services and therefore such data should be made available to Access Seekers.

The Director considers it appropriate that eircom enter into immediate discussions with the industry to identify the data which they require for efficient deployment of services. This group will also decide the most appropriate information to be used by eircom when categorising a line. Should access seekers require further information, it would be appropriate for access seekers to request this information as a 'related facility' under the LLU Regulation, and for eircom to devise a product, process and associated costs to provide this service.

The initial meeting of this group will take place on 12<sup>th</sup> March 2002 at the ODTR's offices and will include representatives from eircom and the industry. Should this group be unable to agree on the definition and application of appropriate data, the Director will intervene further, as appropriate.

***Decision 3.2***

***Pursuant to the powers under Regulation 2887/2000 Article 4 (2)b and 4(3) I direct that eircom shall enter into immediate discussions with Industry to enable Industry to identify the data which they require for efficient deployment of services, and answer any reasonable requests received for such a Related Facility.***

### **3.2 Sub Loop Deployment**

#### *3.2.1 The issue*

The CLFMP subgroup recognised that there are certain legacy systems which were deployed in the eircom network prior to the introduction of eircom's obligation to provide Local Loop Unbundling at 1st January 2001.

Agreement has been reached on the manner in which legacy systems will be treated, however there is one category of systems for which agreement has not been reached. This is known as sub loop deployment. Deployment of such systems may affect the ability to deploy other services in affected areas.

#### *3.2.2 Views of Respondents*

Eircom have stated that they have deployed a limited number of systems which have been used to extend their reach for the delivery of some services to customers. This involves deploying a fibre to the cabinet solution then launching a service from that cabinet into the metallic access network.

It is noted that eircom recognise that access seekers may need to know where sub loop insertions are deployed and suggest that the industry should agree a process whereby access seekers are informed of the locations where sub loop insertions have been made. The industry agree that they require information on sub loop insertions but also state that they wish eircom to be constrained in the volume of such deployments that can be made in the future.

#### *3.2.3 Director's Position*

The Director notes that sub loop deployments could have a detrimental effect on deployment of systems conforming to the agreed PSD masks.

The Director agrees that information on sub loop insertions is required. The Director considers that a meeting should be held between eircom and the rest of the industry to provide this information for any existing sub loop deployments, and to agree a process for provision of this information in the future.



***Decision 3.3***

***Pursuant to the powers under Regulation 2887/2000 Article 4(3) I direct that eircom implement a process whereby access seekers are informed of the locations where sub loop insertions have been made. This shall apply to current deployments and deployments as they are introduced.***

Where previously notified sub loop deployments are found to be interfering with new services on unbundled loops or line share services, the Director considers that eircom shall use best endeavours to replace the systems with spectrally compatible solutions where technically and economically viable. Access seekers can refer specific cases to the ODTR through dispute resolution processes. In the event of a complaint being made to the ODTR that such deployments are not of such an occasional basis the acceptability of such systems within the plan will be revisited.

Additionally, the Director considers that if a new eircom deployment of sub loop systems in an area where line share or unbundled line services have been previously deployed causes interference to such previously deployed services, eircom shall remove the interfering sub loop deployment.

However the Director does not consider it appropriate at this stage to veto any further deployment of sub loop systems and notes that the numbers of such deployments are anticipated to be small. The Director reserves the right to review this position should the volume or pattern of sub loop deployments change in the future.

***Decision 3.4***

***Pursuant to the powers under Regulation 2887/2000 Article 4(3) I direct that the Copper Loop Frequency Management Plan be defined as applicable to all of the eircom metallic access network, including sub loop deployments. Where previously notified sub loop deployments are found to be interfering with new services on unbundled loops or line share services, eircom shall use best endeavours to replace the systems with spectrally compatible solutions where technically and economically viable. Where a new eircom deployment of sub loop systems in an area where line share or unbundled line services have been previously deployed causes interference to such previously deployed services, eircom shall remove the interfering sub loop deployment.***

## **4 Next Steps**

### **4.1 Publication of the Copper Loop Frequency Management Plan**

Decisions 3.1, 3.2, 3.4 and 3.4 and resulting amendments are to be incorporated in an updated draft of the Copper Loop Frequency Management Plan. This Plan will then be deemed approved by the industry and the ODTR and will be published on the eircom website together with the other industry LLU documentation. This should take place within five working days of the publication of the Decision Notice. All operators must comply with the Plan.

### **4.2 Further Work**

These decisions raise some issues particularly in relation to provision of information on individual lines, eircom's obligations under non-discrimination and also in relation to the process for provision of information on subloop deployments.

The ODTR requires eircom and the industry to attend a meeting at the ODTR's offices on 12<sup>th</sup> March 2002 to discuss the product and process implications of these decisions.