



Commission for
Communications Regulation

Information Notice

Status Update on Local Loop Unbundling - Issue 8

Document No:	07/25
Date:	3rd May, 2007

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1. Introduction

Local Loop Unbundling (LLU) is a key wholesale product in telecommunications which provides the ability for non incumbent operators to provide new and innovative broadband products. Experience in other countries suggests that LLU is a key stimulant of broadband innovation and take up. To date the benefits of LLU have not been felt in Ireland to the desired extent because of delays in the implementation of a variety of product requirements.

This 8th LLU update had been delayed while discussions between industry, ComReg and eircom took place. These discussions have now been concluded and ComReg is now in a position to provide clear guidance on timelines for the resolution on all material matters pertaining to LLU at this time. Eircom has now committed to resolving all of the identified issues – the vast majority by September 2007.

A successful outcome will require delivery by eircom on its commitments. Considerable input will also be required from industry participants. These developments should now clear the way for LLU operators to plan their roll out with confidence. ComReg will continue to monitor events closely and will provide further public updates in due course.

2. Executive Summary

Since the last update ComReg has engaged in extensive discussions with eircom with a view to resolving all material obstacles to the implementation of a robust and scaleable LLU product. ComReg has reached agreement with eircom on all material issues which were impeding the development of LLU, most of which are to be implemented by end September 2007.

The major issues that have been resolved in principle are that eircom has agreed to:

1. Implement all requested migration paths to LLU from other wholesale products. Return paths are also to be developed, which should improve consumer confidence in the LLU product.
2. Introduce changes to the existing product in stages between now and September 2007 which should lead to significant improvements in product performance.
3. Provide a standard Service Level Agreement (SLA) which should meet industry requirements.
4. Conclude negotiations on and implement an enhanced SLA.
5. Conclude negotiations on and supply appropriate LLU backhaul.

The details behind these headline items are provided below and are summarised in Appendix 2.

As regards product performance, over the 4 months to March 2007 93% of LLU orders were provisioned within the SLA target. However it should be noted that this is in an overall context of reducing order volumes. During March approximately 40% of orders

submitted were rejected at validation or deemed undeliverable. The measures described in this document are intended bring this metric to acceptable levels.

3. Summary of general LLU Developments

The last LLU update identified significant problems in the provision and service assurance of LLU and since the last update ComReg and industry have been working to identify root causes with a view to implementing a step improvement in the LLU product. While LLU take up has remained low over the period ComReg, understands that operators plan to re-launch their services using LLU in the coming months and a number of improvements have been agreed with eircom and other operators which will facilitate this.

ComReg and industry are of the view that implementation of the steps that have been agreed will significantly improve the operational performance of the LLU product.

The details behind what has been agreed are as follows.

3.1. Migrations

Earlier this year eircom had announced that they would be developing processes which would allow operators to order LLU products for customers in a manner that enabled customers to enjoy a continuity of service when changing broadband provider. While this was a positive development, it fell short of meeting industry needs and eircom has now agreed to put in place a more comprehensive suite of migration processes which will allow operators to readily upgrade their customers to their own broadband products based on LLU.

Following recent discussions, eircom has now agreed to provide all requested migration paths, including those paths where an operator migrates its own customer base currently provided over indirect access products such as WLR and Bitstream, to both full unbundling and line share. Eircom has, for pricing purposes, distinguished between “Inter Operator” Migrations i.e those *between* operators, (where the LLU operator wins a customer from another operator) and “Intra Operator” migrations, (where a LLU operator wishes to move its own customer base on to LLU). These latter paths are defined as that migration which does not involve a change in the customer/operator **broadband** relationship. All other migration paths are defined as Inter Operator migrations

Development of processes to support Inter Operator migrations are already well advanced and the first phase of migration paths are scheduled to be ready this month. This work is to be completed under the auspices of the existing LLU Industry Forum. Work on Intra operator migration paths and remaining Inter Operator paths will follow on from this and will be completed by end September this year. Intra operator migration will include a bulk migration capability.

Eircom has agreed that the current list of requested migration paths is not necessarily exhaustive and may change if operators request it.

The proposed bulk migration charge for Intra operator migrations to full unbundling will be €9 per customer and to Line Share €88 per customer. This includes a discount for “bulk” migration of €14. It also includes all ULMP and GNP elements of the GLUMP connection charges. The level of this charge will be reviewed after one year.

Inter Operator migrations are to be charged at the standard LLU connection fee of €5 per customer plus the standard charge for GNP. Since the charge for the GNP element of the GLUMP charge is to be revised from €19 to €11 this means that Inter Operator migration will attract a charge of €66 while the existing charge for connection to a fully unbundled loop will fall from €74 to €66.

The charge for GNP is currently under review and any further changes in this price as a result of the review will flow through to charges for migration.

A bulk migration is where the number of lines requested for Intra operator migration in an exchange is 15 lines or more per request. All such migrations will attract the bulk discount. ComReg expects that the vast majority of Intra operator migrations will qualify for this discount.

3.2. LLU Process Development

A number of key process developments have been identified for the existing LLU product. These process points were identified as part of an overall matrix of product issues which require IT and process development. The following issues are addressed in the matrix.

- Efficient access to network and customer information for the following issues
 - Exchange code
 - Competing service
 - Line categorization
 - In-situ address data
 - Spare Path process
- Process cycle time reductions
- Improved Quality Managed (QM) Frame order processes

Automated solutions to all of these issues are to be included in eircom’s September IT release, although provisional solutions are to be provided for some elements sooner (See Appendix 2 for detail)

3.3. Number Portability and LLU (known as GLUMP)

The developments around number portability have continued and customers can now move between broadband suppliers while keeping their telephone number. In the months since the last LLU status update publication there have been a significant number of developments in the provisioning and delivery of the GLUMP product.

In January 2007, Phase 1a of GLUMP was implemented on the Universal Gateway. This change included the following developments:-

- the order handling element of the GLUMP product, originally based on a manual email solution, was automated and moved to the standard wholesale order interface.
- eircom took central responsibility for the management of number allocation for the TN1 / TN2 call divert element of the process.
- the removal of the restriction of CPS as a competing service
- the introduction of multi-line orders for GLUMP
- Phase 1a saw the removal of the volume cap on order throughput being removed and eircom committed to meet any industry requirements for order volumes.

Since January, and the introduction of the items detailed above, there has been a small increase in the volumes of GLUMP orders being provisioned. This trend is expected to continue as Access Seekers gain confidence in the product, building on the new developments, most significantly the introduction of wholesale product migrations.

The introduction of wholesale product migrations (see Section 2.1) will also deliver a number of consequential efficiencies to the stand alone GLUMP product in the coming months. The details will be published shortly in the industry documentation but include the following improvements;

- reduction in cycle time
- removal of the call divert process

These changes will mean a reduction in the process cycle time to 10 days which will improve operators' competitiveness and enhance the customer experience. Equally as important, this simplification of the process should significantly improve its reliability and scalability.

These improvements to the GLUMP product are most welcome. However eircom has also agreed that it will endeavour to improve cycle time performance as part its overall commitment to the LLU issues matrix. ComReg will continue to monitor the sufficiency of the current solution in line with volume requirements and seek further development if necessary.

3.4. Service Level Agreement

Operators had considered the levels of service which eircom guarantee for the LLU product were too low for customers to be able to enjoy a quality broadband product. eircom has now agreed to reduce the delivery timescale for circuits and to improve the service level agreement (SLA) around repairs. If eircom fails to meet the repair targets, it will rebate operators 1 month's rental (€15.68) of the service for each day it is late. The details of the SLA have been discussed with industry and will be implemented from Sept '07, subject to fault reporting metrics being made available to Eircom, by operators, initially on a manual basis. This reporting process is to be automated by January 2008.

Further discussion around the development of an enhanced SLA is ongoing and agreement on terms is to be completed by July 2007. Implementation is envisaged to be no later than January 2008.

3.5. Backhaul

A key requirement for broadband services to be rolled out by other operators is the ability to route the broadband service back from the serving exchange to the operator's own network. This service is known as backhaul. eircom has agreed to engage with operators to develop an appropriate backhaul product, Ethernet based if appropriate, to meet their requirements, assuming reasonable engagement by interested operators.

4. LLU Service Performance

The last LLU status update showed delivery performance figures for November which indicated that 83% of accepted orders were delivered within SLA timeframes. The data to March '07, detailed in Annex 1, shows that the performance level has increased over past 4 months to 93% of LLU orders being provisioned within the SLA target. However it should be noted that this is in an overall context of reducing order volumes. The absolute volume of orders provisioned has reduced by 36% between November '06 and March '07. Table 2 also shows that of the 7 % of orders which were not provisioned within the 10 day SLA target time; 75% were provisioned \leq Day15, 15.62% \leq Day 20 and 9.38% \geq Day 21.

In the last LLU status update, ComReg noted that operators had reported significant levels of order rejection prior to order validation phase and also that many accepted orders were subsequently failed as undeliverable. Rejected and undeliverable orders result in additional process charges being borne by LLU operators, and an increase in the lead times for delivery as orders must be resubmitted. In response to the significant levels of undeliverable orders, eircom has conducted a review of the charging policy for undeliverable orders and introduced a range of positive price modifications for undeliverable orders from 1st of March '07.

The current data for March '07 detailed in Table 3, shows that approximately 40% of orders submitted were rejected at validation. ComReg has analysed data provided by eircom to determine the reasons for such high levels of order rejection. The primary rejection reasons include;

- product unavailable (competing service)
- incorrect exchange code
- DSL service on line
- target address rejected
- Order details rejected (incorrect or missing data on order submitted)

The new LLU process developments, combined with the introduction of migration orders types which are due to be implemented over the coming months should provide the necessary order data to ensure that operators can achieve high rates of order acceptance¹.

¹ This excludes rejection for reasons of data error on orders submitted.

5. Other Issues and Next Steps

ComReg will continue to liaise with industry on each of the work streams above. The next status update will be issued in due course.

Appendix 1: LLU Service Performance Statistics

Tables 1 and 2 set out service delivery performance for LLU orders from October '06 to March '07. Table 3 sets out the number of LLU orders rejected or subsequently flagged as undeliverable following order acceptance LLU fault repair performance. These figures have been provided by eircom to ComReg.

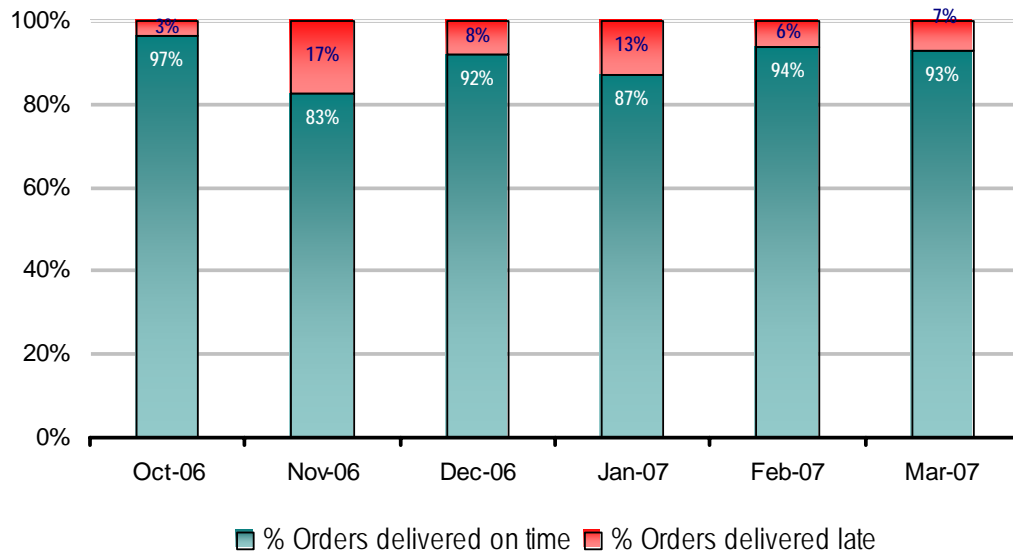


Table 1: Percentage of accepted LLU orders delivered within SLA Timeframe

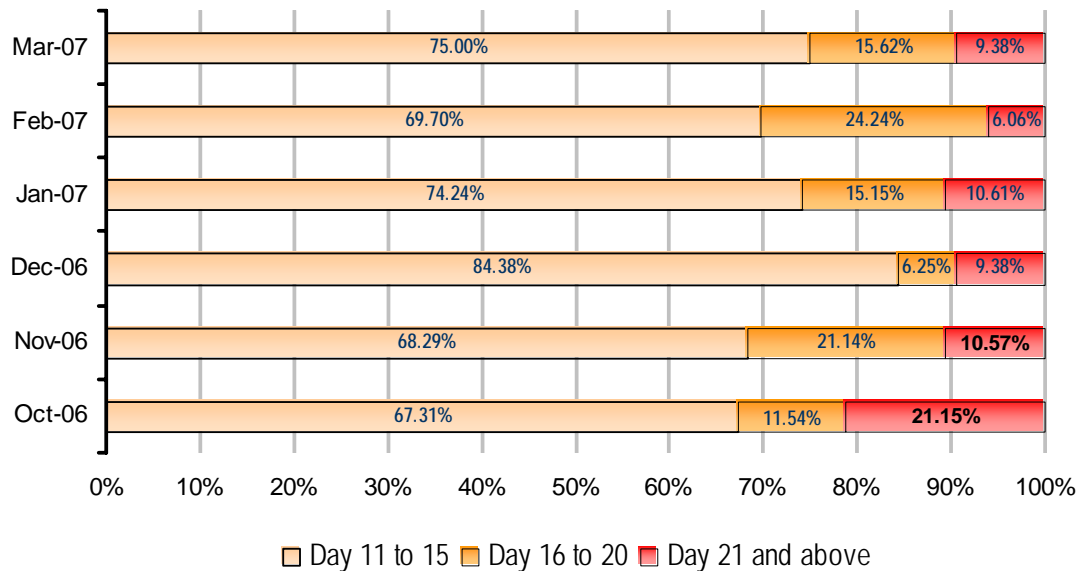


Table 2: Of accepted LLU orders delivered outside SLA (as per Table 1 equates to beyond 10 days), percentage delivered > day 11-15 day 16 to 20, day 21 and above

% LLU Rejected & Undeliverable

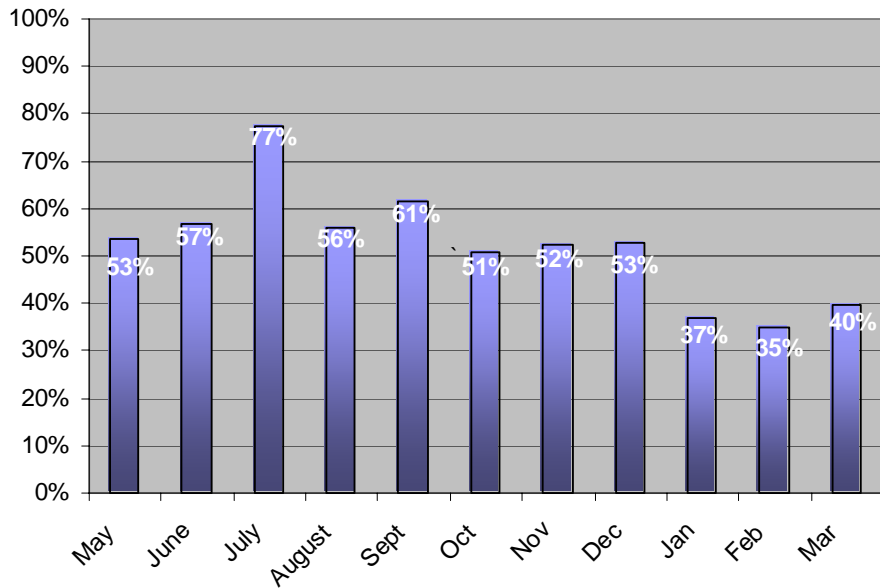


Table 3: Monthly % of LLU orders rejected or subsequently flagged as undeliverable following order acceptance

[rejected and undeliverable percentages for each month are calculated against the total orders being processed during that month and are not based on the end to end flow of a fixed set of orders]

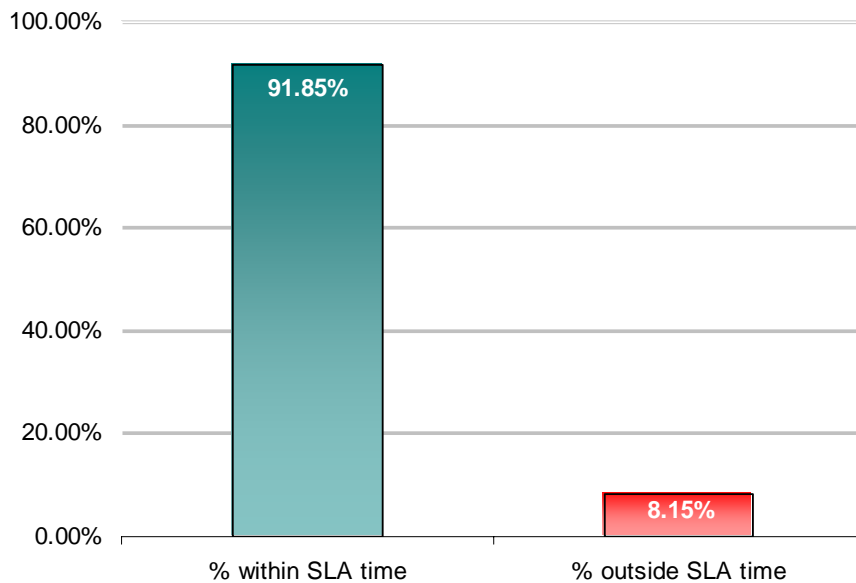


Table 4: % of Total LLU accepted orders delivered within SLA for period October '06 – March '07

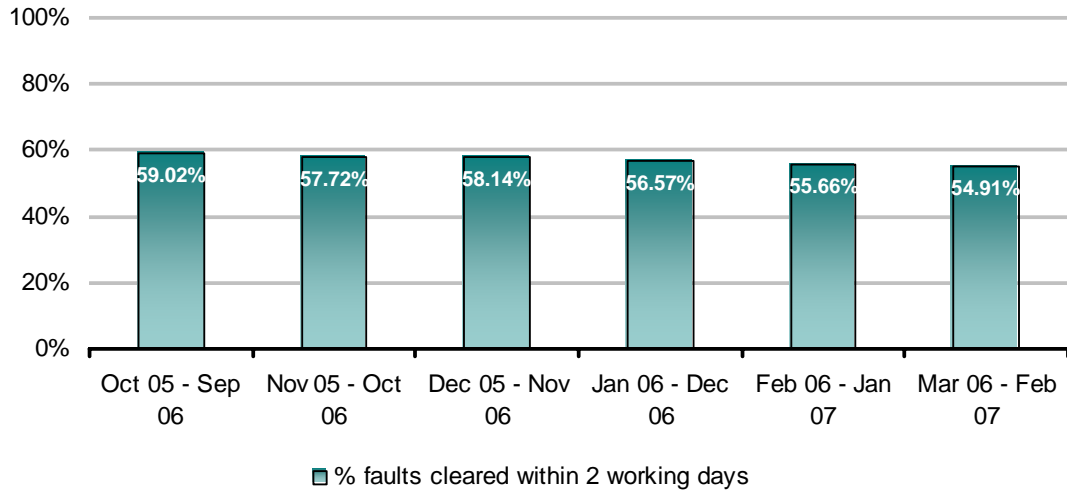


Table 5: Monthly % of LLU faults repaired within 2 working days (averaged over 12 Months)

Appendix 2: LLU Issues Resolution Matrix and Migration Paths

Issue	Issue Details	Resolution date	Comment
Efficient access to network and customer information	Exchange code	Sept 2007	Agreed delivery date for UG based solution
	Competing service	Sept 2007	No requirement for a separate Competing Services Query to be developed as the issue of Competing Services will be addressed as part of the UG based migrations solution.
	Line categorization	Sept 2007	Agreed delivery date for UG based solution
	In-situ address data	May 2007	Agreed delivery date for UG based solution
	Spare Path process	May 2007	Agreed delivery date for UG based solution
Return Path order	A return path order type is required (Including UAN issue)	Sept 2007	Agreed date for implementation.
QM order	Access to local loop termination point data	Sept 2007	Agreed delivery date for UG based solution
Process Cycle Times	ULMP (PUI) validation reduced from 2 days to 1 day (automated validation)	Sept 2007	Agreed delivery date

Issue	Issue Details	Resolution date	Comment
	<p>GNP portion of GLUMP cycle time reduced to 3 days</p> <p>Removal of Call divert (Ref “Automation” below)</p>	<p>April 2007</p> <p>Sept 2007</p>	<p>Agreed delivery date</p> <p>Reduction of cycle time to 10 days for GLUMP orders (including validation)</p>

Issue	Issue Details	Resolution date	Comment
Standard SLA	<p>Standard repair cycle time and performance target. 73% of repairs within 2 working days 95% of repairs within 5 working days</p> <p>Note: Operators who cannot or will not provide data will remain at the 73% / 3 day repair target until the data is provided after which they will move to the 73%/2 day metric.</p>	<p>2 May 2007</p> <p>10 May 2007</p> <p>Aug 2007</p> <p>Sept 2007</p>	<p>Eircom has defined the format for fault data by COB 2 May 2007 SLA to be reviewed in December 2007</p> <p>ComReg has had discussions with Operators in relation to the retrieval of fault data from their equipment. A further ComReg chaired meeting between industry and Eircom is scheduled for Thursday 10 May.</p> <p>Operators to provide fault data files to Eircom one month in advance of implementation. In the event that operators cannot provide the data in the appropriate format to eircom due to circumstances that are clearly beyond their control, the appropriate 3 day penalty charge may be reviewed.</p> <p>Eircom to implement the standard SLA by end September 2007. The fault repair element includes manual transfer of test results from operators to eircom. Automated solution for January 2008 release.</p> <p>Service credits for faults will be as follows:</p> <p>€15.68 per day uncapped after day 2, in the event of the fault not being repaired. (see note above) The later metric, i.e. on 5 days, is for reporting only, i.e. the penalty figure is not adjusted.</p>

Issue	Issue Details	Resolution date	Comment
Enhanced SLA	As per Operators SOR (dated 30 April)	July 2007	Offer to be finalised and agreed by end July. Eircom agree best endeavours to implement the enhanced SLA as soon as possible with a target date of no later than end January 2008.
Automation	Elimination of call diverts for GLUMP	Sept 2007	Agreed delivery date
Back-Haul	A set of appropriate LLU backhaul products	May 2007	Eircom to engage in commercial negotiations in good faith with operators on an appropriate and reasonably priced LLU backhaul product.
COP Review	GLUMP COP Review: By end May 2007 ComReg will make proposals and outline next steps for implementation of new COP.	May 2007	Currently being completed by ComReg.

Issue	Issue Details	Resolution date	Comment
Migrations	INTER migrations process development Phase 1	May/June 2007 (Inter)	Agreed delivery date for UG based solution
	Phase 2 (SB-WLR to GLUMP)	Sept 2007	Agreed delivery date for UG based solution
	INTRA migrations	Sept 2007	Agreed delivery date for UG based solution
	<p>Migrations processes to be discussed with industry as part of the LLU PWG.</p> <p>Terms of reference of LLU PWG to be reviewed in order to accommodate migrations discussions.</p>	May 2007	

SUMMARY OF MIGRATION PATHS

INTER OPERATOR MIGRATIONS PHASE 1 (Delivery Date May-June 2007)

Gaining Operator does not own the existing NB/BB Service
Forward Paths
PSTN + BB > ULMP/GLUMP
PSTN + BS > ULMP/GLUMP
PSTN + CPS (same op) +BB > ULMP/GLUMP
PSTN + CPS (same op) + BS > ULMP/GLUMP
SB-WLR > ULMP
SB-WLR+ BB > ULMP
SB-WLR +BS> ULMP
SB-WLR+LS > ULMP
Reverse Paths (Gaining Operator same for all services)
ULMP/GLUMP >PSTN+BB
ULMP/GLUMP >SB-WLR
ULMP/GLUMP >SB-WLR+BS
ULMP/GLUMP >SB-WLR+LS

INTER OPERATOR MIGRATIONS PHASE 2 (September 2007)

1) SB WLR to GLUMP

Gaining Operator does not own the existing NB/BB Service
Forward Paths
PSTN + CPS (Different Operator) > GLUMP
PSTN + CPS (Different Operator) +BB > GLUMP
PSTN + CPS (Different Operator)+ BS > GLUMP
SB-WLR > GLUMP
SB-WLR+ BB > GLUMP
SB-WLR +BS> GLUMP
SB-WLR+LS > GLUMP

2) Bitstream to Lineshare Migrations (Delivery date Sept 2007)

Forward and reverse paths are available subject to the following conditions:

- a. Broadband service, only, moves.
- b. As regards the narrowband service, though all the variations currently available under CPS/ Single billing can apply changing the narrowband service can only happen before or after the migration, but not as part of the migration. .

INTRA OPERATOR MIGRATIONS (SEPTEMBER 2007)

Forward Paths
PSTN + BS > ULMP/GLUMP
PSTN + CPS (same operator) + BS > ULMP/GLUMP
SB-WLR > ULMP/GLUMP
SB-WLR + BB > ULMP/GLUMP
SB-WLR + BS -> ULMP/GLUMP
PSTN + CPS (other operator)+ BS > ULMP/GLUMP
BS>LS
Reverse Paths (Gaining Operator same for all services)
ULMP/GLUMP >SB-WLR
ULMP/GLUMP >SB-WLR+BS
ULMP/GLUMP >SB-WLR+LS
LS>BS*

*BB service only moves. Narrowband service does not move. Narrowband service can be moved separately in advance or after completion.

Key

SB- WLR	Single Bill Wholesale Line Rental
BB	Broadband
BS	Bitstream
LS	Line Share
CPS	Carrier pre select