



GLUMP (GNP & ULMP) Product Description

Version Control

Version	Status	Update	Effective Date
2.1		Rebranded	October 2015
V3.0	Final	This document is based on V2.1 Implementation of Standardised Change Control.	07/06/2017

This document follows change control procedure:

Proposed is defined as a document status when the approved document is uploaded to Proposals Section of open eir Website.

Final is defined as a document status when the approved document is uploaded to the relevant section of the open eir Website following the publication period.

For information:

- Historical Document History Table located at end of Document.
- Publish means the action of uploading a document to the website regardless of status or location.
- If there **are changes to the document between 'Proposed' and 'Final', change control operates.**



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1 Introduction

This document defines the Product Description to provide a GLUMP, combined GNP (Geographic Number Portability) and ULMP (Unbundled Local Metallic Path) service. The processes supporting the implementation of the services will be outlined in the GLUMP Industry Process Manual. This document is without prejudice to any future position that may be adopted by open air relative to the provision of the GLUMP service. It should be read in conjunction with the associated documents detailing processes and technical specifications of the service

2 Product Scope

The GLUMP service enables the operator to place one GLUMP order that will enable the coordinated delivery of both products to the consumer. Existing ULMP and GNP products will continue to exist as standalone products

Existing air Retail single PSTN lines and ULMP lines are in scope for this service. Customers with CPS with the Gaining Operator (GO) or with no CPS¹ service are also in scope.

ISDN FRA/PRA lines are out of scope for this service. Should orders be submitted for lines with other competing services (e.g. SB-WLR) present the order will be rejected.

DSFA (Department of Social and Family affairs) and NDD (National Directory Database) services will not be supported under GLUMP. The GO will have to reapply for these services on completion of the GLUMP order.

3 Product Description

The GLUMP product enables a combined ULMP and GNP (GLUMP) ordering and provisioning service the provision of a GLUMP order involves the porting of a PSTN number and the jumpering of a metallic path from the AP (Access provider) to the Operator.

The two main elements of the GLUMP product are outlined below:

3.1 ULMP (Unbundled Local metallic path) Product Description

An 'Unbundled Local Metallic Path' (ULMP) is an in-situ two wire metallic path connection between the Operators' (AS) block on the exchange side of the Main Distribution Frame (MDF) and the Network Termination Unit (NTU), or Network Terminating Point where no NTU exists, in the customer's premises.

An in-situ metallic path for the purposes of GLUMP refers to those paths where existing PSTN/ULMP service is being provided. The points of demarcation are the Operator's block on the exchange side of the MDF and the customer facing side of the NTU/NTP.

See Annex A for an illustrative network diagram of ULMP.

Where there is no CPS on the account then the GLUMP order proceeds as normal.

3.2 GNP (Geographic Number Portability) Product Description

Geographic Number Portability provides a method that enables an end customer of one Operator (a 'Donor' Operator) to become a customer of another operator (a 'Recipient' Operator) while retaining the same geographic telephone number(s). The DO is said to 'export' the number(s) to the RO.

Conversely, the RO 'imports' numbers from the DO.

4 Product Components

The GLUMP product consists of two components ULMP and GNP as detailed below.

4.1 ULMP Product Components

4.1.1 MDF

The Operator will have access to the Unbundled Local Metallic Path facilities at their dedicated block on the exchange side of the MDF. This MDF block will be provided by the Operator according to open eir specifications, and will be installed on the MDF by open eir. The Operator will identify on this block, the exchange side, the line side and the pair numbers. The provision of a jumper between the line side of the MDF and the Operator's block on the exchange side of the MDF will be provided by open eir. The provision of a tie cable between the Operator's block on the exchange side of the MDF and their physical co-location space is detailed in the Technical Manual for Physical Co-location.

4.1.2 Metallic Path

The local metallic path is an in-situ two wire physical copper pair that provides a connection from the Main Distribution Frame (MDF) to the Network Terminating Unit (NTU) in the customers' premises, or to the Network Terminating Point (NTP), where no NTU is present on the customers' premises.

4.1.3 Customer Premises

The customers' side of the Network Termination Unit (NTU) or Network Termination Point (NTP) is the final point of open eir responsibility for the unbundled Local Metallic Path.

At the customers' premises the Operator will access the Unbundled Local Metallic Path via open eir's standard Network Termination Unit (NTU) (or Network Terminating Point (NTP) where no NTU is present). Where NTU equipment may need to be installed where no identifiable demarcation exists, open eir would provide the Operator with a standardised Network Terminating Unit (NTU) by agreement to be installed and tested by the Operator subject to agreed installation standards. The specifications of the NTU/NTP are attached in Appendix 3.

Provision, installation, replacement and maintenance of any additional equipment/connections on the customer's side of the NTU/NTP required to provide Operator services to the end user(s) will be the responsibility of the Operator.

4.2 GNP Product Components

4.2.1 4.2.1 Number Porting

The GNP element of the GLUMP product involves the porting of the telephone number from the DO's network to the RO's network. The porting is implemented on both the Switch and the IN (Intelligent Network).

4.2.2 Transitional Period between Number Porting and Line Unbundling

From the point the DO ports the number, the RO must route the diverted traffic from the RO's network to the DO via the tertiary nodes until the ULMP line is completed and the divert is removed.

5 Product Technical Parameters

- The parameters for the MDF interface are detailed in Annex B.
- The parameters of the Metallic Path are detailed in Annex C.

6 Spectrum Management

The provision of the GLUMP Product to an Operator will be dependent upon adherence to a Copper Loop Frequency Management Plan agreed under the National Regulator Definitions Industry Sub-group.

7 Product Availability

The GLUMP product is available to all Operators with both existing PSTN metallic paths and existing ULMP lines available for unbundling.

Please see list of competing services in Annex 5.

8 Continuity of Service

The customer may experience a partial break in service during the agreed two-hour porting window. The customer will also experience a short break in service during jumpering and a partial break of service from the point of jumpering until the Operator removes the call divert.

Both of these service breaks form part of the GLUMP provisioning process. See GLUMP Industry process manual for further details.

9 Services Responsibilities

The Service responsibilities will vary depending on the GLUMP order type and the process point within the GLUMP ordering and provisioning process.

Prior to Porting Completion

The end customer may contact their Existing Service Provider. Any faults up to this point should be reported as per standard PSTN and ULMP repair process to their Existing Service Provider.

Post Porting Completion

When the porting is completed the first point of contact for an end customer will be the Operator. The Operator must have the capability to localise any faults and pass to the Access Provider for repair

- The Access Provider will have responsibility for the provision, repair and maintenance of the Unbundled Local Metallic Path.
- The Operators are responsible any equipment an Operator attaches to the GLUMP service (outside the service termination points).

10 Universal Account Number and Circuit Reference Number

- The GLUMP service will require the use of a Universal Account Number (UAN) and a Circuit Reference Number (CRN).
- As part of the open eir to Operator GLUMP order process open eir will supply the UAN as part of the ULMP completion notification.
- The Operator must ensure that the UAN and CRN are included on all Operator bills issued to the customer. Upon end customer request, the UAN and CRN will be communicated to the customer within 2 working days.

11 Service Management

- Service management parameters, targets, procedures and processes for GLUMP are detailed in the GLUMP Industry Process Manual

12 Order Handling

- The interface between the Operator and open eir for the submission of orders will be as outlined in the GLUMP Industry Process Manual
- Processes for service provisioning will be as outlined in the GLUMP Industry Process Manual

13 Maintenance

- Processes for maintenance and repair will be as outlined in the GLUMP Industry Process Manual

14 Billing Interfaces

- Processes for billing will be as outlined in the GLUMP Industry Process Manual

15 Pricing

Prices are published on the open eir website, and a full list of prices may be found on the www.openeir.ie website.

16 Terms and Conditions

Terms and conditions are contained in the Agreement for the Provision of a GLUMP Service.

Annex A: Network Diagram

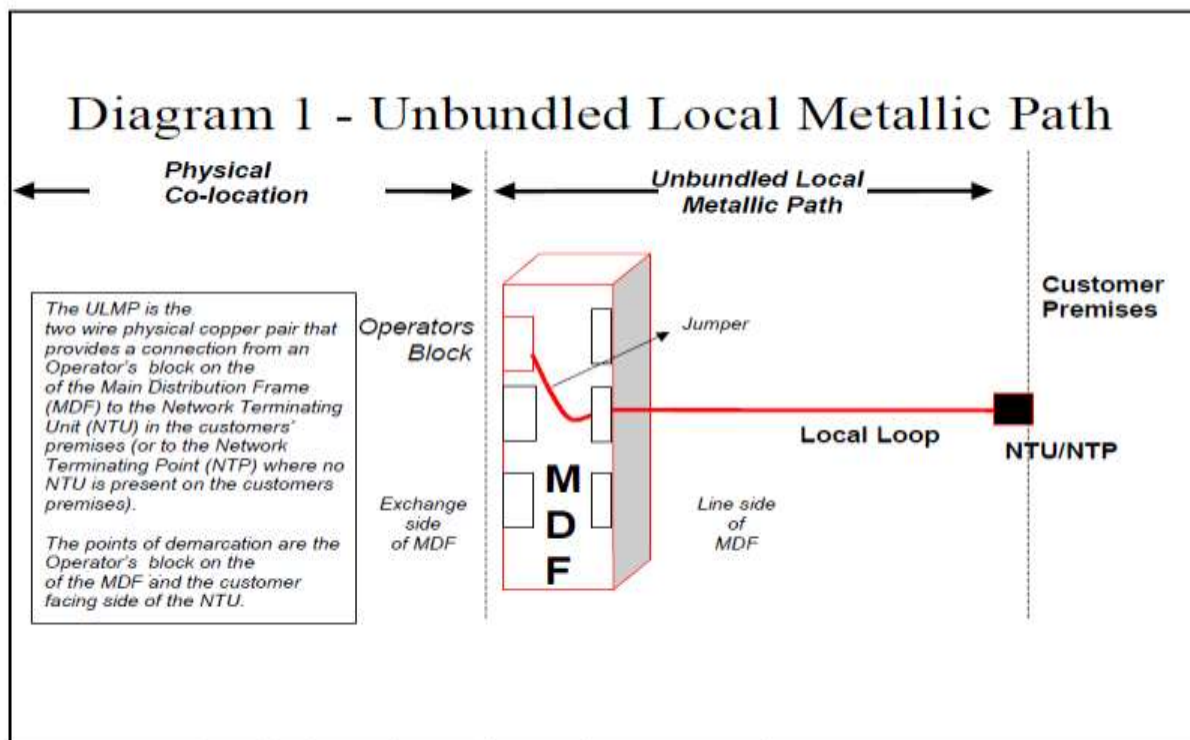


Figure 1: Unbundled Local Metallic Path - Network Diagram

Annex B: Parameters of the Main Distribution Frame

The following blocks are currently being used in the termination of cables in MDFs. The MDF block specification for a particular exchange will be provided as part of a Site Offer.

Insulation Displacement Types

- Jacks Test 200/D –Line Side
- Jacks Test 512/D- Exchange Side
- Jacks Test 240/D – exchange side Multiplex Equipment

QM Types

- QM 2000 Blocks (left & right) 104pr –Line Side
- QM System equip block 128pr – Exchange Side

Quante ID 3000

To be inserted once available.

Ericsson Mini MDF

Exceptional item where required.

The block to be used will depend on the MDF. These will be updated as required.

- Open eir will advise the Operator of the appropriate block for each MDF.

The Technical Manual for Physical Co-location outlines more detailed parameters

Annex C: Parameters of the Metallic Path

The standards have been in place since 1995 and are updated as and when needed. The relevant Operator will be advised of any changes to the parameters as required.

Summary of Transmission and Signalling Standards

The standard circuit for connection of a customer's terminal to the network is an unloaded cable pair

However loop treatment devices are used in special cases where there is a shortage of copper pairs.

Transmission Limit:

The maximum recommended attenuation for the customer's line is 10 dB at a frequency of 1020Hz.

Signalling Limit:

The recommended loop resistance for the customer's line is 1200 Ohms.

The cable gauge chosen should be the smallest which meets the above limits. Cables of lower gauge should be used close to the exchange and the gauge increased with distance from the exchange. A cable should only be jointed to the next largest (or smallest) cable gauge.

Local Network Standards

A standard, dedicated copper pair (2 wire) should be used if possible.

However, the following line treatment devices may be used:

- Signalling loop extenders
- Line amplifiers

- Subscriber carrier systems.

Signalling and Feeding Limits

These limits are determined by the DC current required by the telephone receiver and the customer's home section in the exchange.

The telephone instrument needs a current of 20mA. Parent exchange signalling normally needs 16 mA. Hence the instrument is the limiting factor.

The resistance limit is:

$$R = \frac{(Vs.)}{I_{min}} - (R_f. + R_i)$$

Where

R = permitted loop resistance

Vs. = exchange feed voltage

I_{min} = minimum feed current

R_{f.} = total feed resistance

R_{i.} = instrument resistance

Modern electronic instruments have a higher resistance (up to 400 Ohms) than older types.

$$R = \frac{(48)}{0.02} - (800+400)$$

$$R = 1200 \text{ Ohms}$$

A maximum value of 1200 ohms is allowed.

Note: Rf. for digital exchanges is 800 Ohms.

Physical Parameters

Line Insulation

At installation

The line, including the internal wiring and master socket with no telephone connected to it, shall have minimum leakage resistances measured at 100V DC, as follows:

- 10MOhms A leg to earth and B leg to earth,
- 10MOhms between line terminals (A & B).

The line, including the internal wiring, but excluding the master socket and with no telephone connected to it, shall have minimum leakage resistances as follows:

- 50MOhms A leg to earth and B leg to earth,
- 50MOhms between line terminals (A & B).

Air spaced cables, tested with an Ohmmeter on the 500V range, and shall have a minimum-leakage resistance of 500MOhms between cable pairs and moisture barrier.

For operation and maintenance

The line, including the internal wiring and the master socket with the telephone connected to it, shall have minimum leakage resistances as follows:

- 1MOhms A leg to earth and B leg to earth.
- 1MOhms between the A leg and the exchange battery and between the B leg and the exchange battery. (Alternatively, the voltage across a 20kOhm resistor connected between the A or B leg and the battery shall not exceed 0.5V).
- 500kOhms A leg to B leg. Maximum Loop Resistance

Maximum loop resistance

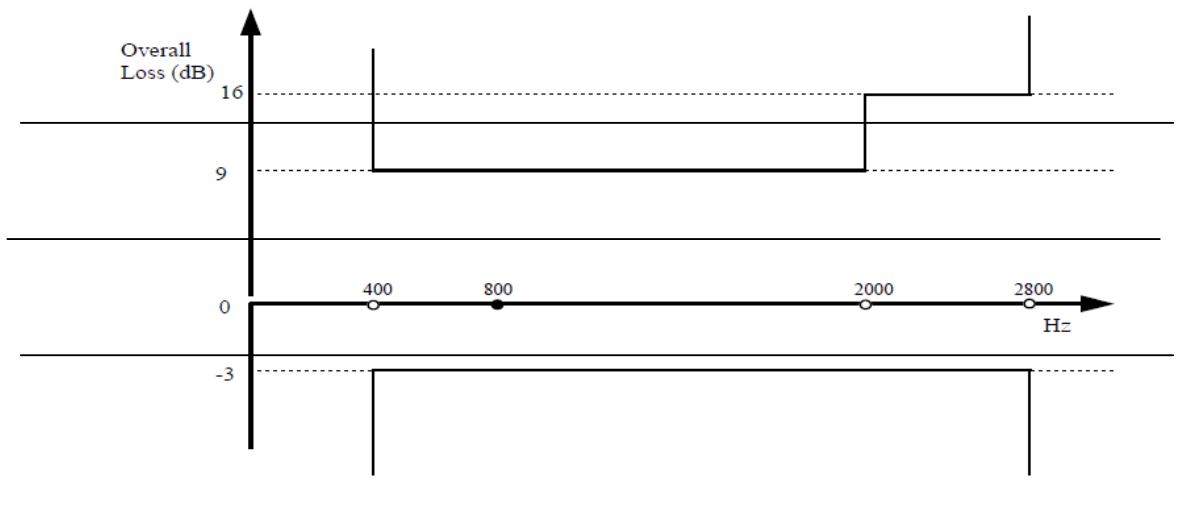
The maximum loop resistance shall be 1,200Ohms.

Jacks Modular Resistance

The resistor in the master socket should be 470kOhms.

Attenuation Distortion

The attenuation distortion of a connection, relative to 800Hz, shall conform to ITU-T Recommendation M1040. Distortion shall be within the limits shown in Figure 1.



Data Speed

No data rate is guaranteed on a telephony connection.

Random Noise

Random noise shall not exceed 50dBmOp.

Impulse Noise

Immunity from impulse noise is not guaranteed. While it should not significantly impair speech transmission, it may affect data transmission.

Maximum Transmission Level

The subscriber's equipment shall not transmit at levels exceeding -5dbm for PSTN

Version Control History

Version	Status	Update	Effective Date
1.0		Final	8 th Aug. 2006
2.0		Final, Removal of ISDN & multi-line as excluded services	15 th Jan 2007
2.1		Updated to align with Migration documents	25 th Sept. 2007
2.1		Rebranded	October 2015
V3.0	Final	This document is based on V2.1 Implementation of Standardised Change Control.	07/06/2017