

Reference Interconnect Offer Fix and Mobile (RIO F&M)

ORANGE LUXEMBOURG COMMUNICATIONS S.A.

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02	Adapted according to tariffs fixed by "Regulation 15/186/ILR" dated February 3 rd 2015
03	Adapted according to new tariffs caps fixed by "Regulation 16/209/ILR" dated November 2016 (market 1/2014)
04	Adapted in accordance with the obligations imposed to OLU in the ILR regulation ILR/T17/4 dated 9 June 2017 (market 2/2014)
05	Adapted new tariffs for termination of calls originating outside of the EEA.
06	Adapted applicable date to March 1 st 2018
07	Adapted to IP interconnect applicable date to July 1 st 2020
08	Adapted in accordance with the obligations imposed to OLU by Regulation ILR/T21/1 dated 18th of January 2021 (market 1/2014) & Adapted in accordance with the obligations imposed to OLU by Regulation ILR/T21/2 dated 18th of January 2021 (market 2/2014)
09	Adapted in compliance with the Delegated Act "supplementing Directive (EU) 2018/1972 of the European Parliament and of the Council by setting a single maximum Union-wide voice termination rate and a single maximum Union-wide fixed voice termination rate"
10	Several countries moved from Table 1 (without surcharge) towards Table 2 (with surcharge)
11	Several countries moved from Table 2 (with surcharge) towards Table 1 (without surcharge)

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1. Scope and limits of the Interconnection Offer

This Reference Interconnect Offer deals with Interconnect Services offered to a duly authorized Public Network Operator, hereafter called “Interconnected Operator”, for termination of fix and mobile voice calls to “Orange network”, hereafter called OLU.

The Interconnect Services included in this Reference Interconnect Offer encompass the following services:

- Terminating access Service
- Interconnect link Service

This Reference Interconnect Offer does not cover calls to numbers which were initially attributed to OLU but which were ported to other networks. Other interconnect services may be negotiated between OLU and the “Interconnected Operator” and included in the final Interconnect Agreement.

As a general principle, OLU is not responsible for the content of the communications conveyed through its Interconnect Services.

2. Offer validity

This Reference Interconnect Offer is **valid from 1st March 2022**, unless

- a new Reference Interconnect Offer is published by OLU;
- a material change occurs in the laws or regulations, governing telecommunications in Luxembourg.

This Reference Interconnect Offer may be reviewed and amended in order to comply with applicable rules and regulations. Furthermore, the ILR reserves the right to request or impose on OLU modifications to the offer.

The validity of the present Reference interconnect offer is determined by the decision 14/177/ILR dealing with the procedures related to the publication of a reference offer dated 28 august 2014 and in compliance with the Delegated Act “supplementing Directive (EU) 2018/1972 of the European Parliament and of the Council by setting a single maximum Union-wide voice termination rate and a single maximum Union-wide fixed voice termination rate”.

Unless defined otherwise, the terms used in this Reference Interconnect Offer must be interpreted in accordance with the Law of February 27th, 2011 Networks and Electronic Communication Services (the "Law") and its implementing regulations.

3. Definitions

Term	Description
Call	The establishment of a connection through a telecommunications network and the transmission and the delivery of a signal from the terminal on which this signal was generated to the terminal to which this signal is addressed or to a network platform or any other facility giving an automatic answer in those cases where the connection cannot be established.
Calling Line Identification (CLI):	The CLI is the number of the calling user conveyed by each Operator's network for each call, it may also be provided by the network or partly by the calling user. This information is flagged either as "network - provided" or as "user provided, verified and passed". If the verification of a user provided CLI fails, the network provided CLI will be transmitted.
Calling Line Identification Presentation (CLIP)	Supplementary service provided for in ITU T Recommendation I.251.3.
Calling Line Identification Restriction (CLIR):	Supplementary service provided for in ITU T Recommendation I.251.4.
Capacity of the Interconnection Link:	The capacity defined for the Interconnection Link and the corresponding Operator access point to which the Interconnected Operator wishes to be connected
ILR	Institut Luxembourgeois de Régulation.
Interconnection Link	A Link between "OLU's" Access Point and the "Interconnected Operator"
Operator Access point:	The physical interface within OLU's System from which the Interconnection services can be obtained.
OLU:	Orange Luxembourg offering interconnect services through this offer
"Interconnected Operator":	An operator wishing to be or being interconnected to OLU
IP- Interconnect	IP based interconnection between two access points

International Public Telecommunication Number	Defined as in ITU T Recommendation E.164.
National (significant) Number	Defined as in ITU T Recommendation E.164.
KPI	Key Performance Indicator
Link	Set of telecommunications facilities necessary to establish one or more transmission paths between two locations.
Operator Access Point	The physical interface within OLU's System at which the Interconnection Services can be obtained.
Parties	OLU, offering interconnection services and the "Interconnected Operator" buying interconnection services under this agreement.
Point of Interconnection (POI)	The physical point on the Interconnection Link where the telecommunications network of OLU and the "Interconnected Operator"'s System are interconnected. The POI is the boundary between OLU and the "Interconnected Operator domains of responsibility".
Reference Interconnect Offer Fix and Mobile (RIO F&M)	The present offer for interconnection Services
System	All equipment and software which, an Operator uses to provide his telecommunications services.
SLA	Service Level Agreement
TDM interconnection	Time-division multiplexing based on classical E1 interconnections and SS7 signalling

4. Interconnection Architecture

4. a - Sites

OLU offers the following site that has been designed for use as Interconnection Access Points grounds of their optimal network integration.

Interconnection point addresses:

LuxConnect
4, rue A. Graham Bell
L-3235 Bettembourg

b - System alteration

If OLU wishes to make a system alteration, it shall give the “Interconnected Operator” and the ILR no less than 6 months written notice prior to the date of the anticipated system alteration. The notice shall specify the technical details of the system alteration and the date of the anticipated system alteration. Following such notification OLU shall supply to the interconnected Operators such information as the “Interconnected Operator” may reasonably request including, to the extent reasonably practicable, the potential impact on the service provided by the “Interconnected Operator” to the End Users.

c - Standards

Where relevant, the following standards and procedures will apply:

- Any legal requirements
- ITU-T Recommendations
- ETSI standards
- Any other relevant international standards

The signalling system will be based on the ITU-T SS7 protocols, ISUP Blue Book version. Tests for the SS7 will be performed following the pertinent ITU-T recommendations.

The transmission level of the Interconnection is based on the pertinent ITU-T recommendations for PDH and SDH interfaces.

Other Interconnection options may be provided, and OLU try to comply with any reasonable request for alternative Interconnections, if technically feasible.

d – IP Interconnect

The IP Interconnection Link Service consists in the physical linking between an OLU access point and an Interconnected Operator Access Point.

The capacity or bandwidth has to be defined between the parties prior to the installation. Recurrent tarification is a function of the capacity/ bandwidth.

5. Service description: Terminating access service

The fix and mobile terminating access service conveys a call handed over from the “Interconnected Operator’s” System, at OLU’s Access Point for termination on any national fix or mobile number of OLU’s network. Tariffs may be different for different categories of services identified by different fix or mobile number ranges.

The tariffs applied by OLU for the provision of the terminating access service are indicated in Annex 1. Only calls that have been setup successfully and answered will be charged. The charging time starts with the answering signal and ends with the first clear signal generated either by the calling or the called party.

Whenever CLI is transferred to the telecommunications network of “The Interconnected Operator”, OLU will not communicate such CLI to an end-user if such CLI is marked as CLIR unless the call is directed to an emergency number.

6. *Interconnection Link Service*

The interconnection link service consists in the physical linking between “OLU’s” Access Point and an “Interconnected Operator” Access Point. The “Interconnected Operator” must interconnect to a Point of Interconnection defined in paragraph 4.a. The relevant charges per interconnect site are defined in Annex 2.

6. a - General

The “Interconnected Operator” is responsible for the dimensioning and payment of the interconnection links required for the conveyance of its own traffic. The “Interconnected Operator” is responsible for the traffic conveyed through its System and handed over at OLU’s Access Point in order to use OLU’s terminating fix and mobile access services.

- Initial Capacity Order

The initial capacity order must be submitted at the latest 4 months before the launch date of the service. OLU will aim to keep shorter delays taking into consideration its availability and organizational constraints.

- Subsequent Capacity Orders

Any subsequent capacity order has to be submitted at the latest 2 months before the launch date of the additional traffic. OLU will aim to keep shorter delays taking into consideration its availability and organizational constraints.

6. b – Other interconnection options

Other Interconnection options may be provided and OLU will try to comply with any reasonable request for alternative Interconnection, if technically feasible.

7. QoS for interconnection services

As far as the terminating access service is concerned, OLU undertakes to ensure for its own System, a network failure rate which does not exceed 1, 5% as a national 3 months average, for failures which are exclusively due to its System.

Network failure rate is the ratio between the number of calls handed over by an “Interconnected Operator” to be terminated on OLU’s Network and failed due to insufficiencies in OLU’s Network and the total amount of calls handed over by “The Interconnected Operator” to be terminated on OLU's network (excluding, in particular, failures due to end-user behaviour and failure of terminal equipment).

In case of disturbance of the conveyance of traffic within its System, OLU may be constrained to implement the classical measures of traffic regulation (limiting channels, etc.) in order to limit its effect on the quality of the service provided to its customers as well as to the “Interconnected Operator”.

The target figures given above for network failure rate do not include failures that are caused by the mentioned measures of traffic regulation.

“The Interconnected Operator” and the ILR shall be informed if the above-mentioned measures for traffic regulation have to be applied and how long they may last.

OLU shall respect the quality conditions as they are defined in the applicable legal regulation and in accordance with the quality OLU provides to its retail clients.

8. Procedures for reaching an interconnect agreement

Interconnection agreements shall be negotiated according to the procedures and regulations determined by ILR.

On first demand by the “Interconnected operator”, OLU may request bank guarantees of 10.000€ (of a bank based in Luxembourg) for the provisioning of the interconnect service.

Other “reasonable” guarantees, as payment in advance, may be requested before supplying the interconnection service.

Agreement requests shall be addressed to:

Orange Communications Luxembourg S.A.
Département Régulation
8, rue des Mérovingiens
L-8070 Bertrange
e-mail : jgr@orangeluxembourg.lu

9. Annexes

All prices mentioned here after are given exclusive of VAT or any other legal taxes, which will be added where applicable.

Annex 1

Annex 1 – National terminating access service for calls originated in Luxembourg

- a) Terminating access service to OLU's geographic fix network of calls originated in Luxembourg

Billing Period	Charge/ minute (€cts)
01/07/2021 – 31/12/2021	0,11
as of 01/01/2022	0,07

- b) Terminating access service to OLU's mobile network of calls originated in Luxembourg

Billing Period	Charge/ minute (€cts)
01/07/2021 – 31/12/2021	0,70
01/01/2022 – 31/12/2022	0,55
01/01/2023 – 31/12/2023	0,40
As of 01/01/2024	0,20

Annex 2

Annex 2 –Terminating access service to OLU’s fix and mobile network for calls originating outside Luxembourg

OLU applies, based upon the country of the calling party number (A-number), a specific surcharge for the termination in OLU’s network will be applied according to the following rules :

- 1) Termination of calls with A-Number belonging to any of the Country Codes included in Table 1: OLU will not apply any surcharge.
- 2) Termination of calls with A-Number belonging to any of the Country Codes included in Table 2: OLU will apply **a surcharge of 5 €cts/min.**
- 3) Termination of calls with A-Number not belonging to any of the Country Codes included in Table 1 or Table 2, with no A-number (no CLI), with incorrect A-Number (either in format or content), invalid A-Number, modified or manipulated A-number: OLU will apply **a surcharge of 12 €cts/min.**

These surcharges will be applied in addition to the national termination rate specified in annex 1 of this RIO F&M.

Table 1

Country Code	Country
43	Austria
32	Belgium
359	Bulgaria
385	Croatia
357	Cyprus
420	Czech Rep
45	Denmark

372	Estonia
358	Finland
33	France
594	French Guiana
49	Germany
30	Greece
590	Guadeloupe
36	Hungary
354	Iceland
353	Ireland
39	Italy
44 134	Jersey
371	Latvia
423	Liechtenstein
370	Lithuania
352	Luxemburg
356	Malta
596	Martinique
262	Mayotte
31	Netherlands
47	Norway
48	Poland
351	Portugal
262	Reunion
40	Romania
421	Slovakia
386	Slovenia
34	Spain
46	Sweden
44	United Kingdom
1	USA, Canada, alaska, Hawai
1787 / 1939	Puerto Rico (US)
1340	Virgin Islands (US)

Table 2

Country Code	Country
61	Australia
880	Bangladesh
1441	Bermuda
55	Brazil
673	Brunei
86	China
57	Colombia
506	Costa Rica
1809 /1829/ 1849	Dominican Rep
20	Egypt
350	Gibraltar
852	Hong Kong
91	India
62	Indonesia
81	Japan
82	Korea South
965	Kuwait
856	Laos
60	Malaysia
52	Mexico
64	New Zealand
92	Pakistan
65	Singapore
27	South Africa
41	Switzerland
886	Taiwan
66	Thailand
84	Vietnam

Annex 3

Fees for Interconnection link service based on TDM :

One-off charge per Operator covering installation and testing	8 149,- €

Fees for Interconnection link service based on IP :

One-off charge per Operator covering installation and testing	8 149,- €