



Version	Date	Changes made	Status
1	1 August 2019	Original version	Final
2	1 January 2020	New fixed termination rates under Schedule 4	Final
3	19 March 2020	Name change	Final
4	1 May 2020	New fixed voice origination rates under Schedule 4	Final
5	15 December 2020	New fixed termination rates under Schedule 4	Final
6	10 September 2021	New fixed termination rates under Schedule 4	Final



SCHEDULE 1 - SPECIFICATION AND TESTS

1 Points of Interconnection

1.1 Each Party will interconnect its Network with the other using the SIP protocol. The transmission level of the interconnection is based on Ethernet interfaces.

1.2 The Parties will connect their Networks at the points of connection as set out in the diagram attached at the appendix to this Schedule.

1.3 Each Party will be responsible for ensuring that it has sufficient bandwidth to maintain interconnection in accordance with the terms of this Agreement.

2 Testing

2.1 In order to establish that interconnection has been properly established the Parties shall conduct a Protocol test and a Service Test. GTRD TPO Questionnaire as provided by OBS to the Interconnect Operator once OBS has been served with a request to interconnect its Network with the Interconnect Operator's Network.

2.2 Interconnection shall be deemed to have been established once the Parties' Networks have been connected and they have confirmed to each other in writing by signing and countersigning the acceptance protocol that they can provide each other with the Services.

Appendix 1 to Schedule 1

Interconnection Architecture

National Interconnection Sites

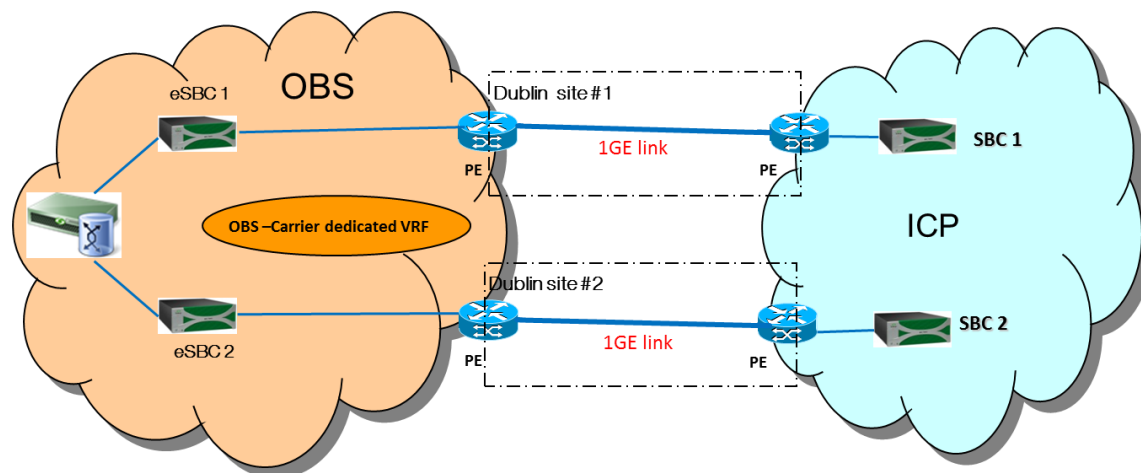
OBS has two sites that have been designed for use as National Interconnection Access Points for wholesale VoIP services. The addresses of the interconnection points are:

- Equant C/O Esat Block 8, Harcourt Centre, Charlotte Way, Dublin, Ireland (DUBX01)
- 7/8 Harcourt St c/o Data Electronics, Dublin, Ireland (DUBT03)

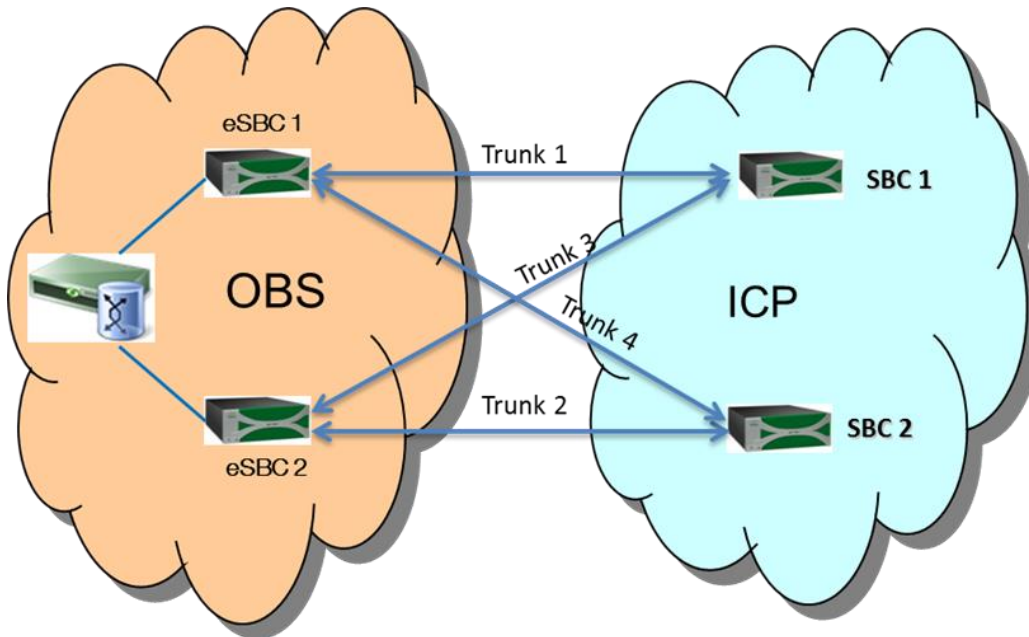
These are existing unmanned sites of OBS, containing relevant switching and transmission equipment with all digital functionalities for national and international traffic.

In case of national interconnection, the offered Interconnect Services relate to the entire national area.

IP connectivity design



Voice connectivity level



Main technical requirements:

- Codec G.711 A law with p-time of 20 ms is recommended
- G.729 with or without annex A and p-time of 20 ms is also available
- Transport protocol IPv4/UDP/RTP for Media
- CLI presentation guaranteed, CLI identity will to be accepted in the INVITE (P-Asserted Identity)
- Fax support: preferably T38, G.711 pass-through available

Regional Interconnection Sites

OBS has **no** site that has been designated for use as Regional Interconnection Access.

Interconnection Link Services

The interconnection link service consists of the physical link between an OBS' Access Point and an Operator Access Point. The Interconnection Link provided by Operator is Ethernet (optical / metallic interface) based line.

OBS ensures the availability of only the following Interconnection Link Service for the conveyance of the Operator's traffic: Orange Business Telecommunications Services-sited interconnection as defined hereafter.



Orange Business Telecommunications Services-sited Interconnection

For Orange Business Telecommunications Services-sited interconnection, the Interconnect Operator will supply and operate an Interconnection Link in its entirety. The Interconnection Link will remain in the Interconnect Operator's property.

The Point of Interconnection shall be located at the Access Point on the DDF (digital distribution frame) or ODF (optical distribution frame) of the Party that has the operational responsibility for the Interconnect Link.

OBS will permit Orange Business Telecommunications Services-sited interconnection at the site identified under the abovementioned National Interconnection Site.

In its request for Orange Business Telecommunications Services-sited interconnection, the Interconnect Operator will describe its needs regarding the installation of transmission equipment. Whenever OBS determines that Orange Business Telecommunications Services-sited interconnection is not reasonably feasible, it will inform the operator and ComReg of the reasons of such unfeasibility within 15 (fifteen) working days of receiving the request. OBS will comply, should ComReg find that Orange Business Telecommunications Services-sited interconnection is reasonably feasible.

In case Orange Business Telecommunications Services-sited interconnection is unfeasible, OBS will cooperate with the Interconnect Operator in order to find an appropriate alternative solution.

END OF SCHEDULE 1



SCHEDULE 2 - SERVICES

Interconnect access services

1. Terminating Access Service

The terminating access service conveys a call handed over from the operator's system, at an OBS' access point for termination on any number category of OBS' network.

Tariffs may be different for different categories of services identified by different number ranges.

OBS operates geographic numbers and non-geographic numbers 076.

The tariffs applied by OBS for the provision of the terminating access service are indicated in Schedule 4. 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 the Calling Line Identifier (CLI) is transferred to the telecommunications network of OBS, OBS 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.

2. Originating access service

OBS could optionally offer only Access to Operator Freephone Service to Freephone number 1800, subject to technical feasibility. This service consists in the conveyance by OBS of calls originated in OBS' network, handed over to an operator at a national point of interconnection between the operator's system and OBS' system for termination in Operator's network, on one of Operator's freephone numbers (1800x) in accordance with the national numbering plan of Ireland.

3. Transit access service

OBS does not offer any transit access service towards its network for operators.

4. Leased Lines Interconnection Service

OBS does not offer any leased line interconnection service on its network for operators.

END OF SCHEDULE 2



SCHEDULE 3 – FAULT REPORTING AND RESOLUTION

1 Introduction

1.1 This Schedule sets out the standards of fault resolution that each Party shall provide to each other with respect to Interconnection and the Services.

1.2 Each Party shall identify and fix faults in their Network which impact the Interconnection arrangements and/or the Services in accordance with this Schedule.

1.3 As soon as a Party becomes aware of a fault affecting Interconnection or the Services it shall promptly notify the other Party. The reporting Party shall also log such faults on its fault reporting system.

1.4 Faults shall be resolved in accordance with the severity level attached to that fault. The Party on whose Network the fault occurs shall determine the severity level in good faith. Any dispute regarding the severity level shall be dealt with in accordance with the escalation process at clause 16.

1.5 The severity levels are set out below:

Severity level	Description	Mean time to repair
Critical	Total outage	4 hours
Major	Partial outage. The problem is causing the service to operate at a Continuously degraded level such that voice communication is difficult	8 hours
Minor	Degraded / non-service-impacting Affecting - Intermittent QoS issues	24 hours

Quality of service of OBS' Interconnection Services

As far as the Interconnect access service is concerned, OBS undertakes to ensure for its own system a network failure rate, which does not exceed 1% 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 operator to be terminated on OBS' network and failed due to insufficiencies in OBS' network and the total number of calls handed over by that operator to be terminated on OBS' network (excluding, in particular, failures due to end-user behavior and failure of terminal equipment).

In the event of disturbance of the conveyance of traffic within its system, OBS may be constrained to implement the classical measures of traffic regulation (call gapping, etc. ...) in order to limit its effect on the quality of the service provided to its customers as well as to the interconnected operators. These measures of traffic regulation are applied to OBS' and operator's traffic without discrimination. The target figures given above for network failure rate do not include failures that are caused by the mentioned measures of traffic regulation. The operator and ComReg shall be informed if the above-mentioned measures for traffic regulation have to be applied and how long they may last.

The KPIs covering the provisioning time and fault repair time, are always stated in the "SLO and escalation matrix" document as negotiated and subject to agreement between the Parties.

END OF SCHEDULE 3



SCHEDULE 4 – CALLS CHARGES AND PAYMENT

1. Terminating Access Service Fixed Call Termination

Calls to geographic and non-geographic numbers terminated in the OBS' network

This service consists in the conveyance by OBS' calls handed over by an Interconnect Operator at a national point of interconnection between the Interconnect Operator's system and OBS' system for termination on OBS' system, on one of OBS' geographic numbers in accordance with the national numbering plan of Ireland.

The rates to be paid to OBS for terminating access service to OBS' geographic numbers are as specified below:

	Rate per minute in EUR		
Number category	Peak	Off peak	Night
	<u>effective from August,1 till December 31, 2019</u>		
Primary– geographic and 076 number	0.00063	0.00063	0.00063
Tandem geographic and 076 number	0.010412	0.010412	0.010412
	<u>effective from January 1, till December 31, 2020</u>		
Primary– geographic and 076 number	0.00057	0.00057	0.00057
Tandem geographic and 076 number	0.010412	0.010412	0.010412
	<u>effective from January 1, till June 30, 2021</u>		
Primary– geographic and 076 number	0.00051	0.00051	0.00051
Tandem geographic and 076 number	0.010412	0.010412	0.010412
	<u>effective from January 4, till June 30, 2021</u>		
0818 number	0.00051	0.00051	0.00051
	<u>effective from July 1, till December 31, 2021</u>		
Primary – geographic, 076 and 0818 numbers	0.00070	0.00070	0.00070
Tandem geographic and 076 number	0.010412	0.010412	0.010412



2. Originating Access Service

Calls to free phone numbers originated in the OBS' network

This service consists in the conveyance by OBS of calls handed over to an Interconnect Operator at a national point of interconnection between the Interconnect Operator's system and OBS' system for termination in the Interconnect Operator's system, on one of the Interconnect Operator's free phone numbers (1800x) in accordance with the national numbering plan of Ireland.

The rates to be paid to OBS for originating access service to the Interconnect Operator's free phone numbers are set out as follows:

As of	up to and including	Rate per minute charged for calls to 1800 numbers
1 May 2020	31 December 2020	0.873 €cent
1 January 2021	31 December 2021	0.918 €cent
1 January 2022	31 December 2022	0.961 €cent
1 January 2023	31 December 2023	1.000 €cent
1 January 2024	31 December 2024	1.043 €cent

Calls to 0818 originated in the OBS' network

OBS shall not impose a charge in relation to the provision of 0818 Fixed Voice Call Origination ("FVCO") other than where OBS is charged a 0818 Termination Rate that is in excess of the Regulated FTR, in that case OBS may charge the 0818 Termination Operator a 0818 FVCO Rate that is no greater than the difference between that 0818 Termination Rate and the Regulated Rate.

3. Orange Business Telecommunications Services-sited Interconnection

Monthly charge per used Interconnect Site (covering billing, maintenance and service quality control): 250 EUR.

Installation charge covering project preparation, allocation of resources, testing and all the administrative aspects: 2,500 EUR.



4. Modification of Interconnection Links

The establishment, the modification and the cancellation of trunks, as well as the connection or disconnection of circuits or signalling links required by an operator, are charged to that operator if these changes apply to existing interconnect trunks.

The necessary changes related to the extension of an existing interconnect trunk by adding supplementary interconnect links are not charged to the operator.

Change required by the operator	Tariff in EUR
Establishment of a new trunk	700
Modification or cancellation of an existing trunk	500
Connection or disconnection of circuits	200

END OF SCHEDULE 4



SCHEDULE 5 - COMPLIANCE

1 Corruption Prevention

Each Party will, and will take all appropriate measures to ensure that its Associated Persons and employees, engaged in the performance of the Agreement:

- (a) comply with the Anti-Corruption Laws and implement and maintain necessary controls to ensure that its subcontractors and representatives comply with the Anti-Corruption Laws;
- (b) maintain and comply with an anti-corruption policy and code of ethics that are substantially equivalent to Orange's Anti-Corruption Policy and Orange's Code of Ethics (which are located at the following URL or such URL as may be identified by OBS, which may be amended from time to time: <http://www.orange-business.com/en/our-anti-corruption-commitment>);
- (c) maintain accurate and complete accounting records; and
- (d) not offer or provide to any person, an advantage, financial or otherwise, including facilitation payments, in an effort to obtain a business advantage in return or to induce improper behavior; and
- (e) obtain the prior approval of the usual primary contact person of the other Party before offering or providing any gift, meal, entertainment, travel or other advantage (whether financial or otherwise), or making any charitable donation or political contribution on behalf of the other Party (such approval will be made by e-mail).

2 Economic Sanctions Programs

The activities under this Agreement, including the provision of the Products and Services, are or may be subject to Economic Sanctions, and the Parties will comply with Economic Sanctions. Each Party warrants and covenants that neither itself nor any of its Associated Persons are subject to any sanctions issued by a national or international body administering Economic Sanctions in any country or included on a list maintained by such body for the purposes of enforcing Economic Sanctions.

If (and to the extent) necessary to comply with any Economic Sanctions, a Party will be entitled, without liability to the other Party, to immediately suspend or terminate any provision or receipt of the affected Services or Products, notwithstanding anything to the contrary otherwise contained in the Agreement.

3 Implementation

Each Party represents and warrants that it has implemented all necessary and appropriate measures in order to ensure compliance with its obligations under this Schedule, and each Party will ensure that such measures are maintained and properly applied during the term of the Agreement. Each Party will immediately notify the other Party in writing if it has failed, or believes it will fail, to comply with its obligations under this Schedule. Upon a Party's request, the other Party will inform the requesting Party of the measures and controls it has taken to ensure compliance with its obligations under this Schedule.

Any breach of this Schedule will constitute a material breach of the Agreement.

For the purpose of this Schedule:

"Affiliate" any entity controlling, controlled by or under common control with a Party, where "control" means an entity's (a) ownership, directly or indirectly, of equity securities entitling it to exercise in the aggregate at least 50% of the voting power of the entity in question; or (b) possession directly or indirectly, of the power to direct or cause the direction of the management and policies of or with respect to the entity in question, whether through ownership of securities, by contract or otherwise.



“Anti-Corruption Laws” means all laws on the prevention of corruption applicable to a Party, including the U.S. Foreign Corrupt Practices Act, the U.K. Bribery Act 2010, the law “Sapin II”, the French criminal code pertaining to corruption prevention and similar or comparable applicable legislations in other countries.

“Associated Person” means a person or legal entity, private or public which is (a) an Affiliate of a Party involved in the performance of this Agreement; (b) an Owner of a Party, (c) a director or member of the management of a Party or of its Owner(s), or (d) a subcontractor, or representative of a Party, involved in the performance of this Agreement.

“Economic Sanctions” means the economic, financial or trade sanctions programs or restrictions, prohibition or embargos against certain countries, individuals or entities in accordance with the resolutions of the United Nations Security Council (UNSC) or under the laws and regulations of the European Union and its member states, the United States, or of any other applicable countries or authorities.

“Owner” means any person(s) who or which (a) own individually or jointly, directly or indirectly, at least 50% of the voting power of a Party or (b) possess individually or jointly, directly or indirectly, the power to direct or cause the direction of the management and policies of or with respect to a Party, whether through ownership of securities, by contract or otherwise.

END OF SCHEDULE 5