**Annex G:**

**IMPLEMENTATION, MAINTENANCE, OPERATIONS**

***Table of Contents***

1 Scope 4

2 Technical Interconnection Meetings (TIC meetings) 4

3 Responsibilities 4

3.1 ORT (ORANGE BELGIUM Responsible Traffic) 5

3.2 NRT (Operator’s Responsible Traffic) 5

4 Forecasting and Dimensioning 6

4.1 General 6

4.2 Start-up period 6

4.3 Regular regime 6

4.3.1 Rolling Forecasts 6

4.3.2 Regular Ordering of Capacity 7

4.3.3 Deviations 7

4.3.4 Order Acceptance 8

4.4 Rush Orders 8

5 Lead times for provisioning 9

6 Modification of an existing Interconnection 9

6.1 Removal of Capacity 9

6.2 Re-arrangement of the Interconnection and Migrations 9

7 Routing Principles 9

8 Signalling 10

# Scope

This Document describes the implementation principles and operational maintenance, related to the Interconnection between Orange Belgium's Network and Operator's Network. It contains provisions on the maintenance and implementation of services provided under this Agreement regarding Interconnect Services.

# Technical Interconnection Meetings (TIC meetings)

Both Parties have appointed a member of their staff as Technical Interconnect Single Point of Contact (T-SPOC) for all matters related to the technical Interconnection between Operator’ Network and Orange Belgium's Network.

Both Parties’ Interconnection managers will act as a commercial SPOC (C-SPOC) and will lead commercial interconnect negotiations. Any change in the identity of the C-SPOC or the T-SPOC should be communicated within a reasonable timeframe by the both Parties.

A Technical Interconnection Meeting will be organized upon request, at the dates agreed by the Parties. At Technical Interconnection Meetings, the Parties may discuss any technical issue as may arise in their Networks in the context of the Interconnection between them. In particular, and without prejudice to the right of the Parties that any other technical issue as defined in the preceding sentence be discussed, the following issues shall be discussed during Technical Interconnection Meetings:

1. The Parties’ Forecasts, Firm Orders and related RFS dates
2. Follow-up of the implementation of previous Capacity Orders; and
3. Interconnection outages and measures intended to protect and improve the Quality of Service of the Interconnect Services.
4. Planned operations and impacts.
5. Trouble Tickets (TT) handling.
6. Any other technical subject.

The group of participants in the Technical Interconnection Meetings is called the Technical Implementation Committee (TIC). Each Party’s team will be led by a duly authorised T-SPOC or its Deputy.

When the TIC comes to an agreement about a particular issue, it will be stated in the minutes of the meeting. When the TIC cannot come to an agreement about a topic, it will also be stated in the minutes of the meeting, and the matter will be put on the agenda of the Interconnection Coordination Group. The Interconnection Coordination Group, at which Orange Belgium is represented by the C-SPOC, is in charge of discussing the commercial & strategic issues related to the Interconnection of the two Parties’ Networks.

The minutes of each TIC meeting shall be provided within a five (5) Working Day period. The document provided to the receiving Party shall be validated by and binding for the sending Party. The receiving Party shall have five (5) Working Days to validate it and after its validation be bound by it. In the event that the receiving Party transmits comments on the draft report within the five (5) Working Day period, the other Party will again have a five (5) Working Day period to transmit either its validation of the comments or to transmit comments on the comments.

# Responsibilities

The responsibilities of the Parties, with respect to the Forecasting and Ordering of IP Links conveying their respective Interconnect traffic, are defined in the relevant Service Plans.

Each Service Plan included in the Interconnect Agreement indicates whether it is Orange Belgium or Operator that is responsible for the Forecasting and dimensioning of the needed capacity in respect of the Interconnect Traffic under the Service Plan concerned. If Orange Belgium is responsible for such Forecasting and dimensioning of the needed capacity, then the Interconnect Traffic under that Service Plan is called **ORT (Orange Belgium Responsible Traffic).** If Operator is responsible for such Forecasting and dimensioning of the needed capacity, then the Interconnect Traffic under that Service Plan is called **NRT (Operator Responsible Traffic).**

A summary of ORT and NRT is provided below and should be read together with the specific conditions set out in each Service Plan. If there are exceptions to the general rules stated below, then they will be clearly indicated in the related Service Plans. In the event of differences, the information contained in the Service Plans prevails over the information summarised below.

## ORT (ORANGE BELGIUM Responsible Traffic)

ORT includes:

1. Calls conveyed from Orange Belgium's Network to Operator’s Network, to be terminated in or through Operator’s Network;
2. Operator Calls conveyed from Operator's Network to Orange Belgium Network in order to reach the Value Added Services offered by Orange Belgium or by other OLOs.
3. All other traffic types as defined in service plans.

## NRT (Operator’s Responsible Traffic)

NRT includes:

1. Calls conveyed from Operator’s Network to Orange Belgium's Network, to be terminated in or through Orange Belgium's Network;
2. Orange Belgium Calls conveyed from Orange Belgium's Network to Operator’s Network in order to reach the Value Added Services offered by Operator or by other OLOs.
3. All other traffic types as defined in service plans.

# Forecasting and Dimensioning

## General

Both Parties will forecast together the bandwidth needed by each party for the primary and backup IP links. The goal of this mutual dimensioning exercise is to have both IP links configured exactly in the same way (same bandwidth allocated to each party configured on both IP links).

Both Parties shall submit to each other Forecasts and Firm Orders for needed Internet link Capacity dimensioning and modification, as the case may be.

Each Service Plan indicates if the related traffic is ORT or NRT:

* ORT is to be forecasted by Orange Belgium;
* NRT is to be forecasted by Operator.

Two stages shall be differentiated for the purposes of Forecasting and Ordering of Capacity by Operator (explained below):

1. a so-called **“start-up period”**, applying to the first Capacity Order which is ever introduced by Operator in the context of its Interconnection with Orange Belgium;

***A minimum bandwidth capacity to carry monthly 1.8 million of minutes will be ordered between Operator and Orange Belgium***

The VoIP interconnection provides an initial capacity that will cover both operators’ needs for several months or years. However if the bandwidth usage reaches the maximum threshold capacity provided by the physical link (1 GBE), a new physical link of 1 GBE will be installed by both parties to offer additional available bandwidth.

1. a so-called **“regular regime”,** applying to any Capacity Order subsequent to the Initial Capacity Order:

***A granularity of 10 GbE is applicable for "regular time" capacity ordering by Operator.***

***A granularity of 10 GbE is applicable for "regular time" capacity ordering by Orange Belgium.***

For the sake of clarity, for all matters related to the Forecasting and Capacity Ordering process, a binding agreement between the Parties will be defined at the TIC meeting.

## Start-up period

***A minimum capacity of 10 GbE will be ordered by Operator and Orange Belgium in the initial order.***

The Bringing into Service cannot take place if the Interconnect Agreement has not been signed.

## Regular regime

Subsequent provisioning of capacity will be installed at the earliest during the quarter that will follow the Quarter including the BIS Date. From then on, ordered Capacity will be delivered on the RFS Dates, on the basis of the quarterly orders and the lead times for provisioning described in Section 5.

***Subsequent capacity orders will be done with a granularity of 10 GbE.***

### Rolling Forecasts

Operator and Orange shall share a first Rolling Forecast that covers the Capacity needs for a 1 year period, starting from the quarter including the BIS Date. This first rolling forecast will therefore be included in the LOI document.

Subsequent Rolling Forecasts will be communicated on a quarterly basis. They will be part of the quarterly TIC meeting report.

### Regular Ordering of Capacity

#### General

After the Initial Order (required for the Bring Into Service date), an Interconnection Agreement must have been signed before any subsequent Firm Orders can be accepted.

A Party can submit only one Capacity Order in a given quarter. This order will cover the capacity needs for the subsequent quarter (Order in Qi covers capacity needs in Qi+1). One Capacity Order can only cover the required capacity concerning the next Quarter (One order for One Quarter principle).

"Capacity Order" must be understood in its broad sense. It does not only concern pure bandwidth capacity extension but general capacity rearrangement (swaps or capacity decrease) and SS7 and SIP related work. This also includes ordering of internal cabling, whether in the Orange Belgium Co-location framework.

One party shall always present the quarterly firm orders to the other party during the TIC meetings. The agreement reached between both parties will then be made official using a standard ordering form (please refer to annex).

As far as the requested order is not exceeding the allowed capacity deviation of a previous forecast, there will in principle not be any discussion on the capacity content of the order.

On the other hand, discussions can concern any practical implementation issues (target installation timing, phasing of the order if needed, practical organisation of swaps), staying aligned with the content of the chapter 5 (Lead Times).

#### IC link delivery and timing

The RFS (Ready For Service) dates, or IP link delivery dates, which are agreed between both Parties, include the time necessary to perform the acceptance tests between Orange Belgium and Operator. These acceptance tests must therefore take place before RFS.

### Deviations

When introducing a 1-year Rolling Forecast or a Firm Order, the indicated Transmission and Switching Capacity extension of a particular IP Link for a particular quarter may deviate from the Capacity extension mentioned in a previous Rolling Forecast related to the same IP Link and the same quarter, as indicated below.

More precisely, the values for Capacity extensions included in a Rolling Forecast related to a particular IP LINK, submitted in quarter Qi for each quarter Qi+x, are to be compared with the Capacity extension estimations for the same IP Link for each quarter Qi+x+1 mentioned in the previous forecast submitted in quarter Qi-1. A firm Order submitted in quarter Qi related to the delivery of Capacity with RFS in quarter Qi+1 will be compared with the Capacity estimation for the same quarter Q i+1 and for the same IP Link included in the Rolling Forecast submitted in Qi-1.

The allowed deviations on the absolute number of bandwidth, as indicated in the table below, are expressed, either as a percentage of the value contained in the previous forecast/ordering intention, either as an absolute number of bandwidth, whatever is the greatest. The indicated deviations are applicable as well in plus as in minus and result in an upper and a lower deviation limit within which a new forecast/Firm Order can range.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Qi+1 | Qi+2 | Qi+3 | QI+4 |
| % | +5 / -5 | +10 / -10 | +20 / -20 | N.A. |

The deviations indicated in the table cannot be used as a ground to modify a Firm Order that has been accepted by Orange Belgium.

### Order Acceptance

The Forecasts and Firm Orders made by a Party must respect the maximum allowed deviations per IP Link as specified in Section 4.3.3 with respect to the previous Forecasts per IP Link. If not, the requested Party will only have to accept the delivery of the Capacity within the allowed deviation limits.

#### Under-estimation of capacity needs

In case it turns out that a Forecast for Capacity extension per IP Link was underestimated, a Party may in the Firm Order increase the value contained in the previous Rolling Forecast beyond the allowed deviations. However, as indicated above, the requested Party is then not obliged to accept the Capacity extension which is beyond the allowed deviations nor to deliver it within the lead times defined in Section 5 but will do all reasonable efforts to do so (best effort basis). If the requested Party accepts to deliver the Capacity extensions beyond the allowed deviations, the C-SPOC will inform the other Party about any extra cost related to the provision of that Capacity extension.

This must be included in a Rush order process (See 4.4).

#### Overestimation of the capacity needs mutalize

If it appears that specific investments have been made by either parties in reply to the needs described by the other Party, both Parties will be entitled to claim from the other Party the payment of the total or part of the said investments (including, in particular, any expenses incurred for installation activities). This will be the case if investments are duly justified as being reasonable and proportional taking into account forecasts and Firm Orders transmitted by the Parties and provided by the Party demonstrating that those investments have become redundant as a consequence of difference between, on the one hand, a Firm Order for Capacity as ultimately placed by the other Party, and, on the other hand, the forecast made.

## Rush Orders

A Party, detecting that:

1. its installed IP Capacity cannot meet the engineering targets as described in Section 1, or;
2. its existing IP Capacity Order will not meet the engineering targets at the end of the quarter

can call for a Rush Order in TIC meeting. Rush orders aimed at replacing a transmission option by another one will be refused by Orange Belgium. The requested content of the Rush order will be made available to the requested party at least 5 days before the TIC meeting. This will allow the requested party to check the feasibility of the request.

A Rush Order has no link with the Forecasting and Ordering process described in Section 0 and has to be considered as an exceptional order which can be submitted at any time. Therefore the requested Party cannot guarantee that it will always be able to implement a Rush Order within the requested lead-time.The Party submitting a Rush Order in quarter Qi will at the same time also submit a new 1 year Rolling Forecast replacing the Rolling Forecast submitted in quarter Qi. The deviations for this new Rolling Forecast have to be calculated on the basis of the Capacity extensions indicated in the Rolling Forecast submitted in quarter Qi-1, and can only be increased by the capacity extensions contained in the Rush Order.

During the Rush Order TIC meeting, both parties will agree on:

1. The IP Capacity that can be supplied[[1]](#footnote-1);
2. the proposed implementation date;

As for regular orders, an Ordering Form will have to be signed by both Parties to implement this Rush Order. The requested party C-SPOC will inform the other party about the additional charges (as defined in the CPL) relating to this rush order. The additional Capacity is supplied at the expense of the Party of which the traffic will be conveyed over the said additional Capacity. This will be communicated at C-SPOC level, within the Interconnection Co-ordination group.

Each Party can place one (1) successful[[2]](#footnote-2) Rush Order per year to the other Party. Each Rush Order will be charged with a flat fee, covering the costs incurred for establishing an offer with respect to the Rush Order.

If both Parties fail to agree on the Rush Order as set out in this Section, the issue will be put on the agenda of the Interconnection Co-ordination group.

# Lead times for provisioning

As far as Orange Belgium is concerned, the reception per Registered Mail of a valid Quarterly order, is the starting point of the whole capacity extension process. Provided that the formal procedure and intermediate timings are respected, both parties shall make the relevant Capacity available at the agreed RFS Date.

In case Operator is not fully respecting the ordering procedure, information flow & timing, Orange Belgium cannot be held as responsible in case of delay.

Lead times for Rush Orders are to be agreed on a best effort basis case-by-case in accordance with the rules set out in Section 4.4.

# Modification of an existing Interconnection

## Removal of Capacity

Any reduction of capacity at an AP has to be handled as a normal quarterly order.

## Re-arrangement of the Interconnection and Migrations

If a Party proposes a re-arrangement of the Interconnection, not affecting the installed Capacity, it can submit this proposal directly to the TIC Meetings. If accepted, all details of the re-arrangement will be stated in the meeting minutes, including the agreed implementation date. If not accepted, the reasons for not providing the re-arrangement will also be stated in the meeting minutes.

In case a proposed re-arrangement has a commercial or financial impact, the proposal has to be sent to the other Party’s SPOC. An offer will be sent to the requesting Party. In case that Party does not agree with that offer, it may ask to put this issue on the agenda of a meeting of the Co-ordination Group.

Requests for Migrations will be dealt with in a similar way.

Re-arrangement of interconnection and Migrations must follow the quarterly order process.

# Routing Principles

Before the Bringing into Service of the Interconnection, each Party must provide the other Party with a Routing Table (AP level) describing the routing of the traffic outgoing from its Network and handed over to the other Party’s Network for each Service Plan as agreed between both Parties. The Routing Tables are defined and updated through the TIC Meetings. A Party may not change the routing of its primary outgoing traffic (as defined below) to the other Party’s Network, without the agreement of the other Party in the TIC Meeting except in case of overflow, disputes or loss of quality of service on the direct interconnection between the Parties. In case no agreement can be reached, the issue will be subject to a decision by the Interconnection Co-ordination Group.

Traffic routed according to the Routing Tables is primary traffic. Traffic which is given another routing, is identified as overflow traffic and can be (partially) blocked by the receiving Party or be treated with a lower priority.

However, calls originated in one of the Parties’ Networks and destined to the other Party’s Network, which have overflowed (because of isolation or a failure either in one of the Parties’ AGE's, either in an IC Link), shall be given by the receiving Party the same priority as primary traffic.

In case a Party pre-plans to re-route (part of) its interconnect traffic to another route in case of failure in the own Network, the re-routing plan shall be discussed at the TIC.

It is not allowed to overflow internal traffic to the other Party’s Network, except if this is provided for by a dedicated Service Plan under the terms and conditions set out therein.

A SIP trunk between the Networks of both Parties can be subdivided into several SIP Trunk Groups. The Party, subscribing to a Service Plan of the other Party, will also propose which SIP Trunk Group will carry the related traffic, taking into account any relevant service/regulatory considerations as specified in the Service Plans. The SIP Trunk Groups will be defined and updated through the Technical Interconnection Meetings.

Each Party shall route the other Party’s traffic in accordance with the following routing principles:

1. there shall be no discrimination in the routing of traffic in a Party’s Network between the traffic of such Party’s Service Users and the other Party’s Service Users;
2. the Parties shall develop and apply Network management strategies and procedures to maintain service quality and to protect the Parties’ Networks as appropriate;
3. destinations with a low Answer Bid Ratio (e.g. Hard To Reach destinations or destinations with an “explosive” call pattern) will be characterised by one or more specific sub-ranges within the VAS number ranges allocated to a Party, in order to allow the other Party in whose Network the Calls originate, to protect its Network against the negative effects of such kind of traffic by isolating the traffic concerned from normal ABR traffic or by applying Protection call control on HTR or explosive traffic destinations characterised by the predefined low ABR sub-range. A Party may also apply these measures on the complete VAS number ranges allocated to the other Party, if it finds that the other Party is operating low ABR services without reserving a dedicated sub-range for it.

In addition to this, both Parties can agree about protection measures like route diversity on the transmission or the switching level. Full details of these measures will be defined and updated through the TIC Meetings after they have been commercially agreed.

# Signalling

The Orange Belgium network contains two STP’s that handle the signalling messages. Orange Belgium requires that all the signalling info goes through these network equipment’s.

Orange Belgium recommends interconnecting its STP through SIGTRAN via at least 2 IP Links to increase the diversity. All needed information about signalling management by Orange Belgium is to be found in the Technical Specification document.

The Parties shall apply SS7 signalling between their Signalling Points. Both Parties will apply the same route priority scheme, in order to make it easily possible to trace a complete SMS scenario on one signalling link. All signalling related to a particular SMSl will follow the same signalling link, excepted if this is technically not possible.

- END OF DOCUMENT -

1. As far as ORANGE BE is concerned, the additional IP Capacity will be supplied on a ”first come, first served” basis in respect of any possible Order of the same type. [↑](#footnote-ref-1)
2. [↑](#footnote-ref-2)