

BASIC SERVICE LEVEL AGREEMENT FOR INTERCONNECT SERVICES

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PART 1
PRINCIPLES OF THE SERVICE LEVEL AGREEMENT.

1.1 TERMS AND CONDITIONS.

1. This SLA version is valid until the approval of a new SLA version inserted in the Interconnection Agreement by way of formal Amendment. The SLA can be ended on request of one of the Parties three months after the notification of such request to the other Party by registered mail addressed to the SPOC¹ of the other Party.
2. This version of the SLA supersedes all previous versions entirely.
3. The SLA only covers Interconnect Services under the IC-agreement between OLO and Proximus.
4. Both Parties can agree to implement a higher level of Service after agreeing on specific operational and commercial conditions.
5. This SLA is binding for Proximus and OLO. Both Parties agree to respect the content of this document
6. Both Parties agree that all efforts should be taken to avoid compensations.
7. Compensations under this SLA can only be applied if the responsibility of the penalized Party is unambiguously clear and only for those issues where an amount is mentioned in this SLA. In that respect, the present SLA is not applicable in situations of force majeure including without limitation, natural disasters, fire and strikes or in case the timers are delayed due to the other Party.
8. Both Parties agree that the Interconnect SLA should be able to evolve according to changed or new business requirements, without the need to terminate the existing SLA. New requirements will be communicated to the other Party in a proposal for evolution at least three months before they can be integrated in the existing SLA. Those requirements can be integrated in an addendum to be inserted in the Interconnection Agreement by way of a formal Amendment.
9. A number of references to BRIO or P&O are made inside the SLA document.
To increase the usability of the document the referred text is added to the SLA. This is only for information as the actual text of BRIO and P&O has priority over the SLA. The font style for this text references is italic.

1.2 ROLES & RESPONSIBILITIES

1.2.1 *Steering team.*

1.2.1.1 Members.

The members must represent Proximus or the "Platform Telecom Operators & Service Providers".

Each party of the steering team is free to select his delegation and change this without notice to the other party.

A member can be added representing the BIPT to advise or consult the meeting.

1.2.1.2 Chair.

1.2.1.3 Secretary.

If the chair is of one delegation then the secretary is of the other.

1.2.1.4 Communication

All communication to the steering team will be done in parallel to the chair and secretary.

1.2.2 *Steering team meeting.*

1.2.2.1 Role

The role of the steering team meeting is to evaluate the actual SLA and to prepare the new version of the next year. They are the owners of the change process for the interconnect SLA. All parties of the steering team will use their best efforts to edit a new version every year.

1.2.2.2 Frequency.

A recurrent meeting will be held in the last week of every quarter.

¹ The SPOC of a Party is defined in P&O §3.

On demand of one party of the steering team an extra steering team meeting will be organized. The requesting party of the steering team informs the chair and secretary about the demand by forwarding an amendment to the actual SLA mentioning the urgency. The chair will organize this extra meeting ASAP and within the two weeks following the request. This extra meeting will only be asked in case the requesting party is of the opinion that the issue cannot be postponed until the next recurrent meeting of the steering team.

1.2.2.3 Venue.

Each party of the steering team in alternation will choose the venue.

1.2.3 *Technical Implementation council.*

The OLO specific subjects related to the SLA will be discussed at the TIC meeting with each operator individually.

1.3 CHANGE PROCESS.

The change process is completely owned by the SLA steering team.

1.3.1 *Amendments.*

Both, Proximus and the “Platform Telecom Operators & Service Providers” can ask for an amendment of the existing basic SLA. Therefore the party wishing such amendment will formally notify to the other party the text which it wants to be added, modified or deleted.

The amendment will be identified as: Amendment<date> (e.g.: amendment 01/10/03).

Each amendment will be put on the agenda of the next steering team meeting, this meeting can approve, disapprove or postpone the text of the amendment. The amendment can only be postponed after an agreement has been reached on a planning for the discussion of the proposed amendment.

1.3.2 *Addendum*

If the steering team approves the text of an amendment it will be added as addendum to the SLA and inserted in the Interconnection Agreement by way of formal Amendment to the said Interconnection Agreement.

The steering team will also determine whether the addendum has a business or major operational impact of the organization. If this is the case a formal acceptance process (refer to 1.3.3.2) will be organized.

The addendum will be identified as addendum <date of the steering team meeting>

Each addendum contains the target date for activation and if required, the transition rules.

1.3.3 *New edition of the Basic SLA*

1.3.3.1 Negotiation process.

The SLA steering team should prepare a new edition of the SLA.

1.3.3.2 Acceptance process.

Proximus will organize the Acceptance process.

As inside the SLA steering team the Other Licensed Operator’s are represented by the “Platform Telecom Operators & Service Providers” every Other Licensed Operator should formally accept each new edition individually.

Proximus will organize the Acceptance process, as soon as the final draft of the new edition of the SLA is approved by the steering team.

PART 2

PROVISIONING.

2.1 PROVISIONING OF IC-LINKS

This section describes the total process for the provisioning of IC-links as described in Service Plans 001 and 003. This process is applicable for Proximus- and OLO-sited IC-links. A complete flowchart of the actions and decisions that need to be taken starting from the ordering until the installation of an E1-link can be found in Appendix 1. The overall action flow can be divided in three main sub-processes: the Order Process, the Site Preparation and the Installation of the IC-links.

The total duration of the process for the provisioning of IC-links is specified in the P&O-document. Hereunder we will provide a more detailed overview of the specific actions to be taken during the Process for provisioning IC-links. If the Parties have agreed a RFS-date which is planned more than 4 months after the ordering date, then all intermediary timers as of RFB will be applicable.

All Parties shall use their best effort to have an E1-link in service at the agreed RFS-date, even if one or both of the Parties did not succeed to respect all timers in the sub-processes.

2.1.1 Subprocesses

2.1.1.1 Order process

A detailed overview of the Order Process is inserted under Appendix 2. The Order Process starts with the receipt of the Firm Order, and is preceded by the procedures, for which the terms and conditions are described in annex 4 of the BRIO: the P&O-document. The Order Process ends with the Order Acceptance.

After the receipt of the Firm Order, the receiving Party can decide whether that clarification of the Firm Order is needed and organise a meeting. In this case both Parties have a maximum of 15 Working Days to agree on an acceptable Firm Order (in case the order is an Initial Order: see P&O document §9.2). In case a part of the total Firm order is not accepted a 'TO-Solve issue 1'² will occur.

After the notification of the Firm Order a Field Survey can be requested in case a new site needs to be built. If it was not possible for the requesting Party to have a complete Field Survey, a 'To-Solve issue 2' will occur. The field survey will take place within 10 Working Days after the receipt of the firm order. Maximum 5 Working Days after the Field Survey or after the receipt of the additional information, the RFS-dates should be communicated and the orders will be accepted (=order acceptance).

The time between firm order and RFS is specified in the P&O document.

2.1.1.2 Site Preparation

A detailed overview of the process for Site Preparation is inserted in Appendix 3.

A Site survey can be requested if needed. This survey should be done within ten Working Days (for extensions) or within a maximum of 2 months (in case new infrastructure is required) following the Order Acceptance and at the latest 2 months before RFS. In case a complete Site Survey was not possible within the here above mentioned timeframe a 'To-Solve issue 3' will occur.

After the Order Acceptance, or if applicable after the site survey, both Parties need to agree on a RFB or RFO date and confirm the RFS date. The RFB or RFO must be scheduled at the latest at 'RFS-2 months'. In case where problems are identified to establish a RFB or RFO date, a 'To-Solve issue 4' will occur.

² 'To-Solve'-issues have been detected in the process and can give cause for escalation. All these issues with the appropriate scenario for escalation will be defined under point 3.3

If RFB or RFO was successful, the installation should be ready to start the test procedure 20 Working Days before RFS. In case an RFB or RFO is missed or has to be changed, a 'To-Solve issue 5' will occur. An installation is 'ready for test' if both Parties have completed the realisation of their transmission path.

2.1.1.3 Installation of IC-links

A detailed overview of the process for Installation of IC-links is inserted in Appendix 4.

Transmission and switching tests have to be performed during a 15 Working Days period preceding the RFS. If these tests are successful, the E1-link(s) will be brought into service at the latest on the RFS date. In case problems occur during the test phase, a 'To-Solve issue 6' can be initiated.

2.1.1.3.1 E2E Transmission tests.

Proximus will take the lead (for both OIT and BIT).

Proximus will send a standard mail to OLO during the 4th week preceding the RFS to propose a date on which transmission tests can take place and a contact point. The OLO SPOC has to confirm the proposal. On the agreed date, Proximus will then contact OLO to perform the tests.

If the OLO does not reply on the test schedule, proposed by Proximus, before the end of the week preceding the transmission tests, it is assumed that these tests are not needed.

The transmission test is a continuity check in 2 consecutive steps:

- a. OLO installs a loop on the IC-link termination point in the OLO Network, close to the OLO switch if required and Proximus checks the continuity with a test pattern. If OK then step b) may be skipped.
- b. OLO installs a loop on OLO-side of the POI of the OLO and Proximus checks the continuity with a test pattern.

If test b) is successful, but test a) is not, than this is an indication that the fault is in the OLO Network. If test b) is not successful, than no localisation of the fault can be done.

In case the fault cannot be exactly located, both Parties will try to solve this with internal tests by having a 24 hour double check in their respective networks. If still no solution has been found Proximus and OLO have to agree mutually on a date to visit the POI. An appointment is made for a visit and the transmission problems should be resolved within 5 Working Days, and in each case before the end of week 2 before RFS. The other Party must be informed if timing could not be kept due to transmission problem.

2.1.1.3.2 E2E Switch tests.

The OLO will take the lead. (for both OIT and BIT)

After the transmission tests, OLO has to contact Proximus during the second week before the RFS, to agree on a date (in week 1 before RFS) for the switching test—and the activation of the circuits. On the agreed date, OLO has to contact Proximus for the following tests:

- Tx and Rx correspondence test;
- PCM system identification test;
- PCM system continuity test;

2.1.1.3.3 In service.

When the E2E switch tests have been finalized with a positive result the IC links are no longer under construction but in service.

2.1.2 Escalation.

Two escalation levels are foreseen if the above described formal communication is not correctly applied by one of the Parties.

2.1.2.1 Escalation Level 1

The fact that a Party decides to a Level 1 escalation implies that the communication between the Parties will be held at a more formal level and thus, that traces of the communications are

kept. These traces will be either e-mails or faxes or via a commonly agreed method of inter-operator communication.

In case no escalation has been done within the foreseen delay, the other Party can not be held responsible for the issue on which no escalation has been done in case where faults or delays occur.

The fact that a Party chooses to switch to a Level 1 escalation is an official sign to the other Party that the identified problems need to be solved within a reasonable timing by the people involved. A Level 1 escalation does not require involving extra people.

The requested Party needs to react in an appropriate manner to the Level 1 escalation within the following timeframes:

Time before RFS	Time to respond and to react
More than 2 months	5 Working Days
Between 2 months and 1 week	3 Working Days
Less than 1 week	1 Working Day

In case a Party does not react in a relevant manner to the Level 1 escalation within the defined timing, the escalation will become automatically a Level 2 escalation.

2.1.2.2 Escalation Level 2

If no solution to the problem has been reached within escalation Level 1, an escalation to Level 2 might be required. Escalation Level 2 can imply the discussion of the issue during an Interconnection Coordination Group meeting, depending on the specific 'To-Solve' point.

Communication at this escalation level will always be formalized in writing (Minutes of meeting, letter...).

2.1.3 *To-Solve issues*

2.1.3.1 To-Solve issue 1: An order or a part of the order is not accepted

In case the receiving Party does not accept the order, or a part of the order, the requesting Party can escalate this issue on the following manner:

2.1.3.1.1 Escalation Level 1

At escalation Level 1 a co-ordination meeting will be scheduled to discuss the order and to provide additional information. This Level can be initiated if the order is not accepted due to lack of technical information or inconsistencies in the information.

2.1.3.1.2 Escalation Level 2

If after a Level 1 escalation the complete order is still not accepted a Level 2 escalation can take place. With a Level 2 escalation the issue will be discussed during an Interconnection Coordination Group meeting.

2.1.3.2 To-Solve issue 2: No complete Field Survey was possible

Before the Order Acceptance a Field Survey can be requested. If the complete Field Survey can not be performed within the foreseen delay escalation is possible.

2.1.3.2.1 Escalation Level 1

Escalation to Level 1 can be done if:

- no date could be set to perform the Field Survey within the foreseen delays
- a Party was not present at the scheduled date
- crucial information could not be provided

2.1.3.2.2 Escalation Level 2

Escalation to Level 2 is possible if:

- The appropriate Parties were not present at the scheduled moment to inspect the site.

- The relevant information was not available and a new site survey has to be scheduled. The issue and eventual penalties will be set on the agenda of an Interconnection Coordination Group meeting.

2.1.3.3 To-Solve issue 3: No complete Site Survey was possible

After the Order Acceptance a Site Survey can be requested. If the complete Site Survey can not be performed within the foreseen delay, escalation is possible.

2.1.3.3.1 Escalation Level 1

Escalation to Level 1 can be done if:

- no date could be set to perform the site survey within the foreseen delays
- a Party was not present at the scheduled date
- crucial information could not be provided

2.1.3.3.2 Escalation Level 2

Escalation to Level 2 is possible if:

- The appropriate Parties were not present at the scheduled moment to inspect the site.
- The relevant information was not available and a new site survey has to be scheduled. The issue and eventual penalties will be set on the agenda of an Interconnection Coordination Group meeting.

2.1.3.4 To-Solve issue 4: Problems with RFB/RFO communication

During the process for site preparation a RFB/RFO date needs to be communicated within 5 Working Days after the site survey. This RFB/RFO date needs to be fixed at a date no later than 2 months before the RFS date.

2.1.3.4.1 Escalation Level 1

Parties can decide to start up an escalation of Level 1 because:

- No RFB/RFO is communicated within 5 Working Days after the site survey
- An RFB/RFO date is communicated within 5 Working Days if this date is scheduled later than 2 months before RFS. By escalating Parties will try to achieve a date at the latest 2 months before RFS.

2.1.3.4.2 Escalation Level 2

No Level 2 escalation is foreseen for this To-Solve issue 4. The actual penalisation for not complying with the agreed rules to exchange information on RFB/RFO will be reflected in the compensation set for a shift RFS. An indication of fault for shift RFS will be given.

2.1.3.5 To-Solve issue 5: Change of RFB/RFO date

During the installation and preparation of the site some events can take place so that the RFB/RFO cannot be respected. The following escalation levels are possible for the identified events.

2.1.3.5.1 Escalation Level 1

Escalations to Level 1 are possible in case:

- The RFB/RFO date is changed after the RFB/RFO communication
- The site is not RFB/RFO on the date the installation should start. Via the Level 1 escalation a new date can be scheduled
- The site was not accessible at the date installation should have started.

2.1.3.5.2 Escalation Level 2

Escalation to Level 2 can be initiated for the following cases:

- The RFB/RFO date is changed after the RFB/RFO communication and the new date is scheduled in less than 2 months before RFS. The actual penalisation for not complying with the agreed rules to schedule RFB/RFO will be reflected in the compensation set for a shift RFS. An indication of fault for shift RFS will be given.
- The site is not RFB/RFO on the date that the installation should start. The actual penalisation for not complying with the agreed rules to schedule RFB/RFO will be reflected in the compensation set for a shift RFS. An indication of fault for shift RFS will be given.
- The site was not accessible at the date that installation should have started. The penalisation for not complying with the agreed rules to schedule RFB/RFO will be

reflected in the compensation set for a shift RFS. An indication of fault for shift RFS will be given.

2.1.3.6 To-Solve issue 6: Problems during test

During the process for installation of the IC-links transmission and switching tests will be performed. If during these tests problems occur which threaten the foreseen RFS-date, escalations of these issues are possible.

2.1.3.6.1 Escalation Level 1

The following scenario's have been identified that can give cause to a Level 1 escalation if:

- OLO has not provided a SPOC or SPOC is not available
- A transmission test has been scheduled but this test did not start at the agreed date.
- Internal tests, performed within 24 hours after unsuccessful end-to-end transmission tests, were not conclusive and no suitable date for both Parties was found to further investigate transmission problems on the POI within 5 Working Days. Via Level 1 escalation a date will be looked for within the shortest delays.
- Transmission problems are not solved at RFS-5 Working Days.
- No appointment for switching test is made 5 Working Days before RFS. Via Level 1 escalation a date will be looked for within the shortest delays.
- A switching test has been scheduled but did not start at the agreed date.
- Problem could not be fixed for switching or second switching test was unsuccessful.

2.1.3.6.2 Escalation Level 2

The following scenario's have been identified which can give cause to a Level 2 escalation if:

- A transmission test has been scheduled but this test did not start at the agreed date. An indication of fault for shift RFS will be given.
- Internal tests were not conclusive and no suitable date for both Parties was found to further investigate transmission problems on the POI within 5 Working Days. An indication of fault for shift RFS will be given.
- Transmission problems are not solved at RFS-5 Working Days. Both Parties need to deeper investigate the problem.
- No appointment for switching test is made 5 Working Days before RFS. An indication of fault for shift RFS will be given if no appointment can be set up within the shortest delays.
- A switching test has been scheduled but did not start at the agreed date. An indication of fault for shift RFS will be given
- A problem could not be fixed for switching or second switching test was unsuccessful. An indication of fault for shift RFS will be given.

2.1.3.7 Compensations between both Parties.

2.1.3.7.1 Shift RFS

If a shift RFS occurs. the terms and conditions as defined in the P&O are applicable for the Party which is identified as responsible for the shift RFS.

Refer to P&O – Annex 4 to BRIO

After the notification of the RFS dates (and, where relevant, after adjustment of these dates at TIC meetings), the RFS planning will be considered as mutually agreed. In case ICLs cannot be brought into service at the RFS date as a result of a delay incurred on the side of one of the Parties, compensation will be invoiced by the other Party as described hereafter.

a) Shift of RFS date due to OLO delay:

In case the delay period exceeds 10 Working Days, OLO will pay a variable compensation fee equal to the rental fee for the duration of the delay period. The applied rental fee will cover the actual Capacity of which the bringing into service is delayed and will be based on the applicable rental rate for Proximus Customer-Sited ICLs. Both compensation fees will be applied as well for delayed OIT Customer-Sited ICLs as well as for delayed BIT OLO-Sited ICLs to be provided by Proximus.

b) Shift of RFS date due to Proximus delay:

In case the delay period exceeds 10 Working Days, Proximus will pay a variable compensation fee equal to the rental fee for the duration of the delay period. The applied rental fee will cover the actual Capacity of which the bringing into service is delayed, based on the applicable rental rate for Proximus Customer-Sited ICLs. Both compensation fees will be applied as well for delayed OIT Customer-Sited ICLs as well as for delayed OIT Proximus-Sited ICLs to be provided by OLO.

When the delay period with respect to the scheduled RFS date exceeds 6 months, the ordered Capacity will be considered as cancelled. The variable compensation fee mentioned above will have reached a maximum level corresponding with a six month rental period for the Capacity concerned. The Party to which the delay is due will also have to pay the cancellation fee applicable to OIT Customer-Sited ICLs (see Section 12.1.2) as well as the installation fee related to the Capacity concerned, unless otherwise agreed at a commercial meeting between the Parties.

2.1.3.7.2 Other compensations

In case during the process for provisioning of IC-links an appointment has been missed that leads to a 'To-solve-issue' the following compensations can be requested from the absent Party:

- If an appointment at the site of the requesting Party has been missed: 248 EUR
- If an appointment at another site has been missed: 496 EUR

2.2 PROVISIONING OF TRANSPORT INTERCONNECT

The provisioning of half links will be handled in such a way as to guarantee the same level of service as for the retail leased lines. Reference is made to the basic SLA for leased lines, available on Internet.

Remark about internal cabling

The case of a Proximus-sited demarcation point may require some further clarification. The OLO endpoint is to be considered Ready For Proximus (RFB) if the OLO has ordered on time the necessary extensions of the cabling from the equipment in the OLO cage to the appropriate Proximus distribution frame.

2.3 PROVISIONING OF SERVICE PLANS

2.3.1 *Timing*

For the opening of existing or new service plans, the timing and rules as defined in the Interconnect agreement is applied.

2.3.2 *Process to implement an existing Service Plan*

This process is applicable under the conditions that a Service Plan and the Technical Specifications for the specific service are available.

The detailed process for the provisioning of an existing Service Plan is provided under Appendix 5.

The requesting Party must add the following documentation to his request to open a Service Plan:

- A copy of the reservation certificate for a number block (if any)
- A test number (if any)

In chronological order the following actions and checks are performed by the requested Party after the receipt of the request to open the Service Plan:

- a. Check if all regulatory and technical requirements are met to accept the request. If not, inform the requesting Party.
- b. Determine a target BIS date and hour
- c. Engineering and implementation
- d. Perform an Interface test and proceed if successful. This test consists of a protocol test between both Parties' AGE's
- e. Perform routing tests from every Base Unit concerned, and proceed if successful³.
- f. Check if a commercial agreement has been reached on terms and conditions of the Service Plan.
- g. Validation of the target BIS date and hour⁴
- h. Unblock service
- i. Start supervision and billing

2.3.3 *Process to close a service plan.*

When a Party closes a Service Plan, the following actions and checks are to be performed by that Party:

- a. Check if all regulatory, commercial and technical conditions are met to perform the closure of the service;
- b. Notify at least one month in advance all concerned Parties, in particular about the taking out of service of one or more numbers;
- c. Remove service from network.

³ In the future, Proximus foresees to add to the process also a billing test. This test will not have an impact on the timing to implement an existing Service Plan

⁴ The BIS date can only be respected in case the technical implementation has been done successfully and all regulatory and commercial obligations are respected

PART 3

REPAIR & MAINTENANCE.

3.1 SCOPE.

This part of the SLA refers to the trouble handling on “Interconnect Services” and “Interconnect Network Elements” which are already in service.

3.2 MAIN OBLIGATIONS OF BOTH PARTIES.

To ensure the smooth functioning of the repair process, both Parties need to respect some general rules as set out hereunder and need to have the disposal of a number of technical tools as the repair process is based on the bilateral use of tools and testing procedures.

3.2.1 Organization of a SPOC for Network Maintenance.

3.2.1.1 Network Operations Centre Refer to P&O – Annex 4 to BRIO

Both Parties must have a Network Operations Centre (NOC) that is reachable and attended 24 hours per day, 7 days per week. The Belgian phone and fax numbers of the operator in duty and of 2 escalation levels for both Parties’ NOC’s will be included in an appropriate annex to the Interconnect Agreement concluded between both Parties

3.2.1.2 Languages used between NOC’s.

Proximus NOC

The languages to be used by the Proximus NOC are Dutch and French. English can only be supported as a best effort. The English GTF document template will be used and completed in English on a best effort basis.

NOC of OLO.

The standard language for communication procedures with the NOC of the other parties is English.

3.2.1.3 Escalation levels.

Each Party will organize 3 levels of escalation.

3.2.1.4 Language between escalation levels.

The standard language used between escalation levels is English.

3.2.1.5 Co-ordinates of the NOC and escalation levels .

The co-ordinates of the SPOC are inserted in Annex A to the SLA for interconnect. These coordinates include the full name, telephone number (fix and mobile for escalation level), fax number, e-mail address.

The NOC is to be considered as a back-end office of which the co-ordinates can not be communicated to customers.

3.2.1.6 Change process.

The change of coordinates or names of the NOC or escalation levels will be done by formal notification of the requesting Party on the TIC meeting.

A complete reviewed Annex A should be handed over during the meeting.

The date to come into effect should be mentioned in the notification, which should be sent at least 5 Working Days before that date.

3.2.2 Building Access. (Refer to P&O - Annex 4 to BRIO)

3.2.2.1 Proximus-Sited Interconnection

See Collocation Agreement

3.2.2.2 OLO-Sited Interconnection

In case a Demarcation Point is located in OLO's building, Proximus must have access 24 hours per day, 7 days per week to that part of the building where its equipment is located, for implementation, repair and maintenance works. The access procedures as well as additional conditions such as safety procedures, allowed rooms, contact persons, etc... will be described in an appropriate document.

3.2.3 **Maintenance tools.**

As the whole repair process is based upon bilateral use of tools and testing procedures, some minimal technical obligations apply to each Party to this SLA.

In some cases the requested Party needs a maintenance tool (e.g. protocol trace, test number) to be put available by the requesting Party before or during the repair process. If this maintenance tool is missing or unavailable the requested Party can send a intake reject or defer request to the requesting Party.

The availability of the following tools is mandatory to keep the service levels as specified in this SLA.

3.2.3.1 Test numbers.

3.2.3.1.1 **Scope:**

An independent tool is required to allow reachability and quality testing between the Parties. This tool might even serve to the Parties' needs when establishing his own QOS reports.

3.2.3.1.2 **Definitions (Refer to P&O - Annex 4 to BRIO)**

A test number is a number that simulates a device which accepts the incoming call and sends a test message (announcement) or test tone to the calling party, when a call is made to it.

This test number should ideally accept any type of call, audio or data.

3.2.3.1.3 **Requirements and rules (Refer to P&O - Annex 4 to BRIO)**

Each operator must at least have one terminating test number available on his network:

- *per numbering area, i.e. per zone, for the GEO numbers*
- *per 10.000, 1000 or 100 numbers (HTR and non-HTR are to be considered as separate number blocks), for the VAS numbers*
- *per mobile number block (MOB number block = 1.000.000 numbers) or per MSC*

Calls to this test number must terminate on the Operator's own network without being forwarded to another Operator, so that no doubt exists on the location of the trouble in case of unexpected results.

Calls to these test and loop numbers will be considered as normal calls, i.e. billing will be handled as for normal calls.

Each operator will publish the test numbers and loop numbers that are available on its network. Each operator is responsible for the update of this list. In case of update, the updated information has to be sent to the NOC of the other operators.

For each of these numbers, the operator will specify:

- *the nature of the number: test or loop*
- *the compatibility restrictions, if applicable: audio, data or all*

Additional rules and features that are nevertheless recommended, but not mandatory are enlisted under Appendix 9

3.2.3.2 Numbers for CSC testing. (Refer to P&O - Annex 4 to BRIO)

A Proximus number per Base Unit , will be permanently activated in the customer database of each OLO. These numbers will enable Proximus to perform a test if there are complaints on the Collecting Access Services.

OLO will not invoice Proximus for calls done via these test numbers for tests made on its own request

A List of these numbers can be consulted on a Proximus website through a secured access.

3.2.3.3 **Numbers for geo and non geo NP testing.**

It is advised that each OLO and Proximus will have a number of ported-in and ported-out numbers for test purposes. The ported-in numbers will behave as normal or test numbers.

3.2.3.4 **Protocol tracings.**

Both Parties must be able to take protocol tracings on the interconnection links between both. The use of protocol tracings is submitted to rules, which are described under Appendix 8.

Though the agreement is related only to tracings on Interconnection links, it might be necessary for the Requesting Party to take user-interface protocol tracings; for these tracings identical rules apply as for the Interconnection tracings.

3.2.3.5 **Switch based information.**

Switch based information can be used during the Trouble Intake procedure, in order to clarify certain events. However, this information is only indicative as it is not as reliable as the information obtained through independent measurement devices such as protocol analyzers, because the switch might discard or change information in stress situations or during SW-operations (SW-replacement).

Basic rules for the use of switch based information is inserted under Appendix 9.

3.3 PRO-ACTIVE MAINTENANCE.

3.3.1 Scope.

3.3.2 SPOC for Pro-Active Maintenance.

Refer to SPOC for Maintenance.

3.3.3 Routine tests.

The routine test described hereafter is recommended but not mandatory. The technical implementation and activation are to be agreed between both Parties possibly during the Technical Interconnect Council meeting.

The invoicing of these calls between both Parties will be subject of the Interconnect Coordination group.

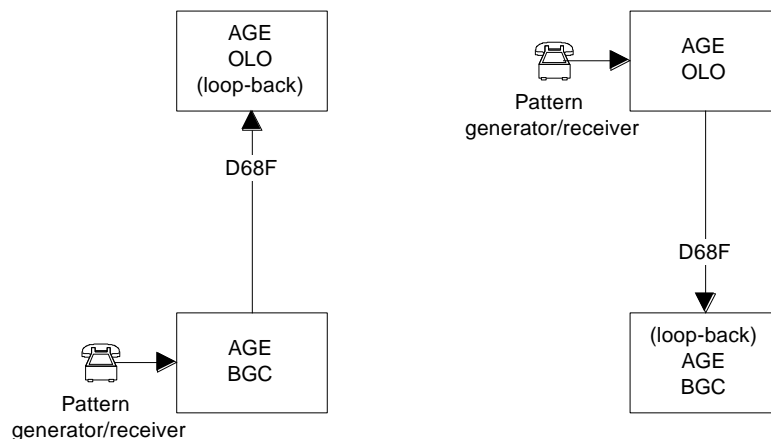
3.3.3.1 Network interface test

The network interface test is done from an internal call generator in the AGE of one Party and is answered by an internal responder in the AGE of the other Party.

The called party number is D68F and the Nature of address is "Unknown", requesting a loop-back device in the other network. A test pattern generator/receiver is connected to the call sender, to do a BER test.

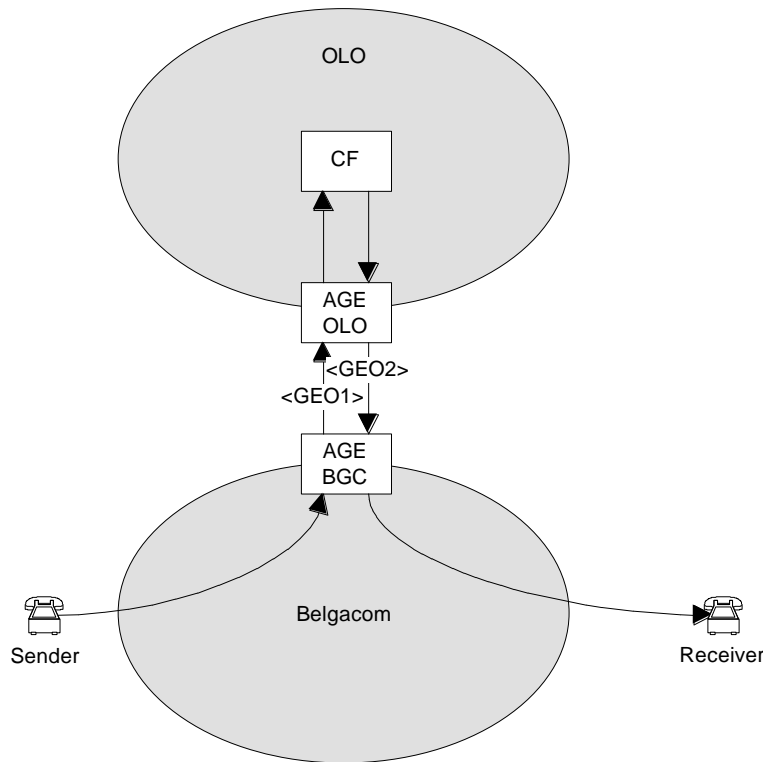
The test routine seizes all free or blocked trunks of an interconnect circuit group one after another in the test window 22:00 – 06:00. Every trunk should be tested at least once in a week.

These tests are initiated from both networks:



3.3.3.2 End-to-end test

The end-to-end test is done from a call generator, connected on a Proximus analogue or ISDN/BA line to a non-ported number in the OLO network. A CF-U (Call Forwarding – unconditional) is programmed on this OLO number towards a Proximus analogue or ISDN/BA line on which an automatic responder is connected:



There is an OLO test number in every interconnect area. It is called at least 4 times a day. The CLI must be propagated back to Proximus.

3.3.4 Maintenance Windows (Planned works).

3.3.4.1 Definition

Planned works refer to maintenance and enhancement works, which are planned to be carried out on Interconnect Links, Interconnect Switches, STP's and IN platforms. This concerns only the planned works with a foreseeable impact on the Interconnection.

3.3.4.2 Planned outages described in BRIO or P&O (Refer to P&O - Annex 4 to BRIO)

Both Parties shall inform each other about planned upgrade works, which cause a temporary unavailability of one or more Interconnect Services. The information exchange procedures will be these as defined in the SLA. Each Party shall use its reasonable endeavors to minimize disruption and where possible provide alternative routing at no additional charge to the other Party for a reasonable period of time with respect to the duration of the disruption.

Maintenance or repair works that cause a temporary unavailability of one or more interconnect services must be delayed if possible till the relevant maintenance window and the other Party must be informed as soon as reasonably possible.

3.3.4.3 Procedure for Maintenance Window

3.3.4.3.1 Notification of maintenance window

In case Planned works are scheduled, the Operator concerned needs to communicate the following information to the SPOC's for Pro-Active Maintenance of all operators that could be impacted by these works in writing (e-mail or fax):

- Planned Works reference number.
- Interconnect Links and/or Interconnect Switches that will be impacted.
- Short description of the works.
- Date, time and duration of the works.

The following optional information can be added if relevant:

- Estimated impact on the Interconnection services
- Special attention related to Emergency Services

- Fallback scenarios
- Specific temporary contact points (if appropriate)

This information should be communicated at the latest three Working Days in advance or earlier if possible.

Where possible, the Operator that performs the works, will take appropriate actions in order to minimize the impact on the Interconnect Services. For this, it is free to contact the other Operators with alternative proposals. These proposals must be considered as options to be negotiated.

In case of Package Replacement on an Interconnect Switch, a specific communication process will be applied with main milestones as mentioned hereafter:

- Package Replacement announcement: at least 3 months beforehand.
- Package Replacement planning (all involved AGE/IGE): at least 3 weeks beforehand.
- Package Replacement confirmation (for a specific AGE/IGE): 3 Working Days beforehand.

3.3.4.3.2 Request to postpone Maintenance Window.

If the time window is not appropriate to the requested operator then the requested operator should promptly respond to the message coming from the requesting, explaining why the proposed time window could not be accepted.

This response must be sent to the requesting operator at the latest on the next Working Day COB.

3.3.4.4 Exceed of maintenance window.

If a trouble exists after the maintenance window has been exceeded, re-active maintenance or crisis management processes will started up.

3.3.4.5 Special requirement for packet replacement

A packet replacement should retrofit completely unless communicated otherwise in advance. The requested operator has 5 Working Days to react after the notification of the packet replacement.

If a problem due to packet changes occurs, the service should be restored within the related repair time.

3.4 RE ACTIVE MAINTENANCE – METHOD OF OPERATIONS.

3.4.1 Scope.

When a Party detects a trouble, that can affect the quality of an Interconnect Service, and whose origin is located in the network of the other Party, the hereafter-described “Trouble Handling Procedure” will be applied.

3.4.2 SPOC for Re-Active Maintenance.

Refer to the SPOC for Maintenance.

3.4.3 Severity Levels.

A Severity Level has to be assigned to each trouble. This Severity Level will determine the repair time objective, the escalation timings and the relevant compensations, if applicable.

The severity levels are a crucial element in the Trouble Handling Procedure, and may therefore not be abused. Especially the use of the higher severity levels might lead to an overload of the receiving NOC and to less attention for more important problems. All Parties must be aware that basic rules, as described hereafter, apply for the severity levels.

3.4.3.1 Classification of troubles into Severity Levels.

The Parties can use 4 different Severity Levels: Check, Minor, Major, and Critical. These levels are defined as follows:

3.4.3.1.1 Check:

This severity level will be used by the requesting Party when he is not sure of the location of the problem, i.e. whether the problem is located on its network or on another network. For this reason, it may send a TGF with the severity level “Check”. This means that it asks for the support of the Requested NOC for a trouble that is not really clear to him.

- This severity level can also be used for problems that need investigation without any urgency.
- This severity level will also be used if critical, major or minor are not applicable.

3.4.3.1.2 Minor:

This severity level will be used for all problems of minor nature. Some general rules can be applied to define this Level:

- This severity level applies to problems whereby the customer is not exempt of communication possibilities.
- This severity level applies to single customer problems or problems of a more general nature which do not lead to major customer dissatisfaction.
- This severity level applies to infrastructure problems which are not service affecting due to built-in redundancy.

3.4.3.1.3 Major:

This severity level will be used for all problems of a major service affecting nature. Some general rules can be applied to define this Level:

- This severity level applies to problems whereby the customer is exempt of communication possibilities.
- This severity level applies to a group of customers, which can be linked to certain office codes.

3.4.3.1.4 Critical:

This severity level will only be used for problems that are considered as really menacing by the requesting Party. Some general rules can be applied to define this Level:

- This severity level applies to problems that cause the interruption of traffic for a large group of customers (in case the interruption of traffic could have been avoided by the

requesting Party by making use of the possibility of redundancy offered by Proximus such as load-sharing, the severity level is reduced to "Major").

- This severity level applies to problems that (can) lead to important interconnection problems whereby (almost) no redundancy can be guaranteed to solve the problem.

3.4.3.2 Mapping of errors into severity levels.

This list should bring practical approach to severity levels. This list is not complete and not limitative, for all errors not inside the list the general rules inside §3.4.3.1 should be used.

Service	Minor	Major	Critical
Interconnection Links.			
OIT or BIT Interconnect capacity Between Proximus and OLO AGEs	Capacity loss of 20 % or less.	Capacity loss of 50 % or less (but more than 20%).	Capacity loss of more than 50%.
Transmission error	Transmission error		

Signaling Data Links.			
Link between ✓ SSP & STP pair ✓ STP's pairs	Loss of signaling link	Reduction of signaling link capacity with 50% or more	Reduction of Signaling link capacity with 75 % or more
Link Set between ✓ SSP & STP pair ✓ STP's pairs		Loss of Link Set	
Destination unavailable		If destination is STP	If destination is SSP

Interconnect Services: Issue in the receiving network			
To geographic or mobile numbers.	Isolation to a single number . Service degradation to a single number or number block	Isolation to a number block. Service degradation to a complete area	Isolation to a complete area <ul style="list-style-type: none"> • to geo numbers: access area • to mobile numbers: all calls originated in a particular access area fail
To VAS Number. Except HTR number ranges.	Isolation to a single number Service degradation to a single number or multiple of numbers.	Isolation to a multiple of numbers. Service degradation to all numbers of a specific VAS service plan in a particular access area	Isolation to all numbers related to a specific VAS service plan via all AGEs in a particular access area
To VAS [HTR] Number.	Isolation to a single number	Isolation to a multiple of numbers.	
To Directory Services. Range 12xx-13xx-14xx	Service degradation to specific directory service number	Isolation to specific directory service number	

<i>To Emergency Services Range 1xx</i>			All service outage or degradation
<i>To International Destinations.</i>	Isolation to a single number. Service degradation to a single number or international destination	Isolation to an international destination Service degradation to a complete country	Isolation to a complete country

Interconnect Services: Issue in the sending network			
To geographic or mobile numbers.	Isolation from a single number Service degradation from a single number or number block	Isolation from a number block. Service degradation from a complete area	Isolation from a complete area • geo numbers: access area • mobile numbers: coverage area
To VAS Number. Except HTR number ranges.	Isolation from a single number Service degradation from a single number or multiple of numbers.	Isolation from a multiple of numbers. Service degradation from a complete area	Isolation from a complete area • geo numbers: access area • mobile numbers: coverage area
To VAS [HTR] Number.	Isolation from a single number	Isolation from a multiple of numbers.	
To Directory Services. Range 12xx-13xx-14xx	Service degradation from a single number	Isolation from a multiple of numbers	
To Emergency Services Range 1xx		Wrong Centre Indicator	All service outage or degradation
Collecting Services: CPS – CS – DCS - VPN. Range 15xx-16xx-17xx-18xx	Service outage from one specific customer line. Service degradation from a single number or multiple of numbers.	Service outage from multiple of customer lines [multiple CLI] within the same number block. Service degradation from a complete area	Service outage from all customers spread over an access area.
To International Destinations.	Isolation from a single number. Service degradation from a single number or number block	Isolation from a number block Service degradation from a complete area	Isolation from a complete area • geo numbers: access area • mobile numbers: coverage area

3.4.3.3 Upgrade of a Severity Level.

The requesting Party can upgrade the severity level mentioned in a previously sent Trouble Intake Form to a higher severity level, by sending a new request. The new Repair Time Objective will apply at the confirmation of this new request.

3.4.3.4 Downgrade of a severity Level.

Downgrade of a severity level is however not allowed.

3.4.4 Pre-Requisites.

As a general rule, the requesting Party will perform minimal internal checks before initializing the "Trouble Handling Procedure". These checks can be done on the basis of its own measurement systems and verification procedures; some guidelines related to these minimal checks are inserted in Appendix 6

3.4.5 *Trouble Communication Process.*

3.4.5.1 In General.

The trouble communication process is based on the formal exchange of information between requesting and requested Party of a document called the Generic Trouble Form (GTF). In addition and if applicable, an alert can be sent to the other Party.

The time window for trouble communication is:

	<i>Time Window</i>
<i>Critical</i>	7/24
<i>Major</i>	7/24
<i>Minor</i>	Business Hours
<i>Check</i>	Business Hours

3.4.6 *Alert procedure.*

3.4.6.1 When

The alert is only required when all following conditions are met:

- Intake request to the other Party is sent out.
- Outside business hours.
- The severity level is Critical or Major.

The requesting Party is free to alert the SPOC of the requested Party any time during the repair process.

3.4.6.2 How.

The alert from requesting to requested Party is done via telephone. Therefore the requesting Party will call the SPOC for reactive maintenance of the requested Party to alert him that a Intake request is sent out.

Escalation:

If the SPOC for reactive maintenance of the requested Party is not available then the escalation procedure can start.

3.4.6.3 Overview

<i>Severity Level</i>	<i>Transition</i>	<i>Alert Required</i>	
		<i>During Business Hours</i>	<i>Outside Business Hours</i>
<i>Critical</i>	<i>Intake Request</i>	No	Yes
<i>Major</i>	<i>Intake Request</i>	No	Yes
<i>Minor</i>	<i>Intake Request</i>	No	No
<i>Check</i>	<i>Intake Request</i>	No	No

3.4.7 *Formal Information Exchange Procedure.*

3.4.7.1 When.

Must be used for all communication between both Parties.

3.4.7.2***How.***Standard procedure:

An E-mail will be sent to the SPOC for reactive maintenance with in attach the Generic Trouble Form document.

Subject of the E-mail:

GTF <Name of requesting Party> <TT number of requesting Party>

File name of the attached GTF:

<TT number of requesting Party>

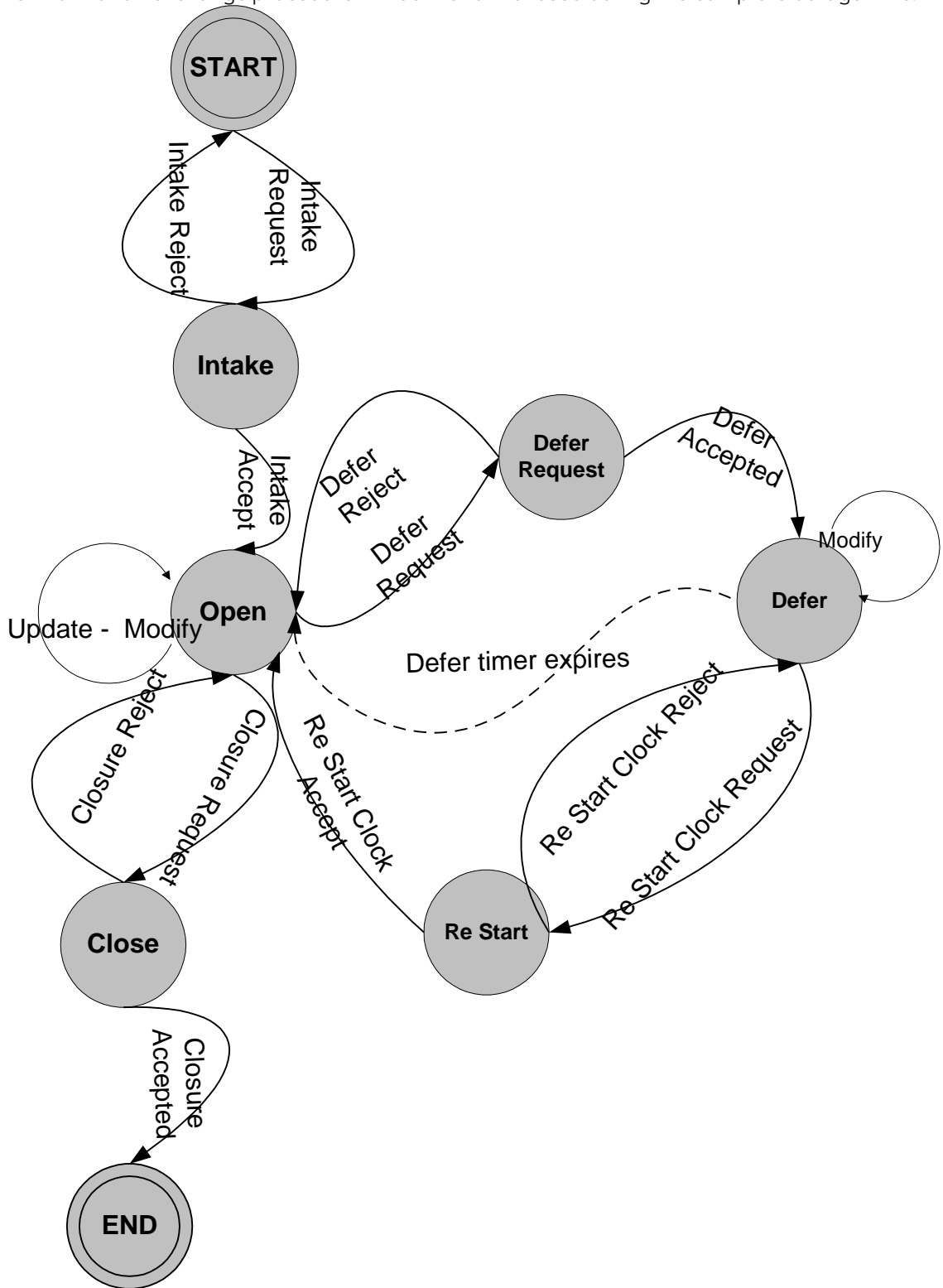
Backup procedure:

The back up procedure will be used if the standard procedure seems to fail. This procedure has two steps.

- Alert telephone call to the SPOC of the other Party.
- GTF document will be sent by fax to the other Party.

3.4.7.3 Status Transition Flow.

This information exchange procedure will be the formal used during the complete outage time.



3.4.8 Generic Trouble Form.

The GTF will be used for the formal exchange of information with the goal to cover the complete life cycle of a particular trouble ticket.

3.4.9 Transitions between START and END.

3.4.9.1 Intake Request.

Information inside the GTF.

Object	Add/Modify	Field	Mandatory/Optional
Transition	A	INTAKE REQUEST	M
<u>REQUESTING OPERATOR.</u>			
Name of Requesting Operator	A	<Text>	M
Name of Requesting Agent.	A	<Text>	M
Direct telephone number of Requesting Agent.	A	<Text>	M
Trouble Ticket number of Requesting Operator.	A	<Text>	M
<u>REQUESTED OPERATOR.</u>			
Name of Requested Operator	A	Check Box	M
<u>REQUEST SUMMARY.</u>			
Related Service	A	Check Box	M
Trouble Summary	A	Check Box	M
Request Triggered by	A	Check Box	M
		Check Box	
		Check Box	
Severity level.	A	Check Box	M
Start day of the trouble	A	<Date>	O
Start time of the trouble	A	<Time>	O
Request Time Stamp [TO] TO BE ALIGNED WITH PROCESS CLOCK	A	<Date> <Time>	AUTO AUTO
Requested feedback time window (refer to:3.4.9.5). If field is empty default will be used.			
First	A	<Text>	AUTO
Increment	A	<Text>	AUTO
<u>DETAILED TROUBLE DESCRIPTION.</u>			
Clear and complete description of the problem and the related services impacted by the trouble.			
Originating			
Network Owner	A	Check Box	O
Type of connection	A	Check Box	O
Calling Party Number	A	Check Box	O
Terminating			
Network Owner	A	<Text>	O
Type of connection	A		O
Called Party Number	A	Check Box	O
Ported Number			
Recipient Network	A	Check Box	O
Donor Network	A	Check Box	O
Network			
Originating switch	A	<Text>	O
Terminating switch	A	Check Box	O
Codification Number	A	Check Box	O
CIC	A	Check Box	O
		<Text>	
		<Text>	

		<Text> <Text>	
Any useful info, e.g. Protocol Trace:	A	Packet Object	O

Valid severity Levels. Refer to 3.4.3

- Critical
- Major
- Minor
- Check (default setting)

Valid Trouble summaries:

- Network element partial outage
- Network element OOS
- Interconnect service partial outage
- Interconnect service OOS
- Protocol error
- Call procedure error
- Long duration calls
- Fraud indication
- Unspecified

Valid Request triggers:

- Other Operator
- Calling Customer
- Called Customer
- Network Monitor

Valid Related Services:

- OIT or BIT Interconnect Links.
- Terminating to geographic numbers
- Termination to Mobile Numbers
- Termination to VAS Numbers
- Termination to International Numbers
- Terminating to Operator Services
- Terminating to Emergency Services
- Collecting from network: This for CPS or CS.
- Collecting to VAS
- Collecting to Operator Services

Valid Type of Connection

- PSTN
- ISND
- PSTN+ISDN
- GSM
- ALL
- UNKNOWN

3.4.9.2 **Intake Request Accepted.**

The Requested Operator checks and confirms that the trouble exists by using the intake accept procedure. From the moment that the request is accepted, the clock will be started.

Information inside the GTF.

Object	Add/Modify	Field	Mandatory/Optional
Transition	M	Intake Accepted	M
Name of requested agent	A	<Text>	M
Direct telephone number of requested agent	A	<Text>	M
Trouble Ticket number of Requested Operator	A	<Text>	M
Time stamp: start clock [T1]	A	<Date>	AUTO
	A	<Time>	AUTO
Expected Time of Service Restoration	A	<Date>	O
	A	<Time>	O

Response Timer: see further in document

Escalation: If the requesting Party doesn't agree with the Start Clock time stamp then he can start the escalation procedure.

3.4.9.3 Intake Request Rejected.

Information inside the GTF.

Object	Add/Modify	Field	Mandatory/Optional
Transition	M	Intake rejected	M
Name of requested agent	A	<Text>	M
Direct telephone number of requested agent	A	<Text>	M
Reason of rejection.	A	<Check Box>	M
Description of Reason of rejection	A	<Text>	M

Valid reasons for rejecting.

- Requested is not involved: the Text field should explain why the requested Party is not involved.
- Mandatory information is missing: the Text field should describe the missing mandatory field.
- Not a network or interconnect service problem.

Escalation after reject of intake

If the requesting Party does not agree with the reason of rejection he can start the escalation procedure.

Response Timer: see further in document

3.4.9.4 Trouble Modify.

The modify procedure is used by the requesting Party to add new information to the ticket and forward this to the requested

It is not allowed to modify the content of the fields of the intake request.

Information inside the GTF.

Object	Add/Modify	Field	Mandatory/Optional
Transition	M	Modify	M
Time stamp	A	<Date> <Time>	M
Object description	A	<Text>	M
Change Request	A	Check Box	M
Modification	A	<Text>	M

Valid Change Request.

- ❑ Add: To add the text to the existing intake request
- ❑ Modify: to delete and add new text to an existing intake request
- ❑ Delete: to delete the contents of an existing intake request

Multi Modifies:

The modify transition procedure can be run through multiple times during the trouble handling. In that case the new <text> in the modification field is added to the previous <text>.

3.4.9.5 *Trouble Update.*

The update procedure is to keep the requesting Party informed about the status of the restoration or repair by the requested Party.

The expiring of the trouble update interval timer triggers the update.

Information inside the GTF.

Object	Add/ Modify	Field	Mandatory /Optional
Transition	M	Update	M
Repair status information	A	<Text>	M
Expected restoration time	A	<Date> <Time>	M

Time window and interval:

The Trouble Severity Level determines the time between updates unless otherwise agreed between both Parties during the trouble intake phase. From the second update the new <text> in the repair status information field is added to the previous <text>.

Severity Level	First Update	Interval	Trouble update window
Critical	1 hour	2 hour	24/7
Major	1 hour	4 hours	24/7
Minor	4 hours	On occurrence	Business hours
Check	1 Working Day		

The Requesting Operator is free to contact at any time the SPOC of the requested Party for more information about the status of a trouble ticket.

Escalation:

If no trouble update received within the interval escalation procedure can start.

3.4.9.6 **Closure Request.**

As soon as the trouble has been completely cleared the requested Party can start the closure procedure.

From the moment that the request is sent the clock will be stopped.

Information inside the GTF.

Object	Add/ Modify	Field	Mandato ry/Optio nal
Transition	M	Closure Request	M
Cause	A	Check Box	M
Description	A	<Text>	M
Time stamp: End clock time [T2]	A	<Date>	AUTO
	A	<Time>	AUTO

Valid Cause:

- No problem found
- Failure in own network
- Failure in requester network
- Failure in 3rd party network
- Unspecified

3.4.9.7 **Closure Request Accepted**

The Requesting Operator checks and confirms that the trouble has disappeared by using the closure accept procedure.

Information inside the GTF.

Object	Add/ Modify	Field	Mandato ry/Optio nal
Status	M	Closure Accept	M
Closure Accept Time	A A	<Date> <Time>	AUTO AUTO

Response Timer: see further in document

Escalation: If the requesting Party doesn't agree with the End Clock time stamp then he can start the escalation procedure.

3.4.9.8 **Closure Request Rejected.**

If the closure request cannot be accepted, the Requesting Operator will reject it by sending back the GTF to the Requested Operator, with mention of the reason of rejection.

Information inside the GTF.

Object	Add/ Modify	Field	Mandato ry/Optio nal
Transition	M	Closure Reject	M
Reason of rejection.	A	<Text>	M
Time stamp:	A	<Date> <Time>	AUTO AUTO

Reasons to reject:

- Service restoration not accepted.
- Problem not solved.
- Mandatory information not provided

Escalation:

If the requested Party does not agree with the reason of rejection he can start the escalation procedure.

Response Timer: see further in document

3.4.9.9 **Forced Closure.**

If the requesting Party detects during the process that the trouble disappears or that he is able to solve the problem himself then he can start the Forced Closure procedure.

Information inside the GTF.

Object	Add/ Modify	Field	Mandato ry/Optio nal
Transition	M	Forced Closure	M
Reason	A	Check Box	M
Comment	A	<Text>	O
Time stamp: End clock time [T2]	A	<Date>	AUTO

	A	<Time>	AUTO

Valid Reasons for forced closure:

- Problem disappeared
- Problem in requesting network

3.4.9.10 Defer Request.

The stop-clock mechanism allows suspending the handling of a Trouble Ticket for a certain period. A stop-clock must have a maximum length, to be negotiated between both involved Parties.

Information inside the GTF.

<i>Object</i>	<i>Add/Modify</i>	<i>Field</i>	<i>Mandatory/Optional</i>
Transition	M	Defer Request	M
Reason of defer request	A	<Text>	M
Maximum requested suspend time	A	<Time>	M
Defer time stamp [T4]	A	<Date>	AUTO
	A	<Time>	AUTO

Reasons to request Defer:

- Force majeure
- Supplementary testing required
- Access to equipment required
- Observation period needed
 - The observation period must be limited in time with a maximum of 1 week, in order to enable the requested Party to close the problem administratively. The observation period can be prolonged in common agreement between both Parties.
- Structural problem
 - In the case that a structural problem is identified (i.e. for instance related to the design of supplier software), where a solution within the above objectives cannot be guaranteed, an escalation of this type of problems will be necessary and the timers will be put 'on hold'.
 - A solution period will be agreed between the Third Level Escalation Points (see Escalation Procedure hereafter). At this escalation level, a specific meeting can be organized, with, if necessary, involvement of experts and /or higher management of both Operators, if needed. Since a solution might take a much longer period than the above-mentioned repair time objectives (e.g. a new software release is necessary), this type of problems is out of scope of this SLA and will be handled on a case-by-case basis.
- Third party testing required
- Problem to be solved by third party
- Unspecified

3.4.9.11 Defer Request Accepted

The Requesting Operator agrees by sending back the GTF.

Information inside the GTF.

<i>Object</i>	<i>Add/Modify</i>	<i>Field</i>	<i>Mandatory/Optional</i>
Transition	M	Defer Accept	M

Time stamp	A	<Date>	AUTO
	A	<Time>	AUTO

Response Timer: see further in document

3.4.9.12 *Defer Request Rejected.*

If the above request cannot be accepted, the Requesting Operator will reject it by sending back the GTF to the requested, with mention of the reason of rejection.

Information inside the GTF.

Object	Add/ Modify	Field	Mandato ry/Optio nal
Transition	M	Defer Reject	M
Reason	A	CheckBox	M
Comment	A	<Text>	M
Time stamp	A	<Date>	AUTO
	A	<Time>	AUTO

Valid reasons for reject:

- Mandatory information is not available;
- Reason of Defer request is not valid

Escalation:

If the requested Party does not agree with the reason of rejection he can start the escalation procedure.

Response Timer: see further in document

3.4.9.13 **Re-Start Clock Requested.**

After clearing the reason why the defer-clock mechanism became active the clock is restarted by the Restart clock procedure.

Information inside the GTF.

Object	Add/ Modify	Field	Mandato ry/Optio nal
Transition	M	Re-Start Clock Request	M
Reason:	A	CheckBox	M
Comment	A	<Text>	M
Restart Time Stamp	A	<Date>	M
		<Time>	

Valid reasons:

- Stop-clock condition not valid anymore
- Stop-clock timer expired
- Unspecified

3.4.9.14 **Re-Start Clock Request Accepted.**

The Re-start clock is agreed by sending back the GTF.

Information inside the GTF.

Object	Add/ Modify	Field	Mandato ry/Optio nal
Transition	M	Re-Start Clock Accept	M

Time stamp	A	<Date>	AUTO
	A	<Time>	AUTO

Response Timer: see further in document

3.4.9.15 Re Start Clock Request Rejected.

If the above request cannot be accepted, it will be rejected by sending back the GTF, with mention of the reason of rejection.

Information inside the GTF.

<i>Object</i>	<i>Add/ Modify</i>	<i>Field</i>	<i>Mandato ry/Optio nal</i>
Transition	M	Re-Start Clock Reject	M
Reason of rejection.	A	<Text>	M
Time stamp	A	<Date>	AUTO
	A	<Time>	AUTO

Valid Reason of rejection:

- Mandatory information is not available;
- Reason of Defer request is still valid

Escalation:

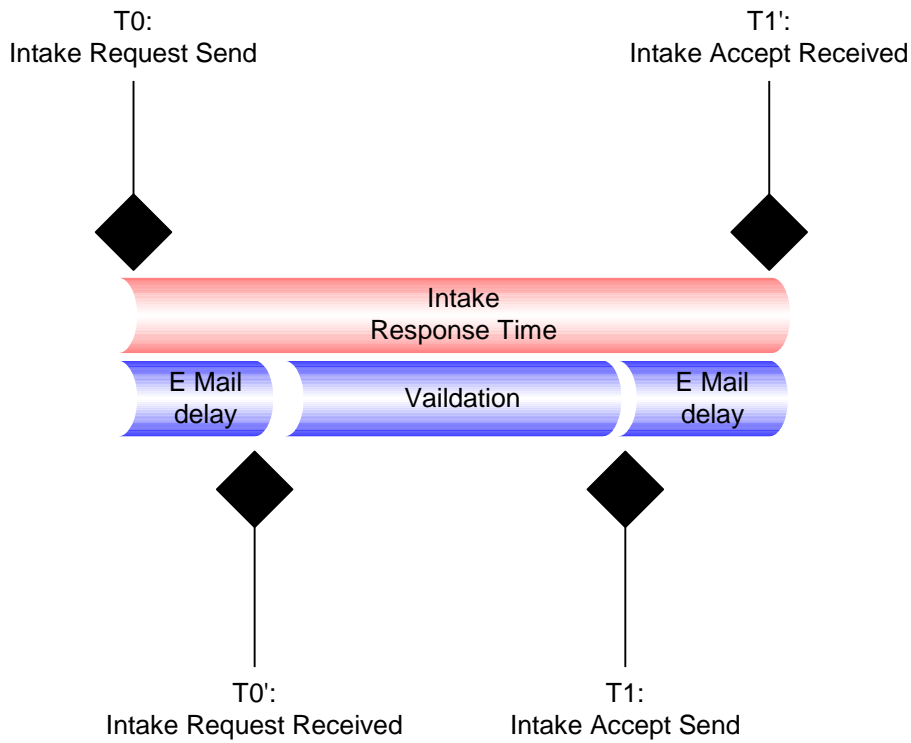
If the requested Party does not agree with the reason of rejection he start the escalation procedure.

Response Timer: see further in document

3.4.10 *Trouble Repair Process.*

3.4.10.1 *Post mortem.*

Each Party can ask after the closing of the ticket with severity level “major” or “critical” to have a detailed description of the cause of the problem. This will be handled within the TIC meeting. The post mortem will indicate the cause of the problem and also evaluate the processes and procedures used to get to service restoration and total repair. If this evaluation shows a possible technical, organization, process or procedure issue the change process including time lines will be explained to the other Party.



3.4.11.2.1 Maximum time

The maximum “intake response time” is depending on the severity level.

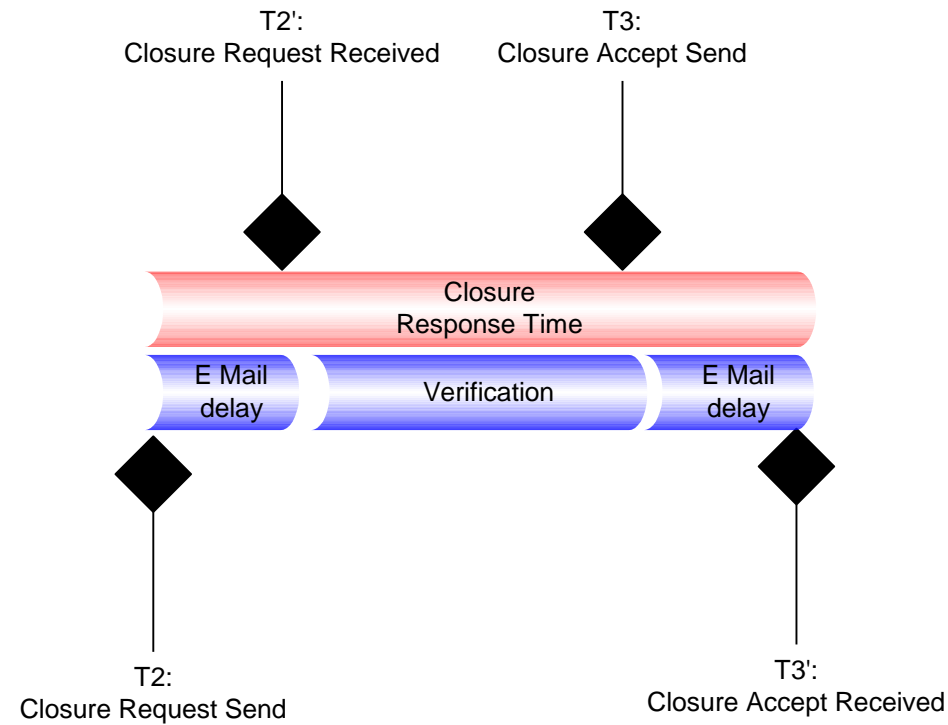
Severity Level	Maximum Intake Response time.
Critical	30 min
Major	1 hour
Minor	1 hour
Check	1 hour

If the maximum time is exceeded the requesting Party can start the escalation procedure.

3.4.11.3 Closure Response Time.

The closure response time is by definition the time between the instant at which the requested Party sends out the “closure request” and the instant at which that Party receives an accept or refuse message from the requesting Party. The timer includes the delay times caused by the sending of e-mails between the Parties and the time needed to verify that the trouble was solved..

Closure Response Time = T3' - T2



3.4.11.3.1 Maximum time

The maximum “closure response time” is depending on the severity level:-

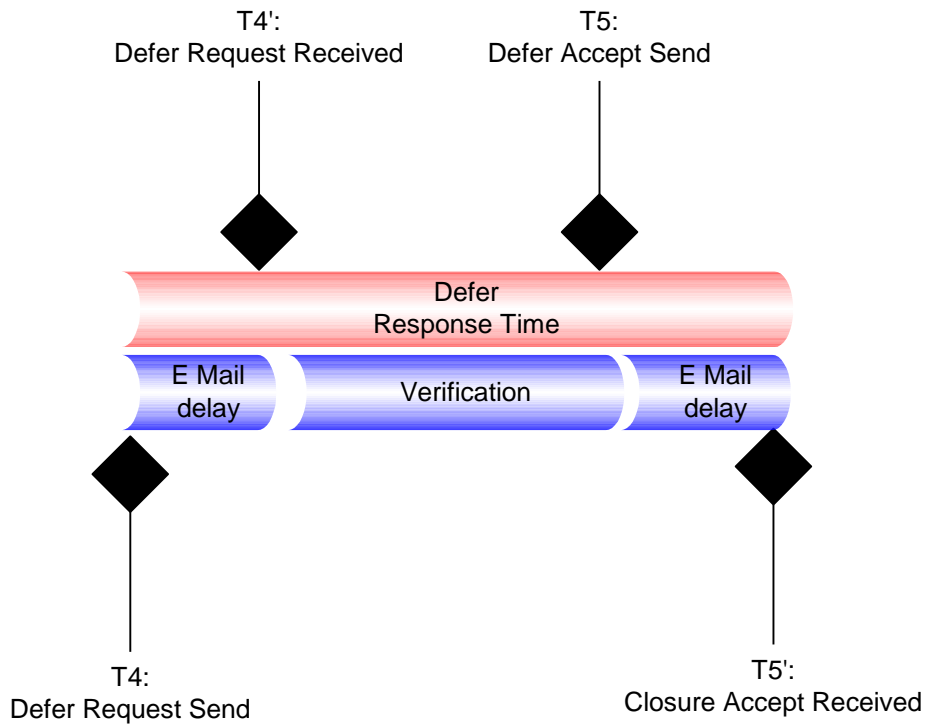
Severity Level	Maximum Intake Response time.
Critical	30 min
Major	1 hour
Minor	1 hour
Check	1 hour

If maximum time is exceeded the requesting Party can start the escalation procedure.

3.4.11.4 Defer Response Time.

The defer response time is by definition the time between the instant at which the requested Party sends out the “defer request” and the instant at which that Party receives an accept or refuse message from the requesting Party. The timer includes the delay times caused by the sending of e-mail between the Parties and the time needed to verify that the trouble was solved..

Closure Response Time = T4 – T5'



3.4.11.4.1 Maximum time

The maximum “defer response time” is depending on the severity level-

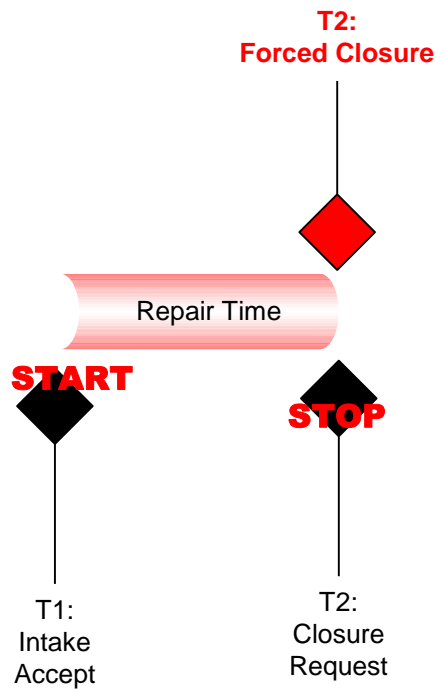
Severity Level	Maximum Defer Response time.
Critical	30 min
Major	1 hour
Minor	1 hour
Check	1 hour

If maximum time is exceeded then the request is accepted and the repair timer is stopped.

3.4.11.5 Repair Timer.

Time to Repair= (T2 – T1)

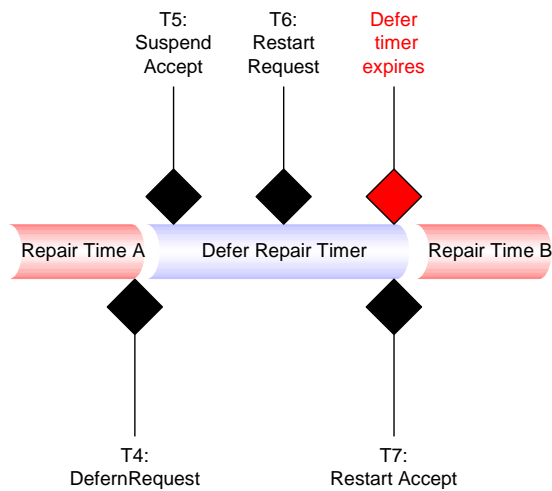
The “Repair Time” is by definition the time between the instant at which the requested Party sends out the “Intake Accept” and the instant at which that Party sends the final “Closure Request” or “Forced Closure”



For the maximum repair time pls. refer to § 3.6.2
 Escalation procedure can start as from Target repair Time was expired.

3.4.11.5.1 Impact of Defer Request on Repair Timer.

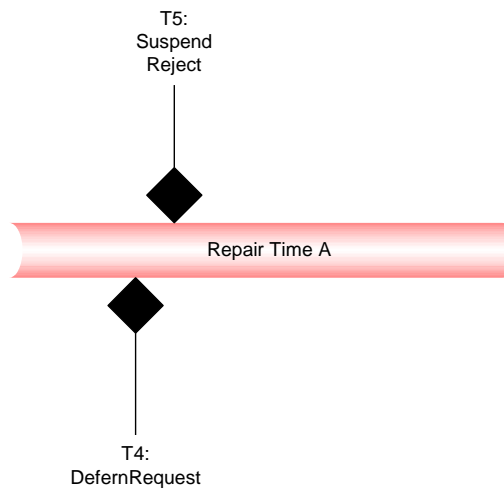
Each request for defer will defer the repair timer, this until the maximum defer timer expires or the restart is accepted.



New Repair time = Repair Timer A + Repair Timer B

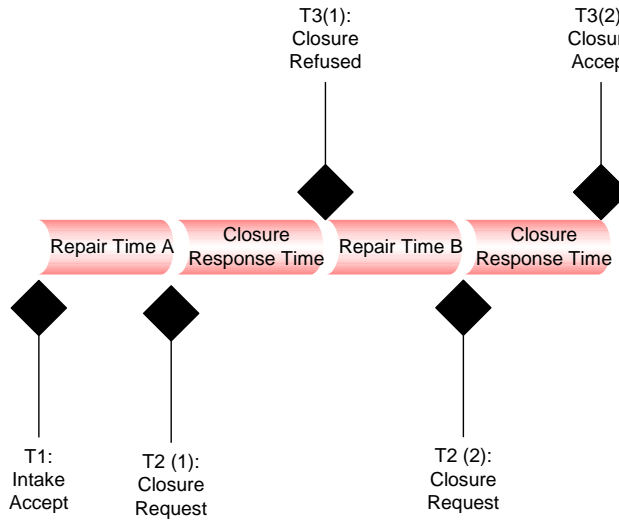
3.4.11.5.2 Impact of Defer Request to Repair Timer.

If the request for defer is rejected then the repair timer will not have been deferred



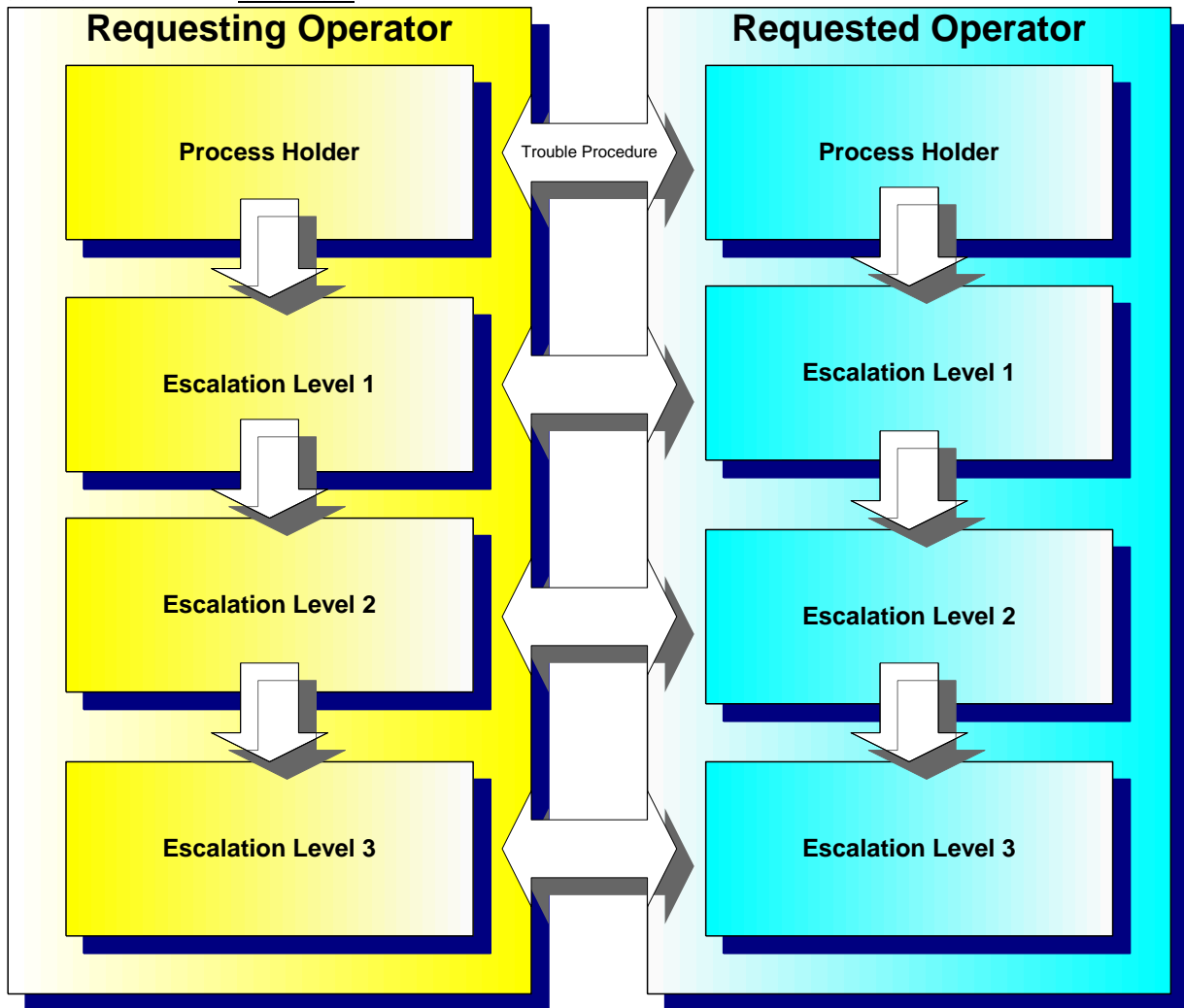
3.4.11.5.3 Impact of Refused Closure on repair-timer.

Definition: The total repair time is the sum of the partial repair times. i.e. the time between the acceptance of the intake request and the acceptance of the closure. The total repair time does not include the closure response and suspend times.



3.4.12 *Trouble Escalation Procedure.*

3.4.12.1 *Overview*



3.4.12.2 *Escalation from Normal to First Escalation level.*

An escalation procedure is the process of referring the problem to an organizational entity with a higher degree of expertise and authority.

Matrix of the different levels must be provided and updated when a change occurs (e-mail, fax, phone numbers).

If in case of escalation, the level L+1 is not reachable, the problem can be escalated to L+2.

The trouble escalation procedure, which is described hereafter, has to be used between the Parties when:

- ✓ it appears that a trouble will not be resolved within the repair time objective
- ✓ exceed of response timers
- ✓ no agreement about refuse

Matrix of the different levels must be provided (email, fax, and phone numbers)

The escalation communication will occur horizontally between peer levels, i.e. between the escalation points of a same escalation level. When the peer does not respond within the escalation response time the problem can be escalated to L+1.

All escalation communication will be done by telephone.

As the trouble escalation procedure is part of the trouble resolution process, the involved escalation point of each Operator will keep its own NOC informed about the actions taken up for clearing the reported problem.

The trouble escalation points of each Operator are mentioned in annex A.

The relationship between the severity level of a trouble and the corresponding escalation timings are given hereafter (T1 = Trouble Intake Request):

3.4.12.3 Escalation to higher level.

Escalation to higher level is allowed when

- ✓ the escalation timer expires
- ✓ the escalation response timers expire
- ✓ there is no agreement about the refuse by lower level

3.4.12.4 Escalation timers.

Severity Level	First escalation L0 → L1	Second escalation L1 → L2	Third escalation L2 → L3
Minor	20 hours	24 hours	48 hours
Major	6 hours	8 hours	12 hours
Critical	2 hours	4 hours	6 hours

3.4.12.5 Escalation response time.

Severity Level	First escalation L0 → L1	Second escalation L1 → L2	Third escalation L2 → L3
Minor	Only during Proximus Business hours	Only during Proximus Business hours	Only during Proximus Business hours
Major			
Critical			

3.5 *CRISIS MANAGEMENT.*

3.5.1 *Trouble Distribution*

As soon as an Operator identifies a trouble occurring on its own network, which may have an adverse effect on the network of other Operators, his NOC shall promptly and regularly inform by phone the NOC of the other Operators about the trouble and about the actions taken to clear it.

3.6 QUALITY OF SERVICE FOR RE ACTIVE MAINTENANCE.

3.6.1 Introduction.

The repair process is defined in Chapter 3.4. It describes the whole process of the trouble management procedure. The SLA parameters defined hereafter measure the performance of the repair management, based on statistical figures.

As a general rule, the Party requesting compensations for ratios that are not respected has to provide the necessary data so that the Party receiving the invoice can validate the requested amount.

3.6.2 Repair time objectives.

3.6.2.1 Definitions:

Target repair time: 80 % of all opened "Intake Requests" must be fixed or solved in the defined timeframe

Committed repair time: 100% of all opened "Intake Requests" must be fixed/solved in the defined timeframe

3.6.2.2 Objectives..

Depending from the Severity Level has the following Repair Time Objectives been defined:

Severity Level	Target Repair Time	Committed Repair Time
Critical	4 hours	6 hours
Major	8 hours	12 hours
Minor	1 Working Day	2 Working Day
Check	5 Working Days	10 Working Days

3.6.3 Solving Ratio Performance: Calculation.

3.6.3.1 General rules.

QoS calculations are done over a three-month period and are based on the Trouble Tickets, received by one Party from the other Party.

The calculations are performed per severity class at the end of every quarter. They relate to all the Trouble Tickets, which have been closed during that quarter.

3.6.3.2 Total Number of Trouble Tickets.

The Total Number of Trouble Tickets is defined as the count of reported "Intake Requests" between both Parties. This count is presented in a quarterly reporting.

$$TotalNumberOfTroubleTickets = \sum_{Severity} TotalNumberOfTroubleTickets_{Severity}$$

Remark: even the "wrongly sent" TT should be handled and will be taken into account as handled in time.

3.6.3.3 Number of Trouble Tickets Solved in Target Time

The Number of Trouble Tickets Solved in Time is the Total Number of Trouble Tickets which have been solved or fixed within their respective Target repair time.

$$NumberOfTroubleTicketsSolvedInTargetTime = \sum_{Severity} NumberOfTroubleTicketsSolvedInTargetTime_{Severity}$$

3.6.3.4 Number of Trouble Tickets Solved in Committed Time

The Number of Trouble Tickets Solved in Time is the Total Number of Trouble Tickets which have been solved or fixed within their respective Committed repair time.

$$NumberOfTroubleTicketsSolvedInCommittedTime = \sum_{Severity} NumberOfTroubleTicketsSolvedInCommittedTime_{Severity}$$

3.6.3.5 Solving Ratio in Target Time (SRTT)

$$\%SRTT = \frac{NumberOfTroubleTicketsSolvedInTargetTime}{TotalNumberOfTroubleTickets} * 100\%$$

$$\%SRTT_{Severity} = \frac{NumberOfTroubleTicketsSolvedInTargetTime_{Severity}}{TotalNumberOfTroubleTickets_{Severity}} * 100\%$$

3.6.3.6 Solving Ratio in Committed Time(SRCT)

$$\%SRCT = \frac{NumberOfTroubleTicketsSolvedInCommittedTime}{TotalNumberOfTroubleTickets} * 100\%$$

$$\%SRCT_{Severity} = \frac{NumberOfTroubleTicketsSolvedInCommittedTime_{Severity}}{TotalNumberOfTroubleTickets_{Severity}} * 100\%$$

3.6.4 *Compensations related to SRTT degradation*

The present version of the SLA does not include compensation schemes to be applied among the Parties. During the first year of operation of the present SLA all Parties commit to exchange scorecards on a bilateral basis related to the repair times with respect to the trouble tickets opened at the Parties' respective NOC's. Appropriate and consistent compensation schemes, based upon these scorecards, will be discussed when preparing the next version of the SLA.

3.6.5 *Mean Time To Repair (MTTR).*

The Mean Time To Repair reflects the average time needed for the fixing or the solving of reported failures, expressed in hours. The calculation is performed at the end of every quarter. It includes all the Trouble Tickets which have been closed during that quarter.

$$MTTR_{Severity} = \frac{\sum Re\ pairTime_{Severity}}{TotalNumberofTroubleTickets_{Severity}}$$

3.6.6 *MTTR performance indicator.*

The MTTR performance indicator $PI_{Severity}$ is defined as follows:

$$PI_{Severity} = \frac{MTTR_{Severity}}{Committed\ Re\ pairTime_{Severity}} * 100\%$$

3.6.7 *Compensations related to MTTR degradation.*

The present version of the SLA does not include compensation schemes to be applied among Parties. During the first year of operation of the present SLA all Parties commit to exchange scorecards on a bilateral basis related to the repair times with respect to the trouble tickets opened at the Parties' respective NOC's. Appropriate and consistent compensation schemes, based upon these scorecards, will be discussed when preparing the next version of the SLA.

3.6.8 *Scorecard*

The scorecard exchanged between the Parties on a bilateral basis at the end of each quarter will include the following information:

- Total number of closed trouble tickets which were opened at the Party's NOC by the other Party, during the quarter concerned:
 - Number of wrongly sent TT's
 - Number of TT's distributed according to severity level:
 - check:
 - minor:
 - major:
 - critical:
 - Average repair time, per severity level (defer time is deducted from repair time)
 - check: expressed in Working Days
 - minor: expressed in Working Days
 - major: expressed in hours
 - critical: expressed in hours
 - Performance indicator (ratio average repair time versus committed repair time) in %
 - check:
 - minor:
 - major:

- critical:

PART 4

APPENDIXES

4.1 APPENDIX O: GLOSSARY AND ABBREVIATIONS.

4.1.1 Glossary

For the sake of clarity, this Glossary explains all the terms used in this document. In case the concepts that are defined elsewhere (Acts, documents approved by the BIPT) undergo changes, those changes will be taken into consideration within this Glossary. The capitalised terms in the present document have the meaning as defined below:

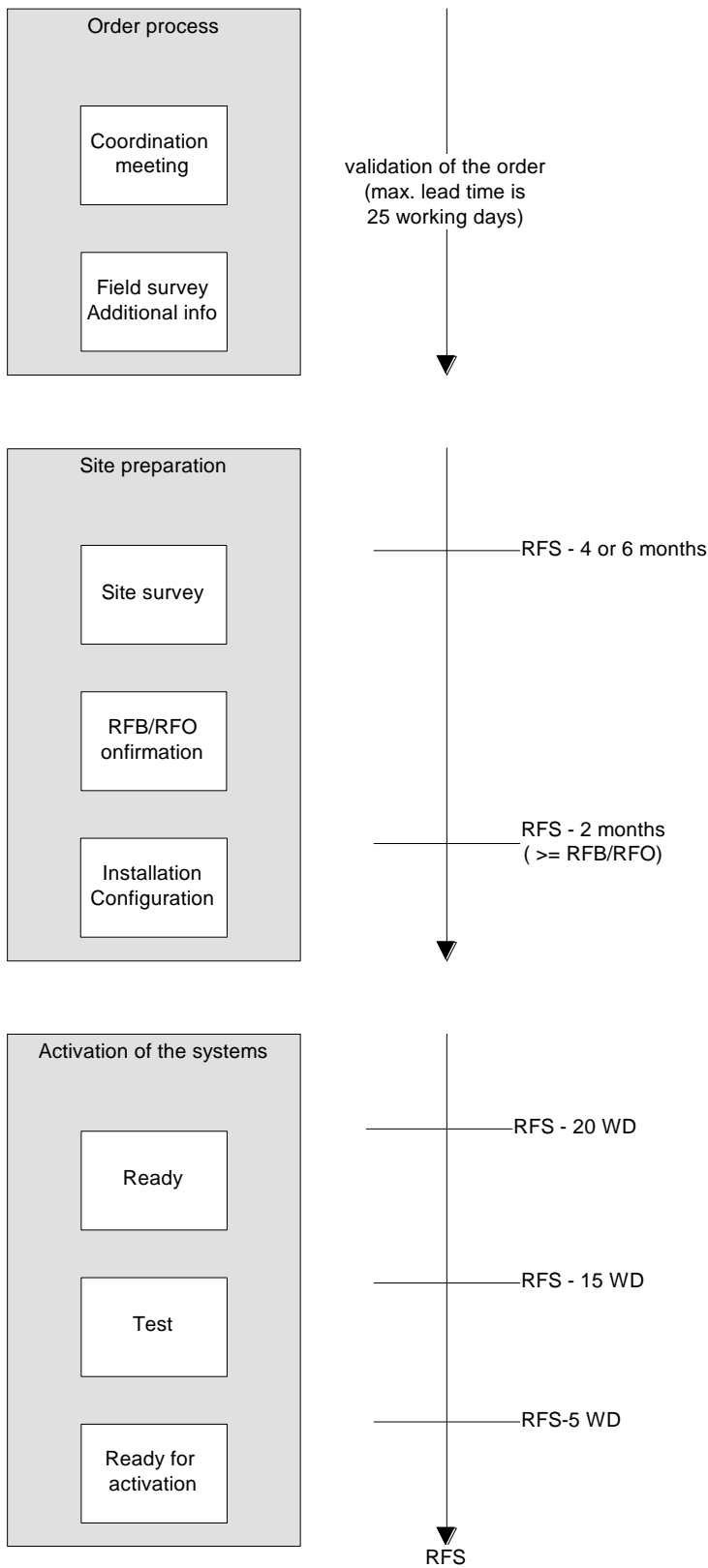
Base Unit	Switching node that performs the call handling function for its own subscriber interfaces and for the subscriber interfaces of its Remote Units
Bringing into Service (BIS) Field Survey	Bringing into service date for Proximus. Survey of private (and public) domain around the POI to determine the ways of cable and connection points outside the building(s).
Correctly sent Trouble Ticket	Trouble Ticket describing a trouble whose cause is to be located in the Network of the Party receiving the Trouble Ticket
Large group of customers	Customers related to more then one number range bloc, or more then 10000 customers.
Loop	HW or SW implementation of a loop-back functionality on a certain OSI-layer that sends back transmitted data to sender.
Party	Depending on the context, Proximus and/or the OLO entering into an Interconnection Agreement to which the present SLA is annexed.
Ready for Proximus (RFB)	Date, on which all work, as agreed upon during the field and site survey, should be terminated by the OLO.
Ready for OLO (RFO)	Date, on which all work, as agreed upon during the field and site survey, with exception of splicing the fiber of the OLO en the fiber of Proximus together, should be terminated by Proximus.
Ready for Service (RFS)	Date on which the activation of the circuit is foreseen (Ready For Service).
Remote Unit	Switching node with subscriber interfaces that has no autonomous call handling function
Site Survey	Survey of the telecom room to determine the infrastructure works (cable trays, powering, equipment racks, ...) that need to be performed before installation and bringing into service is possible
Working Day	Each day except Saturday, Sunday and the national legal holidays in Belgium
Wrongly sent Trouble Ticket	Trouble Ticket describing a trouble whose cause is located in the Network of the Party sending the Trouble Ticket

4.1.2 Abbreviations

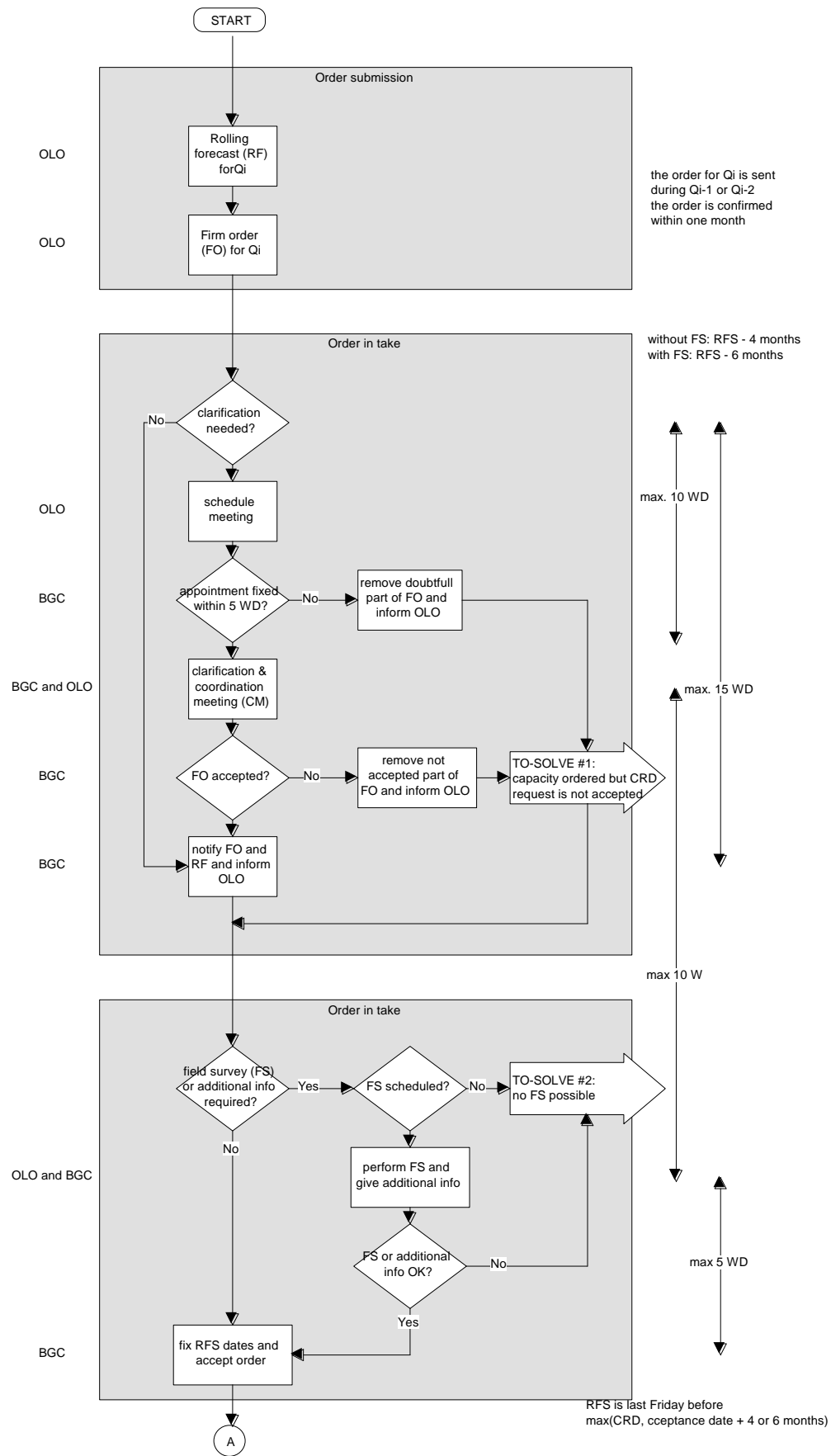
AGE	Access Gateway Exchange
• A-AGE	• Area Access Gateway Exchange
• L-AGE	• Local Access Gateway Exchange
BIS	<u>Bringing into Service</u>

BIPT	<u>Belgian Institute for postal services and telecommunications</u>
BRIO	Proximus Reference Interconnect Offer
CSC	Carrier select code
GTF	Global Trouble Form
HTR	Hard to Reach
ICG	Interconnection Coordination Group
IGE	International Gateway Exchange
IN	Intelligent Network
MFC	Multiple Frequency Code
MSC	Mobile Switching Centre
NOC	Network Operation Centre
OLO	Other Licensed Operator
P&O	Planning and operation document
POI	<u>Point of Interconnect</u>
RFB	<u>Ready for Proximus:</u>
RFO	<u>Ready for OLO:</u>
RFS	<u>Ready for Service:</u>
SPOC	Single Point of Contact
STP	Signal Transfer Point

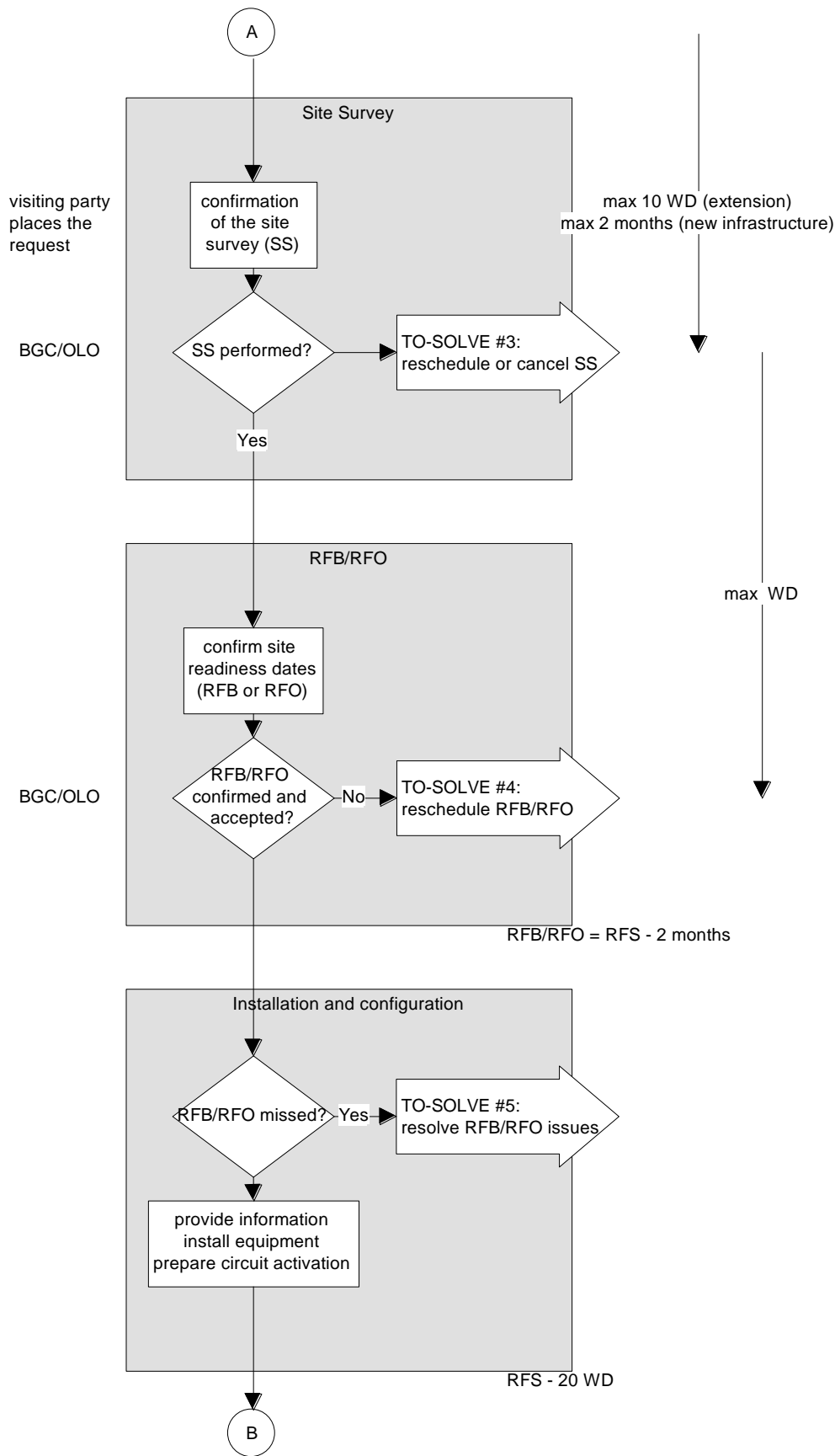
4.2 APPENDIX 1: OVERALL FLOW FOR PROVISIONING OF IC-LINKS.



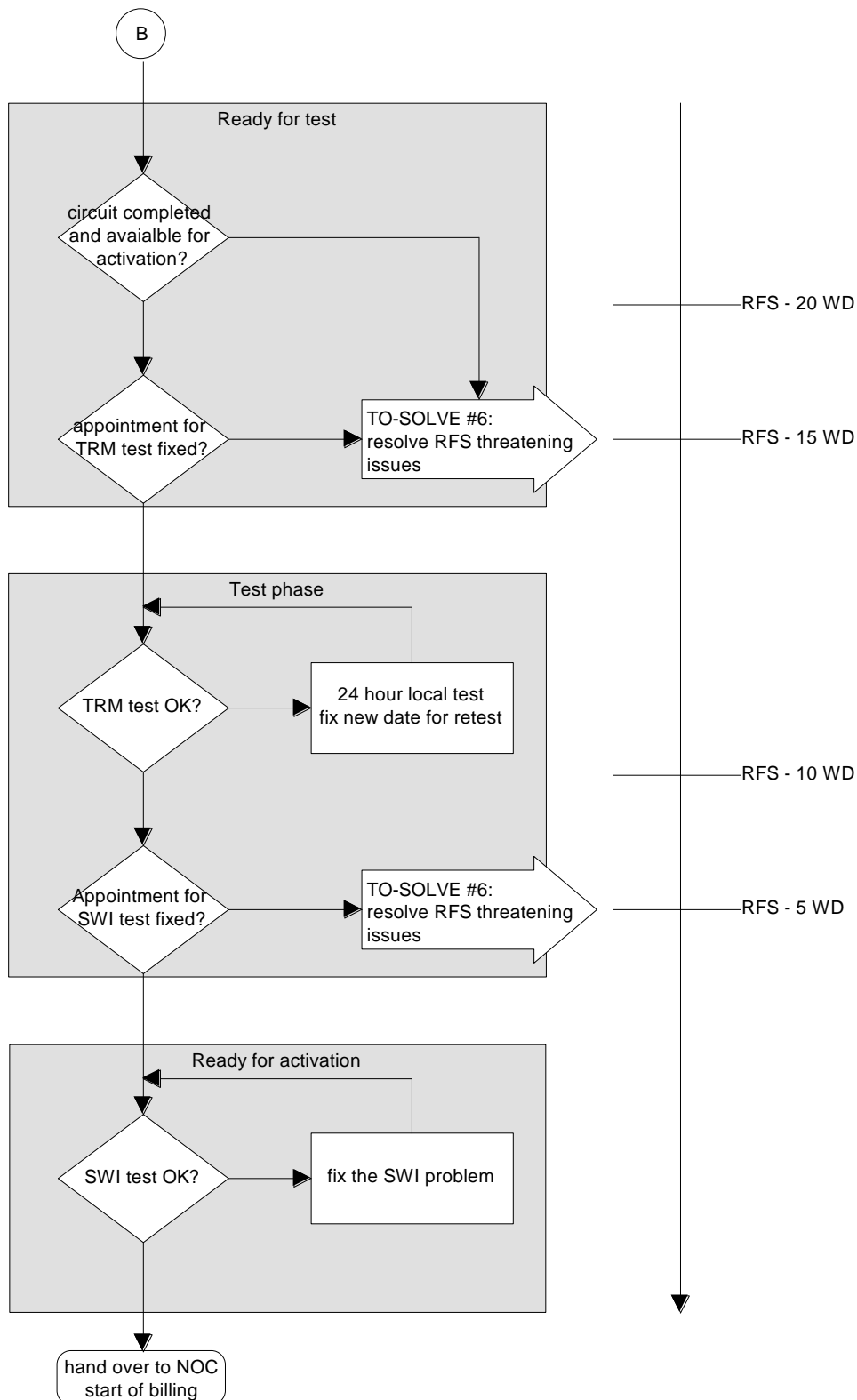
4.3 APPENDIX 2: ORDER PROCESS



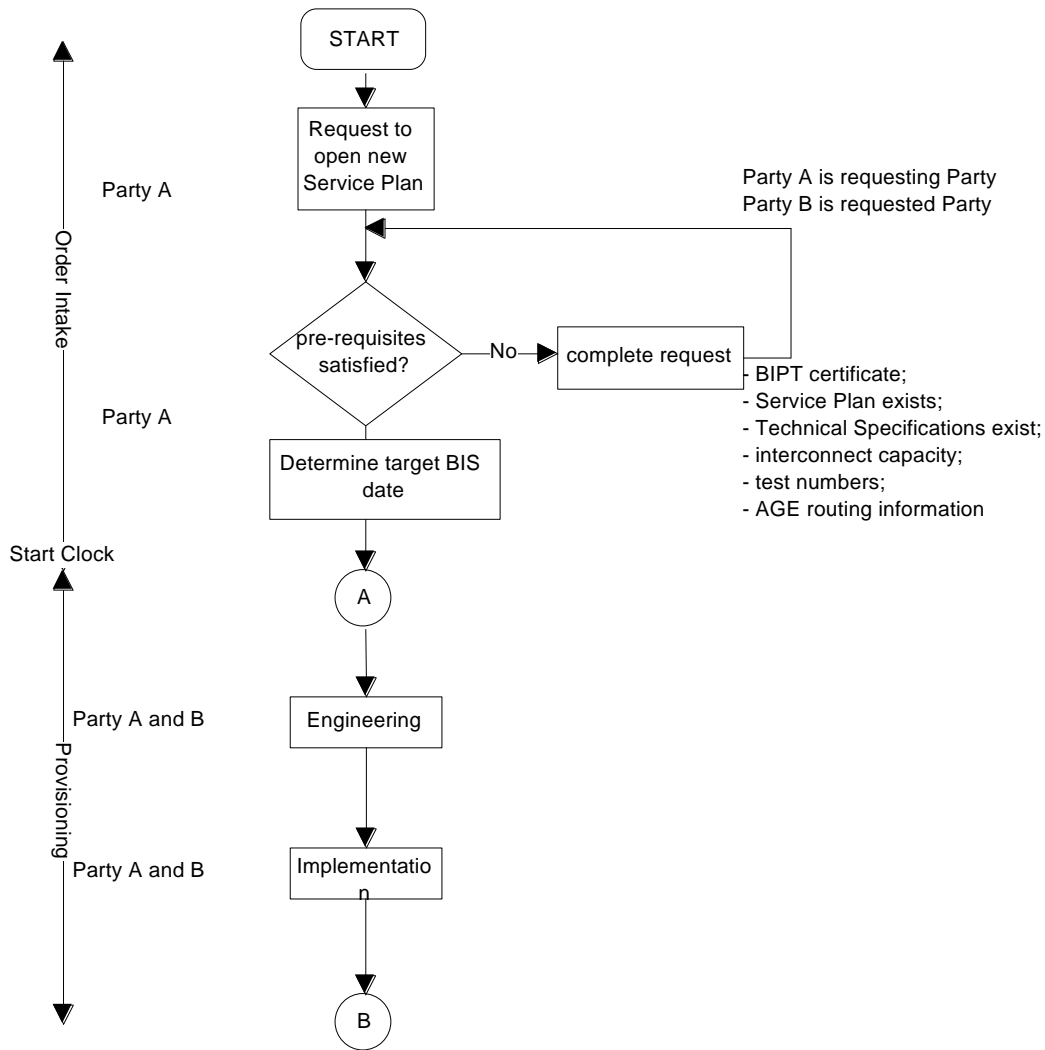
4.4 APPENDIX 2: SITE PREPARATION

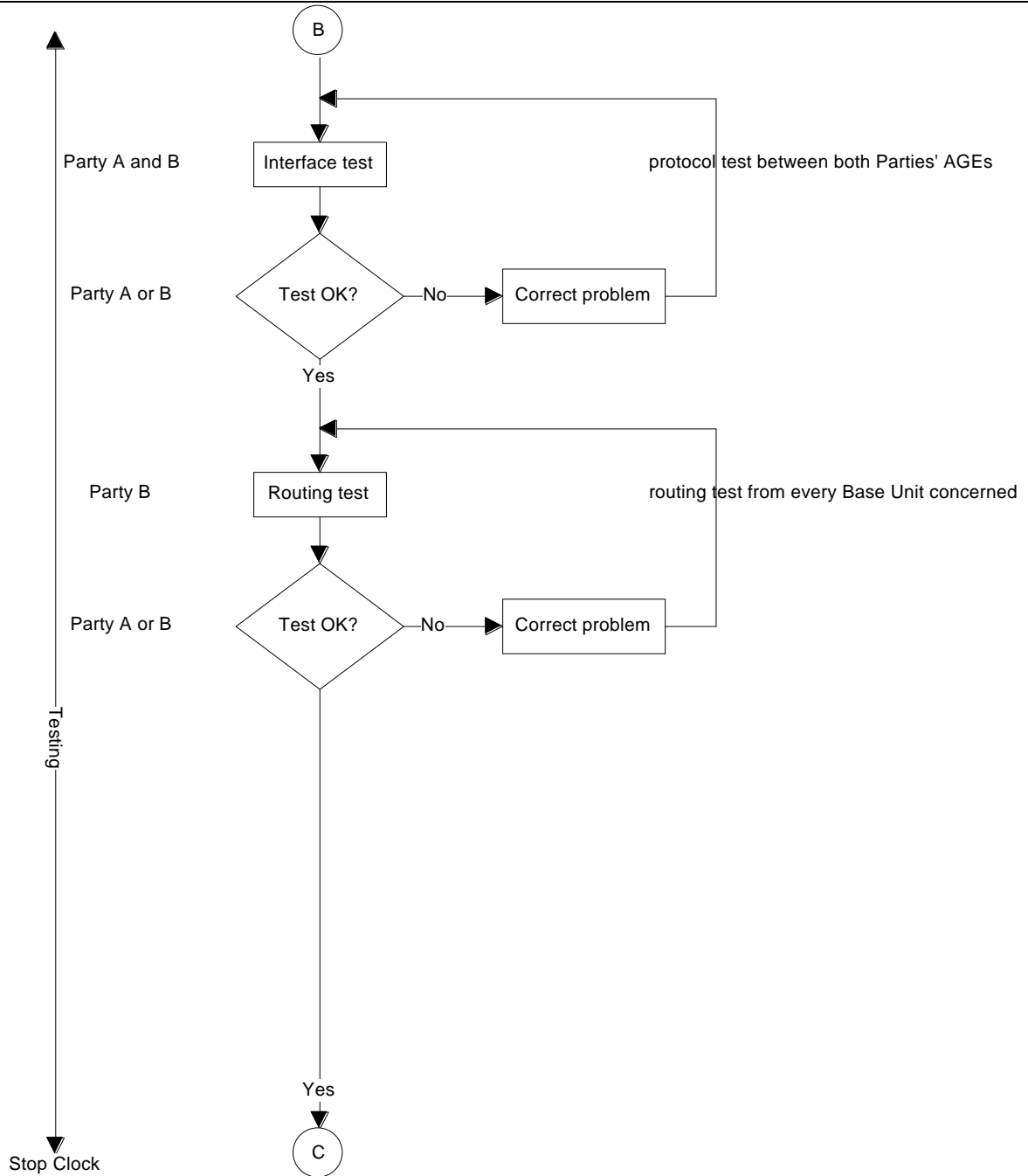


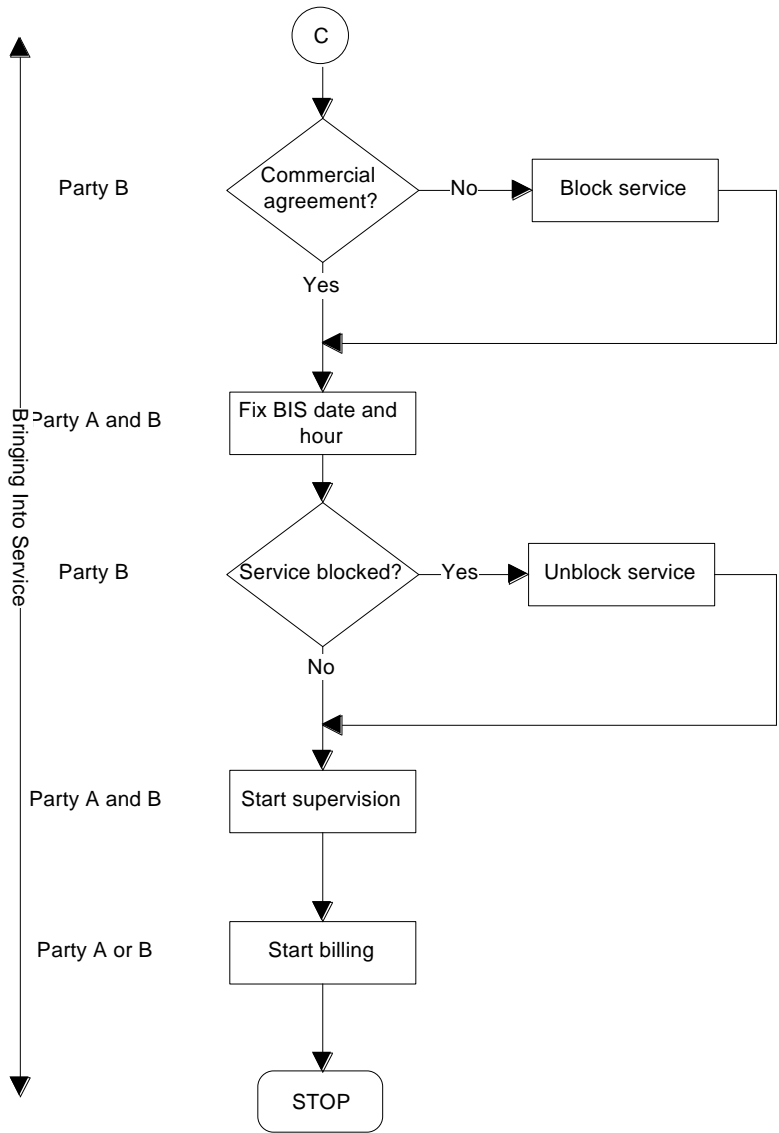
4.5 APPENDIX 4: INSTALLATION OF THE IC-LINK



4.6 APPENDIX 5: FLOW FOR PROVISIONING OF SERVICE PLANS







4.7 APPENDIX 6: ADVISED BASIC CHECKS

4.7.1 Advised Basic checks in case of traffic problems .

4.7.1.1 Where possible, a protocol tracing must be included:

- This protocol tracing must refer to the problem;
- This protocol tracing must not only contain hexadecimal information, but also contain a translated result whereby at least the names of the messages must be presented when a signaling flow is transmitted.
- This protocol tracing must exactly reflect, up to the bit level, the messages as they are exchanged (no editing)
- In case of transmission of more detail for a particular message, the information elements must be decoded by name; decoding of the I.E. contents is desirable for the optimal handling of the complaint;
- Proprietary decoding must be avoided as much as possible;

4.7.1.2 For SS7-related tracings, the mandatory fields to include in a tracing are

- Message type
- OPC/DPC information
- Timing information
- A-number, B-number (or a range of numbers)
- Cause value & location

4.7.1.3 When a protocol tracing is included, following elements must be mentioned as well:

- Call scenario
- Place where the tracings have been taken
- Info in case of use of (proprietary) abbreviations or denominations

4.7.2 Advised Basic checks in case of transmission problems.

4.7.2.1 On organizational level:

- **Check** if any planned works are going on
- **Check** if the circuit-in-alarm has already been given in service

4.7.2.2 On transmission level:

- **Check** the status of the optical transmitter / receiver
- **Check** which alarms are present (on E1 level and higher):
 - ✓ AIS
 - ✓ RFA
 - ✓ LOS
- **Check** if the problem is linked to one alarm, or if several alarms can be correlated
- **Check** if the problem can be isolated via local loop-back
- **Check** if the problem has a constant or an intermediate presence:
An intermediate alarm can indicate a bad connection, a timing trouble or a degrading card
- **Check**, via performance monitoring of the affected circuit(s), what the alarm events are and where they might be located

4.7.2.3 On switch level:

- **Check** the status of the carrier
- **Check** the datafill of the interconnection circuit
- **Check** if the affected circuit is still in service

4.7.3 *Advised Basic Checks in case of Carrier Selection problems .*

4.7.3.1 Does the problem occur before the complete introduction of the dialed nb by the customer, or after this introduction?

- In case of problems during number introduction: problem probably linked to Proximus or to PABX if manual dialing of CS-code from an internal set (PABX is using a 'numbering plan' and does not allow strings starting with 1 to be longer than ... digits)

4.7.3.2 Does the problem, in case of complete number introduction, occur immediately or not ?

- In case of immediate occurrence: Proximus might be the reason if very short (less than 0.5 to 1 sec)
- In case of delayed occurrence: lower probability of problem on Proximus side

4.7.3.3 Which destinations are affected?

- **Check** if the nature of the destinations is compatible with the use of the CSC-code, for Proximus as well as for your own network
- **Check** if this problem has a general nature, or is to be linked to just one number (which might be out-of-service)
- In view of NP:
 - ✓ **Check** the identity of the recipient operator
 - ✓ **Check** the identity of the transit network

4.7.3.4 What are the tones or messages heard by the customer?

- **Check** if the message heard is typical for your own network or not, in case of national destinations
- Attention for PABX customers: especially for ISDN PABXes, the messages (display prompts) or tones might be generated by the PABX, basing upon the network coding, and not by the public network

4.7.3.5 What is the frequency of the problem?

- **Take** a relevant number of samples (at least 5 attempts)

4.7.3.6 Does the problem occur for every CLI of the customer site?

- **Check** also if these CLI belong to the same block of 10.000 numbers
- If not, **check** if CLI is introduced in switch

4.7.3.7 Has the customer already taken contact with other parties (PABX, other operator) and what is their result analysis?

4.7.3.8 Is incoming traffic affected, and if so, what is the impact ?

4.7.3.9 Check if the customer has activated or subscribed supplementary features: call forwarding, call barring

4.7.3.10 On NOC-site (OLO):

- **Simulate** destination via
 - ✓ Proximus directly
 - ✓ Proximus + own CSC
 - ✓ OLO directly
- **Compare** results. These can be part of the problem description sent to BINOC.

4.8 APPENDIX 7: TEST NUMBERS.

4.8.1 *Proximus robot*

Proximus has test numbers available which, upon connection, generate a MFC-tone equivalent to the A1-signal (R2-signalling), 1020+1140 Hz. In case of bulk call testing between Proximus and OLO whereby automatic detection equipment on the Proximus side is used, it is necessary to provide this tone on seizure.

4.8.2 *The ideal scenario for calls to a test number is:*

- ✓ ringing phase
- ✓ connection phase (ANM)
- ✓ disconnection by originating party

CALLING		CALLED	
IAM	→		
	←	ACM	
	←	CPG	(optional, to indicate Alerting)
	←	ANM	
REL	→		
	←	RLC	

4.9 APPENDIX 8: USE OF PROTOCOL TRACINGS

4.9.1 SCOPE:

Protocol tracings are important attachments for the Trouble Intake procedure. These tracings must be relevant to the signaled problem, and are by preference obtained via independent measurement equipment. The transmitting party must also give an indication of the point where the tracing has been taken

4.9.2 *Basic rules for the use of protocol tracings*

- Spontaneously or on demand, a protocol tracing must be sent to the requesting operator within 30' (if on demand)
 - This protocol tracing must refer to the problem
 - This protocol tracing must not only contain binary or hexadecimal information, but must also contain a decoded result whereby at least the names of the messages must be presented when a signaling flow is transmitted
 - This protocol tracing must exactly reflect, up to the bit level, the messages as they are exchanged (no editing)
 - In case of transmission of more detail for a particular message, the information elements must be decoded by name; decoding of the I.E. contents is desirable for the optimal handling of the complaint
- For all switching related protocols where a problem is reported (MTP, SCCP, ISUP, MAP, INAP, ...), the mandatory fields to include in a N7 tracing are:
 - All messages(e.g. for ISUP, from IAM to RLC) linked to the problem, incl decoding detail, with OPC/DPC
 - Flow of the testing or call scenario
 - Timing information
 - Description of call context (facilities, ...)
- DSS1 tracings may be used when relevant (congestion, CSC)
 - All messages linked to the problem, incl decoding detail
 - Facilities involved (NP !!)
 - CPE-information
 - Timing information
 - Description of call context
 - Place where the tracing has been taken (ie compared to the NT1 or TWIN or PRA-interface)
 - Number of samples used to simulate the problem

Other traces like R2, N5, ... may also be used to clarify a problem

4.10 APPENDIX 9: SWITCH BASED INFORMATION.

4.10.1 SCOPE:

Switch based information can be used during the Trouble Intake procedure, in order to clarify certain events. However, the relevance of this information is not as high as the information obtained through independent measurement devices such as protocol analyzers, for the simple reason that the switch might discard or change information in stress situations or during SW-operations (SW-replacement).

4.10.2 *Basic rules for the use of Switch based information*

- Traffic counters can be sent as additional information to the TIF-document, in order to give an indication of
 - Congestion occurrence
 - Distant failure
- AMA records can be included in the trouble description
 - These records are acceptable in certain circumstances, but the sending party must include a description of the data format and the interpretation of the contents
 - Only records which are related to the Interconnection trunks must be sent; other linked AMA-tickets must not be sent since they are only relevant to the switch itself

Switch logs can be sent as additional information to the TIF-document, but these are considered as less reliable. If these are sent, they must contain an accurate timestamp, a clear problem indication and an indication of the trunk(set) where the log has been taken from.