



IP Packet eXchange Service Agreement

3.2

July 2009

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General Terms & Conditions for Agreement for IP Packet eXchange (IPX) Services

entered by and between

IPX_Provider_full_name

[IPX_Provider_full_address]

registered in the [] register sub file # []

Vat# [],

hereinafter "IPX PROVIDER" or "[]" or "PARTY"

and

Service_Provider_full_name

[Service_Provider_full_address]

registered in the [] register sub file # []

Vat# []

hereinafter "SERVICE PROVIDER" or "PARTY"

1 General Introduction

1.1 Structure

In this Agreement, the Parties agree the terms and conditions for IP Packet eXchange (here under IPX) services.

IPX Provider shall supply the IPX Service through a private IP network, independent of the Internet, as governed by the IR.34 technical solution and supports end-to-end quality of service.

This Agreement consists of the main body (with general mostly legal terms) and these Annexes, some of which are equipped with their own Schedules:

ANNEX 1 Definitions

ANNEX 2 Tax

ANNEX 3 Financial Security

ANNEX 4 Insurance

ANNEX 5 Service Provider Contact Details

ANNEX 6 IPX Provider Contact Details

ANNEX 7 Connectivity Options

ANNEX 8 Service Level Agreement for IPX Transport Service

SCHEDULE A Access Connectivity Schedule

SCHEDULE B Participating Service Provider Parameters

SCHEDULE C Service Provider Premises

SCHEDULE D Charging and Billing

SCHEDULE E Elected Participating Service Provider Parameters

SCHEDULE F Service Contact Details

SCHEDULE G Service Credit Level

ANNEX 9 Charges for IPX Transport

1.2 Enabling indirect connectivity

Any Service Provider acting as a gateway between the IPX Domain and the non-IPX Domain (i.e. enabling other parties not directly connected to the IPX Domain, to send and receive traffic to and from the IPX Domain), must assume full responsibility with regard to all obligations of the IP Interworking (IPI) Framework and requirements specific for the IPX Domain. This means that everything outside the IPX Domain, interacting with the IPX Domain, must be compliant with the IPI framework as specified by the GSMA.

Where necessary, the IPX Provider must interconnect with any Third-Party IPX Provider required to enable connectivity with other Service Providers.

1.3 End-to-End Quality:

The IPX Provider shall be responsible for the end-to-end IPX Service between two Service Providers where the Participating Service Providers use the same IPX Provider according to IR.34.

IPX Provider shall take responsibility for the end-to-end IPX Service where the Participating Service Providers are connected to Third-Party IPX Providers according to IR. 34.

The IPX Service consists of three Connectivity Options:

- IPX Transport
- IPX Service Transit
- IPX Service Hub

This Agreement enables the Service Provider to contract for a multiple of options within the realm of Transport, Transit and Hub.

Each IPX Service offered within this Agreement is implemented under the conditions governed by the applicable signed Service Schedule.

1.4 Cascading of Responsibilities

The IPX concept of Cascading of Responsibilities applies for all connectivity options according to the applicable SLA, IR.34 and IR.77. For this purpose the IPX Provider has to implement the appropriate commercial, technical, interconnection procedures, as appropriate, with any Third Party IPX Provider that the IPX Provider chooses in order to provide IPX Services to the Service Provider.

Nothing in this Agreement as such shall be construed as imposing any requirement or obligations upon any Party to convey IPX traffic to the other Party.

2 Scope

The following areas shall be covered in the Agreement:

- Definitions and interpretation
- Suspension, Interruption and Cancellation of the IPX Service
- Liability of the Parties
- Confidentiality
- Force majeure
- Term and termination
- Choice of law
- Dispute resolution
- IPX Charges and Payment
- Access
- Connectivity Options
- End-to-end responsibilities

3 IPX Services

3.1 General

Both Parties agree that in order to support all of the commercial business models and technical aspects of IPX, each service transmitted over the IPX must conform to the relevant Service Schedule. The Service Schedule will define the quality of service, service level agreement and commercial and technical framework for each IPX Service rendered under this Agreement.

IPX Providers agree to connect only with other Third-Party IPX Providers that are compliant with IPX Governance.

Parties agree that there will be Specific IPX services in future to be provided by the IPX Provider which will require IPX connection that may be either standardised or non-standardised. All IPX Services offered hereunder will be subject to applicable GSMA guidelines and other regulatory provisions affecting such IPX Services.

3.2 Service Schedules

Each IPX Service shall be fully described in the applicable Service Schedule. The Service Provider reserves the right to choose which IPX Service to use among the range of services offered by the IPX Provider. By signing the Service Schedule both Parties accept the conditions stated in the applicable Service Schedule.

The IPX provider shall not offer any IPX Service nor activate any Service between the Service Provider and any Participating Service Provider unless the Service Provider has expressly given its consent through signature of the relevant Service Schedule attached

to this Agreement. In this way, only agreed IPX Services are activated and Participating Services Providers are connected at any given time with the Service Provider.

3.3 Governance

Both Parties agree to abide by the IPX Governance as defined from time to time.

3.4 IPX Commercial & Technical Requirements

Both Parties shall be responsible for ensuring that they adhere to certain business, operational and connection criteria in order for the IPX Provider to provide and for the Service Provider to receive IPX Services under this Agreement. Such criteria detailed in the IPX Governance are intended to ensure that the IPX Domain is properly managed to meet minimum commercial and technical requirements required in an IPX deployment.

3.5 Transparency and Traceability Requirements

Both Parties will adhere to the IPX Governance.

3.6 Routing

The IPX Provider chooses the routing up to the Terminating Service Provider provided that the QoS levels remain unchanged.

No more than two IPX Providers must be involved in the end-to-end delivery.

4 Access

The Parties shall connect and keep connected according to the IR.34 and the applicable SLA's. The Parties shall agree on how the connection between the Service Provider and the IPX Provider (IPX Transport) is implemented.

5 Charges and Payment

5.1 General provisions and details

The charges and payment for each IPX Service and for the termination service offered by the Service Provider and the Participating Service Providers are defined in the applicable Service Schedule.

While general provisions on charges and payment are set out here, the charges and payment for each IPX Service and for the termination service offered by the Service Provider and the Participating Service Providers shall be defined in the applicable Service Schedule.

5.2 Currency

All charges/prices are stated in Euro, all services shall be invoiced and paid in Euro.

[or other currency to be agreed]

If a currency exchange is necessary, the xchange rate to be used by the each Party shall be the rate published by the IMF on the 23rd day of the month preceding the invoicing period, or the previous business day, in the case the 23rd is a public holiday in the US.

5.3 Invoicing Period

Invoice Period means 00:00:00 AM (Country local time) on the first day of a calendar month until 11:59:59 PM (Country local time) on the last day of a calendar month; upon bilateral agreement single services ordered hereunder (e.g. SMS and MMS hubbing) may be billed applying the local time of a different country (eg Singapur time).

5.4 Notice of changed charges

Where applicable, the IPX Provider shall notify the Service Provider by written notification, of any increase by any existing Participating Service Provider to its Participating Service Provider Termination Charges at least sixty (60) calendar days prior to the Invoicing Period in which such increase shall become effective. The IPX Provider may reduce all or any of the Participating Service Provider Termination Charges at any time upon written notice to the Service Provider.

Where applicable the Service Provider shall notify the IPX Provider of any proposed increase to the Service Provider Termination Charges at least ninety (90) calendar days prior to the Invoice Period in which such revisions shall become effective unless the Service Provider is required to revise the Service Provider Termination Charges by any decision of any regulator or other competent authority within timescales which preclude the giving of such ninety (90) calendar day notice in which event the Service Provider shall give the IPX as much prior written notice of such revisions as is reasonably practicable in the circumstances. The Service Provider may reduce the Service Provider Termination Charges at any time upon written notice to the IPX Provider.

The IPX Provider may increase the IPX Charges on [state number of days to be agreed between parties] days' prior written notice per the beginning of an Invoicing Period but shall not increase the IPX Charges during the period of [state number of months agreed between parties] months following the Effective Date. The IPX Provider may notify the Service Provider of any reductions in the IPX Charges at any time upon written notice. In the event of any increase in the IPX Charges, the Service Provider shall have the right to terminate this Agreement upon at least [state number of days agreed between parties] days prior written notice to the IPX per the beginning of the Invoicing Period for which the increased IPX Charges would become effective.

5.5 Invoice

The IPX Provider shall provide the Service Provider with an invoice in respect of each Invoicing Period within one calendar month of the end of the Invoicing Period. The invoice will cover the charges for the Services provided during the Invoicing Period and – if applicable – previous Invoicing Periods of the past 3 years in case Services have not been invoiced correctly. The detail of such invoice shall depend on the IPX Service and will be included in the corresponding Service Schedule.

All invoices shall be provided as printout, additionally the invoice data will be provided in electronic form (xls, xlm, csv or txt). The hard copy invoice shall be sent to the other Party's contact as indicated in ANNEX 5 and ANNEX 6. The electronic invoice data shall be sent by e-mail to the other Party's contact as indicated in ANNEX 5 and ANNEX 6.

The invoice shall cover at least the invoice header and the invoice details as listed below:

Invoice header:

- Document name (e.g. invoice, credit note, adjustment)
- Name, adress and (if invoicing Party is located inside the European Union) VAT-number of invoicing Party
- Name, adress and (if invoiced Party is located inside the European Union) VAT-number of invoice
- Invoice number and issue date of invoice
- Description of invoiced service
- Invoicing Period
- Complaint period (see clause 5.8)
- Payment procedure (direct payment, settlement via ClearCom notification ...)

- Payment information (Due Date, bank name, address, account number, IBAN, SWIFT etc)

Invoices issued pursuant to this Agreement shall be payable by the other Party (the "Paying Party") within 30 days of the invoice date (the "Due Date").

5.6 Payment

If Party is member of ClearCom (www.clearcom.org), the Parties shall adhere to ClearCom's procedure of notification and payment:

After the complaint period (see clause 5.8) each Party notifies the total amounts of the invoices issued for payment via ClearCom

In case of complaints only the undisputed part of invoices shall be notified for payment via ClearCom.

The notification to ClearCom shall be made via internet.

If the party is not a member of ClearCom the Settlement Process is made by direct payment. A set-off of open of unpaid invoices may be bilaterally agreed by e-mail.

Payments of each Party are solely considered to settle the debt, if the paying Party informs the other Party on the details which are required for allocating the payment correctly to the debt. Any payment received without information on these details shall be credited against the longeststanding debt.

The cost of payment (e.g. bank expenses) incurred in the debtor country shall be paid by the debtor Party. The cost of receiving payment in the creditor country (including bank expenses and cost imposed by intermediary banks in third countries) shall be paid by the creditor Party.

5.7 Delayed payment, interest and collecting charges

If the Paying Party shall fail to pay any amount due hereunder by the due date then the Billing Party shall be entitled to charge and receive interest at the yearly rate of 5 per cent per annum above the three month EURIBOR lending rate from time to time which shall accrue from the due date until the date of payment and shall be calculated on a daily basis.

Each Party shall reimburse the other Party for reminder and collecting expenses resulting from the other Party's delayed performance of its payment duties.

5.8 Complaints on an invoiced amount

In the event that the Paying Party disputes the amount of any invoice delivered by the Billing Party, or the Paying Party disputes the applicable traffic delivered (volume, number, or as applicable) or the Charges applicable to the applicable traffic as notified by the Billing Party, it will, as soon as practicable, and in any case within 30 days of the relevant invoice date, notify the Billing Party in writing (including with its notice all details reasonably necessary to substantiate its claim). The Parties shall consult in good faith to try to resolve the dispute.

Failing resolution, either Party may initiate arbitration (see clause 29). Subject as set out below, the Billing Party shall maintain and retain for a period of at least 6 months (as or longer, if and as required by law) following the end of the month to which the invoice relates, true and accurate books of account and information contained in or on discs, tapes, documents or other records as may reasonably be required by such chartered accountants for calculation or verification of the amounts payable under such invoice which shall include reasonable billing summary reports.

In the event that a dispute relating to an invoice arises within 6 months after the end of the month to which the invoice relates, the Billing Party shall maintain and retain the above records at least until the dispute is resolved. Each Party shall permit any expert (appointed by the arbitral court) to have reasonable access (subject to receipt of reasonable prior written notice which shall not be less than 14 days) solely for the purpose of inspecting the apparatus used for recording the applicable traffic. Any such inspection shall be made in such a way as to cause the minimum inconvenience. The Party whose premises are being visited for such inspection shall provide such experts with reasonable facilities and assistance for such purpose. In no event may the Paying Party raise a dispute in relation to all or part of an invoice any later than 6 months after the end of the month to which the invoice relates.

Notwithstanding the reference of any dispute for investigation and determination, if the amount in dispute represents less than 3% of the total amount of the invoice (excluding VAT) the invoiced amount shall be payable in full pending the resolution of the dispute. If the amount in dispute represents 3% or more of the total amount of the invoice (excluding VAT) the disputed amount may be withheld pending resolution of the dispute while, for the avoidance of doubt, any undisputed balance and interest payable thereon shall remain payable in full.

A complaint against an invoice shall be deemed not raised,

- if such complaint is received more than thirty (30) days after the date of the invoice to which the complaint refers to, or
- if the amount of money (which is subject to the complaint) is less than 3 % of total amount invoiced.

Parties may agree on other cases when complaints shall be deemed not raised.

6 Tax

The Parties agree to comply with the provisions of Annex 2 in respect of taxes.

7 Financial Security

The Parties agree to comply with the provisions of Annex 3 in respect of financial security.

8 Insurance

The Parties agree to comply with the provisions of Annex 4 in respect of insurance.

9 Suspension of Service

With regards to the following paragraphs, each service may be suspended independently. Where a Suspension of Service is initiated based on either Operational or Non-Operational event (defined below), a suspension of payment is also initiated until such time that Service is restored.

Either Party that enters into this Agreement may initiate a suspension of Service based on an Operational and Non-Operational Event.

9.1 Operational Event

An Operational Event is defined as an event that has a direct affect on Service or revenue, for example but not limited to:

- Denial of Service Attack
- Fraudulent or unauthorised behaviour

- Unauthorised access to any part of the IPX.

Either Party, without liability, may at any time and with immediate effect suspend the affected part or all operation of the Service, in order to protect all or specific connected parties. As a consequence this may affect traffic both ways or one way depending on severity of the Operational Event, the protection requirement specific to this Service and in relation to the Party(s) affected where there is a reasonable opinion that:

- A customer of a Party or any Party is using the IP Service in a way which is fraudulent, unlawful or unauthorised;
- The IPX Service Provider has received notification from another Party or has reasonable grounds to suspect fraudulent, unlawful or unauthorised use of the IP Service by End-User(s) or any Parties, or
- An customer of a Party or third Party is using equipment or utilising the IPX Service in a way which damages or is likely to cause damage to the IPX Provider's or an IPX Service Provider's System or any part thereof.

The initiating Party of a suspension of Service shall, as soon as reasonably practicable, inform the affected Party(s) through pre-defined communication channels (see applicable Service Schedule and clause 26) that are agreed between the IPX Provider and the Service Provider prior to the commencement of Service.

The duration of such suspension will remain in effect until both Parties are satisfied that the conditions giving rise to such suspension of Service have

9.2 Non-Operational Event

If the Service Provider is in material breach (including failure to pay any sum due) of this Agreement the IPX Provider may serve a notice specifying the breach and requiring it to be remedied within a period of no less than 10 days from the date of receipt of such notice. If Service Provider fails to remedy the breach within the period IPX Provider may suspend performance of such obligations under this Agreement as is reasonable in the circumstances. Suspension for a material breach may last until such breach is remedied or the breached Agreement is terminated – whichever comes first.

10 Interruption of Service

The following paragraphs apply to all services independently.

10.1 Planned

"Planned" is defined as a change that is an operational requirement in order to improve/configure or manage that Service or the network that it requires.

All planned changes initiated by any party shall require a 21 (calendar) days' prior written notice, in writing (by fax or email), to the pre-agreed operational contacts (see appropriate Service Schedule and clause 26).

10.2 Unplanned

"Unplanned" is defined as an interruption of Service that is not managed or due to any operational requirement. In this case, it is assumed that a fault scenario has occurred:

In such a case, the IPX Provider/ Service Provider shall inform the involved parties as soon as possible. The Service maximum recovery time is defined in Annex 8.

11 Cancellation of Service

Service Provider may cancel IPX Services with any of the Participating Service Providers, by providing at least 90 days prior written notification to IPX Provider. As part of its prior written notification to the IPX Provider the Service Provider should state its reason for IPX Service cancellation.

IPX Provider may cancel IPX Services on behalf of any Participating Service Provider to the Service Provider on 60 days prior written notification to the Service Provider. As part of its prior written notification to the Service Provider, the IPX Provider should state its reason for IPX Service cancellation.

12 Confidentiality

Each Party acknowledges that it will receive Confidential Information from the other Party under this Agreement. Each Party shall keep in confidence and trust all such Confidential Information and will make no use of any Confidential Information except as it is necessary for the performance of its obligations or exercise of its rights under this Agreement. Each Party shall disclose the other Party's Confidential Information only to its officers, employees, contractors, consultants on a need-to-know basis. Each Party shall use a reasonable care to protect the other Party's Confidential Information.

Information shall not be deemed Confidential Information and neither Party shall have any obligation concerning the use or disclosure of any information, which: (a) is or becomes publicly known through no fault of the receiving Party; (b) is or becomes known to the receiving Party from a third party source other than the disclosing Party without duties of confidentiality attached and without breach of any agreement between the disclosing Party and such third party; (c) furnished to others by the disclosing Party without restriction on disclosure; or (d) was independently developed by the receiving Party. Nothing in this Agreement shall prevent either Party from disclosing Confidential Information to the extent it is legally compelled to do so by any governmental, investigative or judicial agency pursuant to proceedings over which such agency has jurisdiction; provided, however, that prior to any such disclosure, that Party shall (i) assert the confidential nature of the Confidential Information to the agency; (ii) immediately notify the other Party in writing of the agency's order or request to disclose and (iii) cooperate fully with the other Party in protecting against any such disclosure and/or obtaining a protective order narrowing the scope of the compelled disclosure and protecting its confidentiality.

The IPX Provider reserves the right to disclose such Confidential Information necessary for the enabling of the agreed IPX Services, to potential Service Provider customers, other IPX Providers and other Participating Service Providers.

This Article shall survive the termination of this Agreement for a period of 5 years but shall not in any way limit or restrict a disclosing Party's use of its own Confidential Information.

13 Regulatory Requirements

The Parties agree to meet the relevant regulatory requirements as required.

14 Data Privacy / Protection

The Parties shall at all times observe the requirements arising in particular from data protection legislation, the provisions of the civil code governing legal protection of personality, and telecommunications legislation (see clause 15 below).

The Parties may use data transmitted only for their own business purposes such as call registering, network management, billing and the tracking of malicious calls.

The Parties agree, irrespective of "Article Liability", to indemnify and hold harmless the other Party from and against all costs or expenses of any kind arising out of any claim or demand brought by any person as a result of any breach or alleged breach of such data protection laws.

15 Telecommunications Laws and Regulations

The Parties shall comply with any applicable laws and regulations of telecommunications services (including telecom secrecy and lawful interception) governing the provision of the Services and shall, irrespective of clause 19, indemnify and hold harmless the other Party from and against all costs or expenses of any kind arising out of any claim or demand brought by any person as a result of any breach or alleged breach of telecommunications laws or regulations.

16 Number Portability

The Service Provider and IPX Provider will agree the Number Portability resolution process in each applicable Service Schedule.

The IPX Provider will endeavour to provide support for regulatory issues surrounding subscriber-addressing requirements, like number portability, as and where applicable and be compatible with local country number portability requirements.

17 Security

The Parties will conform to GSMA IR.77.

18 Fraud Prevention

The Parties agree to comply with the procedures and provisions concerning fraudulent or unauthorised use of the Services set out in the GSM Association Permanent Reference Documents.

19 Liability of Parties

Nothing herein excludes or limits either Party's liability (a) for fraud or death or personal injury caused by its negligence or (b) under applicable provisions on product liability. Also any obligation to pay unpaid invoices or to grant credits shall and shall in no way be limited by this clause 19.

Save as provided otherwise herein the Parties' claims for any lost revenue, business, contracts or profits or for damages for any legal ground whatsoever - in particular for default, impossibility, positive breach of the contract, consequential damage, special, incidental, indirect or punitive damages, defects or for unlawful acts - are excluded, unless resulting out of the other Party's at least gross negligence

The Parties' liability for any claim, loss, expense, or damage shall be limited:

With regard to any damaging event this liability shall be limited to 30% of the agreed upon amount of recurring charges payable for one calendar month of the Service affected ("MRC");

With regard to any series of damaging events concerning the same Service and happening within 12 consecutive calendar months this liability shall be limited to the agreed upon amount of recurring charges payable for these 12 consecutive calendar months.

If binding deadlines are not met, a reasonable extended deadline must be set for delayed fulfilment of the contract requirements. This shall in no way reduce a Party's liability under this Agreement.

20 Force Majeure

Neither Party shall be liable for any breach of this Agreement caused by force majeure which expression shall mean act of God, insurrection or civil disorder, war or military operations, national or local emergency, acts or omissions of Government, acts or omissions of any third party operator or events affecting third party telecommunications sys-

tems, faults in telecommunications systems run by any third party or acts or omissions of third parties running other telecommunications systems, acts of terrorism, highway authority or other competent authority, industrial disputes of any kind (other than those affecting that Party's employees), fire, lightning, explosion, subsidence, seriously inclement weather, acts or omissions of persons or bodies for whom the Party affected by the force majeure is not responsible, or any other cause whether similar or dissimilar outside the reasonable control of that Party, provided in all cases that the Party affected by the force majeure has taken all reasonable steps to avoid or minimise the act or omission giving rise to the force majeure. For the avoidance of doubt, 'force majeure' in respect of one Party shall not include any act or omission of any sub-contractor of that Party.

The Party affected by force majeure shall promptly notify the other in writing of the estimated extent and duration of its inability to perform its obligations and shall use reasonable endeavours to both mitigate such inability to perform its obligations and to resume performance of its obligations as soon as reasonably possible without hereby being obliged to incur any cost or expenditure.

If either Party is prevented from performance of its obligations for a continuous period in excess of 60 days (other than in relation to payment of charges), the other Party may terminate this Agreement forthwith on service of written notice upon the Party so prevented, in which case neither Party shall have any liability to the other except that rights and liabilities which accrued prior to such termination shall continue to subsist.

Upon the cessation of the delay or failure resulting from force majeure the Party affected by force majeure shall promptly notify the other of such cessation.

21 Term and Termination

This Agreement shall commence on the Effective Date and continue in force until terminated at the end of a calendar month in accordance with the provisions hereof by either Party upon at least *[state number agreed between the Parties]* months' prior written notice to the other Party. However, this Agreement cannot be terminated at an earlier date than the date of commencing of IPX Service stated in the Service Schedules attached to this Agreement.

A Party may terminate this Agreement with immediate effect by giving the other Party immediate written notice of termination if any of the following events occurs:

- The other Party is in material or persistent breach of this Agreement and fails to remedy such breach within 30 days of the receipt of notice from the other Party specifying such breach;
- An order is made or a resolution passed for the winding up of the other Party (other than for the purpose of a solvent scheme of reconstruction or amalgamation) or any analogous occurrence takes place in any jurisdiction;
- An administrator, administrative receiver or receiver is appointed in respect of a material part of the other Party's assets or business or any analogous occurrence takes place in any jurisdiction;
- If the other Party becomes bankrupt or insolvent or if that other Party enters into any composition or arrangement with its creditors and that other Party is not able to ensure performance of its obligations under this Agreement by a guarantee from a first class bank, payable on first written demand;
- The other Party ceases to continue its business;
- If the other Party is liquidated; or
- If the other Party engages directly or indirectly in any fraud with respect to its use of the terminating Party's Service or makes other unlawful use of the Service.
- Subject to Article 13 Regulatory Requirements, immediately in the event a final order by the relevant governmental authority revoking or denying renewal of the license(s) or permission to operate a public telecommunications

network(s) granted to either Party, or any other license necessary to operate the Service(s), takes effect.

- The Service Provider is entitled to terminate the Agreement if the IPX Provider is no longer meeting the criteria issued by the IPX Governance.
- Termination or expiry of this Agreement shall not operate as a waiver of any breach by a Party hereto of any of the provisions of this Agreement and shall be without prejudice to any rights liabilities or obligations of either Party which have accrued up to the date of such termination or expiry;

21.1 Consequences of Termination

On termination of this Agreement, the connectivity options and all IPX services in connection with the agreement are terminated.

22 Penalties

Penalties for breaches in IPX Services SLA are to be commercially agreed between the IPX Provider and Service Provider and specified in the mutually agreed Service Schedules.

23 Changes to the Agreement and Annexes

Any amendments and/or Annexes shall be valid only if made in writing and signed by duly authorized representatives of the Parties hereto.

24 Severability Clause

If any part of this Agreement or any Annex is held to be invalid or unenforceable, such determination shall not invalidate any other provision of this Agreement or Annexes; and the Parties shall attempt, through negotiations in good faith, to replace such part of this Agreement or Annexes. The failure of the Parties to agree on such replacement shall not affect the validity of the remaining parts of the Agreement.

25 Miscellaneous

Successors and Assigns: This Agreement is personal to the Parties hereto and (except by operation of law) neither Party shall assign, transfer, charge, encumber or otherwise deal with the whole or any part of this Agreement or its rights or obligations hereunder without the prior consent in writing of the other Party which consent shall not be unreasonably withheld or delayed.

Subcontractors: Nothing in this Agreement shall prevent either Party from appointing sub-contractors to perform work in connection with the performance of its obligations hereunder, provided that the Party shall remain fully responsible for the acts and omissions of sub-contractors as if they were his own.

No waiver: Failure by any Party at any time or times to require performance of any provisions of the Agreement shall in no manner affect its rights to enforce the same, and the waiver by any Party of any breach of any provisions of this Agreement shall not be construed to be a waiver by such Party of any succeeding breach of such provision or waiver by such Party of any breach of any other provision hereof.

No Partnership: The Parties declare that it is not their intention to enter into a joint venture with each other hereby and nothing herein shall be deemed to constitute a partnership between the Parties or constitute one Party the agent of the other for any purpose whatsoever.

No Publicity: Without prejudice to clause 12 or the right of either Party to publish this Agreement or any part thereof in order to comply with any legal or regulatory obligation neither Party shall make any press announcements or publicise the existence or contents

of this Agreement or any part of it in any way except with the prior written consent of the other Party;

Trade Marks and Service Marks: Nothing in this Agreement shall be deemed or construed as granting to either Party any right or licence to use any trade or service marks of the other Party in connection with the promotion of its services or for any other reason.

Precedence: In the event of any inconsistency between the numbered Articles of this Agreement and Annexes hereto, the Annexes shall prevail.

Previous Agreements between the Parties: This Agreement supersedes and prevails over all previous agreements, understandings or commitments made between the Parties or representations made by either Party whether oral or written relating to the subject matter thereof.

26 Notices

Any notice or other communication required to be given for the purposes of this Agreement shall be given by letter sent by acknowledgement of receipt of courier or by facsimile transmission with acknowledgement of receipt immediately confirmed by a letter sent by courier.

Any notice sent for the purposes of this Agreement shall, be addressed to the other Party's Contact (see applicable Annexes or later notifications of any changed contacts).

Any notice sent by courier or personally delivered shall be deemed (in the absence of evidence of earlier receipt) to have been delivered 3 calendar days after its despatch. Any notice given by facsimile transmission shall be deemed to have been delivered on the same day as transmission once transmission is actually received (provided it is sent prior to 2pm in the recipient's time zone) or where transmitted at or after 2pm that day in the recipient's time zone, it shall be deemed to be received the next working day following transmission.

27 Intellectual Property Rights

"Intellectual Property Rights" means, for the purposes of this Agreement, rights in, and in relation to, any patents, registered designs, design rights, trade marks, trade and business names (including all goodwill associated with any trade marks or trade and business names), copyright and related rights, moral rights, databases, domain names, semi conductor and other topography rights and utility models, and including the benefit of all registrations of, applications to register and the right to apply for registration of any of the foregoing items, each for their full term (including any extensions or renewals thereof) and where ever in the world enforceable; and trade secrets, confidentiality and other proprietary rights, including rights to know how and other proprietary technical information.

Each Party shall retain full title and ownership with regard to such Party's or its subcontractors' Intellectual Property Rights insofar as any such Intellectual Property Rights may be required in order for either Party to provide or to make use of the Services and other associated services referred to in this Agreement. Nothing in this Agreement shall be deemed or construed as a transfer of title or ownership nor as the granting of any licence, right to use and/or as giving rise to any encumbrance of any kind with regard to either Party's Intellectual Property Rights.

Where Intellectual Property Rights are developed by a Party in connection with performance of this Agreement then in the absence of any other agreement between the Parties, the ownership of such Intellectual Property Rights shall remain with the Party who developed the same provided that in consideration of entering into this Agreement the other Party shall have a non exclusive licence, irrevocable at no cost to use the Intellectual Property Rights if necessary for the purposes and the duration of this Agreement.

28 Choice of Law

The Agreement and any matters relating hereto shall be governed by and construed in accordance with the law of [state Law agreed between parties].

29 Dispute Resolution & Arbitration

The Parties agree to seek to resolve any dispute arising out of this Agreement in accordance with the following escalation procedures before commencing the arbitration procedures described below.

The Contact Persons of both parties shall work in good faith to try to resolve the dispute within thirty (30) days from the date that a Party first gives notice that a dispute has occurred.

If the Contact Persons fail to reach an agreement on the dispute within thirty (30) days, the dispute shall be referred to more senior persons within the respective companies who shall try to resolve the dispute within a further thirty (30) - days period. If no resolution is found each Party is entitled to commence the arbitration proceedings described below.

All disputes arising out of or in connection with this Agreement shall be finally and exclusively settled under the Rules of Arbitration of the International Chamber of Commerce (ICC) by 3 arbitrators appointed in accordance with the said Rules.

The place of arbitration shall be [state arbitration agreed between parties] and the proceedings shall be conducted in the [state language].

The award shall be final and binding and the Parties waive all means of recourse to the courts of any country.

30 Signatures

IN WITNESS WHEREOF the Parties have caused this Agreement to be executed by their duly authorised representatives on the date(s) shown below.

Signed on this _____ in [insert City]

The IPX PROVIDER: IPX_Provider_full_name	
----- [] (name + function)	----- [] (name + function)

Signed on this _____ in _____ (place)

The SERVICE PROVIDER: Service_Provider_full_name	
----- [] (name + function)	----- [] (name + function)

ANNEX 1 Definitions

Carrier ENUM: A Service Providers-only Private ENUM that is separated from the Public ENUM (which is located in Internet and used by a Party's customer). Carrier ENUM is synonymous with Operator ENUM but for IPX purposes the term "Carrier ENUM" will be used.

Connectivity Options: Technical possibilities to connect the Service Provider to the IPX Providers IPX network.

Due date: shall have the meaning as set out in clause 5.5 of the main body.

Destination: means any geographical location in which a number of service providers reside.

Elected Participating Service Provider Commencement Date: means the date when the Service is open between the Service Provider and the Elected Participating Service Provider.

Effective Date: means the latest date of the signatures of the Agreement or any other date agreed between the Parties at which point this Agreement enters into force;

Elected: in respect of a Participating Service Provider means elected as Interworking Partner by the Service Provider.

GSM Association Permanent Reference Documents (GSMA PRD): means a document noted as such by the EMC to the General Assembly and listed as such by Headquarters on the list of Permanent Reference Documents.

Hub: Hubbing or hub-service in this context is when an IPX Provider is performing multi-lateral interconnection.

Interworking: in this concept means exactly the same as the term "interconnection" in 3GPP. While generally speaking "interworking" is used only when talking about connection between different systems, here for example "IMS interworking" means that two IMS networks are connected through an IP network to enable SIP control (Mw interface) and transport of user plane (Gi interface).

IPX: IP Packet eXchange. This is the the service of exchanging IP traffic via the IPX networks.

IPX Provider: is the Party so described on the first page of the Agreement

IPX Proxy: A service aware IPX network element that supports service interworking. The term hub may also be used to refer to a form of IPX Proxy. Hubs and proxies facilitate a multilateral model for each service.

IPX Domain: Refers to the whole group of business entities comprising interconnected Service Providers and IPX Providers.

IPX Service: an IP based service using the IPX network as a means of interconnection, which enables the service provider to grant international interconnection to such service provider's customers.

IR.34: Inter PLMN Backbone Guidelines

IR.67: DNS Guidelines for Operators

IR.77: Inter Operator IP Backbone Security requirements for service Providers and Inet-operator IP Backbone Providers

Invoicing Currency: means the currency in which Participating Service Provider Termination Charges are invoiced and paid.

Key Performance Indicator (KPI) : means any parameter out of those indicated in the agreed SLA.

Operational Procedures : means the operational procedures set out in the applicable Service Schedule.

Opt-In: Where the Service Provider chooses which Participating Service Provider it wishes to open interworking with. By default all connections will be closed.

Opt-Out: Where the Service Provider chooses which Participating Service Provider it wishes not to open interworking with. By default all connections will be open.

Participating Service Provider Service Parameters : means the service parameters and service restrictions relating to the specific service provided by a Participating Service Provider as set out in the applicable Service Schedule;

Participating Service Provider: means a Service Provider which has entered into an Agreement with the IPX Provider or with a Third Party IPX Provider.

Peer-to-Peer: Refers to direct communication between user terminals.

Performance Reporting or QoS report : meaning the report on the actual performance of the IPX Service, based on the KPIs defined in the applicable SLA;

Quality of Service or Quality or QoS: means the level of performance of the IPX Service as per the provisions of the agreed SLA.

Service Awareness: Means the ability of the IPX Provider to support Bilateral Service Transit and Multilateral Interconnect modes.

Service Commencement Date: means the date where the IPX Service is ready to be open as defined by the applicable Service Schedule (to be agreed upon separately).

Service Interworking: means the Service implemented between the Service Provider and the Elected Participating Service Provider using the IPX Service.

Service Level Agreement (SLA): means the service level agreement set out in the applicable Service Schedule.

Service Provider Service Parameters: means the service parameters and service restrictions relating to the specific service provided by the Service Provider as set out in the relevant Service Schedule.

Service Schedule: is contained in a separate document where the IPX Provider and the Service Provider agree on a specific service. This service is provided in addition to the service agreed hereunder.

Term: means the period during which this Agreement remains in force.

Termination Services: means receiving data under this Agreement whereby the receiving party shall be the Service Provider on its network pursuant to this Agreement and the Participating Service Providers on their respective network to be obtained by the IPX Provider and provided to the Service Provider pursuant to this Agreement.

Test Plan: means the test specification and/or schedule set out in the applicable Service Schedule.

Transparent Hubs/Proxies: an IPX Proxy that is invisible to the end points of the communication.

Third Party IPX Provider: means an IPX provider to which a Service Provider is not directly connected. Nevertheless, it is an entity that is involved in the traffic handling as it is connected to the IPX Provider to terminate the Service.

URL: means Uniform Resource Locator.

WAP: means Wireless Application Protocol.

ANNEX 2 Tax

1 General

IPX Provider will charge VAT if and to the extent applicable provisions provide so. Yet, the Service hereunder is a telecommunication service under EU-VAT law and therefore the reverse charge procedure is applicable. No [Country] VAT shall be charged to Service Provider if Service Provider is registered for VAT purposes outside of [Country] and if Service Provider provides to IPX Provider the certificate, a draft of which is set out below in clause "Draft VAT Certificate".

If Service Provider is required by law to deduct or withhold any taxes or fees from any amounts due, such amounts shall be increased as necessary so that IPX Provider receives an amount equal to the sum it would have received if no such deduction or withholding had been made. IPX Provider is a registered provider for telephone and telecommunication services in [Country]. Service Provider acknowledges that all payments to IPX Provider will be made without the need of receiving further documents or confirmations.

Each Party shall be responsible for the payment of any taxes, duties and governmental fees, including state, federal and local personal and business income taxes, sales and use taxes, other business taxes and license fees arising out of its activities. All taxes, duties (including stamp duty) and governmental fees triggered by these General Conditions or any contract on a Service shall be borne by Service Provider.

2 Draft VAT Certificate [choose one of the following options]

2.1 Certificate on VAT and Telecommunication Services (for Customers of company name registered outside the European Union)

Service Provider's name: _____

Service Provider's address (as registered with financial authority): _____

Service Provider's VAT registration number (if any): _____

We hereby certify that we have neither established a business nor a fixed establishment in Country. The services rendered by company name to our company constitute telecom services within the ambit of the 6th EU directive.

We certify that none of the services provided by company name to our company will be used or enjoyed in Country.

In case we no longer fulfil the above mentioned prerequisites, we shall inform company name immediately.

Signed on this _____ (fill in date) in _____ (fill in place)

Signature: _____ (name + position)

2.2 Certificate on VAT and Telecommunication Services (for Customers of company name registered within the European Union, but outside Country)

Service Provider's name: _____

Service Provider's address (as registered with financial authority): _____

We hereby certify that we have neither established a business nor a fixed establishment in [Country]. The services rendered by company name to our company constitute tele-com services within the ambit of the 6th EU directive.

We certify that none of the services provided by company name to our company will be used or enjoyed in [Country].

In case we no longer fulfil the above mentioned prerequisites, we shall inform company name immediately.

Signed on this _____ (fill in date) in _____ (fill in place)

Signature: _____ (name + position)

ANNEX 3 Financial Security

1 General

Upon IPX Provider's request Service Provider shall provide financial statements, credit reports and other information to determine its credit worthiness as well as any information on its identity and legal and contractual capacity within 3 weeks after request.

2 Bank Guarantee

Upon IPX Provider's request Service Provider shall provide an adequate collateral security or a prepayment within 15 days after having received such request, if - based on reliable information - timely payment of any amount appears to be endangered.

Within 2 weeks after this Agreement entering into effect Service Provider shall provide to IPX Provider a bank guarantee as set out below in clause "Draft Bank Guarantee". The bank issuing the bank guarantee has to be located [Country] or in the European Union. Such bank has to have a rating of no less than set out below:

- Short-term rating: A1 (Standard & Poor's) and/or Prime 1 (Moody's)
- Long-term rating: A- (Standard & Poor's) and/or A3 (Moody's)

The bank guarantee shall amount to one or several payment(s) of no less than a total of EUR ____.

If the bank issuing the guarantee at any time fails to meet rating criteria, Service Provider shall within two weeks provide a replacement bank guarantee by a bank that meets the rating criteria.

The bank guarantee shall be valid for 12 months. No later than 1 month before any given bank guarantee expires Service Provider has to provide a new bank guarantee that matches the current bank guarantee's criteria and that enters into effect the day after the current bank guarantee expires.

Service Provider shall pay all the costs, including all fees and taxes triggered by the bank guarantee.

3 Draft Bank Guarantee to be addressed to IPX Provider

We are informed that you and [Service Provider] entered into an Agreement for IP Packet Exchange (IPX) Services on [date] (hereinafter "Agreement").

By order of our client [Service Provider] and in view of the above we, the undersigned Bank, hereby irrevocably and unconditionally undertake to pay to company name on their first written or faxed demand and without any contestation by our principal, ourselves or any other party within 1 week the amount requested by company name should company name lodge a claim with us stating that [Service Provider] has not fulfilled its payment obligation in accordance with the above mentioned Agreement, provided, however, that we shall never pay more than EUR ____.

The same shall apply should company name lodge with us more than one claim (be it on one or several occasions) in the aforementioned matter during the term of this Bank Guarantee, provided, however, that we shall not have to pay a total sum of more than EUR ____.

Claims, if any, are to be received at our address as stated in the letterhead or at any of our branch offices or at any of the faxnumbers of us or our branch offices on [Expiry Date] at the latest to be valid and have to be made in writing or per telefax.

This Bank Guarantee shall be governed by [Country] law (excluding provisions of international private conflict law). We submit to the jurisdiction of the Commercial Court [city] on all disputes arising out of or in connection with this Bank Guarantee. Notwithstanding [company name] may also bring claims against us before any other competent court.

Should you have any questions regarding this matter please do not hesitate to contact [name, address].

ANNEX 4 Insurance

Service Provider shall keep all of IPX Provider's equipment that is placed on Service Provider's premises sufficiently insured against theft, damage or misplacement.

Service Provider shall provide a reasonable level of security at each Service Provider's premises where IPX Provider's equipment is placed which in no event shall be less than the same level of physical security as Service Provider provides for its own equipment at that premises. Service Provider shall pay IPX Provider for the full replacement cost of any of IPX Provider's equipment which is stolen, damaged or misplaced while at Service Provider's premises.

ANNEX 5 Service Provider Contact Details

Service Provider's name:

Address:

Contact person:

Contact's telephone:

Contact's fax:

Contact's email:

Contact's service hours:

ANNEX 6 IPX Provider Contact Details

IPX Provider's name:

#SELLER full_nameIPX_Provider_full_name
e

Address: IPX_Provider_full_address

Contact person:

Contact's telephone:

Contact's fax:

Contact's email:

Contact's service hours: 9 am – 5 pm on working days;

ANNEX 7 Connectivity Options

1 Connectivity Option: “IPX TRANSPORT”

1.1 Definition of connectivity option “IPX Transport” (transport only, i.e. without service awareness):

The ‘IPX Transport’ connectivity option enables a bilateral connection between the Service Provider and one other Participating Service Provider utilising the IPX Transport Layer, but without service awareness. This includes providing guaranteed QoS only if the participating Service Provider is connected (a) directly to the IPX Provider or (b) to any other third Party IPX Provider who has separately agreed on guaranteeing QoS with the IPX Provider.

1.2 Commercial requirements

The scope of the IPX Transport connectivity option is considered applicable only between the IPX Provider and the Service Provider and is to implement the IPX connection between the Service Provider and a Participating Service Provider. Any other circumstance with regard to the bilateral connection is outside the scope of this Agreement and shall be subject to a separate agreement between the Service Provider and the Participating Service Provider.

The IPX Provider agrees to convey traffic exchanged between the Service Provider and the respective other Participating Service Provider, either directly or via a Third Party IPX Provider for delivery to the Service Provider or the Participating Service Provider’s respective networks in accordance to this Agreement and the Annexes hereto.

1.3 IPX Transport Charging and Payment

IPX Transport Charging and Payment shall be settled in accordance to the respective Service Schedule and other applicable clauses referring to this concept.

In the event that Third Party IPX Providers are involved, the remuneration to such Third Party IPX Providers for the traffic handling shall be paid by the IPX Provider, who will then charge the Service Provider with these costs in addition to its own service charges.

1.4 Technical Requirements

IPX Transport technical requirements shall be defined in accordance with IREG PRD IR.34, IR.77 and IR.67.

1.5 Operational and Maintenance Requirements and IPX Transport SLA

Operational and Maintenance requirements and IPX Transport are stated at Annex 8.

2 CONNECTIVITY OPTION “IPX SERVICE TRANSIT”

2.1 Definition of Connectivity Option “IPX Service Transit” (i.e. Transport with Service Awareness)

The ‘IPX Service Transit’ Connectivity Option enables a bilateral connection between the Service Provider and one other Participating Service Provider utilising the IPX Transport layer and IPX Service layer provided by the IPX Provider with guaranteed QoS end-to-end and service awareness.

2.2 Commercial requirements

The scope of the IPX Service Transit connectivity option is applicable only between the IPX Provider and the Service Provider.

IPX Provider agrees to convey the traffic exchanged between the Service Provider and a Participating Service Provider (with whom the Service Provider also deploys the IPX Provider's IPX Service Transit), either directly or via a Third Party IPX for delivery to the Service Provider or the Participating Service Provider's respective networks according to this Agreement and the applicable Service Schedule hereto.

The Service Provider agrees to convey the traffic received from the IPX Provider to the Service Provider's network, whereas (for the avoidance of doubt) such traffic according to this Agreement and the Service Schedule hereto may be:

Data received by the IPX Provider directly from a respective Participating Service Provider (with whom the Service Provider also deploys the IPX Provider's IPX Service Transit); or

Data received by the IPX Provider from a Participating Service Provider (with whom the Service Provider deploys the IPX Provider's IPX Service Transit) via a Third Party IPX Provider.

2.3 IPX Service Transit Charging and Payments

2.3.1 General

IPX Service Transit Charging and Payment shall be settled in accordance to the respective IPX Service Schedule and other applicable clauses referring to this concept.

2.3.2 Charging components

The charging components applicable to the IPX Provider's IPX Service Transit with regard to any specific Service are defined in the respective Service Schedule.

The charging components for IPX Service Transit consist of

- the IPX Service Transit Charge, i.e. the remuneration of the IPX Provider for the IPX Service Transit and
- the Termination Charges (a) quoted by the Service Provider and (b) agreed directly between Service Provider and the Participating Service Provider.

The Service Providers shall pay the same IPX Service Transit Charge, whether a Third Party IPX Provider is involved or not.

The Termination Charges for each applicable Service shall be

- agreed directly between the Service Provider and the Participating Service Provider in a separate agreement and
- brought to the attention of the IPX Provider.

In the event that Third Party IPX Providers are involved, the remuneration to such Third Party IPX Providers for the traffic handling shall be dealt with by the IPX Provider who considers this activity in its pricing.

2.4 Settlement for IPX Service Transit: Direct Settlement

The Service Provider and the Participating Service Provider(s) (with whom the Service Provider deploys the IPX Provider's IPX Service Transit) shall perform the settlement of the applicable Termination Charges for the corresponding Service independently from this Agreement.

The IPX Provider may invoice the Service Provider for the IPX Service Transit Charges and the Service Provider shall pay the IPX Provider.

The IPX Service Transit Charges applicable for a respective Service are defined in the respective Service Schedule

2.5 Technical Requirement

IPX Service Transit technical requirements shall be defined in accordance with IREG PRD IR.34, IR.67 and IR.77 and the applicable Service Schedule.

2.6 Operational and Maintenance Requirements and IPX Service Transit SLA

Both Parties will adhere to the GSMA IREG PRD IR.34, IR.67 and IR.77 and the applicable Service Schedule.

3 CONNECTIVITY OPTION “IPX SERVICE HUB”

3.1 Definition of Connectivity Option: IPX Service Hub

The IPX Provider's hub functionality ("IPX Hub") is a multilateral connection based on Service Awareness.

Traffic is exchanged between the Service Provider and multiple Participating Service Providers through the IPX Hub, which facilitates the service through a single agreement and connection between the Service Provider and the IPX Provider. The single agreement and connection enables inter alia cascading of quality of service responsibilities and of payments.

3.2 Commercial Requirements

3.2.1 IPX Service Hub

The IPX Provider operates the IPX Hub enabling traffic exchange and Service Interworking between Participating Service Providers. Upon the terms and subject to the conditions set out in this Agreement, the Parties wish to establish terms and conditions for the IPX Service Hub.

3.2.2 Responsibility of the IPX Provider

The IPX Provider shall supply the IPX Hub to the Service Provider whereby the IPX Hub conveys traffic received from the Service Provider to the Elected Participating Service Providers' Systems run by each Elected Participating Service Provider either directly or via another IPX Hub for delivery to a Participating Service Provider; vice versa the IPX Provider shall also convey traffic from the Elected Participating Service Providers to the Service Provider for termination to the Service Provider.

The IPX Provider shall procure and provide to the Service Provider, the necessary Termination Services from, and in respect of each Elected Participating Service Provider from which the Service Provider has elected to receive traffic by means of the IPX Hub in order to enable Service interworking.

The IPX Provider provides to the Service Provider the IPX Hub in accordance with the description set out in the corresponding Service Schedule, the Service Level Agreement and Test Plan and Operational Procedures, all of which are included in the Service Schedule.

3.2.3 Responsibility of the Service Provider

The Service Provider agrees to provide its Termination Service for traffic sent via the IPX Provider to the Service Provider according to this Agreement and the Service Schedule hereto which may include:

Data received by the IPX Provider directly from a respective Participating Service Provider (with whom the Service Provider deploys the IPX Provider's IPX Service Hub) i.e. Elected Participating Service Provider; and

Data received by the IPX Provider from a Participating Service Provider (with whom the Service Provider deploys the IPX Provider's IPX Service Hub) i.e. Elected Participating Service Provider, via a Third Party IPX Provider.

The Service Provider shall use the IPX Hub in accordance with this Agreement and the applicable Service Schedule hereto.

3.3 Cascading of Payments

The Service Provider shall specify its Termination rate to the IPX Provider by Service according to the Service Schedule.

The IPX Provider shall ensure transparency on the Participating Service Providers' Termination rates. Transparency in this context means a clear split, at an invoice level, between the Elected Participating Service Providers' Termination rates and other Service charging components as defined by the Service Schedule.

Service Providers shall pay the same IPX Service Hub Transit charge, whether or not a Third Party IPX Provider is used.

3.4 Charges, Payment and Settlement

IPX Service Hub Charging and Payment shall be settled in accordance to the clause 5 and any applicable clauses referring to this concept.

IPX Service Transit Charging and Payment shall be made in accordance to the respective IPX Service Schedule and other applicable clauses referring to this concept.

Charging components: The Charging Components applicable to the IPX Providers for the IPX Service Hub with regards to any specific Service are defined in the respective Service Schedule.

The Charging component applied by the Service Provider to the IPX Provider for the Termination Service is detailed in the applicable Service Schedule.

In the event that Third Party IPX Providers are involved, the remuneration to such Third Party IPX Providers for the traffic handling, shall be paid by the IPX Provider who will charge the Service Provider this cost in addition to the service charges in the invoice.

3.5 Opt-in or opt-out

Whether opt-in or opt-out applies may need to be subject to trial on a Service-by-Service basis, i.e. in reference to which particular Service is being implemented through the IPX Hub, and therefore it will be stated and defined in each Service Schedule.

3.6 Technical requirements

Technical requirements shall be defined in accordance with IREG PRD IR.34, IR.67 and IR.77.

3.7 Operational and Maintenance Requirements and IPX Service Hub SLA

Both Parties will adhere to the GSMA IREG PRD IR.34, IR.67 and IR.77 and the applicable Service Schedule.

ANNEX 8 Service Level Agreement for IPX Transport Service

1 Purpose

The architecture of the IPX domain is clearly split in two layers: service and transport. The service layer is in charge of hub and transit capabilities, and the transport layer is in charge of maintaining along the whole path the technical characteristics of the communication depending on the class of service used.

This Annex provides the requirements to ensure the end-to-end quality of the IPX transport service.

This Appendix deals with:

- Service Definitions
- Definition of Terms
- Service Quality commitments
- Qualifying faults
- Service credits
- Service Credits claim procedures
- IPX Provider and Service Provider commitment to end-to-end quality
- Commitments to achieve guaranteed Service Level
- Troubleshooting
- Customer Care
- Response times
- Monthly reporting on QoS indicators
- SLA Review

2 Scope and Assumptions

The IPX Provider commits to send to the Service Provider all the traffic it receives from others Participating Service Providers or Third Party IPX Provider(s) at the same QoS by which the IPX Provider receives the traffic.

IPX Provider is responsible for the IPX transport service (including any involved Third Party IPX Provider) up to the second demarcation point (see definition below).

- applies a cascade responsibility principle. This means that, in the typical scenario analysed in this document, in order to guarantee end-to-end QoS there will be an SLA in place between the Service Provider and the IPX Provider and an SLA between the IPX Provider and the Third Party IPX Provider (in the case where a Third Party IPX is involved in the traffic handling). IPX Provider must be held responsible for the behaviour of Third Party IPX Provider up to the second demarcation point (see definition below) that represents the point where the IPX Transport Service ends because the terminating Service Provider network is reached.
- in order to guarantee a full end-to-end SLA both ways from the originating Service Provider to the terminating Service Provider, a similar SLA chain must be in place in the backwards path from the destination/Terminating Service Provider to the originating Service Provider.
- assumes that any two Service Providers are interconnected by at most two IPX networks in the middle as a best solution. In case of more than two IPX Providers are needed to provide the connectivity, the QoS requirements shall remain unaltered.

A fault in, or any other problem associated with, Service Provider-supplied power, any Service Provider Equipment, non-maintained structured cabling.

3 Service Definition

The requested Service is described as:

The Internet Protocol (IP) transport rendered by the IPX Provider to the Service Provider to allow the connectivity between the Service Provider and the Elected Service Providers listed in the Agreement with the QoS requirements described in this Annex, enabling Service Interworking and (when applicable) Roaming services.

3.1 IPX end-to-end responsibility

The end-to-end path in an IP Service connection is a very long path made up of many components of a great diversity. Following drawing is only an illustration of what could be in the path:



The Service rendered by the IPX Provider 1 (IPX 1) is defined only for the transport path, excluding the Service Provider B Network; therefore, as a general rule the responsibility of IPX 1 starts at the BG of the Service Provider A (SP A) and ends at the BG of the Service Provider B (SP B).

As shown in the picture above, the IPX Provider 1 network may need a third party IPX provider (IPX 2) to reach all the destinations offered to the Service Provider A in their agreement; in this case the IPX 1 responsibility towards SP A will cover any third party IPX involved in the traffic handling, in a way that the responsibility towards the Service Provider A will remain unaltered. Therefore IPX Provider 1 will be responsible for the transport beyond its own IP network, but again, only until the BG of the destination/terminating Service Provider B. Cascading of responsibility will apply for the different players involved.

When more than one IPX transit network is involved, the IPX providers shall assume the responsibility for the end-to-end IPX Service between service providers, in accordance with the SLAs between the IPX providers and between their respective service providers.

3.2 Demarcation points

One Demarcation Point of the IPX is the point to which the responsibility of the IPX Provider extends. It could also be called responsibility boundary.

The other Demarcation Point is the beginning of IPX Providers responsibility and it is the point where the traffic is delivered from the Service Provider A BG to IPX Provider 1 router for the traffic transportation.

This Demarcation Point also defines the point where the responsibility of the Service Provider extends. The Demarcation Point is the beginning of the Service Provider responsibility and is the point where the traffic is delivered from the IPX Provider 1 to the Service Provider A BG for the traffic transportation/termination.

This Annex assumes – for simplicity purposes - that any two service providers (being the Service Provider and an elected service provider) are interconnected via two IPX networks.

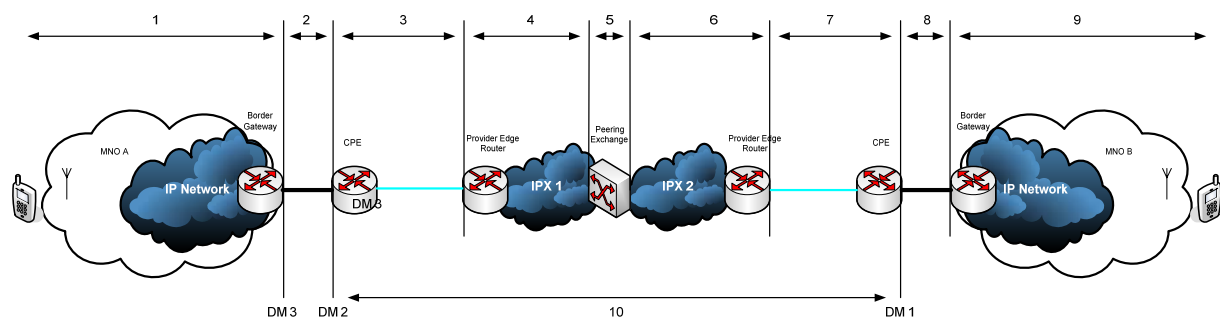
It should be noted that cascading of responsibility applies along the path up to the last BG; therefore the responsibility for all the transport from the Service Provider's network up to the terminating service provider's network is a duty of the IPX Provider, even if part of the path is not managed by the IPX Provider (e.g. if there is a third party IPX provider involved).

3.3 IPX Scenarios

Depending on who provides the local tail for connecting Service Provider's network and IPX Provider's network, two different places for the Demarcation Point are possible to guarantee the end-to-end QoS (see diagrams below).

Any other configuration of the Local Tail between the Parties' networks are unlikely because it cannot be assured the QoS end-to-end (for further information refer to the AA.80 Handbook)

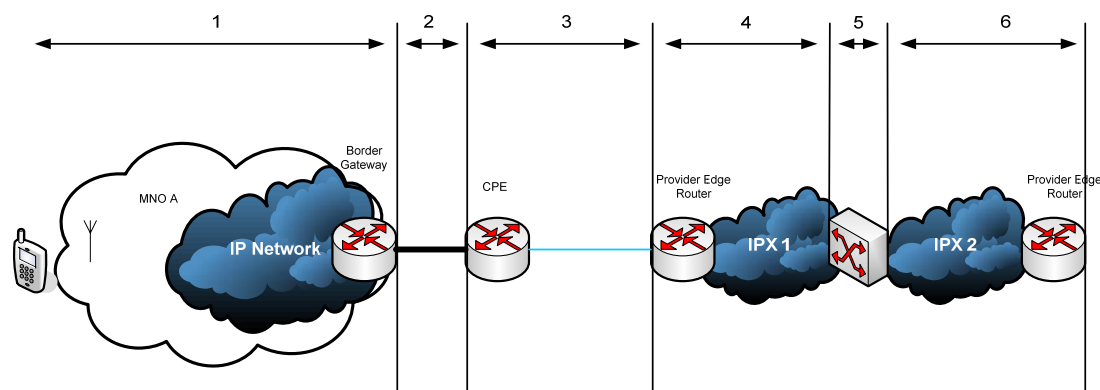
Irrespective of which party who provides the interconnecting circuit (local tail) between an IPX and a terminating Service Provider, the SLA between these two parties should ensure that the capacity, QoS criteria and maintenance are adequate to meet the forecasted originating and terminating traffic. The SLA should, for example, make provision for the upgrade of the terminating tail circuit, by the responsible party, if the actual traffic exchanged on the local tail exceeds 80% of the capacity of the tail circuit, for individual classes of services, for extended periods, or if other agreed QoS parameters are not met. The details of the SLA should take into account expected peak and off-peak volumes and should include provisions for extreme peaks e.g. New Year, vacation, migration and international events.



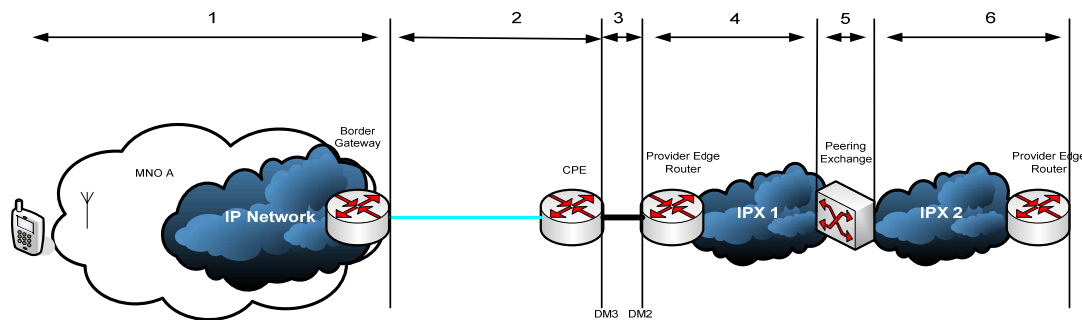
3.4 Demarcation Point

The Parties must agree which of the two following scenarios shall apply to this Annex.

Scenario 1 – Local tail provided by IPX Provider and CPE managed by IPX Provider at customer premises. The Demarcation Point shall be the CPE. The IPX Provider has the responsibility for the local tail.



Scenario 2 – Local tail provided by Service Provider and CPE managed by Service Provider at IPX Provider's premises: The Demarcation Point shall be DM3. The Service Provider has the responsibility for the local tail.



4 Quality of Service

4.1 Traffic Classes

The (transport) Service has different levels of performance depending on the needs of the Service Provider's service carried (e.g. a video call, email, etc).

The 3GPP TS 23.107 have defined 4 different 'QoS Types' or 'Traffic Classes'. The Parties associate these different Traffic Classes to different levels of transport performance in terms of attributes like delay, jitter, packet loss that will characterize the traffic.

The main distinguishing factor between them is the level of sensitivity to delay. The Traffic Classes are:

- Conversational: Defined to support real time applications extremely sensitive to delay
- Streaming: Also for real time applications but less sensitive to delay.
- Interactive: Used for those interactive applications for which real time is not expected. Due to the high number of customer services that may be included, subsets of Interactive Classes are defined: Fatal, Priority 2 and Priority 3.
- Background: For the rest of non real time applications.

4.2 Key Performance Indicators (KPIs)

Maximum Time to Restore the Service (MTRS) in case of (a) Fatal Errors, (b) Severe Errors or (c) Warning Errors. MTRS is the time that passes between the moment a trouble ticket in IPX Provider's trouble ticketing system is opened and the moment when the problem, which is dealt with in such trouble ticket, is resolved.

4.2.1 Fatal Errors

A complete breakdown/outage, a critical performance degradation, functionality of a single Service causing service unavailability included but not limited to:

- Failure of connectivity and/or traffic between IPX Provider and a connected Third Party IPX Provider
- Total loss of connectivity between Service Provider and IPX Provider platform
- Service affecting outage in the interconnection equipment
- Serious degradation of the quality as measured by the KPIs indicated within this SLA

4.2.2 Severe Errors

The functionality of the Service is affected to a large extent, major performance degradation or loss of important function occurs, Degradation of the service, either of the performance or the quality, includes but it is not limited to:

- If redundant connection is ordered separately: Loss of diversity or duplicity of the routes or/and signalling links, without isolation with the other network, i.e., one link of the redundant connections is out of service; backbone congestion causes excessive packet loss or jitter.
- If the local loop to the terminating service provider is provided by the IPX Provider and the IPX Provider has access to the terminating service provider's Boarder Gateway: Degradation of the QoS to any Terminating Service Provider, being defined as when any measured value for KPI is below the target threshold as indicated in the SLA.

4.2.3 Warning Errors

A minimal limitation to the functionality of the Service. Such faults include irregular network behaviour without restricting operational and without an impact on business, included but not limited to:

- Real-time reporting portal access problem
- Asymmetric routing management issues
- Failure affecting isolated or individual service numbers

4.2.4 Traffic Classes parameters

Delay (=roundtrip delay) is the total time that it takes to transmit an IP packet from the originating service provider to the terminating service provider and receive the reply packet from the terminating service provider at the originating service provider (measured over a given period of time, in milliseconds). For details see IR.34.

Jitter (=delay variation, =standard deviation of delay) is the delay variation among the different packets sent from the originating service provider to the terminating service provider (measured over a given period of time, in milliseconds). For details see IR.34.

Packet Loss is the ratio of dropped packets to all packets sent from the originating service provider to the terminating service provider in percents (measured over a given period of time). For details see IR.34.

4.2.5 Service Availability

Service availability is the percentage of time the transport of IP packets between the demarcation points works successfully or does not work for one of these reasons: (a) a service window / programmed works, (b) Service Provider breaching its duties or (c) force majeure. For details see IR.34.

Where:

$$P = \sum_{i=1}^{i=n} \frac{A - B_i - C_i}{A - B_i} * 100$$

A is the number of hours in the period

B is the time without service due programmed works

C is the time without service due to fatal failures

P is the total availability percentage

The measurement period is one calendar month.

The unavailability time is the time the service has been unavailable within the measurement period.

The unavailability time starts at the beginning of MTRS for a fatal error. A trouble ticket is opened when unavailability time starts. The unavailability time ends when the service is available for the Service Provider again.

Each fault is counted only once.

The information sources for service availability are the IPX Provider's internal management system measurements, reporting and trouble ticket history.

4.3 Measurement Points

The Measurement Points are identical to the demarcation points agreed between the Parties. It is between these points that the IPX Provider provides the agreed upon Service.

4.4 IPX Provider commitments

4.4.1 Maximum Time to Restore the Service

Severity of error	Maximum restoration times	Initial Feedback	Update Interval
Fatal	4 hours	30 minutes	1 hour
Severe	6 hours	30 minutes	4 hours
Warning	5 working days	30 minutes	2 working day

The maximum number of fatal errors during the quarter calendar year must not be higher than *[State number of faults agreed between Parties]*

4.4.2 Traffic Classes (= QoS Classes)

The Parties agree on these KPIs:

3GPP QoS Information	End to End QoS requirements			This Traffic Class might be suitable for
Traffic Class	Max Delay	Max Jitter	Max Packet Loss	
Conversational	see IR.34	see IR.34	see IR.34	VoIP, video conferencing
Streaming	see IR.34	see IR.34	see IR.34	Audio / video streaming
Interactive 1	see IR.34	N/A	see IR.34	Transactional service
Interactive 2	see IR.34	N/A	see IR.34	Web browsing
Interactive 3	see IR.34	N/A	see IR.34	Telnet
Background	see IR.34	N/A	see IR.34	Email download

Due to the technical nature of the IPX Transport Service, it is not possible to distinguish and categorize the IP traffic according to the different Traffic Classes. Therefore only the set of KPIs valid and applicable for the "conversational" Traffic Class applies to all the IP traffic.

4.4.3 Service and network availability

The service availability is ███%. The network availability is ███%.

[For information see availability target is defined in the IR.34]

4.5 Service Provider commitments

If the Service Provider provides the Local tail the Service Provider shall ensure that this Local Tail meets the same KPIs as set out in the IPX Provider commitments above.

5 Qualifying Faults

When according to the Service Provider's own measurement, the average daily level of QoS falls below the KPIs, the Service Provider may raise a "qualifying fault".

The Service Provider may request the IPX Provider to handle and investigate all qualifying faults, and to commit to resolve ████% of them within ████ hours when the fault lies in its own network.

When according to the Service Provider's own measurement, the average weekly or monthly QoS level falls below the KPIs, the Service Provider is entitled to raise a "qualifying weekly/monthly fault".

The Service Provider may request the IPX Provider to handle and investigate all qualifying weekly/monthly faults, and to commit to resolve ████% of them within ████ hours when the fault lies in its own network.

6 Service Credits

Should the MPR (= monthly performance report) show that in the relevant period the agreed KPIs are not met the Service Provider reserves the right to request a Service Credit. The precise amount of Service Credit is set out in Schedule G. The Service Credit will be applied by a credit note.

6.1 Qualifying Claims

Each Party (the Service Provider and the IPX Provider) may submit a claim for a service credit if a valid qualifying fault was raised and the qualifying fault was not resolved in the committed time

6.2 Service Credit Level

The Parties agree on the service credit level set out in Schedule G.

6.3 Service Credits Claim Procedure

The Party who claims a service credit has to provide the following details to the commercial contact of the other Party:

- IPX Provider fault reference
- Service Provider fault reference
- Terminating Service Provider
- Time of notification
- Time of resolution
- Severity of error
- Amount of credit claimed

The mechanism for compensating any eventual service credit due by the IPX Provider will be mutually agreed between the Parties.

7 Controlled Connectivity policy

In order to avoid deterioration of the quality of service, information on the connectivity for each terminating service provider shall be made transparent to the Service Provider.

Instead of sending the traffic via a third party IPX provider, the IPX Provider shall strive to terminate all traffic directly on the terminating service provider.

The Service Provider may request the IPX Provider to provide all connectivity information associated to its offer (including details on the type of routing used per each terminating service provider). The IPX Provider shall at least inform which of the terminating service providers is connected directly ("direct connectivity") and which of them is reached only through a third party IPX provider ("indirect connectivity").

8 Customer Care: Help Desk and Monitoring

The IPX Provider must provide a 24x7 help desk.

The IPX Provider must provide a web access monitoring tool where the Service Provider sees the traffic performance of the IPX Provider.

This monitoring tool will only show the traffic from the originating Service Provider's network.

9 Operation & Maintenance– Fault Management

9.1 Introduction

This section details the operational processes and measures to be put in place by the IPX Provider and the Service Provider to guarantee the proper functioning of for the IPX Transport Service in line with the requirements of this Agreement and SLA.

The terms used in the Service Level Agreement between the IPX Provider and the Service Provider have the same meaning in this Operations and Maintenance Section unless otherwise stated.

9.2 Central Notification Addresses

Each Party must name a central entity (single point of contact) who shall fulfil the duties in the notification processes in case of faults affecting the Service.

This contact must be available 24 hours a day at a single telephone contact number.

He has to be competent in operational issues for IPX Services. He has to have remote access to decentralized operational network elements as well as relevant access to tools, resources and knowledgebase to solve problems.

24 x7 Reference Details	IPX Provider	Service Provider
Contact point		
Telephone number		
Facsimile number		
Email address		

9.3 Fault Classification

The IPX Provider shall open a trouble ticket in the case of any fault on the Service reported by the Service Provider or as identified by the IPX Provider. The appropriate severity level shall be assigned to each trouble ticket. There are three levels of severity:

- Fatal Errors (see clause 4.2.1)
- Severe Errors (see clause 4.2.2)
- Warning Errors (see clause 4.2.3)

9.4 Fault Reporting procedures

9.4.1 Fault Reporting by the Service Provider

The IPX Provider shall provide a contact to receive fault reports 24x7. This contact is set out in clause 9.1 above.

Suspected faults on the Service shall be reported to the IPX Provider's contact in clause 9.1.

Reporting of fatal faults shall be also followed by a phone call to the same contact. Faults will be logged and each call will be time-stamped and allocated a unique call reference number in the IPX Provider trouble ticket system to be used for all progress updates. To allow further tracking.of

each fault reported the the Service Provider will also state its internal reference number when reporting any fault.

Whenever a fault is reported the below information has to be given:

- Service Provider's company name
- Name, telephone number and email of the person reporting the fault
- Service Provider's contact name, telephone number and email, if different from the above
- Service Provider's fault trouble ticket number
- Physical location of the fault if identified.
- Details of the fault (IPX Provider's services at site, symptoms, any tests carried out in attempting to isolate the problem)
- Any environmental conditions, such as a power failure, that may be causing the fault
- Severity
- Service Provider domain/DNS details (if applicable)
- IPX Provider traffic details should be included if available.

9.4.2 Fault Reporting by the IPX Provider

The IPX Provider shall quickly inform the Service Provider's contact (see clause 9.1) by telephone and email of any fatal fault, no matter in which part of the systems involved the fault occurs.

9.5 Fault Resolution:

The IPX Provider shall start proper fault handling intervention actions and inform the Service Provider accordingly, in line with the procedure stated within clause 9.4.

The time interval to calculate MTRS shall start from the moment when the TT is opened.

Both Parties shall provide each other with the agreed progress updates as reported in clause 4.4.1.

The minimum information required in the update are:

- Expected resolution date/time
- Any information as to the cause of the fault
- All actions undertaken to date since the previous update
- Any further information required
- Results of end-to-end measurement if applicable.

If the IPX Provider cannot resolve a fault within the agreed MTRS targets, the IPX Provider shall allocate extra resources, via an escalation procedure, to achieve its resolution.

In all cases, if the fault is not resolved within the timeframe agreed from when a trouble ticket is opened and there is a degradation of the agreed service quality level the Service Provider reserves the right to request the IPX Provider to re-route the traffic to a different third party IPX provider if appropriate or re-route the traffic to another IPX provider.

9.6 Escalation procedure

Both Parties must name contact persons as single points of contact for escalation (i.e. Fault Reporting Points). The escalation procedure can be delayed at the discretion of the escalation contact points for a mutually agreed period when the fault has been identified and is being addressed by engineering staff of the appropriate Party.

Non-service-affecting faults will not be escalated outside of working hours.

The recipient of the trouble ticket may escalate a fault in advance of the times set out below if it requires further information to progress the fault and that information has not been provided within a reasonable timescale.

If the IPX Provider cannot resolve a fault within the estimated time, then an escalation procedure will be initiated.

Escalation procedure is applied to all fault cases related to the services referred to in this contract. Only these can be the subject of an escalation that deals with persons with higher decision-making power.

If an escalation criterion listed is fulfilled, escalation can take place to the next higher level following expiration of the escalation period. The escalation period is the time that must pass before a change can take place from one level to the next.

In some cases certain faults need not be escalated automatically. This may be the case when the investigation of a fault is in progress and an escalation would serve no practical purpose. Both parties will use reasonable and mutually agreed judgment regarding the benefit of escalating a particular fault.

All escalation between the Service Provider and the IPX Provider must be accomplished using the following steps:

Escalation Level	IPX Provider	Service Provider
Level I	____ (name, email, phone#)	____ (name, email, phone#)
Level II	____ (name, email, phone#)	____ (name, email, phone#)
Level III	____ (name, email, phone#)	____ (name, email, phone#)

Note: Non-service affecting faults will not be escalated outside of normal working hours.

Fault Status	Max Escalation Time to Level II	Max Escalation Time to Level III
Fatal	____ (time)	____ (time)
Severe	____ (time)	____ (time)
Warning	____ (time)	____ (time)

9.7 Official Status Information

After the initial information, updates in accordance with clause 4.4.1 will apply. On any reasonable request by either Party, the Central Notification Addresses are able to give information on the status of the trouble/problem.

9.8 Fault Clearance Procedures

Only the Central Notification Addresses can issue an official fault clearance (closure of trouble ticket for fault resolution).

If one Party's Central Notification Address closes a trouble ticket for fault resolution and informs the other Party thereon and the other Party does not complain about the fault still being there such fault will be classified as «cleared» and the «Response and Restoration Time Clock» are stopped.

9.9 Duration of a fault

The duration of a fault shall be determined under the rules set out in clause 4.2.

9.10 Communications

The IPX Provider will communicate to the Service Provider's contact points the following events within the timescales below:

Planned Outages (including product upgrades/updates): minimum [state number of days agreed between parties].days of prior notice. If such timescales is not respected, the work will be considered as an unplanned outage, i.e. a fault.

Communication of Suspension of IPX Services for operational events: as soon as reasonably possible.

Emergency situations shall be expedited.

Where an event is planned, each Party is required to notify the other in advance of full details concerning that event. A brief explanation of the operation shall be included and the impact or risk of impact, in the IPX Service shall be always specified.

9.11 Planned Outages, Product Updates/Upgrades

Before a planned work is undertaken that might affect the Service, each Party shall give a notice to the other Party (receiving Party).

Unless agreed otherwise all planned works shall be made **[insert day]** through **insert day** (if working day) between 00:00 am and 06:00 am local time.

In all cases described above, each Party's network management organization will take action to reduce disruption of traffic flows to the minimum.

IPX Provider shall inform the Service Provider of a special contact who will be available during the time the IPX Provider carries out work which may affect the Service Provider's traffic. Upon the Service Provider's request this contact will provide information on the status of the work being carried out.

Both Parties reserve their right to refuse a scheduled event for a good reason. In such a case the Parties will postpone the work to a later date which need not fit into the time slot for planned works.

Advice of proposed planned work shall be notified e.g. by e-mail. Within 1 working day after receipt the receiving Party shall acknowledge receipt of the advice (e.g. by a return e-mail). Only if the receiving Party fails to acknowledge the receipt, the originating Party shall call the contact number of the receiving Party and ask for a "GO" or "NO GO" decision. The originator shall not carry out the work as long as the receiving Party has not reacted to the notice at all (otherwise the work will be considered as an unplanned work/outage, i.e. an MTRS impacting fault).

If a new (e.g. software) release does not work properly for any reason the IPX Provider will initiate a rollback process to revert the system to its original working state. In such a case, the time to restore the proper functionality of the Service shall be taken into account when measuring the MTRS levels.

The Parties shall make no changes to their systems and any outage is defined as fatal during this freeze period: **_____** (set out days and time zone, e.g. 24 December – 26 December).

9.12 Fault Handling and Monthly Reporting

9.12.1 General provisions

This section details the reports that shall be supplied and measured.

The IPX Provider shall send its report to the Service provider no later than on the 10th calendar day of the month following the month to which the report applies.

The Service Provider shall validate this report not later than the 20th calendar day of the month following the month to which the report applies.

Reports and validations shall be emailed to the other Party's contact set out below:

IPX Provider's contact details	Service Provider's contact details
Fill in name, position, email	Fill in name, position, email

Either party may change contact names by providing written notice to the other Party seven days in advance of the change being valid.

In the event there is a discrepancy in the reporting of the KPI, between the reports provided by IPX Provider, and the Service Provider's own measurements, then the Parties will agree the reconciliation process to follow.

9.12.2 Monthly Fault Report

The IPX Provider shall supply to the Service Provider a monthly "Fault Report" with the following information (for each trouble ticket) included:

- Date and hour of the receipt of information pertaining to each fault notified
- Date and hour of acknowledgement of receipt of fault notification;
- Date and hour of fault resolution (and notification).
- IPX Provider Trouble Ticket No
- Service Provider Trouble Ticket No
- Priority
- Brief description of the problem
- Brief description of cause of the problem
- Start Fault Date & Time
- Response Date & Time
- Resolution Date & Time
- Time to Restore the Service

9.12.3 Monthly Review Fault Report

Based on the fault report the IPX Provider shall supply a monthly review fault report including the following statistics for the past month and the past 6 months in total.

- Reporting Party
- Reporting Period (calendar month)
- Faults by severity and terminating service provider
- Number of open tickets at the end of the reporting period
- Number of tickets opened during the reporting period
- Number of tickets closed during the reporting period
- Average resolution time based on the closed tickets during the reporting period
- Number of opened fatal trouble tickets
-

9.12.4 Monthly Traffic Report

The IPX Provider shall provide a monthly traffic report which lists:

- The total volume of traffic transmitted
- The maximum amount of traffic transmitted during the busiest hours
- The average according with size definition

9.12.5 Monthly Quality of Service Report (= Monthly Performance Report = MPR)

The IPX Provider shall provide a MPR which lists hourly values for the KPIs. The values will be measured 24x7.

10 Operations & Maintenance – Non-fault Management

10.1 Service Management

Such customer care service shall be provided on non-faults situations to include, non-fault related operational problems, operations and maintenance routines and documentation, pricing and billing queries and technical information.

This service shall be provided Monday – Friday, 9 am – 5 pm (of the IPX Provider's local time) excluding Public Holidays.

10.2 Traffic Management

The Service Provider commits to providing traffic forecasts at least monthly. The traffic forecasting provisions shall be used for dimensioning the transport capabilities of the IPX Provider network and the IPX Provider termination capabilities on the terminating service providers. They shall not have any binding effect unless otherwise agreed between the IPX Provider and the Service Provider.

10.3 Participating Service Provider Management

Pursuant to the provisions for election and activation of the participating service providers, the Service Provider may request the IPX Provider from time to time to activate the Interworking between its own network and a new terminating service provider not included in the IPX Provider's list of participating service providers.

In such cases, the IPX Provider shall inform the Service Provider within one month from his request, of the road map for implementation of the interworking between the Service Provider and the required terminating service provider.

If feasible, the IPX Provider shall offer this as a directly connected Terminating Service Provider to his own service, otherwise shall use a Third Party's IPX to implement the required IPX Transport to the required Terminating Service Provider in the shortest possible time.

At mutually agreed intervals the IPX Provider shall provide the Service Providers with its forecasts on the activation of new terminating service providers. Those forecasts shall be used by the IPX Provider for implementing all necessary technical and charging parameters and by the Service Provider for systems configuration.

10.4 Maintenance Operations Management

Where an outage is planned by the Service Provider or the IPX Provider, this Party shall notify the other in advance with full details concerning that outage. A brief explanation of the operation as well as the impact or risk of impact on the service shall be included.

The IPX Provider shall periodically conduct maintenance tests to check:

- The proper functionality of the Service Provider's connection to the IPX Provider's platform;
- The interworking between the Service Provider and its terminating service providers

The Parties will mutually agree, and document in the relevant Service Schedule, the appropriate maintenance tests to be performed including the allocation of any costs.

10.5 Parameter Change Notification & Contact Points Update

The Parties shall agree at signature of their Agreement on ad hoc timing for notification of network and billing parameters' change & contact points' update.

10.6 Connection between IPX Provider System and the Service Provider's System

The IPX Provider shall designate an account manager(s) as contacts for the IPX Transport Service.

The account manager shall co-ordinate all technical and implementation operations with the Service Provider and shall report weekly to them on the project progress.

10.7 Operating period

The IPX Provider shall designate an account manager to manage all technical and rollout operations required when a new terminating service provider has to be activated.

This shall take place from the moment the Service Provider requests to implement the service with that new terminating service provider and until 1 month after the relevant Commencement Date.

11 SLA Review

The Service Provider and the IPX Provider agree to perform a review of the SLA's QoS benchmark levels every 6 months to verify the necessity to update such levels in order for them to be always in line with the current technology and market trends.

SCHEDULE A Access Connectivity Schedule

The IPX Provider shall provide the IPX Transport Service including [] Mbit/sec capacity connection(s) between the IPX Provider and the Service Provider)

[] (Kindly fill in technical details on the interconnection between the IPX Provider and the Service Provider)

The aim of this document is to provide general connectivity and Access requirements between Service Provider and IPX Provider. This document forms the basis for required connectivity requirements and bandwidth for the services highlighted in the Service Schedule and the relevant service class used

Access Connectivity Information

IP Traffic Class (Provided in Bits Per Second)	Forecast Bandwidth Requirement Class Basis	Overload Behaviour
1 - Conversational (e.g. VoIP, video conferencing)		Agreement shall be made between IPX Provider and Service Provider as to the handling of excess packets on a per Traffic class basis.
2 - Streaming (e.g. audio + video streaming)		
3 - Interactive (e.g. transactional services)		
4 - Interactive (web browsing)		
5 – interactive (telnet)		
6 – Background (e.g. email download)		

Overall Bandwidth Requirement (Provided in Bits Per Second): []

Physical Connectivity: []

Service Provider Access Location/Address: []

Access Connectivity Equipment Location: []

IPX Provider Access Location/Address: []

Access Connectivity Equipment Location: []

Local loop connectivity Requirements

Protocols/Physical: []

Technical Information: [] (All specific technical information relating to Layer 2 requirements shall be included here.)

Address format (IP Version): []

IP Addresses: []

Sub Net Mask: []

SCHEDULE B Participating Service Provider Parameters

E.g.: Service Provider subnets and netmasks:

SCHEDULE C Service Provider Premises

 (Fill in)

SCHEDULE D Charging and Billing

1 PRICING

1.1 Monthly Recurring Charge ("MRC")

Service Provider shall pay a monthly recurring charge for the IPX Transport Service.

The MRC shall begin to accrue on the day after the Service has first been provided. The recurring charge shall stop accruing when the contract for that Service ends.

Whenever such date is not the first day of a calendar month IPX Provider will charge 1/30th of the monthly recurring charge for each calendar day the Service is provided during such incomplete calendar month.

MRC will be invoiced monthly in advance if (and to the extent) its amount is known to the Parties in advance.

MRC depending on the amount of whatever unit (e.g. bandwidth, events and volume) sent and or received shall be charged in arrears, i.e. after the service to has been provided.

1.2 Non Recurring Charges ("NRC")

In addition to any recurring charge the Service Provider shall pay a non-recurring charge as set out in ANNEX 9.

SCHEDULE E Elected Participating Service Provider Parameters

____ (fill in)

SCHEDULE F Service Contact Details

Commercial contact	IPX Provider	Service Provider
Contact point	_____	_____
Telephone number	_____	_____
Cellphone number	_____	_____
Facsimile number	_____	_____
Email address	_____@_____	_____

SCHEDULE G Service Credit Level

The IPX Provider shall automatically include all triggered service credits in the invoice of the relevant invoicing month, without waiting for a separate request made by the Service Provider.

There may be cases when one event triggeres several service credits: in that case only the highest of these service credits shall be granted

The IPX Provider shall grant these service credits:

[TO BE AGREED BETWEEN PARTIES]

Every six months the Parties shall discuss and review the list of KPIs and modify them as well as the service credits as needed.

Service credits claim procedure: In order to claim for a Service Credit, the Service Provider shall notify the IPX Provider of the requested Service Credit, no later than 30 days after the period to which the service credit pertains to, with the following information:

- KPIs affected
- Amount of credit claimed

For the avoidance of doubt, service credit shall not apply in any force majeure event.

Also, no service credit shall be triggered if degradation of a KPI is caused by originating and/or terminating end performance or end customer behavior;

ANNEX 9 Charges for IPX Transport

[To be agreed, e.g committed bandwidth and/or burstable]

The Service provider shall pay these charges to the IPX Provider:

Non Recurring Charge: €

Monthly Recurring Charge: €

DOCUMENT MANAGEMENT

Document History

Ver- sion	Date	Brief Description of Change	Approval Au- thority	Editor / Company
1.0	10 Nov 2006	New Non-Binding PRD covering the Agreement for IP Packet eXchange (IPX) Services, submitted to IWG #5 for Approval	IWG #5	Elena Sacco (Telecom Italia)
2.0	14 May 2007	Major CR001 to AA.80, Change from restricted to unrestricted	IWG #6	Elena Sacco (Telecom Italia)
2.1	December 2007	CR002 (IWG Doc 07_008) adds supplemental Definitions in the AA.80 main body in order to support the new AA.80 MMS Interworking Hub Service Schedule, CR003 (IWG Doc 07_009) and CR 004 (IWG Doc 07_010) add supplemental clauses (i.e. Suspension and Interruption of Service) to the AA.80 main body in order to support the new AA.80 MMS Interworking Hub Service Schedule, CR 005 (IWG Doc 07_011) adds definition of Invoice Period to the AA.80 main body in order to support the new AA.80 MMS Interworking Hub Service Schedule, CR006 (IWG Doc 07_014) removes Annex 11 since it has been decided to include a specific SLA in each Service Schedule, CR 007 (IWG Doc 07_015) adds a new annex with IPX charges for the transport mode which is included to AA80 as new Annex 11, CR008 (IWG Doc 07_020Rev1) adds the Service Schedule for MMS as AA.80 MMS Interworking Hub Service Schedule as Annex 9 (IWG Doc 07_027) to the AA.80, CR009 introduces changes to Annex 10 of the AA80 (SLA for IPX Transport) to reflect the local tail responsibility and the SP commitments	IWG #7	Elena Sacco (Telecom Italia)
2.2	January 2008	Editorial Correction to replace 'RESTRICTED' with 'UNRESTRICTED' in header		Elena Sacco (Telecom Italia)
3.0	July 2008	CR 012 Editorial tidy up of main body (IWG 08_031), CR 010 Service Credits Section Framework (IWG 08_025) CR 011 Addition of reference to KPIs in IR.34 (IWG 08_026) and restructuring of document to remove Service Schedules to separate PRDs for example PVI is now AA.81, SMS AA.82 & MMS AA.83	IWG #8	Elena Sacco (Telecom Italia)
3.1	November 2008	Editorial Correction		Elena Sacco (Telecom Italia)

Ver- sion	Date	Brief Description of Change	Approval Au- thority	Editor / Company
3.2	July 2009	This document contains the clean version of AA.80 incorporating CR014 Quality Improvements (IWG DOC 10_018) and CR013 SLA – Re-formatting and Quality Improvements (IWG DOC 10_029) approved at IWG Plenary#10	IWG #10	Elena Sacco (Telecom Italia)

Other Information

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