

ANNEXES

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ANNEX A - DEFINITIONS

In this Offer, the following words and expressions shall have the meaning assigned to them in the list below:

| Term | Definition |
|-------------------------------|--|
| Access Codes | Short codes which allow end-users to access specific services as defined in the National Numbering Plan. |
| Advanced Call Services | Value-added services associated with call conveyance services, examples of which are set out in the Interconnection Guidelines |
| Autonomous System (AS) | The administrative domain relevant to a given IP Network or set of Networks that share common resources such as an IP addressing plan and a common policy with respect to Internet access. |
| ATM | Asynchronous Transfer Mode |
| Billing Information | That information which must be provided by the Billing Licensee, in accordance with the Interconnection Guidelines, in support of invoices issued under an acceptance of this Offer, as agreed by JT and the Licensee to enable the billed Licensee to validate an invoice. |
| Billing Licensee | The Licensee requiring payment from the other Licensee for the provision of interconnect services to that Licensee |
| Border Gateway | The routing equipment that connect an IP Network with other IP Networks. |
| Border Gateway Protocol (BGP) | Inter-autonomous system routing protocol, designed to exchange network access information with other BGP systems. The information includes data on the list of Autonomous Systems (AS) which is sufficient to construct a graph of AS connectivity from which routing loops may be pruned and some policy decisions at the AS level may be enforced. |
| Calendar | The Gregorian calendar |
| Call | A transmission path through telecommunications networks for the sending of messages within the voice band, and a reference to conveyance of a Call by a Licensee means the establishment by that Licensee of a transmission path through that Licensee's Network and the conveyance by that Licensee in accordance with an acceptance of this Offer of a message (if any) over such transmission path. |
| CCITT | Abbreviation for International Telegraph and Telephone |

| Term | Definition |
|---|---|
| | Consultative Committee; a predecessor organization of the ITU-T |
| CLI | Calling Line Identification as defined by the ITU-T. |
| Customer Number Range | Any number range, either geographic or non geographic, from which individual numbers or groups of numbers are assigned to specific end user customers. |
| Data Management Amendment | Such data reconfiguration of the JT Network or the Licensee's Network as is necessary for the access, routing and charging of Calls. |
| Day | The 24-hour period during which the Earth completes one rotation on its axis. |
| Default Interest Rate | The maximum rate permitted by the Jordanian Laws. |
| Digital Distribution Frame | A device on which a jumper cable is connected to establish a connection between two separate Networks |
| Disclosing Licensee | A Licensee disclosing to the Receiving Licensee information under the Interconnect Agreement. |
| Each Licensee | JT and the other Licensee |
| Either Licensee | JT or the other Licensee |
| ETSI | European Telecommunication Standardisation Institute |
| External Border Gateway Protocol (eBGP) | Routing protocol designed to connect large networks which are mainly Autonomous Systems (AS). |
| Grade of Service | The collective term for a series of metrics that measure for example transmission loss and Answer seize ratios. These measures are intended to define the overall grade of service levels intended on a given service. |
| Intellectual Property Right | Any patent, copyright, design, trade name, trademark, service mark or other intellectual property right (whether registered or not) including without limitation ideas, concepts, know-how, techniques, designs, specifications, drawings, blueprints, tracings, diagrams, models and other information relating to any such intellectual property. |
| Interconnect or Interconnection | The physical linking of the Telecommunications Systems in order to allow the Users of one Telecommunications Systems to communicate with Users of the same or another Telecommunications Systems or to access services provided |

| Term | Definition |
|---|---|
| | by another Licensee. |
| Interconnect Node | An exchange at which Interconnect Services can be installed between the JT and the Licensee networks. |
| Interconnect or Interconnection Agreement | An agreement to be signed by and between JT and the Licensee for the purposes of Interconnection . |
| Interconnection Guidelines | The Interconnection Guidelines - Final, dated 14 th October 2002, as approved by the TRC Board of Commissioners on 25 th of November 2002, as amended from time to time. |
| Interconnect Link | A single 2 Mbit/s circuit between a JT Interconnect Node and the Licensee's Interconnect Node. |
| Interconnect Path | A physical route over which a minimum 1x2 Mbit/s Interconnect Links between a JT Interconnect Node and a Licensee Interconnect Node are installed |
| Interconnect Service | A telecommunications service provided in accordance with an Interconnection Agreement , which may include link services, call conveyance services, data services and collocation facilities, all of which being provided for the purpose of Interconnection.. |
| IP International Gateway | The routing equipment which connects the JT IP Network to global Internet exchanges |
| Internet | The worldwide interconnection of private and public Router-based Networks via Gateways and exchange points, and which all utilise the Internet Protocol (IP). |
| IP | Internet Protocol |
| IP Network | A Network using the Internet Protocol for data transmission. |
| IP Traffic | Data traffic conveyed using Internet Protocol |
| ITU-T | The International Telecommunications Union, Telecommunications sector |
| JT | Jordan Telecom |
| JT Network | The total infrastructure operated by JT to provide telecommunications services. |
| JT Voice Interconnect | An exchange at which Interconnect Services for the |

| Term | Definition |
|-----------------------------------|---|
| Node | conveyance of calls in the voice band can be installed between the JT and a Licensee's networks. |
| License Agreement | The License Agreement signed by and between the TRC and JT on the 23 rd of January 2000. |
| Licensee | Any legal person granted a Licence by the TRC pursuant to the Telecommunications Law and entitled for Interconnection under the Interconnection Guidelines. |
| Licensee Network | The total infrastructure operated by the Licensee to provide telecommunications services. |
| Licensees | JT and the Licensee. |
| Month | 30 calendar days |
| Network Alteration | A physical change, including modifications to the technical standards related to Interconnection interfaces, within one Licensee's Network which is necessitated, to ensure continued efficient operation of the Interconnect, by a change made by the other Licensee to any acceptance of this Offer without bi-lateral agreement. |
| Network Plan | The specific agreement of the characteristics of reciprocal interconnection services between JT and the Licensee including, but not limited to, target grade of service, traffic routing principles, active number ranges, capacity and traffic forecasts. |
| Network | The JT Network or the Licensee Network as the case may be. |
| Numbering Plan | The Numbering Plan of Jordan as amended from time to time by the TRC. |
| Offer | This Reference Interconnect Offer. |
| Off Peak | The low usage period for a service, as stipulated in the Price List. |
| Operations and Maintenance Manual | A separate document that sets out the processes and principles by which JT and the Licensee shall maintain and operate the capacity and traffic that makes up the Network Interconnection between their respective Networks |
| Patch Panel | The interface provided by JT to the Licensee for the connection of its routing equipment. |
| Peak | The high usage period for a specific service, as stipulated in |

| Term | Definition |
|------------------------------|---|
| | the Price List. |
| Radial | Radiating from or converging to a common centre, which shall be the JT Interconnect Node. |
| Receiving Licensee | A Licensee receiving any information from the Disclosing Licensee, under the Interconnect Agreement. |
| Reference Interconnect Offer | A Reference Interconnection Offer (RIO) is a publicly available document published by a Designated Licensee defining a standard set of technical and commercial terms by which the Designated Licensee offers interconnection services to other Licensees. It forms the basis of a transparent offer by the Designated Licensee to contract with another Licensee through a standard interconnection agreement. |
| Requested Licensee | Either JT or the Licensee who has been requested by the other, under the Interconnection Agreement, to carry out some activity in relation to the Interconnect or Interconnect Services. |
| Requesting Licensee | Either JT or the Licensee requesting the other, under the Interconnection Agreement, to carry out some activity in relation to the Interconnect or Interconnect Services. |
| RIPE database | The independent register of allocation and assignment of IP address space and Internet routing information. |
| Router | The equipment which performs the routing function in an IP Network, i.e. the process of setting Network path and processing IP packets, based on the addressing information contained in IP packets. |
| SDH | Synchronous Digital Hierarchy |
| Telecommunications Law | Telecommunications Law means the Telecommunications Law of 1995 and applying the doctrine of implied repeal this shall be read as – Law No 13 of 1995 and its amendments. |
| Telecommunications System | Any transmission or switching device or other device or instrument used to convey, receive or transmit telecommunications signals for the purpose of providing Public Telecommunications Services. |
| Third Party | Any Party, other than JT and the Licensee. |
| TRC | The Telecommunications Regulatory Commission. |

| Term | Definition |
|-------------|---|
| Voice | Shall mean the conveyance of traffic in the voice band. |
| Week | A period of seven calendar days |

Capitalised terms or expressions that are not defined in the above list shall have the same meanings assigned to them in the Interconnection Guidelines.

ANNEX B - BILLING AND PAYMENT

B 1. DEFINITIONS

B.1.1 In this Annex B, a reference to a clause unless stated otherwise, is to a clause of this Annex B. Words and expressions have the meaning given in Annex A.

B 2. RECORDING OF BILLING INFORMATION

B.2.1 Subject to paragraph B.2.2, JT and the Licensee shall, for each individual Call for which the Billing Licensee collects end user payments, record (whether in bulk or on an itemised Call basis) and process in accordance with paragraph B.2.2, the Billing Information.

B.2.2 The following shall be recorded for each Call type for which there is a Service Schedule and shall be based upon call data records:

B.2.2.1 Interconnect switch identifier; and

B.2.2.2 the dialled digits and/or such other information as may be agreed; and

B.2.2.3 CLI (if available); and

B.2.2.4 the date and the time when the Answer Signal is received by the Licensee providing the Billing Information; and

B.2.2.5 Chargeable Call Duration (whether measured or derived); and

B.2.2.6 The service type involved to the level of detail specified in the relevant Service Schedule

B.2.3 The Billing Licensee shall provide with the invoice appropriate support Billing Information, as outlined in clause B 3, to enable the non-billing Licensee to validate the invoice.

B 3. EXCHANGE OF BILLING INFORMATION

B.3.1 The Billing Licensee shall process the information specified in paragraph B.2.2 so as to produce the matrix outlined below in Table 1, which shall be referred to as the Interconnect Usage Report.

Table 1

| Call Type | Peak rate / off-peak rate | | |
|--------------|---------------------------|----------------|---------------|
| Service Type | Total Number of Calls | Total Duration | Total Revenue |
| | N | M | R |
| TOTAL | ΣN | ΣM | ΣR |

or such other form of Interconnect Usage Report as the Licensees may from time to time reasonably agree.

Where: N = the total number of Calls

Where M = the total Chargeable Call Duration

Where R = the total Revenue Charge which shall comprise of:

M x Rate per minute; or

N x Rate per call; or

M x Rate per minute plus N x Rate per call

- B.3.2 For the avoidance of doubt, the Interconnect Usage Report table shall be produced for each of peak and off-peak traffic.
- B.3.3 For charging and accounting purposes, calls shall be considered to fall entirely within the charge period in which they started.
- B.3.4 The Interconnect Usage Report shall be provided by the Billing Licensee to the other Licensee together with the resulting invoice within 4 weeks from the end of the Billing Period.
- B.3.5 The Billing Period for Interconnect Traffic shall be monthly commencing from 00.00 hours on the 1st day of each Calendar month or such other time as may be agreed from time to time between the Licensees. The end of each Billing Period shall be 24 hours on the last day of each Calendar month or such other time as may be agreed from time to time between the Licensees.
- B.3.6 The Billing Licensee shall, for a period of 24 (twenty-four) months after each Billing Period, store the Billing Information in such summary format and in such amounts as shall be sufficient to recalculate the amounts due

from one Licensee to the other to take account of changes in the relevant prices.

- B.3.7 If the Network or the Billing System of either JT or the Licensee malfunctions and fails to provide all of the Billing Information necessary for the Billing Licensee to prepare an invoice, the other Licensee shall at the request and reasonable expense of the Billing Licensee use its reasonable endeavours to supply the missing Billing Information to the Billing Licensee. There shall be no legal liability on the Billing Licensee for the preparation of an incorrect invoice resulting from inaccuracies in such Billing Information provided by the other Licensee to the Billing Licensee. JT and the Licensee acknowledge that Billing Information supplied by the other Licensee pursuant to this clause B.3.7 shall have been supplied via a suitable system and that neither JT nor the Licensee can warrant that the information is free of error.
- B.3.8 If the Licensees' monitoring of their respective Billing Information indicates a persistent inconsistency in reconciling Billing Information provided by the Licensees' respective Billing Systems, the Licensees shall use their reasonable endeavours to ascertain the cause of such inconsistency, including, subject to the agreement between JT and the Licensee, the reference of the matter for investigation and resolution by such appropriate independent consultant as JT and the Licensee may agree, or in default of agreement, as may be nominated by the TRC. Such independent consultant shall act as an expert and not as arbitrator and whose decision, in the absence of manifest error, shall be final and binding. The Licensees shall co-operate in such investigation. The independent consultant's costs for such investigation shall be paid by the Licensees in such proportions as the independent consultant shall decide.
- B.3.9 In the event of undetected errors in the Billing Information which result in either under or over invoicing and payment, JT or the Licensee may request a review of the Billing Information for any Billing Period within 24(twenty-four) months of the date of the end of that Billing Period.
- B.3.10 In the event of the Billing Information not being available to JT or the Licensee in time to produce the monthly invoice, JT and the Licensee shall agree that an invoice may be produced based on estimated Billing Information. This estimate shall be derived using the following formula for the required detail of each separate traffic stream in the Services Schedules;
- Traffic Month N = Traffic Month (N-1)
 - This method of estimating invoices shall not be used for consecutive months.

- B.3.11 The Billing Licensee must advise the Billed Licensee of the fact that any invoice is estimated together with the reasons for using estimates.
- B.3.12 Final clearing of estimated Invoices must take place within [3] months of the date of issue of the estimated invoice.
- B.3.13 For the avoidance of doubt, where the discrepancy between billing records is less than 3% (three percent) and less than JD 50,000 (fifty-thousand Jordanian Dinars), the Licensee shall pay the invoiced amount in full.
- B.3.14 Reconciliation of traffic flows between the Licensees shall occur monthly, while payment of invoices shall occur within [1] calendar month of the invoice being dispatched.

B 4. BILLING RECONCILIATION

- B.4.1 During an Interconnection Billing Reconciliation Process, Licensees shall work together in good faith, taking more frequent measurements and exchanging detailed information if necessary.
- B.4.2 A 3% (three percent) discrepancy of net set off shall be accepted provided that such discrepancy does not exceed the amount of JD 50,000 (fifty-thousand), below which there shall be no Interconnection Billing Reconciliation Process, otherwise the discrepancy shall be subject to the reconciliation process detailed below.
- B.4.3 If, pursuant to a dispute between the Licensees, either Licensee has notified the other of a dispute relating to such invoice and such dispute has not been resolved before the Due Date, and if the amount in dispute represents less than 3% (three percent) of net amount (excluding taxes), of the relevant invoices, the amount of dispute shall be split between the licenses on 50%-50% basis. The amount of invoices less the Licensees' share of the disputed amount shall be due and payable on the due date.
- B.4.4 If, pursuant to a dispute between the Licensees, either Licensee has notified the other of a dispute relating to such invoice and such dispute has not been resolved before the Due Date, and if the amount in dispute is equal to or more than 3% (three percent) of net amount (excluding taxes), of the relevant invoices or equal to or exceeds the amount of (JD 10,000) whichever is greater, the amount, less the disputed amount, shall be due and payable on the due date.
- B.4.5 The party disputing the invoice should submit a request for recalculation of that invoice within two weeks from the date of receipt of that invoice. The Joint Technical Committee from both parties shall meet in order to reconcile the reports.
- B.4.6 Time to reach a final reconciliation of any invoice in dispute is 3 (three) months from the date of receipt of the request for calculation subject to

Jordanian Tax Regulations. If a resolution is not reached, the matter shall then be resolved according to the formal dispute process referred to herein.

B 5. INTERCONNECT, TRANSMISSION AND EXTENSION LINK BILLING

- B.5.1 This Clause refers to the Services defined in Service Schedules 101, 102 and 104.
- B.5.2 Billing shall be carried out in accordance with the charging structure as outlined in the Price List and shall conform to the terms and conditions provided in clause B 9 hereof.
- B.5.3 The commencement of charging shall be from the moment of Handover for the services set out in Service Schedule 101, 102 and 104. The Billing Period for each of these services shall be monthly with each month commencing on the 1st day of that Calendar month.
- B.5.4 Billing shall involve an initial invoice for Installation Costs and Rental Costs from the Commencement Date of Charging to the start of the next Billing Period. Thereafter invoicing shall be monthly in advance.
- B.5.5 The Billing Information for the services defined in Service Schedules 101, 102 and 104 shall be based on the information provided for in the table below.

| SERVICE COMMENCEMENT DATE | REFERENCE NUMBER | A-END | B-END | CIRCUIT TYPE | INSTALLATION CHARGE | RENTAL CHARGE |
|---------------------------|------------------|-------|-------|--------------|---------------------|---------------|
| | | | | | | |
| | | | | | | |

B 6. SDH BANDWIDTH SERVICE BILLING

- B.6.1 This Clause refers to the Service defined in Service Schedule 113.
- B.6.2 SDH Bandwidth Service billing shall be carried out in accordance with the charging structure as outlined in the Price List and shall conform to the terms and conditions provided in clause B 9 hereof.
- B.6.3 The commencement of charging for SDH Bandwidth Service shall be from the moment of Handover for the services set out in Service Schedule 113. The Billing Period for SDH Bandwidth Service shall be monthly with each month commencing on the 1st day of that Calendar month.
- B.6.4 Billing shall involve an initial invoice for Installation Costs and Rental Costs from the Commencement Date of Charging to the start of the next Billing Period. Thereafter invoicing shall be monthly in advance.

B.6.5 The Billing Information for the Service shall be based on the information provided for in the table below.

| SERVICE COMMENCEMENT DATE | REFERENCE NUMBER | A-END | B-END | SERVICE CAPACITY | INSTALLATION CHARGE | RENTAL CHARGE |
|---------------------------|------------------|-------|-------|------------------|---------------------|---------------|
| | | | | | | |
| | | | | | | |

B 7. INTERNATIONAL IP CAPACITY BILLING

- B.7.1 This Clause refers to the Services defined in Service Schedules 114.
- B.7.2 JT International IP Capacity billing shall be carried out in accordance with the charging structure as outlined in the Price List and shall conform to the terms and conditions provided in clause B 9 hereof.
- B.7.3 The commencement of charging for JT International IP Capacity will be from the point of Handover of the service set out in Service Schedule 114. The Billing Period for JT International IP Capacity shall be monthly with each month commencing on the 1st day of that Calendar month.
- B.7.4 JT International IP Capacity billing shall involve an initial invoice for Installation and Rental Costs from the Commencement Date of Charging to the start of the next Billing Period for International IP Capacity. Thereafter invoicing will be monthly in advance.
- B.7.5 The Billing Information for the services defined in Service Schedules 114 shall be based on the information provided for in the table below.

| COMMENCEMENT DATE | PORT NUMBER | PORT TYPE | BANDWIDTH | SET UP CHARGE | RENTAL CHARGE |
|-------------------|-------------|-----------|-----------|---------------|---------------|
| | | | | | |
| | | | | | |

B 8. DATA TRAFFIC COLLECTION BILLING

[TBA; see Traffic Collection T&Cs]

B 9. INVOICES

- B.9.1 At the end of each Billing Period the Billing Licensee shall submit to the other Licensee, invoices for charges for Calls as outlined in clause B ~~3B-3~~, the services stipulated in Service Schedules 101, 102 and 104 as outlined in clause B ~~5B-5~~ and other services provided as part of this Offer for which the Billing Licensee is entitled to charge the other Licensee during such Billing Period.

- B.9.2 JT and the Licensee shall each hand-deliver 2 (two) copies of any invoice pertaining to Interconnection Services to the other. The Licensee receiving the invoice shall sign and date one of the aforementioned copies as proof of delivery, which shall be returned to the invoicing Licensee.
- B.9.3 All charges payable under the Interconnect Agreement shall be calculated in accordance with this Annex B and at the rates specified in the Price List and amended from time to time. Invoices raised pursuant to the Interconnect Agreement shall be paid in accordance with paragraph 8 of the main body of this Offer.
- B.9.4 For the avoidance of doubt, an invoice (including an invoice based on estimated information) shall be dated as of the date of despatch of that invoice.
- B.9.5 For services (other than Call traffic and the services stipulated in Service Schedules 101, 102 and 104) the Billing Licensee shall provide with the invoice appropriate Billing Information to enable the non-billing Licensee to accurately process the invoice for such services.

B 10. PAYMENT

- B.10.1 Subject as stated below, all charges due by one Licensee to the other shall be payable by the Due Date.
- B.10.2 If, pursuant to a dispute between the Licensees, either Licensee has notified the other of a dispute relating to such invoice and such dispute has not been resolved before the Due Date, and if the amount in dispute represents less than 3% (three percent) of the total amount (excluding taxes), of the relevant invoice, the amount shall be due and payable on the Due Date.
- B.10.3 If, pursuant to a dispute between the Licensees, either Licensee shall have notified the other of a dispute relating to such invoice and such dispute shall not have been resolved before the Due Date, and if the amount in dispute is equal to or more than 3% (three percent) of the total amount (excluding taxes), of the relevant invoice, the amount, less the disputed amount, shall be due and payable on the Due Date.
- B.10.4 Notwithstanding notification of a dispute, if a Licensee fails to pay on the Due Date any amount due under the Interconnect Agreement or shall overpay any amount, the payee or, as the case may be the over-payer, shall pay or be paid interest at the Default Interest Rate as at the Due Date or date of the overpayment in respect of any such amount outstanding.

- B.10.5 If such overpayment results from information provided by the over-payer (which is not attributable to information provided by the payee Licensee), the payee Licensee shall be under no obligation to pay any interest at the Default Interest Rate on the amount overpaid.
- B.10.6 Interest at the Default Interest Rate shall be payable (for late payment) from and including 5 (five) days after the Due Date or (in the case of a refund) the later of the date of payment of the original amount to be refunded and the Due Date, in each case ending on the date of payment or, as the case may be, refund in full. Such interest at the Default Interest Rate shall accrue day by day from and including the Due Date and shall not be compounded.
- B.10.7 Relevant taxes shall be added to all or any part of the charges under the Interconnect Agreement and shall be paid by the Licensee responsible for making such payment.

B 11. DISPUTES

- B.11.1 Billing disputes between the Licensee and JT shall be resolved according to this Annex B in the first instance and in any event in accordance with clause 17 of the Main Offer document.

B 12. SAMPLE INTERCONNECT TRAFFIC BILL

| Call Type | Peak_Min | Off-peak_Min | Total_Min | Peak_Rate | Peak_Cost | Off_peak_Rate | Off_peak_Cost | Total_Cost |
|--------------------------|----------|--------------|-----------|-----------|-----------|---------------|---------------|------------|
| National termination | | | | | | | | |
| Call transit | | | | | | | | |
| Premium rate origination | | | | | | | | |
| Free phone origination | | | | | | | | |
| Directory Enquiries | | | | | | | | |
| Call connection | | | | | | | | |
| Emergency services | | | | | | | | |
| International services: | | | | | | | | |
| Band 1 | | | | | | | | |
| Band 2 | | | | | | | | |
| Band 3 | | | | | | | | |
| Band 4 | | | | | | | | |
| Band 5 | | | | | | | | |
| Band 6 | | | | | | | | |
| Band 7 | | | | | | | | |
| Band 8 | | | | | | | | |
| Band 9 | | | | | | | | |
| Total Bands | | | | | | | | |

ANNEX C - MANAGEMENT OF INTERCONNECTION

C 1. DEFINITIONS

C.1.1 In this Annex, a reference to a clause or Appendix unless stated otherwise, is to a clause or Appendix of this Annex. Words and expressions have the meaning given in Annex A.

C 2. MANAGEMENT OF INTERCONNECTION**C.2.1 *Account management***

C.2.1.1 JT shall appoint a Technical Account Manager and a Commercial Account Manager to deal with the Licensee from the initial request for interconnection with the JT network, to coordinate communication on interconnection matters.

C.2.1.2 JT and the Licensee shall agree to hold a meeting within 5 (five) working days of a meeting being formally requested by either Licensee.

C.2.2 *Joint Technical Committee*

C.2.2.1 JT shall establish a Joint Technical Committee with the Licensee.

C.2.2.2 The Joint Technical Committee shall discuss and agree on the technical, operational, planning, billing and service aspects, with authority to take decisions on these matters.

C.2.2.3 The Joint Technical Committee shall consist of equal representatives, including technical and commercial staff, from both parties to be agreed upon between JT and the Licensee; the committee may be amended from time to time upon mutual agreement as appropriate.

C.2.2.4 The joint technical committee shall meet on a regular basis not less than twice a year and upon request in cases of emergency with the meetings planned in advance. The agenda may include, among the other items raised by either party, the following items:

- Need for new Points of Interconnect and potential timing of delivery
- Analysis of traffic levels
- Analysis of service quality
- Discussion of capacity requirements
- Future forecasts
- Discussion and analysis of faults during the period since the previous meeting
- Discussion of billing processes
- Provision of relevant information and discussion of changes to either network or to the service

- Discussing preparations for coming special events, Mass Call Events and high traffic periods
- Exchange the required information in case of any Service Affecting or Non-Service Affecting failure and setting the required procedures to report and solve the problem

C 3. RECORDS OF LINKS

C.3.1 Both Licensees shall maintain a database of all in-service Links in order to facilitate the management of the Interconnect. These databases contain the following information, as applicable, for each link and shall be reviewed and reconciled if necessary from time to time:

- Service Reference number
- Service type (Interconnect Link (CSI or collocated), Transmission Link, Interconnect Link Extension)
- In-service date
- A-end exchange – name, location, manufacturer, software release
- B-end exchange – name, location, manufacturer, software release
- Transmission path – direction designation, type
- Capacity
- Associated signalling link(s)

ANNEX D - TECHNICAL INFORMATION

D 1. TRANSMISSION NETWORK**D.1.1** *Transmission standards*

D.1.1.1 SDH equipment is used to assemble various payloads conforming to ITU-T Recommendations G.703, G.707, G.708, G.709 and multiplex them into STM-1 (155 Mbps) or into STM-4 (622 Mbps) or into STM-16 (2488 Mbps) based on SDH hierarchy as specified at ITU-T Rec. G.782.

D.1.1.2 The SDH equipment complies with ITU-T Recommendations G.781, G.782, G.783, G.784, G.957, G.958 and any other relevant ITU-T recommendations

D.1.1.3 External timing and timing of incoming STM-N shall be carried out in compliance with ITU-T Rec.G.703/10.

D.1.2 *Digital Interface*

D.1.2.1 The equipment digital interface is compliant with ITU-T Rec. G.707 and G.985.

D.1.3 *Electrical Interface*

D.1.3.1 Interface for 2 Mbps Symmetrical 120 ohms interfaces for 2.048 Mbps in accordance with ITU-T Recommendation G.703/6

D.1.3.2 Interface For High Capacity Bit Rates: Interfaces for 34.368 Mbps and 139.264 Mbps in accordance with ITU-T Recommendation G.703/8 and /9

D.1.3.3 Interface For STM-1 Electrical (STM-1): Interfaces for STM-1e, 155.520 Mbps in accordance with ITU-T Recommendation G.703/12 .

D 2. VOICE INTERCONNECT**D.2.1** *Interconnect Nodes*

D.2.1.1 The list in Appendix D.1 details the Interconnect Nodes at which Licensees can interconnect to the JT network.

D.2.1.2 The list contains the name, location, function, switch manufacturer, software configuration for each Interconnect Node and may be amended from time to time. The switching equipment currently operated by JT is compatible with other vendor switches and can be interconnected via Signalling System No.7 (SS7) in accordance with ITU-T Recommendation Q701-708 for the Message Transfer Part (MTP), Q711-714 for the SCCP (Signalling Connection Control Part) and Q751-755 for the Operation and Maintenance Application Part (OMAP).

- D.2.1.3 The Licensee wishing to interconnect with JT is required to establish Interconnect Links with a minimum two Interconnect Nodes.
- D.2.1.4 The Licensee may also elect to Interconnect with JT's International Nodes (Voice International Gateways). For the avoidance of doubt, interconnection with JT's International Nodes will be established for the sole purpose of conveying international voice traffic (inbound or outbound).
- D.2.2 *Link capacity*
- D.2.2.1 The Licensee should not place excessive reliance on any particular link, and should endeavour to spread interconnection traffic over a reasonable number of Interconnect Links.
- D.2.2.2 The Licensee may designate an Interconnect Link as either "Fully Provisioned" or "High Usage".
- D.2.2.3 The Licensee may require that an Interconnect Link be designated as being Fully Provisioned, either before the link is brought into service or at some point during its operation, subject to agreement documented in the Network Plan.
- D.2.2.4 A Fully Provisioned Link is dimensioned such that congestion is in accordance with the Service Level Offer in any normal circumstances. JT and the Licensee may agree on a Grade of Service required for each Fully Provisioned link in the busy hour in the form of blocking according to Erlang B traffic calculation, otherwise the Grade of Service shall be in accordance with the Service Level Offer. JT and the Licensee may also agree on a Utilisation Factor for Fully Provisioned Interconnect Links. The Utilisation Factor is the percentage occupancy of the designated Interconnect Link that the parties aim to keep the traffic below.
- D.2.2.5 On Interconnect Links designated as Fully Provisioned, the Licensee shall provision in advance sufficient capacity to achieve the Target Grade of Service, as documented in the Network Plan.
- D.2.2.6 If the utilisation of the Fully Provisioned link regularly exceeds the defined Utilisation Factor, JT and the Licensee should agree on a timely re-routing of traffic away from the designated link or an increase of capacity, subject to the forecasting procedure set out in Annex E.
- D.2.2.7 A High Usage link is dimensioned such that a reasonable degree of congestion (or blocking) is expected, as per the Service Level Offer.
- D.2.2.8 The designation of a High Usage link shall be in conjunction with planned overflow via fully provisioned interconnect links, as documented in the Network Plan.

D.2.2.9 The Licensee may also designate an Interconnect Link to be segregated by traffic type (either International or Domestic), either before the link is brought into service or at some point during its operation, subject to agreement between the parties, in order to protect the specified traffic stream against congestion.

D.2.2.10 These configurations should be reflected in the Network Plan agreed between JT and the Licensee.

D.2.3 *Network architecture*

D.2.3.1 The JT core network currently uses SDH ring topology to ensure redundancy between the JT Interconnect Nodes and other JT Network Nodes. This technology may change in the future subject to Clause 12 of the main document.

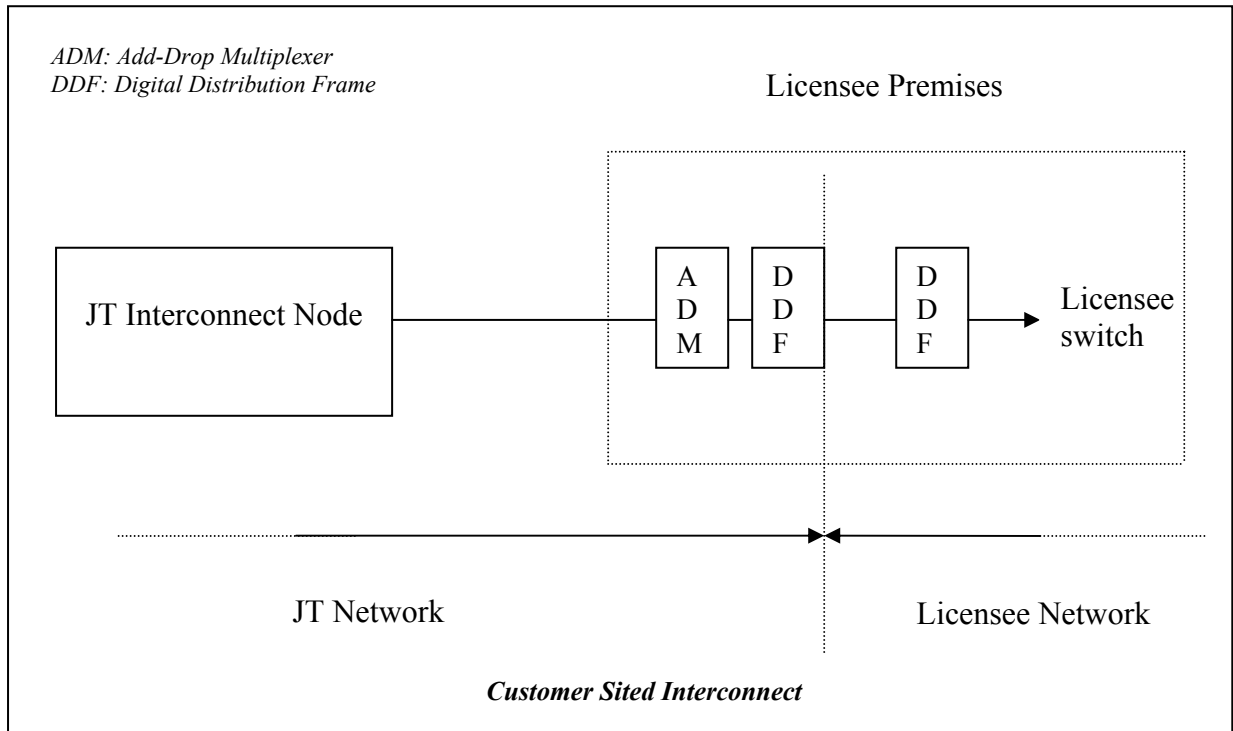
D.2.3.2 In order to provide resilience for Domestic traffic, each JT Transit exchange is connected to all of the Nodes. There is also a direct connection between the two Transit exchanges.

D.2.3.3 In order to provide resilience for International traffic, the two international exchanges are interconnected and re-routing shall be applied in the case of failure of one of the exchanges.

D.2.4 *Delivery methods*

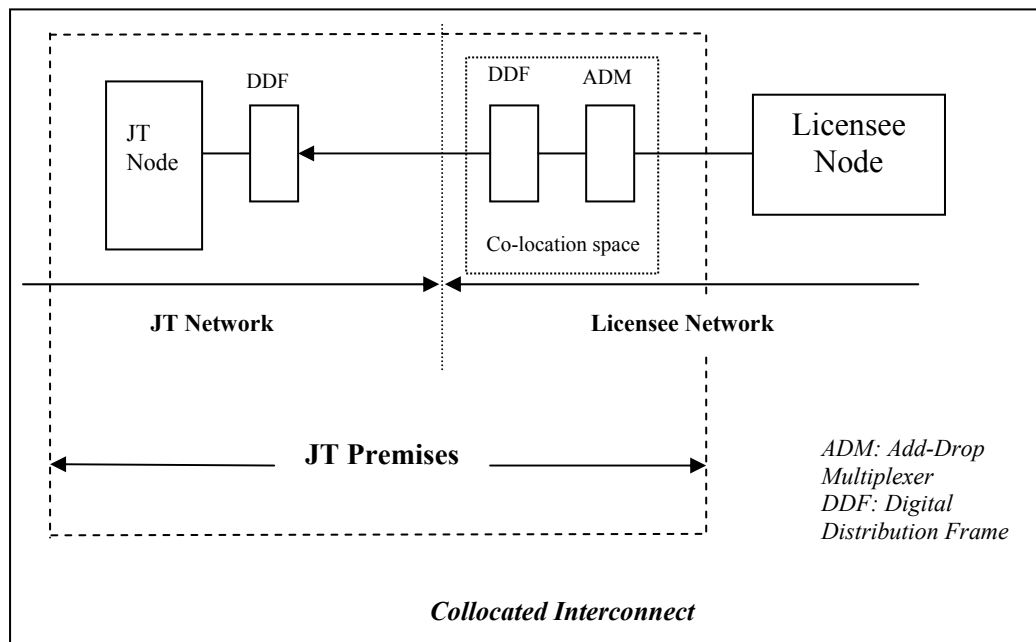
D.2.4.1 The Requesting Licensee may take delivery of Interconnect Links on the premises housing its Interconnect Node (Customer Sited Interconnect Link) or on equipment installed on JT premises (Collocated Interconnect Link).

D.2.4.2 Customer Sited Interconnect consists in Interconnection between the JT network and the Licensee's network. This is provided by means of a JT owned and provisioned physical path which terminates on a Digital Distribution Frame which is located within the premises of the Licensee, as described in the diagram below:



D.2.4.3 The JT terminal equipment shall be housed in one or more rack(s) or cabinet(s) to be agreed in the Network Plan. The boundary of the JT Network is the line side of its Digital Distribution Frame.

D.2.4.4 Collocated interconnect is the interconnection between the JT network and the Licensee network at a facility provided by JT. This is provided by means of a Licensee-owned and provided physical path from the Licensee Network that terminates on a Digital Distribution Frame which is located at a JT facility, as per the diagram below:



D.2.5 *Signalling Standards*

- D.2.5.1 The JT Network supports Signalling System Number Seven (SS7) and Integrated Services User Part (ISUP) version 2 for Signalling Interconnection.
- D.2.5.2 JT shall inform the Licensee of any modification in the adopted ITU signalling system no later than 6 months prior to the implementation of such modifications
- D.2.5.3 Each Interconnect Path shall include a signalling link consisting of dedicated timeslots on designated Interconnect Link(s).
- D.2.5.4 Signalling links are used on a load sharing basis for redundancy.
- D.2.5.5 Signalling links should have much lower occupancy than traffic links, to minimise the risk of losing signalling messages and the need to reduce signalling latency. JT and Licensee shall dimension signalling links to avoid congestion, and the number of signalling links should be established for normal and predictable failure conditions. The signalling network should be defined by JT and the Licensee and documented in the Network Plan.
- D.2.5.6 JT does not have separate signalling network as Signal Transfer Points (STP).
- D.2.5.7 JT International Gateways are interconnected to Signalling Transfer Points outside Jordan.
- D.2.5.8 JT shall permit the use by mobile network Licensees of SS7 signalling via its International Gateways to Licensees outside Jordan for the transit of incoming and outgoing roaming messages, subject to available technology and as agreed between JT and the Licensee.
- D.2.5.9 The utilisation of SS7 links shall be maintained within ITU guidelines, currently:
- Critical load per SS7 link: 0.36 Erlangs.
 - Maximum load per SS7 link: 0.44 Erlangs.
- D.2.5.10 Network Indicators:
- With international carriers Licensees shall use INAT0 (Service Information Octet (SIO) for network is 00)
 - Within their network Licensees shall use NAT0 (SIO for network is 10)
 - Between operators networks Licensees shall use NAT1 (SIO for network is 11)

- D.2.5.11 National Signalling Point Codes (SPC) shall be allocated per exchange by TRC and shall be provided in advance of order requests for Signalling Links
- D.2.5.12 International Signalling Point Codes are assigned to each country by ITU and shall be allocated in Jordan by TRC.
- D.2.5.13 Within Jordan, JT uses the SPC configuration x-y-z where x= 6 bits, y = 4 bits and z = 4 bits.
- D.2.5.14 For international signalling, JT uses the SPC configuration x-y-z where x= 3 bits, y = 8 bits and z = 3 bits.
- D.2.5.15 In order to prevent call forward looping, calls that have been forwarded by either JT or the Licensee shall be distinguished by their Calling Party Number (CPN). Where either Network receives a call set-up with a CPN indicating a forwarded call, the Network shall suppress any further call forward which would result in these calls being routed back across the Interconnect.

D.2.6 *Synchronisation*

- D.2.6.1 The Licensee should synchronise its switching network from the 2Mbit/s Interconnect Links interconnecting with JT. These links shall be identified and marked on JT and the Licensee's databases. Both parties should put procedures in place to prioritise the availability of these circuits.

D 3. TRANSMISSION LINK SERVICE

D.3.1 *Delivery*

- D.3.1.1 JT shall deliver Transmission Links between 2 Nodes on the Requesting Licensee's network using any appropriate technology in a combination of backbone network capacity and/or local access circuits, at its own discretion taking into account the location of the sites designated by the Licensee, in order to provide the Licensee with the requested service in accordance with the targets set in the Service Level Offer.

- D.3.1.2 Before the equipment can be installed on its premises, the Licensee shall ensure that a secure environment is available at each of its premises with the following facilities, e.g.:

- Two Pair Line PVC STP from JT box to the location of the modem
- Termination of the STP cable to the RJ11 socket
- Power socket MK type with earth point terminated on it
- Connection of the cable shield on the earth point
- Shelf space to house the modem

- If the unit housing the modem is metallic it should be earthed

D.3.2 *Interfaces*

D.3.2.1 When requesting the service, the Licensee shall specify the Interface required, which can be:

- G.703
- V.35
- Ethernet

D 4. SDH BANDWIDTH SERVICE

D.4.1 JT may deliver SDH Bandwidth between 2 Nodes in multiples of 2Mbps, from E1 up to and including STM-[x], subject to availability of sufficient capacity between the designated nodes.

D.4.2 For each E-1 delivery, the interface shall be G.703.

D.4.3 In case of direct connection with the optical fibre (OF) cable, the type of connector must be FC/PC-34Mb/s,45 Mb/s, Electrical STM1 interface (impedance 75ohm coaxial type).

D 5. COLLOCATION SERVICES

D.5.1 *Collocation Facilities*

D.5.1.1 The list in Appendix D.1 details the JT exchanges where collocation facilities are available. The list includes details of switching equipment and to which the Licensee may interconnect, as well as the space available (in square meters) at the specified location.

D.5.1.2 The list is deemed correct at the time of issue. An up-to-date list can be requested at any time upon request to the Technical Account Manager (see C.2.1.1.), who shall respond within five 5 (five) working days of receipt of a request.

D.5.1.3 Collocations services ordered or reserved by the Licensee under Service Schedule 103 shall be detailed in the Network Plan.

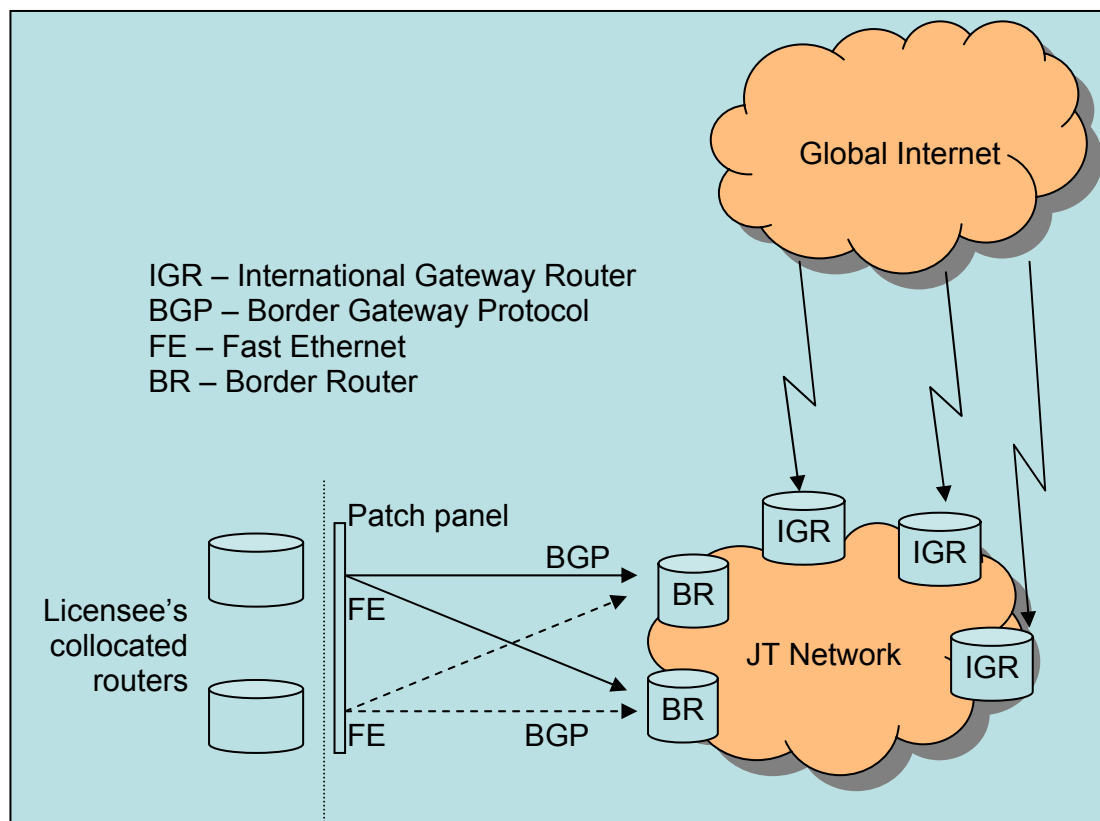
D.5.2 *Collocation environment*

- D.5.2.1 The Licensee may install the following equipment in collocated facilities:
- Carrier grade switching and transmission equipment, for the purpose of Interconnection
 - Voice equipment, such as ADM, ODF, DDF, MUX (Antennae and radio equipment subject to configuration of the premises)
 - Internet routing equipment
- D.5.2.2 A number of options are available to Licensees in collocation facilities. These are detailed in Service Schedule 103.
- D.5.2.3 Access to collocation facilities shall be granted in accordance with the procedure set out at Section 8 of the Operation and Maintenance Manual.
- D.5.2.4 Where the Licensee hires space in a secure room, the Licensee will choose and install the key system restricting access to the room. The Licensee must however provide JT with a key to access the room which may be used for essential site maintenance or in the event of an emergency.
- D.5.2.5 Power options in collocation facilities are as follows:
- Permanent 230/240V AC
 - Permanent 48V DC
- D.5.2.6 The environment in collocation space includes the following automated and monitored features:
- Lighting system
 - Fire system
 - Air conditioning
 - Temperature control
 - Humidity level control

D 6. DATA SERVICES

- D.6.1 *International IP Capacity*
- D.6.1.1 The list in Appendix D.1 includes the Interconnect Node(s) at which Licensees can interconnect to avail of International Internet Capacity.
- D.6.1.2 The list contains the name, location, function, equipment type and manufacturer for each Interconnect Node and may be amended from time to time.

- D.6.1.3 In order to avail of international internet capacity, the Licensee shall collocate its router(s) at the JT exchange.
- D.6.1.4 The Licensee may connect a maximum two routers, for resilience purposes.
- D.6.1.5 The Licensee's equipment will be connected to ports on the JT Border Routers (BRs) via a Patch Panel provided by JT.
- D.6.1.6 Two BGP routes may be established between each of the Licensee's routers and each of the JT BRs. However if the Licensee uses one router with only one Ethernet interface, it is possible to connect to two JT BRs by means of VLAN trunking encapsulation.
- D.6.1.7 The diagram below describes the network architecture for the delivery of International Internet Capacity



- D.6.1.8 A port on a Border Router will consist in 10Mbps Ethernet half/full duplex or 100Mbps Fast Ethernet half/full duplex
- D.6.1.9 VLAN trunking encapsulation can be achieved using the following protocols:
- Ethernet V.2 (arpa)
 - Cisco ISL
 - 802.1q

D.6.1.10 The interface consists in a UTP Cat 5(e) cable, RJ45 connector between the BRs connected to a Patch Panel.

D.6.2 *National Data Traffic Collection*

[TBA; see Traffic Collection T&Cs]

APPENDIX D.1 – JT INTERCONNECT NODES FOR INTERCONNECTION

| Exchange name | Function | Location | Hardware supplier | Switch type | Software model | Available collocation space (sq/m per room) |
|-------------------------------------|------------------------------------|---|--------------------------|--------------------|-----------------------|--|
| <u>Abdali</u> (NISC2) | Voice Transit exchange (TR2) | Abed-El-Raaheem El Waked, No. 28, Amman | Siemens | EWSD | v.15 | 110 + 25 |
| | Voice International gateway (ISC2) | (as above) | Siemens | EWSD | v.9 | |
| <u>Tla El Ali</u> (NISC1) | Voice Transit exchange (TR1) | Omar Ben Abdel Aziz, No. 122, Amman | Siemens | EWSD | v.15 | 50 |
| | Voice International gateway (ISC1) | (as above) | Siemens | EWSD | v.9 | |

| Exchange name | Function | Location | Equipment type | Available Collocation space (sq/m per room) |
|----------------------|--------------------------|------------------------------------|-----------------------|--|
| <u>Hashem</u> | IP International Gateway | King Hussein Medical Centre, Amman | Cisco 75xx | 42 + 82 + 245 |

ANNEX E - INTERCONNECTION PROCESSES

E 1. FORECAST OF LINKS REQUIREMENTS

- E.1.1 *Provision of Interconnect forecast data by the Licensee*
- E.1.1.1 JT requires Licensees using JT interconnection services to provide forecasts, in good faith, of traffic and interconnect capacity and routes between the Licensee and JT networks as accurately as is reasonably possible.
- E.1.1.2 In the event that the Licensee does not provide forecasts or is believed not to provide forecasts in good faith, JT has the right to initiate a Dispute under Clause 17 of the Main Offer document and amend the forecast in the interim until the Dispute is resolved.
- E.1.1.3 Capacity forecasts shall be given in terms E1s for a period of 2 (two) years in advance. These forecasts shall be updated every quarter by the Licensee in accordance with the template provided at paragraph E.1.3 below.
- E.1.1.4 Route forecasts shall be given in terms A and B ends for at least 6 (six) months prior to any firm order. These forecasts shall be updated every quarter by the Licensee in accordance with the template provided at paragraph E.2.2 below. If no update is received, the forecast shall remain unchanged until the following quarter.
- E.1.2 *Capacity forecasting restrictions*
- E.1.2.1 The Licensee shall update its capacity forecast on January 1st, April 1st, July 1st and October 1st of each year by submitting the Capacity Forecasting Form (see E.1.3 below) to the JT Commercial Account Manager.
- E.1.2.2 Increases in capacity orders for the next quarter shall be subject to availability of equipment and resources. JT can offer no guarantees that such increases in capacity can be satisfied.
- E.1.2.3 Decreases in capacity orders for the next quarter shall be accepted subject to charges being levied by JT on the Licensee for any costs reasonably and necessarily incurred as a result of planning for and potentially purchasing of relevant equipment that cannot be reasonably used elsewhere in the JT network.
- E.1.2.4 Increases and decreases in capacity for the remaining quarterly periods are subject to the following restrictions:

| | Current quarter | Quarter 1 | Quarter 2 | Quarter 3 | Quarter 4 | Quarter 5 | Quarters 6,7 and 8 |
|------------------|-----------------|-----------|-----------|-----------|-----------|-----------|--------------------|
| Change permitted | No change | No change | ±10% | ±15% | ±20% | ±25% | ±30% |

E.1.3 *Capacity Forecasting Form*

| JT Interconnect Node name | Licensee interconnect Node name | Interconnect Route designation | Type of Link | Q1 | Q2 | Q3 | Q4 | Q5 | Q6 | Q7 | Q8 |
|---------------------------|---------------------------------|--------------------------------|--------------|----|----|----|----|----|----|----|----|
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

Note: JT Interconnect Node names should appear as in the list of JT Interconnect Nodes. The Interconnect Route must be clearly defined with the address of the Licensee's Node, building plan and other necessary details required to deliver a physical interconnection route to the Licensee's Interconnect Node. Measurements are in multiples of E1s.

E.1.4 *Reactive Capacity Planning*

E.1.4.1 The Licensee and JT shall agree to measure traffic on all Interconnect Links to identify congestion and maintain the Target Grade of Service for voice interconnection. In the event that the traffic, capacity and route forecasting processes have failed to maintain the Target Grade of Service, JT and the Licensee shall agree to work together in good faith to resolve congestion issues by planning as necessary further interconnection capacity or new traffic routing plans in an expedient manner and permit the free flow of traffic between the networks according to the Target Grade of Service. Either Licensee shall have the right to call a meeting of the Joint Technical Committee under clause C 2 to progress resolution of congestions.

E.1.5 *Traffic Forecasting Form*

E.1.5.1 Traffic forecasts shall be given in terms of Erlangs during the peak and off-peak 'Busy Hours' for a period of 2 (two) years in advance. These forecasts will be updated every quarter by the Licensee as per the Traffic Forecast in the following format:

| JT Interconnect Node name | Licencee Interconnect Node name | Route designation | Q1 | | Q2 | | Q3 | | Q4 | | (...) | | Q8 | |
|---------------------------|---------------------------------|-------------------|----|-----|----|-----|----|-----|----|-----|-------|-----|----|-----|
| | | | P | O/P | P | O/P | P | O/P | P | O/P | P | O/P | P | O/P |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |

Note: JT Interconnect Node names should appear as in the list of JT Interconnect Nodes at Appendix D.1. Measurements are in Erlangs.

E 2. PLANNING OF NEW POINTS OF INTERCONNECTION

E.2.1 *Interconnection of New Switching Equipment*

E.2.1.1 Prior to making Interconnection available on new switching facilities, JT or the Licensee, whichever is the equipment owner, shall have completed all commissioning and testing activities in accordance with the recommendations of the switch vendor and industry best practice, including but not limited to inter-working testing within its own network, and activated the SS7 Point Code assigned by TRC.

E.2.2 *Route Forecasting Form*

| JT Interconnect Node name | Licensee Interconnect Node name | Transmission Path | Route Direction | Fully Provisioned or High Usage | Date route to be required operational | Initial number of E1s |
|---------------------------|---------------------------------|-------------------|-----------------|---------------------------------|---------------------------------------|-----------------------|
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

E 3. RESERVATION OF COLLOCATION SPACE

E.3.1 Collocation space may be reserved up to one 1 (one) year in advance, provided the request for reservation is reasonable and the space is available. Payment shall be made for the reserved space in accordance with Service Schedule 103 and the JT Price List.

E.3.2 Requests for reservation should be addressed in writing to the Commercial Account Manager, who shall respond within 4 (four) weeks to confirm whether the order is accepted or rejected.

E.3.3 In the event that a reservation is rejected on grounds of insufficient space, JT shall propose an alternative solution.

E.3.4 Details of reserved collocation services shall be included in the Network Plan.

E 4. FORECAST OF INTERNATONAL INTERNET CAPACITY REQUIREMENTS

E.4.1.1 The Licensee shall provide a forecast of IP traffic growth and required international capacity over 24 (twenty-four) months, which should be updated on a quarterly basis for inclusion in the Network Plan, presented in the following format:

| | Q.1 | Q.2 | Q.3 | Q.4 | Q.5 | Q.6 | Q.7 | Q.8 |
|--|-----|-----|-----|-----|-----|-----|-----|-----|
| International Internet Capacity | | | | | | | | |

E 5. ORDERING PROCESS

E.5.1 *Request for services*

E.5.1.1 A request for Interconnection services detailed in Service Schedule 101, 102, 103, 104, 113 and 114 shall be placed by the Licensee using the Order Form provided in Appendix E.1 and sent to the Commercial Account Manager by letter, fax or e-mail.

E.5.1.2 Requests for services other than those listed in E.5.1.1 above shall be made by letter addressed to the JT Commercial Manager. Requests for new services shall be made in accordance with the procedure outlined in Clause 6 of the Offer.

E.5.2 *Order processing*

E.5.2.1 All the relevant sections of the Order Form must be completed for an order to be valid. The Form should be sent to the JT Commercial Account Manager by mail or fax.

E.5.2.2 Upon receipt of the order, the JT Commercial Account Manager shall review the form for validity. A response shall be sent to the Licensee within 5 working days of receipt of an order, stating whether the order is accepted or rejected.

E.5.2.3 In case of rejection in whole or in part, the Commercial Account Manager shall state the reason for rejection in writing to the Requesting Licensee together with a proposed alternative solution, if available. A copy should be addressed to TRC. The Licensee has the right to start a Dispute under Clause 17 of the Offer. TRC shall investigate with the co-operation of both Licensees and may make a determination on the subject.

- E.5.2.4 Accepted orders may require a feasibility study, which may cover any aspects of service implementation, including but not limited to civil works and constructions, rights of way and planning permissions from municipal and central government authorities, with the cooperation of the Licensee if required. A site survey may be necessary. In any event, within 15 (fifteen) working days of receipt of a valid order the Commercial Account Manager shall fill in the Order Confirmation section on the Order form, indicating the planned delivery date to the Licensee, and return it to the Requesting Licensee.
- E.5.2.5 The Licensee and the TRC have the right to request a progress report within 3 working days at any time following the notification of the delivery date.
- E.5.3 *Lead times for delivery*
- E.5.3.1 Lead times for delivery vary according to the type of service and requirements. Lead times for delivery are detailed in the Service Level Agreement.

E 6. IMPLEMENTATION

- E.6.1 *Interconnect Link Implementation*
- E.6.1.1 The delivery of Customer Sited Interconnect is subject to the commissioning of a physical transmission path to the Licensee's Node.
- E.6.1.2 Once the transmission is installed, JT shall perform the following tests to bring the CSI Link into service:
- a) End-to-End test
 - 24-hour BER test to reach target level of BER < 10⁻⁸
 - b) Commissioning Tests:
 - Connection and testing of power
 - Stand alone commissioning tests
 - Optical tests
 - Tributary cards and cabling tests
 - Alarm Tests
 - On Line Tests
 - Stability Tests
 - Setting options on multiplexers
 - c) Fibre tests

- Attenuation tests
- Power tests

E.6.1.3 The delivery of Interconnect Links to the Licensee's equipment collocated on a JT site is subject to the prior physical connection of the Licensee DDF to the JT DDF. The Licensee should provide the 0.5 gauge cable which shall be installed by JT.

E.6.1.4 The following test shall be performed as appropriate on all Interconnect links (CSI or collocated)

- Loop test
- Bit Error Rate test
- MTP Test Q.781
- MTP Test Q.782
- ISUP Test Q.784

E.6.2 *Transmission Link commissioning*

E.6.2.1 When commissioning a Transmission Link, JT shall perform the following qualification tests:

- Attenuation
- Loop resistance
- Insulation
- SNR (Signal to Noise Ratio)
- Impulse noise

E.6.3 *SDH Bandwidth commissioning*

E.6.3.1 The commissioning of SDH Bandwidth shall be as per Transmission Link commissioning, unless otherwise agreed between JT and the Licensee.

E.6.4 *International IP Capacity commissioning*

E.6.4.1 The Licensee shall provide the following information at the start of the implementation process:

- Details of the routing equipment it intends to connect, including IOS version if available, to facilitate the implementation of interconnection.
- The block of IP addresses they wish to advertise through JT. The address block(s) must be registered under the name of the ISP in RIPE database.

- The Licensee's AS number. If the Licensee does not hold an AS number, JT will assign a private AS number.
- Any specific requirement, such as non-standard interface.

E.6.4.2 In order to implement the service requested by the Licensee, JT shall perform the following activities:

- a) Provide the Patch Panel to the Licensee. JT is responsible for the installation and testing of the cables between the JT routers and the patch panels;
- b) Proceed with cable qualification. Cable qualification consists of loop resistance, attenuation and BER testing;
- c) Configure the JT routers to enable eBGP and announce the Licensee's prefixes;
- d) Provide the Licensee with the public IP address for the Licensee to configure eBGP peering.

E.6.4.3 The Licensee shall be responsible for performing the following activities:

- a) Connect its routers to the Patch Panel provided by JT. The Licensee is responsible for the supply and installation of the cables between its routers and the Patch Panel;
- b) Configure the interface and enable eBGP on its equipment;
- c) Provide JT with the relevant configuration information and show commands.

E.6.5 *National Data Traffic Collection commissioning*

[TBA]

E 7. SERVICE HANDOVER

E.7.1 Once the requested service is implemented, the JT Commercial Account Manager shall fill the Service Handover section on the order form, stating the handover date. The form should be sent to the Licensee together with a report detailing the result of testing.

E.7.2 The Licensee should confirm receipt of delivery and acceptance of the service by signing and returning the order form within twenty-four (24) hours of receipt of the Form.

E 8. ORDER CANCELLATION

- E.8.1 Order cancellations must be notified to JT by the Licensee in accordance with clause 26 of the Main Offer and shall incur charges as per the relevant Service Schedule for the specific service.

APPENDIX E.1 – SERVICE ORDER FORM

(Licensees are advised to fill one form per requested service)

ORDER DETAILS (TO BE FILLED BY REQUESTING LICENSEE)

A- Licensee Details

| | |
|---|----------------------------------|
| Order Date: dd/mm/yyyy | Licensee order reference: |
| Address: | Contact name: |
| Billing Address (if different from above): | Phone No.: |
| | Fax No.: |
| | E-mail address: |

B- Service Requirement:

| | |
|---|---|
| <input type="checkbox"/> JT Voice Interconnect Link (ss.101) – Capacity: _____ x 2Mbps | Presentation: <input type="checkbox"/> G.703 <input type="checkbox"/> V.35 <input type="checkbox"/> X.21 <input type="checkbox"/> Ethernet <input type="checkbox"/> Other: _____ |
| <input type="checkbox"/> JT Transmission Link (ss.102) - Capacity: _____ Kbps | |
| <input type="checkbox"/> JT Interconnect Extension Link (ss.104) - Capacity _____ x 2 Mbps | |
| <input type="checkbox"/> JT SDH Bandwidth (ss.113): _____ x 2 Mbps | |

JT Collocation (ss.103)

Rack Space Floor Space Secure Room Number of Units: _____ Unit: _____

Additional facilities: _____ Cabinet(s) _____ x [...] Amps power supply

_____ metres Intrabuilding cabling _____ x antenna space

JT International IP Capacity (ss.114): _____ x 2 Mbps

JT National Data Capacity (ss.115): [TBA: See Traffic Collection T&Cs]

C- Site details:

| | |
|----------------|---|
| Site A: | Site B (Interconnect or Transmission Link only): |
| | |

D- Required Delivery Date:

As per Service Level Offer Other (specify): _____

E- Additional Information:

Note: This order form shall be completed and signed by a duly authorised representative of the Licensee

Name:.....Signature:.....

ORDER VALIDATION (FOR JT USE ONLY):

Date: dd/mm/yyyy

Order Receipt Date: dd/mm/yyyy

Order Accepted: Yes No

Reason for rejection:

JT Order Reference Number:

ORDER CONFIRMATION

Date:

Order Receipt Date:

JT Service Reference:

JT Order Reference Number:

Planned Delivery Date:

Installation Fee:

Annual Rental:

Comments:

SERVICE HANDOVER

Date:

Order Receipt Date:

JT Service Reference:

JT Order Reference Number:

Installation and Testing completed: [detail]

Comments:

Handover Date: