

# TELECOM REGULATORY AUTHORITY OF INDIA

**Draft**

## REFERENCE INTERCONNECT OFFER

**Dated 5th April 2002**

### PREFACE

Efficient Interconnection is a pre-requisite for sustainable competition. Interconnection Agreements are required to be established between Operators interconnecting their Networks with each other. These include Basic, Cellular Mobile, National and International Long Distance Operators.

During the process of consultation initiated by TRAI on "Issues Relating to Interconnection between Access Providers and National Long Distance Operators", there was a unanimous view expressed by stake-holders in favour of a General Framework for Interconnection to be framed by the Regulator so that the dominant operators could publish a Reference Interconnect Offer (RIO) document so that Interconnection terms could be settled without undue delay. The Interconnection arrangements need to specify Gateway functions to be performed at Network-Network Interfaces such as those relating to handover of Inter-Network traffic at Interconnect Gateway (Transit) Switches at POIs, generation of Call Data Records (CDRs) for Interconnect Billing, Signalling, authentication and Network management functions.

Though many countries have favoured a policy of industry negotiations on Interconnection Agreements and Regulatory intervention is sought only for dispute resolution, there is a growing consensus that formulation of advance regulatory guidelines is important for establishing proper environment to facilitate Interconnection. This has its basis in the fact that traditionally the incumbent or dominant operator has often been found reluctant to quickly reach a mutually agreed Interconnect arrangement. In a number of cases, the various operators do not reach a conclusion on the issue of interconnection, preferring the Regulator's intervention. In both these cases, Regulatory intervention becomes necessary to help finalise interconnection arrangements.

Thus, an accepted Regulatory principles in many of the countries is to ensure that the Dominant Operator publishes a Reference Interconnect Offer (RIO) consisting of the cost of Unbundled Network Elements and Services, including the cost of elements required for Origination, Transit and Termination. Based on this, the new entrants can seek Interconnection and agree upon

specific usage based charges.

Based on the above practice and experience, a draft Reference Interconnect Offer (RIO) has been framed by TRAI on which comments and opinions of the stakeholders and the public are being sought. The draft Reference Interconnect Offer (RIO) consists of Reference Interconnect Agreement (RIA) with a number of Articles (Main Clauses), Schedules and Reference Interconnect Guidelines. The draft Reference Interconnect Agreement is generic and universal, so that it could be established between any two service providers for the interconnection of their Networks. Schedules could be different as per Service requirements, mutually agreed charges and other items. Annexures could also be added as per requirements.

The main clauses of the draft Reference Interconnect Agreement are representing the stable part of the Agreement. The parameters that may vary with time or type of traffic, service or networking requirements, are placed in the Schedules and Annexures, so that the Main Agreement need not be changed every time a variable parameter is added or amended. Schedules and Annexure could be changed as and when required.

The Main Articles covered in the draft Reference Interconnect Agreement are as below:

- Scope and Definition of Services
- POI and Interconnection Principles
- Interconnection Provisioning Procedures
- Network and Transmission Requirements
- Technical Service Commitments and Fault Repairs
- Technical Specifications and Standards
- Network Management, Maintenance & Measurement
- Network Integrity, Safety and Protection
- Operations, Special and Manual Services
- Access to Interconnection Gateway Facilities
- Charging Mechanisms, Billing and Settlement
- Commercial Terms and Conditions
- Interconnection User Charges
- Fundamental Technical Plans
- Confidentiality, Liability and Indemnities
- Liaison and Coordination
- Termination and Review
- Disputes
- Notices

The Schedules covered in the draft Reference Interconnect Agreement are as below:

- Points Of Interconnect
- Charges for Miscellaneous Services
- Charges for Sharing of Infrastructure Elements
- Schedule of Standards and Specifications
- Interconnect Usage Charges (IUC) for use of Unbundled Network Elements (UNEs) involved in Carriage of Various Types of Calls
- Interconnect Usage Charges

To assist operators in arriving at fair agreements, it is desirable to prescribe a draft for general Reference Interconnection Offer along with guidelines. Based on this, major or dominant operators, particularly BSNL/ MTNL/ VSNL, will be required to establish their own Reference Interconnect Offer (RIO) and publish the same. This will avoid the necessity of repetitive detailed individual negotiations with each Interconnection Seeker. After the RIO has been accepted by the Interconnection seeker, a mutually agreed Agreement shall be entered into. Other operators, i.e. those not required to publish an RIO, may also use TRAI approved RIO as the basis for their Interconnect Agreement.

Operators will not be required to obtain prior permission for entering into Interconnect

Agreements, but each Agreement after finalisation has to be registered with the Authority in accordance with the TRAI Regulations, and the RIOs would require prior approval of the Authority before being published by the operator.

The Authority invites written responses from all stakeholders latest by closing hours of 19th April 2002. It would be appreciated if the response is accompanied by a Floppy Diskette or EMAIL having the contents of the submission. An Open House session with the Service Providers is also proposed sometime in the last week of April 2002 at Delhi. The schedule for the same will be notified separately.

For further clarifications, Shri R.K. Bhatnagar, Advisor(Fixed Network), TRAI may be contacted on Tel. No. 6166930, FAX No. 6103294 and EMAIL Address : [traio6@bol.net.in](mailto:traio6@bol.net.in) .

M.S. Verma  
Chairman

New Delhi  
5th April 2002

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## REFERENCE INTERCONNECT OFFER

### AGREEMENT

#### REFERENCE INTERCONNECT OFFER : AGREEMENT

##### PREAMBLE

**THIS AGREEMENT** is made the day of \_\_\_\_\_, 200 between M/s \_\_\_\_\_, a Company registered under the Companies Act 1956 having its registered office at \_\_\_\_\_ hereinafter referred to as **Party A**, which term shall include, unless contrary to the context, its successor in business, legal representatives and/or its assignees of the one part and M/s \_\_\_\_\_, a Company registered under the Companies Act 1956 and having its registered office at \_\_\_\_\_; hereinafter referred to as the **Party B** which term shall include, unless contrary to the context, its successor in business, legal representatives and/or its assignees, of the other part, together referred to as the **Parties**.

**WHEREAS, Party A** is [authorised under the Indian Telegraph Act 1885 to establish, install and operate various Telecommunications Systems for the provision of various Telecommunications Services in India;] or [ **Party A** is licensed... under Section 4(1) of the Indian Telegraph Act 1885 to establish, install and operate a Telecommunications System to provide ..... telecommunications services in ..... on the terms and conditions specified in such license]; and

**WHEREAS, Party B**, is licensed under Section 4(1) of the Indian Telegraph Act 1885 to establish, install and operate a ..... Telecommunications System to provide ..... telecommunications services in ..... , on the terms and conditions of the license, and

**WHEREAS**, in order to provide the specified range of services to their customers in their service areas, the Parties to the agreement are required to interconnect their networks,

**NOW, THEREFORE**, this Agreement, witnesseth as follows:

#### ARTICLE 1 - SCOPE AND DEFINITION OF SERVICES

##### 1.1 Scope

This Agreement herein stipulates the conditions under which the respective networks of the **Parties** shall be interconnected to provide continuous Telecommunication Services and the manner in which the services shall be provided and invoiced, subject to the terms and conditions of the Licenses issued by the Government of India under Section 4 of the Indian Telegraph Act 1885 and the Regulations, Orders and Directions issued by the TRAI under the TRAI Act 1997 as amended by the TRAI Amendment Act 2000.

##### 1.2 Definition of Services

This agreement covers the technical and commercial arrangements for Interconnection between the -----  
-- network of ----- and the network of and for provision of services as detailed in the attached schedules.  
This agreement covers the following:

- a) Physical Interconnection between the two networks (Schedule 1)
- b) Charges for Miscellaneous Services (Schedule 2)
- c) Charges for Sharing of Infrastructure Elements (Schedule 3)
- d) Applicable Technical Standards (Schedule 4)
- e) Interconnect Usage Charges for use of Unbundled Network Elements (Schedule 5)
- f) Interconnect Usage Charges for Origination, Termination, Transit Traffic (Schedule 6)

All attached schedules and Annexures shall form part of this Agreement. In case of conflict or variance, the terms set out in the main body of the Agreement shall prevail.

### 1.3 Registration and Commencement

Pursuant to 'The Register of Interconnect Agreements Regulations 1999', the Parties shall file this Agreement with the Authority within thirty (30) days of the execution or modification of this Agreement including its Schedules. Following the filing of this Agreement, each Party shall provide the Authority with any such information as the Authority may request from each of them individually.

This agreement shall commence on ..... and continue [for a period of ---- years], or, [indefinitely] , subject to the relevant clauses relating to termination.

Note: The Parties may specify terms and condition to be fulfilled before the Agreement becomes effective.

### 1.4 Amendments

Any modification to this agreement or schedules shall be based on mutually agreed amendments signed by both **Parties** and registered with the relevant authorities. Changes necessitated by amendments in the Regulations, Orders, or License conditions shall be deemed to be immediately effective and shall be incorporated as amendments as soon as possible. All such amendments shall be filed with the Authority.

### 1.5 Definitions

Definitions included in the Indian Telegraph Act 1885, The Telecom Regulatory Authority of India Act, 1997 as amended by TRAI (Amendment) Act, 2000 and Regulations and Orders published under the Act shall apply wherever available and shall take precedence.

In addition as used in this Agreement, the following terms shall have the meanings indicated hereunder:

**Act** means the Telecom Regulatory Authority of India Act, 1997 as amended by TRAI (Amendment) Act, 2000.

**Apparatus** means Telecommunication Apparatus.

**Authority** means the Telecom Regulatory Authority of India.

**Basic Telecommunications Services** mean services derived from the Public Switched Telephone Network (PSTN)

**Billing Information** means information relating to bills sent to Customers, which information supports the determination of the payments provided for in this Agreement. The Party billing the Customer shall obtain the necessary information.

**Busy Hour** means the continuous one-hour period lying wholly in a given time interval for which the traffic or the number of call attempts is greatest.

**CLI** means the process that identifies and transfers the identity (number) and category of the calling party from one network to the other.

**Call Attempt** means an attempt to achieve a connection to one or more devices attached to a Telecommunications Service.

**Ceiling(s)** mean(s) the upper limit(s) for interconnection charge for telecommunication services as may be specified by the Authority from time to time.

**Cellular Mobile Telecommunications Service** means a Telecommunication Service provided by means of a telecommunication system for the conveyance of messages through the agency of wireless telegraphy where every message that is conveyed thereby has been, or is to be, conveyed by means of a telecommunication system which is designed or adapted to be capable of being used while in motion. The Cellular Mobile Telephone Service refers to transmission of voice or non-voice messages over LICENSEE'S Network in real time only. Service does not cover broadcasting of any messages voice or non-voice, however, Cell Broadcast is permitted only to the subscribers of the service. The subscriber (all types, pre-paid as well as post-paid) has to be registered and authenticated at the network point of registration and approved numbering plan shall be applicable.

**Customer** means any person who is, or wishes to be, provided with any relevant Telecommunications Service by a Party.

**Default Carrier** means the carrier to whom calls are handed over in those cases where the subscriber has not exercised his choice of carrier.

**Directions** means directions issued by the Authority under Section 12(4) of the Act.

**Effective Call** means an answered call.

**Effective Date** means the commencement date of the Agreement

**Erlang** means the unit of telephone traffic defined by the International Telecommunication Union.

**Floor** means the lower limit of interconnection charges for a telecommunication service as may be specified by the Authority from time to time below which such charges shall not be offered.

**Forbearance** denotes that the Authority has not, for the time being, notified any interconnection charge or revenue sharing arrangement for a particular telecommunication service and the service provider is free to fix any charge for such service.

**Interconnection** means the commercial and technical arrangements under which service providers connect their equipment, networks and services to enable their customers to have access to the customers, services and networks of other service providers.

**Interconnection Charge** means the charge for interconnection by an interconnection provider to an interconnection seeker.

**Interconnection Provider** means the service provider to whose network an interconnection is sought for providing telecommunication services.

**Interconnection Seeker** means the service provider who seeks interconnection to the network of the interconnection provider.

**International Long Distance Telecommunication Service** means telecommunication services required to connect a local area of a public telecommunication network within India to a local area of a public telecommunication network in another country so as to allow for transmission of voice and non-voice signals.

**International Subscriber Dialling (ISD)** means direct interconnection between an end user in India with another end user in another country by means of direct dialling through public networks.

**Leased Circuits** means telecommunication facilities leased to subscribers or service providers to provide for technology transparent transmission capacity between network termination points which the user can control as part of the leased circuit provision and which may also include systems allowing flexible use of leased circuit bandwidth.

**Long Distance** Telecommunication Service means the telecommunication services required to connect one local area of a public telecommunication network to another within the territorial limits of India so as to allow for transmission of voice and non-voice signals across different geographical areas.

**License Agreement** means the Licenses referred to in the Preamble.

**National Standards** means the standards set by the Telecom Engineering Centre (TEC).

**Non-discrimination** in interconnection charge means that service providers shall not, in the matter of interconnection charges, discriminate between service providers except on the basis of substantial cost-differential, and that too only to the extent justified by such cost differential.

**Order** means the Telecommunication Tariff Orders issued by the Authority.

**Originating Network** means the network to which an originator of a telecommunication message is proximately connected to.

**Originating/ Transit/ Terminating Service Provider** means the service provider whose network is used for originating/ transit/ terminating a telecommunication message respectively.

**PSTN** means the Public Switched Telephone Network.

**Point of Interconnection** means a mutually agreed upon point of demarcation (based on TRAI determinations/regulations) where the exchange of traffic between the two Parties takes place.

**Regulations** means the regulations issued from time to time by the Authority pursuant to the power granted to it under Section 36 of the TRAI Act 1997 and the Amendment .

**Reporting Requirement** means the obligation of a service provider to report to the Authority at least 45 working days before implementing any new interconnection charge and revenue sharing arrangement for telecommunication services under the Regulation and any changes thereafter.

**Service Impairment** means (i) any interference with or impairment of service over any facilities of a Party, (ii) damage to the Telecommunications Apparatus of a Party, (iii) violation of any applicable law or regulation regarding the invasion of privacy of any Telecommunications carried over the Party's facilities or (iv) the causing of hazards to the employees of either Party or to the public.

**Set Up Costs** Of Interconnection means the initial cost of any engineering work needed to provide the specific interconnection facilities requested.

**Service Area** means the geographical area specified under the license throughout which the services are provided.

**System** means a telecommunication network consisting of basic access, switching nodes and transmission links, together with the operation and maintenance systems and network management systems.

**Subscriber Trunk Dialling** (STD) means direct interconnection between two end users within India by means of direct dialling through public networks.

**Terminating Network** means the network to which a receiver of a telecommunication message is proximately connected to.

**Transit Network** means the network through which telecommunication messages from originating networks or other transit networks are transmitted and delivered to terminating networks.

**Usage Charge** means the charge levied by a service provider for carriage of telecommunication traffic on its network.

**Value-Added Services** means such services as may be available over a Telecommunications System in addition to Voice Telephony or Data Services, and specifically those services listed as "Value-Added Services" in the Regulations.

**Voice Telephony Service** means the Telecommunications Service that provides Customers with the ability to conduct real-time two-way speech conversation via a network.

**Working Day** means any day from Monday to Friday, excluding holidays.

**WLL(M)** means limited mobility telephony service using wireless in local loop technology within a short distance charging area.