

ANNEX B-5.2
WHOLESALE BROADBAND – BITSTREAM LAYER 2



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1. General

- 1.1 This Annex sets out the Ooredoo offer for the Bitstream Layer 2 Service.
- 1.2 The Bitstream Layer 2 Service product is an access which enables the Access Seeker to provide high speed products and services to its End Users via Connections over a digital pathway across Ooredoo's network. The digital pathway consists of one or more wired/Wireless Link Connections, involving one or more Access Links between End User premises and one or more Aggregation Links.
- 1.3 The purpose of the Bitstream Layer 2 Service offer is to enable the Access Seeker to construct and provide its own broadband services and to resale at retail service.
- 1.4 The Bitstream Layer 2 Service is intended for broadband internet connectivity.
- 1.5 Ooredoo will not be responsible for the content of data conveyed through its Bitstream Layer 2 Service.



2 Definitions

- 2.1 The definitions in Annex A shall apply
- 2.2 The following specific definitions shall apply to this Annex:
- 2.2.1 "Bitstream Port" means the capability to provide a product to an In Service telephone number /CLI or a unique circuit reference number (CRN).
- 2.2.2 "Transfer" means a service that can be used by a Gaining Operator to move a Bitstream Port from the Losing Operator's network to the Gaining Operator's network to a Bitstream product of the Gaining Operator's choosing.
- 2.2.3 "Bitstream Layer 2 Service" means a Fixed Wholesale Access Service comprising the conveyance of IP messages (packets) from a customer's broadband line, across the Providing Party's network to a Point of Interconnection with the Requesting Party for onward connection to the destination defined by the IP address in each IP message. Such messages are routed to a particular Requesting Party according to a pre-determined nomination by the originating customer. The interface at the Point of Interconnection uses a Layer 2 technology, such as Asynchronous Transfer Mode (ATM – ITU Recommendation I.150) or Ethernet (IEEE 802.3).
- 2.2.4 "Unauthorized Provisioning of Services" means any activity undertaken that attempts to initiate a service change without the consent of the customer. This is also known as "slamming".
- 2.2.5 "Transfer Authorization Form (TAF)" means the form authorizing the Gaining Operator to submit the request to transfer on behalf of a Customer for the Bitstream Layer 2 Service only.
- 2.2.6 "Customer Authorization Form (CAF)" means the form completed and signed by the end user, or the recording of Third Party Verification, or the electronic form completed by the end user, or the recording of an Operator's internal customer verification to approve a change of services. CAFs are accepted for Migration Services.
- 2.2.7 "Customer" means a person subscribing to the Operator's service, including without limitation, end users and resellers.

- 2.2.8 "Gaining Operator" means the Party gaining a Customer through the Bitstream Port Transfer service or Migrations.
- 2.2.9 "Losing Operator" means the Party losing a Customer through the Bitstream Port Transfer service or Migrations.
- 2.2.10 "Migration" means the actual transaction for which an order is placed to move between eligible services.
- 2.2.11 "Migrations Product Description" means the document containing the details required to complete the migration between the two operators, which should include the requester customer account details, numbering details to be migrated, and check list and validation.



3 Service Set-Up

3.1 The Bitstream Layer 2 Service enables Internet Access Seeker to provide high speed services to its End Users via a digital pathway across Ooredoo's Network. The handover point of the service is at any of the below hand-over points:

- i. Sohar
- ii. Boushar

The MSAN is operated by Ooredoo and there is no possibility for the Access Seeker to technically alter the MSAN access link.

3.2 The Access Seeker can order MSAN lines at any of the specified geographical areas. Each batch of MSAN is standard provided with a 2 Mbps Access Links that provides the backhaul connection from the MSAN to the closest Provider Edge POP in Ooredoo network.

3.3 In case the Access Seeker opts for a higher contention ratio additional IP Access Links can be ordered in multiples of 2 Mbps.

3.4 To enable the Access Seeker the possibility to further aggregate the IP Access traffic before the handover points the Access Seeker can order IP Core Links IP Core bandwidth in multiples of 10 Mbps.

3.5 Ultimately the Access Seeker is fully responsible for the contention ratio between the number of MSAN end users and IP Access and IP Core link capacity ordered.

3.6 The Access Seeker has to order an internet lease line from Ooredoo to provide connectivity of the aggregated Bitstream Layer 2 Service connections to the Internet.

3.7 The Bitstream Layer 2 Service has two clear demarcation points:

3.7.1 Ooredoo is responsible for the operation and maintenance of the network from the Network Termination Unit (NTU, typically a wall-mounted RJ11 telephone jack output and splitter) in the connected premises (homes and businesses) until the IP Core Point of Interconnect where the aggregated Bitstream Layer 2 Service connections are handed over to the Access Seeker.

- 3.7.2 The Access Seeker is responsible for the operation, safety, protection, and maintenance of the cabling and equipment on the customer facing side of the Ooredoo NTU.
- 3.7.3 The Access Seeker is responsible for all cabling and equipment provided after Ooredoo hand-over point.
- 3.8 In case the requested Bitstream Layer 2 Service involves a line where currently no service is provided by Ooredoo, the potential subscriber will need to request a retail voice service from Ooredoo before the Bistream Layer 2 Service can be provided to the Access Seeker.
- 3.9 The maximum download/upload speed that can be provided over the MSAN line depends on the length of the Local Metallic Path between the NTU at the customer premises and Ooredoo MDF at the exchange where the Metallic path is terminated.
- 3.10 The Access Seeker will be able to market the services in agreed locations where MSANs are installed and the Bistream Layer 2 Service is available according to what is agreed in the Annex.
- 3.11 The Access Seeker will develop the service, market it to its customers, and take the full responsibility of bad debt and fraud emerging from their customers. The Access Seeker will also supply all customer care services.
- 3.12 Ooredoo shall not be responsible for the content of data conveyed through the Bistream Layer 2 Service.



4 Service Areas and Available Capacity

- 4.1 Due to the roll-out of Ooredoo network capacity, the service is only available in specific geographic areas. The list of geographic areas shall be made available on Ooredoo's website at <https://www.ooredoo.om/AboutOoredoo/Wholesale.aspx>.
- 4.2 The Bistream Layer 2 Service is available for the Access Seeker wherever Ooredoo has network infrastructure. Available areas depend on the deployment capacity in Ooredoo network. Ooredoo shall use its best efforts to make sareas available, based on the forecasts from the Access Seeker. The list of geographic areas shall be made available on Ooredoo's website at <https://www.ooredoo.om/AboutOoredoo/Wholesale.aspx>.
- 4.3 The Parties shall from time to time, according to what is agreed in the main body, agree on what capacity, counted as number of End Users, which is available per area.
- 4.4 It shall be noted that Ooredoo is not in the position to discriminate between different companies. Capacity available for the Bitstream Layer 2 Service cannot be pinpointed to a specific company.

5 Charges

5.1 Charges are outlined in Annex F – Pricing.

5.2 The cost of additional product features, specialized billing systems and/or network interfaces, non-standard connectivity and associated configuration, integration and testing are not included in the published tariffs. Such cases will be dealt as on a case-by-case basis against mutual agreed timelines and charges subject to TRA approvals.



6 Network Operations and Maintenance

- 6.1 Network alteration and data management amendment
- 6.1.1 In order to ensure the timely implementation of Network Alterations, requests for Network Alterations shall be provided by the Party requesting the alteration at least one (1) calendar month in advance of the requested implementation date.
- 6.1.2 The requested Party shall, if in a position to accept the Network Alteration proposed, provide an estimate of the costs involved within two (2) weeks of receipt of a Network Alteration request.
- 6.1.3 In the event that any Network Alteration causes the requested Party to incur costs then, unless it is otherwise agreed between the Parties, such costs shall be borne in full by the Party requesting the Network Alteration.
- 6.1.4 Network Alterations shall be carried out within the timescales laid down in this Section 6. If the requested Party believes that it is not in a position to proceed with the requested Network Alteration, either within the timescales requested or in any circumstances, the Access Seeker shall be advised within two [2] weeks of receipt of the Network Alteration request. In these circumstances both Parties shall make all reasonable efforts to resolve the situation, including recourse to the dispute resolution process as per main body of the Agreement.
- 6.1.5 In order to ensure the timely implementation of Data Management Amendments, notice of Data Management Amendments shall be provided by the Party requesting the amendment at least two [2] calendar months in advance of the requested implementation date.
- 6.1.6 Data Management Amendments shall be carried out within the time-scales laid down in this Section. If a requested Party believes that it is not in a position to proceed with the requested Data Management Amendment, either within the timescales requested or in any circumstances, the Access Seeker shall be advised within two [2] Weeks of receipt of the request. In these circumstances both Parties shall make all reasonable efforts to resolve the situation, including recourse to the dispute resolution process as per main body of the Agreement.
- 6.1.7 The Parties shall agree bitstream inter-operator maintenance process manual as part of a Joint Working Manual that contains specific procedures related to the

Bitstream Layer 2 Service and shall be developed jointly by all industry players once the request for the Bitstream Layer 2 Service is received. Within three months of such a request been made, Ooredoo will submit to the TRA for approval the text of the Joint Working Manual, together with a note signed by all involved parties stating whether the text is agreed by all. Where any differences exist, these shall be clearly identified in the accompanied note. The Joint Working Manual shall come into force once approved by the TRA.

- 6.1.8 The Parties shall agree network termination and installation processes and procedures as part of a Joint Working Manual that contains specific procedures related to the Bitstream Layer 2 Service and shall be deployed jointly by all industry players once the request for the Bitstream Layer 2 Service is received. Within three months of such a request been made, Ooredoo will submit to the TRA for approval the text of the Joint Working Manual, together with a note signed by all involved parties stating whether the text is agreed by all. Where any differences exist, these shall be clearly identified in the accompanied note. The Joint Working Manual shall come into force once approved by the TRA. This document shall define the responsibilities of all parties involved in the access, provision, and repair of different types of services using the Ooredoo network. Specifically, this document shall define the procedures and standards to which any party including the Customer, installing a NTU at the Customer's premises for Bitstream provisioning on copper paths, should adhere to.



7 Ordering and Delivery

- 7.1 With regards backbone capacity and network connectivity, the interconnect link (if required) shall be provided in no more than 3 months. Ooredoo shall take no more than 30 Working Days for connectivity to each customer. This delivery date is subject to the Requesting Party having fully cooperated with Ooredoo and that there will be no delays caused by factors outside Ooredoo's control such as, for example, due to the delay arising from the involvement of governmental entities.
- 7.2 Generic Ordering and delivery is handled according to the ordering and provisioning clauses of the main body, as per the charges herein.
- 7.3 The Parties shall agree on the requirements of a network plan from any party to the agreement prior to ordering the services.

Process for bitstream port transfer

- 7.4 The Bitstream Port Transfer service is available for use by the [Company] who has secured a DSL Transfer Authorization Form (TAF), as defined in the Definitions Section, from a Customer, and complies with the processes, procedures, and standards for the Bitstream Layer 2 Service as set out in the Joint Working Manual. These processes, procedures and standards shall be recorded in a Joint Working Manual that contains specific procedures related to the Bitstream Layer 2 Service and shall be developed jointly by all industry players once the request for the Bitstream Layer 2 Service is received. Within three months of such a request been made, Ooredoo will submit to the TRA for approval the text of the Joint Working Manual, together with a note signed by all involved parties stating whether the text is agreed by all. Where any differences exist, these shall be clearly identified in the accompanied note. The Joint Working Manual shall come into force once approved by the TRA.
- 7.5 In all instances the [Company] shall retain these TAFs for at least six (6) months from the date of submitting the Bitstream Port Transfer order. If a Customer complains to a Losing Operator regarding the change of the service provider, the Losing Operator is entitled to request a copy of the TAF, and the Gaining Operator must provide a true copy of the TAF to that operator within three (3) working days. If the Losing Operator is not satisfied with the copy of the TAF produced by the Gaining Operator, then the Gaining Operator must provide access to the original TAF within three (3) working days.

Migration services to and from the Bitstream Layer 2 Service for the gaining and losing operator (including bulk migrations)

- 7.6 Migration Services to and from the Bitstream Layer 2 Service, including the IP service, are as set out in the Migrations Product Description.
- 7.7 Subject to above clause, Migration orders shall be subject to the requesting Operator obtaining a complete Wholesale Operator Consent Form ("WOOCF") or a complete CAF, if applicable.
- (a) Without prejudice to the generality of the above, it shall not be mandatory for the Gaining Operator to procure and/or furnish a CAF in respect of CAF Exceptions, provided however that where the Gaining Operator decides not to procure and/or furnish such a CAF, Ooredoo shall have no liability for any loss or damage to the Customer which arises directly and solely from the absence of such CAF.
 - (b) Subject to sub-clause (a) above, the Gaining Operator will indemnify and hold Ooredoo harmless against any and all claims, demands, actions, damages, costs, and expenses for loss or damage to the Customer which arise directly and solely from the Gaining Operator's decision not to procure and/or furnish a CAF in respect of a CAF Exception.
- 7.8 Migrations shall be subject to breaks in service as set out in the Migrations IPM. The Parties shall endeavor to minimize the break in service for individual end users.

Provisions for unauthorized provisioning (slamming)

- 7.9 A Party shall not engage in the Unauthorized Provisioning of the Bitstream Port Transfer services. Nothing in this Clause shall prejudice the rights of the TRA at any time. Where an incident(s) of Unauthorized Provisioning of the Bitstream Port Transfer service is detected by either Party, the incident(s) shall be notified to the Gaining Operator. Each Party shall use their best endeavours to resolve the matter. Where complaints concerning incident(s) of Unauthorized Provisioning of Bitstream Port Transfer services cannot be resolved in accordance with this Clause or within fifteen (15) working days of the Gaining Operator being notified pursuant to Clause 7.5, the Losing Operator shall have the option of pursuing dispute resolution process as outlined in the main body of the Agreement.

7.10 In addition to the above detailed technical and business processes and procedures will be developed by Ooredoo and Access Seeker and approved by TRA.



8 Fault management

- 8.1 Generic fault management is handled according to the sections in the main body of this Agreement.
- 8.2 In case of a Metallic Path fault reported by the Access Seeker , Ooredoo will perform a connectivity test based on the provisioning of a Narrowband Service between the NTU at the End User Premises facing the PTSN network and the MDF at Ooredoo premises.
- 8.3 If such test shows that connectivity is affected then Ooredoo will take required actions to restore the fault. The repair turn-around time will be in line with the requirements set out in its license.
- 8.4 Under all circumstances, the Access Seeker is fully responsible for the end-to-end service and customer care provided, which means that any inquiry of the End User towards Ooredoo will be re-directed to the Access Seeker .



9 Forecasts

9.1 Forecasts is handled according to the main body of the Agreement.