

REFERENCE OFFER FOR PROVISION OF WHOLESALE ROAMING RESALE ACCESS

Under Article 3 of Regulation (EU) No 531/2012 on roaming on public mobile communications networks within the Union /*Supplemented on 19.12.2013 in compliance with CRC's recommendations* /

1. Subject and Scope:

This Reference Offer /hereinafter referred to as "RO" or "the RO"/ describes the main terms and conditions for the provision of Wholesale Roaming Resale Access which will be subject to negotiation between TELENOR and Access Seekers of such access.

The Access Seeker may offer regulated roaming services to customers situated in the EU (EEA if applicable).

The Access Seeker is entitled by Art. 3 (1) from the Regulation (EU) No 531/2012 on roaming on public mobile communications networks within the Union /hereinafter referred to as Roaming Regulation/ to raise reasonable requests to get access to TELENOR's regulated roaming services.

TELENOR will provide any eligible Access Seeker, according to BEREC Guideline 4, with non-discriminatory access to these regulated roaming services compliant to Art. 3 from the Roaming Regulation. TELENOR will provide additional services which are not regulated but required to provide roaming services.

For the avoidance of doubt, Access Seeker shall only be allowed to resell the regulated services provided under the Wholesale Roaming Resale obligation to EU/EEA roaming customers.

Interested Access Seekers are asked to contact roaming@telenor.bg for a draft contract of the Wholesale Roaming Resale Access Agreement. The Access Seeker has to provide proof of its authentication as an undertaking entitled by the Regulation.

2. Definitions:

2.1. "Roaming" means a service in a mobile network, which allows a subscriber of an undertaking providing public electronic communications services, over public mobile electronic networks, to use the services provided by the undertaking in the networks of another foreign undertaking providing public electronic services, over public mobile electronic networks, without being a subscriber of the latter. For avoidance of doubt national roaming is excluded from the scope of this document.

2.2. "Roaming customer" means a customer of a roaming provider of roaming services, by means of a terrestrial public mobile communications network situated in the Union, whose contract or arrangement with that roaming provider permits roaming.

2.3. "Regulated roaming call" means a mobile voice telephony call made by a roaming customer, originating on a visited network and terminating on a public communications network within the Union or received by a roaming customer, originating on a public communications network within the Union and terminating on a visited network.

2.4. "Regulated roaming SMS message" means an SMS message sent by a roaming customer, originating on a visited network and terminating on a public communications network within the Union or received by a roaming customer, originating on a public communications network within the Union and terminating on a visited network.

2.5. "Regulated data roaming service" means a roaming service enabling the use of packet switched data communications by a roaming customer by means of his mobile device while it is connected to a visited network. A regulated data roaming service does not include the transmission or receipt of regulated roaming calls or SMS messages, but does include the transmission and receipt of MMS messages.

2.6. "Wholesale roaming access" means direct wholesale roaming access or wholesale roaming resale access.

2.7. "Wholesale roaming resale access" means the provision of roaming services on a wholesale basis by a mobile network operator different from the visited network operator to another undertaking for the purpose of that other under-taking providing regulated roaming services to roaming customers.

2.8. "Access Seeker" means an undertaking entitled, under the Law on electronic communications, to provide roaming services. This may be MNOs, full and light MVNOs and resellers.

2.9. "Personal data" means information about a natural person who is identified or can be identified directly or indirectly by an identification number or by one or more specific features.

2.10. "Confidential Information" means any information /verbal, in writing or in whatever form/, that is marked as confidential by the submitting party or which information with a view to its content and/or intended use is normal to be accepted as confidential by the receiving party.

3. Timeline:

3.1. The Access Seeker's initial request for wholesale resale roaming access shall be processed in timely fashion and professional manner. The Access Seeker shall be acknowledged about the acceptance of the request and the information needed for the further processing of its request.

If necessary or requested by the Access Seeker TELENOR shall grant the possibility to orally discuss the access request.

3.2. TELENOR shall provide the Access Seeker with a draft contract one month after the initial receipt of the request.

3.3. The wholesale roaming access shall be granted within a reasonable period of time not exceeding three months from the conclusion of the contract.

3.4. Where the Access Seeker desires to enter into commercial negotiations to also include components not covered by this Reference Offer, TELENOR shall respond to such a request within two months from its initial receipt.

4. Exchange of Information:

4.1. The Access Seeker will get informed within reasonable term after its request about necessary information to be provided to TELENOR in order to enable the further processing of its request.

4.2. Delays in providing such information will not count towards any relevant time limit under this Reference Offer.

4.3. The following information will be provided by TELENOR:

4.3.1. Technical specifications (interfaces and protocols) which are necessary for implementing the wholesale roaming resale access offered under this Reference Offer.

4.4. TELENOR requests the following information to be provided by the Access Seeker:

4.4.1. Evidence that Access Seeker is entitled under the Law on Electronic communications to provide roaming services to roaming customers.

4.4.2. Technical information (interfaces and protocols) that provide information on the compatibility with the services offered under this Reference Offer.

4.5. The exchange of information is subject to a Non-disclosure agreement /NDA/, signed between TELENOR and the Access Seeker, and protecting both parties' interests from and against illegal use, disclosure, etc. of information. The draft NDA is prepared and proposed by TELENOR.

5. Provided Services:

The services provided under this Reference Offer shall be defined in a separate Annex No. 1 attached hereto.

6. Non - discrimination /Supplemented on 13.02.2014 in compliance with CRC's recommendations/

6.1. Where services under this Reference Offer are provided in accordance with BEREC's Guidelines, all terms and conditions of supply (except price) shall be equivalent to those relevant for the provision of services to the TELENOR itself.

Without prejudice to the generality of this requirement, it shall apply in particular to:

- a) the availability of access services and necessary facilities;
- b) maintenance periods;
- c) repair times in case of malfunctions;
- d) process of ordering and delivery;
- e) process of announcing new or redefined access services;
- f) process of supply of information.

7. Fraud Preventions:

7.1. In order to prevent fraud, Access Seeker will have the option to place barring orders.

Therefore TELENOR provides to Access Seeker:

- r Barring all outgoing calls (BAOC); Barring all incoming calls (BAIC).

7.2. Further TELENOR will provide fraud prevention service upon request by Access Seeker and based on a commercial arrangement between the Parties. However, this will not guarantee fully fraud non-existence, and TELENOR will not cover losses to Access Seeker generated by his customers fraudulent activities.

7.3. Parties agree to cooperate in avoiding fraudulent behavior particular to monitor Access Seekers end-customers' usage on fraud potential.

7.4. Fraudulent behavior is agreed to be given particularly in case:

SIM-Cards are used by Access Seeker's end-customers to offer telecommunication services, switching or interconnection services to third parties;

and/or in case SIM-Cards are used by Access Seeker's end-customers in GSM Gateways or in so-called SIM-Servers for purposes of routing telecommunication traffic (so-called "SIM-Boxing");

and/or in case SIM-Cards are used by Access Seeker's end-customers to automatically set-up permanent connections not for purposes of personal communication but for commercial reasons (to generate interconnection fees).

7.5. The Party identifying any fraudulent use will inform the other Party without undue delay. In case of detected fraudulent use, Access Seeker shall upon TELENOR's request deactivate the respective end-customer's SIM-Card according to the commercial agreement between the Parties.

7.6. TELENOR reserves the right to deactivate fraudulent used SIM-Cards based on his judgment, for reasons of minimizing commercial losses **and/or** any adverse effects for the network availability of the Parties due to such fraudulent use.

7.7. Access Seeker will be obliged to make guarantee based on amount of SIM Cards provided from TELENOR. The amount of guarantee per SIM CARD will be described in the commercial arrangement between the Parties.

8. Service Quality, Faults, Maintenance and SLAs:

8.1. TELENOR agrees to provide the Access Seeker with all relevant information on faults or planned maintenances as far as TELENOR itself is informed by its roaming partners.

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8.2. As TELENOR has agreed roaming agreements according to the standard GSMA documents, and SLAs are not used therein, TELENOR cannot commit to dedicated performance KPIs as part of SLAs.

8.3. However, TELENOR commits to treat Access Seeker in a non-discriminatory way and Access Seeker's end-customers will receive the same services according to the best effort principle than TELENOR's own end-customers receive in the roaming partner's network.

8.4. TELENOR commits to not discriminate between its own end-customers and Access Seeker's end-customers in relation to the service quality and coverage on its roaming partner's network and/or the fault detection, fault handling and restoration of any incidents compared to TELENOR's own end-customers, provided that these actions are under TELENOR's control. Discrimination will only be allowed in case of fraudulent behavior of Access Seeker's end-customers as described in this term sheet.

8.5. TELENOR will provide Access Seeker with the same information on operational performance of TELENOR's roaming partners' networks as TELENOR provides to its other wholesale partners.

8.6. Parties will negotiate in good faith on compensation in case TELENOR fails to meet any of the according obligations and act in an unjustified discriminatory way.

8.8. Where TELENOR has control over processes related to service ordering, provisioning and delivery to customers of the access seeker, TELENOR will not discriminate these customers versus TELENOR customers. TELENOR and Access Seeker will negotiate in good faith to agree on reliable processes and timelines associated with ordering, provisioning and delivery where appropriate.

8.9. The Service Quality, Faults, Maintenance and SLAs shall be specified in the Wholesale Roaming Resale Access Agreement that is going to be signed between TELENOR and the Access Seeker taking into account the specifics of the requested services, the available hardware, software, etc. Depending on the type of the services offered to and requested by the Access Seeker there could be different scenarios and constraints. In case that the Access Seeker is using wholesale functionalities from TELENOR, the Access Seeker must fully comply with the existing procedures in place with regard to interoperability with other partners and internal clients used by TELENOR. By any mean the exposed requirements in the scope of the offer should not lead to significant customization effort, which makes the request unreasonable. In case that the Access Seeker is requesting retail functionalities from TELENOR any specific requirements should not infringe the existing security and regulatory procedures in place.

9. Other Interfaces and Used Information Systems:

9.1. Physical and electric characteristics for 2 Mbps transmission links:

9.1.1. The interface of the connection line shall respond to the following specifications of the E1 traffic ports /according ITU-T G.703/:

- Γ Bite rate: 2048 Kbit/s ITU-T G.703;
- Γ Code: HDB3 ITU-T G.703;
- Λ Load impedance: 75 , coaxial connector ITU-T G.703;
- Γ Pulse mask: ITU-T G.703.

9.1.2. The admissible jitter of the incoming port shall meet the requirements of ITU-T G.823.

9.1.3. Protection against surge and lightening.

9.1.3.1. Recommendations ITU-T K.27, K. 35, K.40 and K.41 shall apply. Connections of E1 ports, which do not meet the protection requirements, are not allowed.

9.1.4. Jitter and Wonder (Low jitter) of E1 interface traffic is allowed only in the following cases:

- Π Tolerances on the network output jitter for E1 traffic interfaces shall comply with the ITU-T G.823;
- Π Tolerances on the network output Wonder for E1 traffic interfaces shall comply with the ITU-T G.823.

9.2. Physical and electric characteristics for 155 Mbps transmission links:

- U Wave length in the range 1261nm - 1360nm (1310nm) according to ITU-T G.957;
- Π Mean transmission power: 8 dBm до -15 dBm;
- U Minimum sensitivity: 28dBm;
- Π STM-1 frame structure according to ITU-TG.707, clause 6.2;

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- n The payload of the STM-1 frame has TUG-2 structure with VC-12 (2Mbit/s);
- u SOH and POH of STM-1 frame are according to ITU-TG.707, clause 9.

9.3. Signaling interfaces and protocols for voice and SMS services.

9.3.1. TELENOR supports ETSI MAP 09.02 v.3 (3GPP 29.002. All international traffic routes operate ITU-T ISUP 2000 (ETSI v4) that is compliant with ITU-T Recommendation Q.767.

9.3.2. For outbound roaming TELENOR's pre-paid clients are served by CAMEL Phase 2. **9.4** Signaling interfaces and protocols for data services (GPRS).

9.4.1. All the GPRS interfaces are standardized in the ETSI GSM recommendations.

These are:

- n SGSN - HLR interface "Gr" -> 3GPP 23.060 and 29.002;
- n GSN - GGSN - "Gn" (Intra Network) & "Gp" (Inter Network) -> 3GPP 23.060 and 29.060 (GTP v0, v1 and v2).

9.4.2. The Inter Network DNS - DNS communications shall be performed as per IETF RFC 1034 and RFC 1035. DNS uses IP to transfer the information exchange.

9.5. Billing interfaces:

9.5.1 . Voice and SMS billing interfaces:

9.5.1.1. Postpaid - based on TAPIN files.

9.5.2. Prepaid options:

- r Hot Billing - shall be the same as applies for postpaid customers;

On-line charging will be implemented using on-line charging through TELENOR SMSC and Prepaid System. The on-line charging shall be based on new tariff plans per Access Seeker with respective specific prices. The Access Seeker shall indicate end-user prices for its customers.

9.6. Interfaces for on-line billing information to subscribers:

Postpaid and prepaid customers - subject to negotiations in view of the specific request;

9.7. Access Seeker will obtain and maintain equipment that corresponds to TELENOR's specifications and fulfill the according technical prerequisites for connecting to TELENOR's systems. In this context, hardware- and software-compatibility as well as compliance with usual security standards defined by TELENOR have to be secured in particular. Unusual security standards are those standards which prevent unauthorized access but allow Access Seeker for authorized access to information systems.

9.8. The interfaces and information systems shall be specified in the Wholesale Roaming Resale Access Agreement that is going to be signed between TELENOR and the Access Seeker taking into account the specifics of the requested services. Depending on the type of the services offered to and requested by the Access Seeker there could be different scenarios and constraints. In case that the Access Seeker is using wholesale functionalities from TELENOR, the Access Seeker must fully comply with the existing procedures in place with regard to interoperability with other partners and internal clients used by TELENOR. By any mean the exposed requirements in the scope of the offer should not lead to significant customization effort, which makes the request unreasonable. In case that the Access Seeker is requesting retail functionalities from TELENOR any specific requirements should not infringe the existing security and regulatory procedures in place.

10. Testing procedures:

10.1. The Testing procedures shall be specified in the Wholesale Roaming Resale Access Agreement that is going to be signed between TELENOR and the Access Seeker taking into account the specifics of the requested services, the available hardware, software, etc. Depending on the type of the services offered to and requested by the Access Seeker there could be different scenarios and constraints. In case that the Access Seeker is using wholesale functionalities from TELENOR, the Access Seeker must fully comply with the existing procedures in place with regard to interoperability with other partners and internal clients used by TELENOR. In case that the Access Seeker

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is requesting retail functionalities from TELENOR any specific requirements should not infringe the existing security and regulatory procedures in place.

11. Pricing:

11.1 TELENOR offers all regulated roaming services according to regulated Inter-Operator Tariff (IOT):

	01.07.2012	01.07.2013	01.07.2014	15.06.2017
Data	25 euro cents	15 euro cents	5 euro cents	0,77 euro cents
Voice (MO)	14 euro cents	10 euro cents	5 euro cents	3,2 euro cents
SMS (MO)	3 euro cents	2 euro cents	2 euro cents	1 euro cent

11.2 Any other services which are not part of the regulated wholesale charges will be charged based on a separate price list - duly described in the Wholesale Roaming Resale Access Agreement.

11.3. The termination of incoming SMS will be free of charge to the Access Seeker.

11.4. All tariffs are in Euros and exclusive of applicable VAT.

11.5. Prices are per minute, item (e.g. SMS), Megabyte (MB) in case of data, no peak/off-peak differentiation, per 30/1 second charging for all traffic on the TELENOR Network according to Art.7&8 of the Roaming Regulation.

11.6. Invoicing shall be on a monthly basis with a payment term of 15 days.

12. Interconnection /Supplemented on 19.12.2013 in compliance with CRC's recommendations/:

In case of real time connections, the Parties shall implement procedures for traffic and network management for ensuring the orderly transport of traffic in case of malfunction or overflow. Suitable procedures shall be agreed in the Wholesale Roaming Resale Access Agreement signed between the Access Seeker and TELENOR.

13. Contract Duration:

13.1. The Wholesale Roaming Resale Access Agreement signed between the Access Seeker and TELENOR shall be effective for a period of one year as of the date it enters into force.

13.2. The Wholesale Roaming Resale Access Agreement enters into force from the date it has been implemented in TELENOR's systems and readiness is announced by writing to the Access Seeker.

13.3. After the expiration of the term of the Wholesale Roaming Resale Access Agreement under item 11.1, the Wholesale Roaming Resale Access Agreement shall be automatically extended for a new one year period unless terminated with 3 (three) months notice period before expiry of Initial or any subsequent Contract Period or any extension periods. This rule within the above sentence shall be applied many times and automatically after the expiring of each subsequent period of one year.

14. Contract Termination:

The Wholesale Roaming Resale Access Agreement between TELENOR and the Access Seeker could be terminated on grounds, which will be listed and included in the Agreement. In particular, Telenor will have the right to terminate the Wholesale Roaming Resale Access Agreement in case the Access Seeker fails to renew the Guarantee or increase the amount of the Guarantee when needed or delays payment of any of its obligations, etc.

15. Security and Data Privacy:

15.1. Each Party shall comply with the applicable data protection and other laws and regulations of telecommunication services of Bulgaria and shall indemnify and hold harmless the other Part from and against all

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costs or expenses of any kind arising out of any claim or demand brought by any person, entity or authority as result of any breach or alleged breach of such data protection laws and telecommunications laws and regulations.

16. Choice of Law and Dispute Resolution:

16.1. The Wholesale Roaming Resale Access Agreement and any matters relating hereto shall be governed by and construed in accordance with the Bulgarian law, the relevant European legislation and the BEREC's Guidelines on the matter.

16.2. The disputes between the parties in relation to the Wholesale Roaming Resale Access Agreement shall be settled by means of negotiations. In case that an agreement is not reached within a period of 2 /two/ months after delivering a written request for solving the dispute, each party may refer the dispute for discussion and solving by the competent Bulgarian court.

16.3. This Reference Offer will be updated from time to time to ensure compliance with the relevant Bulgarian and European legislation and the updates of BEREC's Guidelines or other relevant documentation.

17. Bank Guarantee:

17.1. TELENOR has the right to request from the Access Seeker a Bank Guarantee in order to assure payments of all amounts due. An infringement under the Wholesale Roaming Resale Access Agreement, signed between the Parties, and performed by the Access Seeker, is not a precondition for TELENOR's right to request Guarantee.

17.2. The terms and conditions for determination of the amount, constitution, increase and decrease of the amount of the Bank Guarantee shall be set out in the Wholesale Roaming Resale Access Agreement between TELENOR and the Access Seeker. These conditions shall be determined independently for each separate case depending on the Access Seeker's specific requests. The Bank Guarantee will be determined based on the roaming traffic forecast, actual accumulated traffic, number of customers, number of provided SIM cards, types of services provided by TELENOR to the Access Seeker, etc.

17.3. TELENOR could unilaterally and without notification stop and/or restrict the services when TELENOR's system shows that upon a given moment there is traffic provided to the Access Seeker, which has reached a value in a total amount of more than 90% of the amount of the Bank Guarantee/deposit. TELENOR is entitled to exercise the right under the preceding sentence even in case that the payment is still not due, it is not valued in accordance with and within the term of the Wholesale Roaming Resale Access Agreement **and/or** an invoice is still not issued for it. The services shall be renewed after the Access Seeker increases the Guarantee in order to cover all of the accumulated amounts due to TELENOR.

18. Restrictions:

In view of the nature of the services, the different types of eligible Access Seekers and types of requests, during the negotiation, signing and implementation process many restrictions/obstacles could appear, which could be of a technical, commercial, legal and other nature and which may hinder and/or delay the signing **and/or** implementation process. Such obstacles shall be considered as restrictions under Guideline No. 32 of "BEREC Guidelines on the application of Article 3 of the Roaming Regulation - WHOLESale ROAMING ACCESS". In particular, as such restrictions shall be considered any of the following, which are not listed exhaustively: inability to recover of the implementation costs and investments within one year; data service for prepaid customers shall not be provided while roaming; Access to premium numbers and value-added services shall not be provided in roaming. Further, customer care (CC) to Access Seeker end customers could be rendered only as additional service and if possible, at fair and reasonable prices, and only after a request which on the merits of the case appears to be a reasonable one in accordance with the BEREC's Guidelines. For avoidance of doubt, CC to Access Seeker (as well as any other service) requires an explicit written consent, reached between the parties to the Wholesale Roaming Resale Access Agreement.

19. Reasonable Requests:

TELENOR will consider only reasonable requests for access. Each request will be judged on the merits of the case. In particular TELENOR may at its own discretion deny any request which requires deployment of an undue level of resources to implement and/or when the implementation costs will not be recovered within a reasonable period, which shall not exceed the initial contract term.

ANNEX No.1

SERVICES PROVIDED UNDER ITEM 5 OF THE REFERENCE OFFER

I. Wholesale Roaming Resale Access

1) Regulated Roaming Services:

- a.** Delivery of Mobile originated roaming calls generated by the Access Seeker's Roaming Customer from EU/EEA roaming network (VPMN) to EU/EEA destinations excluding premium numbers.
- b.** Delivery of Mobile originated roaming SMS generated by the Access Seeker's Roaming Customer from EU/EEA roaming network (VPMN) to EU/EEA destinations excluding premium numbers.
- c.** Delivery of Mobile roaming data traffic generated by the Access Seeker's Roaming Customer from a EU/EEA roaming network (VPMN) to a packet data network either via a GGSN of TELENOR or, up on TELENOR's decision, via a GGSN of the VPMN.

2) Access to transit services used by TELENOR for its own roaming businesses:

3) Access to all information on end-user usage:

4) Access to all wholesale functions and facilities provided by TELENOR and used to supply its own retail roaming business, in particular:

- a.** Negotiation, implementation and management of its roaming relationships;
- b.** Signaling;
- c.** Authentication;
- d.** Data clearing;
- e.** Wholesale Billing;
- f.** Interconnect;
- g.** Fraud handling with its roaming partners (not towards Access Seeker's end-customers);
- h.** Provisioning;
- i.** Management of Global Roaming Exchange/IP Exchange.

5) Access to relevant interfaces, protocols or relevant operational support systems by TELENOR in order to enable Access Seeker to carry out for itself the necessary retail functions towards its end-customers in particular:

- a.** billing
- b.** control of pre-pay credit
- c.** control of bill shock
- d.** transparency obligations

6) Termination of incoming calls and outgoing SMS and outgoing calls/SMS-s to non EU destinations:

- a.** Provision of end-to-end delivery of mobile terminated calls from a national or international network to the roaming network (VPMN) where the Access Seeker's Roaming Customer is located.

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- b.** Provision of end-to-end delivery of mobile terminated SMS from a national or international network to the roaming network (VPMN) where the Access Seeker's Roaming Customer is located.
 - c.** Provision of end-to-end delivery of mobile originated roaming calls generated by the Access Seeker's Roaming Customer from a roaming network (VPMN) to non-EU/EEA destinations.
 - d.** Provision of end-to-end delivery of mobile originated roaming SMS generated by the Access Seeker's Roaming Customer from a roaming network (VPMN) to non-EU/EEA destinations.
- 7)** Retail functions provided by TELENOR to the Access seeker:
 - a.** Billing of post-pay services
 - b.** Credit control of pre-pay services
 - c.** Services to implement retail transparency obligations.
- 8)** The Access Seeker is entitled to ask for the provision of any other services.