Orange الخط الثابت

ص.ب ١٦٨٩ عمان ١١١١٨ الأردن
هاتف: ٩٦٢٦٤٦٠٦٦٦٦+
فاكس: ٩٦٢٦٤٦٠٦١١١+
www.orange.jo

الرقم: 6 / 19 /15/ 11 / 2181

التاريخ : ١ / ٦ / ٢٠٢٠

عطوفة الرئيس التنفيذي لهيئة تنظيم قطاع الاتصالات المحترم

الموضوع : القرار التنظيمي الخاص بنقاط الربط على الانترنت (IXPs)

تحية وبعد،

اشارة الى القرار التنظيمي الصادر عن مجلسكم الكريم رقم (1-6/2020) تاريخ 2020/4/23 والذي تم نشره على موقع هيئتكم الالكتروني **والخاص بنقاط الربط على الانترنت Internet Exchange Points in Jordan (IXPs)**، واستنادا الى المادة (17) من تعليمات القواعد الاجرائية لاصدار التعليمات وتعديلها، نرفق طيه طلب شركتنا اعادة النظر في القرار التنظيمي المشار اليه بأعلاه. املين اخذه بعين الاعتبار.

وتفضلوا بقبول فائق الاحترام،،،

المدير التنفيذي للشؤون القانونية والتنظيمية والمصادر

م. ابراهيم حرب

شركة الاتصالات الاردنية – أورانج

Jordan Telecommunications Company (Orange Fixed) Request for Reconsideration to the Regulatory Decision for Establishing an Internet Exchange Point (IXP) in Jordan

According to Article (17) of the Rule Making Instructions, Orange Fixed hereby submit its Request for reconsideration to the Regulatory Decision for Establishing an Internet Exchange Point in Jordan issued pursuant to TRC's Board of Commissioners decision number (1-6/2020) dated (23/4/2020), which has been published on TRC website and Facebook page on (3/5/2020).

Due to the following reasons, Orange Fixed asks the TRC to reconsider the IXP regulatory decision entirely:

A) Absence of Prior Meetings, and Considerations for Consultation and Discussions

1. During the course of the consultation, Orange Fixed has asked to meet the TRC in order to address areas of no clarity, uncertainty and inconsistency, which exist in the draft decision. However, TRC did not respond to our request of a meeting, and later issued the IXP decision with numerous amendments and additions (e.g. multilateral agreements, IXP selection process, technical details), that have not been subject to the consultation, during the COVID-19 crisis lockdown without further consultation or meeting with concerned stakeholders.

2. The scope of the initial discussion on the establishing of an IXP was mainly focused on establishing an IXP for the purpose of national traffic peering (Jordan Internet Exchange – JIEX)based on non-for-profit model. The TRC draft decision expanded the original scope to include CDN, Internet-based networks, and cross-country Internet traffic, and for profit models, which deviates from the main goal which is to exchange local traffic.

3. TRC did not respond in details to comments and responses during the consultation; this evident in the document titled "Matrix of TRC Responses to IXP Consultation" that accompanied the regulatory decision. TRC responses was restricted to "noted", "generic-noted", "noted", "updated", "not agree", etc. Orange Fixed believes that by such response, TRC did not published reasoned decision, setting out not only why the decision was made but also providing the full objective legal and necessary analysis that underlies that conclusion, an assessment of the impact on affected parties of the resulting regulatory burdens and to observe the gradual application of

these decisions, which deviated from TRC mandate pursuant to Article (19) of the ICT Policy.

B) No Prior Impact Assessment

1. Orange Fixed strongly believes that the establishment of an IXP in Jordan shall be subject to prior assessment to weigh its cost, benefits and risks, taking into consideration the market situation, legal and regulatory environment, and most importantly; the optimal IXP business model, governance structure and operational model, which are detrimental for the success of an IXP. TRC only conducted a high-level survey questionnaire during June 2019 and the relevant public consultation during started on Nov 2019, and ended on Jan 2020.

2. TRC has not conducted an impact assessment that consider the following aspects:
   - The share of domestic traffic out of total internet traffic.
   - The presence of CDNs major international content providers caching services in Jordan.
   - The existence of international capacity routes, which are basic enabler for the effective operation of any IXP.
   - Estimation of cost and benefits for the introduction of an IXP in Jordan.
   - The cost of regulatory intervention, and its effect of the facilitation of IXP establishment in Jordan.
   - Technical and security risks on each operator network.
   - The availability of an alternative international transmission routes.
   - Amount of investment needed as the business model, operational model and governance model of the IXP are not clear.
   - Evaluating the pros and cons of different business models. Orange Fixed believes that a non-mandatory approach with starting small and growing as the business grows is a success factor for IXP in Jordan.

C) Clarity, Certainty and Consistency

1. Licensing. A part from licensing requirements for the Members, the licensing of the IXP, CDNs, and Person wishing to join the IXP is not clear in the decision. The following statement appeared in Article (4.2) of the decision: *"...once a **CDN** or **Person** wishes to connect to **IXP**..."*, whereas a Person has been defined in the decision as *"any individual, company, corporation, partnership, joint venture, consortium, government or governmental entity"*. This definition opens the door for

unlicensed entities to join the IXP including CDNs, banks, data centers, vendors, etc. Orange Fixed believes that this is considered as discrimination against Members (Licensees) and implies exclusion from licensing requirements for entities that build, operate and manage telecommunication network, and provide public telecommunications services within the territory in Jordan. Moreover, this shall cause total abandonment of ICT and connectivity service sold to these enterprises by telecom operators, which shall negatively affect ICT sector revenues and future investment.

2. Neutral Entity. The neutrality of the IXP has been defined in the decision in terms of *"competitive advantage from IXP location"* and *"favor to any Member over any other"*. It is not clear if this meant to address governance structure and ownership model of the IXP or it is intended to address operational aspects as carrier-neutral IXP. Orange believes that clarification is necessary with respect to this definition; the terms *"competitive advantage"* and *"favor"* are general terms that need to be specified and detailed to avoid any misinterpretation, conflict or dispute in the future. On the other hand, the current definition exclude current licensees from establishing an IXP, as this would be violation of *"Neutrality"* as defined, and would consequently abandon any local investment opportunities on this regard, taking into consideration that major players in Jordan have already redundant locations and high available data centers and infrastructure will be the only factor that can make IXP successful.

3. Role of CDN. As CDN is not a member and as all major service providers already hosting CDN in their network, the role and involvement of CDN in the IXP is not clear. The main question is to have very clear CDN role in IXP if they will not be a member.

4. Business Model. The business model is one of the key success factors for an IXP. The decision does not clearly specify the IXP business model, operating model, governance structure/organization, ownership and shareholding, etc.

5. Peering. Peering definition is not clear; it is being defined in Article (2.30) as Peering is a bilateral agreement between two ISPs, whereas it should be defined in technical terms to address traffic exchange. On the other hand, the decision is uncertain regarding the current transit and peering arrangements between operators, where telecom operators in Jordan are already having bilateral national peering arrangements for national traffic.

6. Redundant IXP Location. There are uncertainties as door open for any entity to establish additional redundant IXP physical location(s) and control governance/setup of the new site(s) are not clear.

D) IXP Selection Process

1. The IXP selection process and relevant application have not been mandated without prior consultation with operators. Orange Fixed believes that constitute a deviation from the principle of transparency and open consultation process mandated pursuant to Article (19) of the ICT Policy.

2. Orange Fixed reiterates it position that that TRC intervention with reference to the establishment of an IXP should be limited to promote the introduction of IXP, by a regulatory statement that set basic principles and minimum requirements for the structure and operation of an IXP, and provides guidance for interested entities in providing IXP services in Jordan. Orange Fixed believes that any regulations, including the IXP Selection Process, imposed in this stage of IXP development in the market would be prohibitive, and TRC should aspire for a market-driven approach leaving outcomes to market forces and for IXP to develop organically.

3. In the definition of IXP, TRC specified that *"...is assigned to a neutral authority or organization..."* Orange Fixed believes that principle of assignment is not accepted entirely, as it lacks legal reference and prior assessment, and should be withdrawn as this will have negative impact on the market due to creation of parallel/alternative licensing scheme. And again the term "authority" opens the door for questions regarding the legal licensing status of the IXP, which might mean a governmental entity. This aspect requires extensive clarification from TRC.

4. Orange Fixed also believes, that the reasoning introduced by TRC, which is to local internet traffic, is not justified and considered a direct intervention in competitive dynamics of the market which could have impact on the effectiveness of the competition in the market.

5. The selection process and relevant application introduced raises again the questions related to licensing of IXP, CDNs and Persons wishing to join the IXP. This process implies a separate licensing scheme and deviation from current licensing regime and licensing requirements. Licensing is already a regulated topic detailed and

extensively specified in the telecom law and relevant licensing instruction issued pursuant thereto. Therefore, Orange Fixed believes that introducing new specific licensing application, requirements and evaluation criteria for IXP are not in line with current licensing regime and should be avoided as it cause market distortion, and create uncertainty in market entry.

6. The selection process mandates announcement for need to establish an IXP, evaluation criteria, and inviting "prospect applicants" if no application received. Orange Fixed reiterates it position that the principle of assignment is not accepted entirely, as it lacks legal reference and prior assessment, and should be withdrawn as this will have negative impact on the market due to creation of parallel/alternative licensing scheme.

E) TRC Approval of Bilateral and Multilateral Agreements

1. The details of the Bilateral and Multilateral Agreements have not been specified and detailed in the decision. The decision only specified the scope of the agreements, parties to be involved, and the requirement to be reviewed and approved by TRC. The content of the agreements have only been discussed in Article (1.4) of the Appendix that *"both MA and BA specify all technical conditions and all other details, and shall be reviewed and approved by TRC"*, and in Article (4.4) where the MA should include conditions related to sharing of cost, transit traffic, and minimum performance and operational requirements as mentioned in Appendix/Section (2). Although Orange Fixed believes that minimum intervention in the content of the agreements is favored due to fact that this gives the IXP and Members the flexibility to manage bilateral business and ensure that both are comfortable with the conditions that the will govern their mutual business, it does however, opens the door for non-standard and significantly different agreement, which will consequently result in discriminatory practices and will be the source of continuous disputes, and ultimately an unsuccessful and non-operational IXP. On the other hand, comparing to the interconnection agreement, the Telecom law, Interconnection Instructions, and the License Agreement specified in extensive details the interconnection scope, requirement, service to be covered, process for interconnection, interconnection agreement content, dispute resolution process, etc. The interconnection framework set therefore a clear, certain and predictable outcome for the interconnection agreements, and also set a reference to TRC to approve/disapprove such agreement, while in the IXP decision case, the TRC review and approval shall be subject to interpretation, uncertainty, and opens the door to

discriminatory and non-competitively neutral arrangement. Orange Fixed believes that TRC should not intervene of reviewing and approval of such agreements, where TRC role should aspire for a market-driven approach leaving the outcomes to market forces and for IXP to develop organically in order to avoid any relevant risks.

2. From legal perspective; Orange Fixed believes that TRC intervention by reviewing and approving such agreements lack of the legal basis. According to the Telecom Law and License Agreement; TRC approval is only required for Interconnection Agreements. Therefore, Bilateral and Multilateral Agreements are not Interconnection Agreements per se, and therefore does not require TRC review and approval.

F) TRC Intervention in the Membership of the IXP

1. Article (4) of the decision mandates a TRC right to intervene in Member withdrawal from IXP, and the right to intervene by terminating the membership of any Member in the IXP. And

2. Article (4.7) gives TRC the right to *"terminate a Member's membership if it **feels** that it has in anyway acted outside the terms and conditions that have been agreed upon or it is **felt** that the Member is causing some harm to the IXP"*. The terms of such intervention is not detailed no specified and may create uncertainty and unpredictability.

3. Orange Fixed believes that both cases of intervention lacks the legal basis as the relationship between the IXP and Members and between the Members themselves is governed by Multilateral and Bilateral Agreement, respectively. And as illustrated above, such agreements are not Interconnection Agreement per se; therefore, TRC intervention in such contractual relationship is not legally justified. It is worth mentioning that in cases of interconnection, TRC does not have the sole right to mandate withdrawal from such agreements or to mandate termination on its own discretion; TRC intervention is limited to issue a determination following extensive and detailed dispute resolution process.

4. On the other hand, such intervention may create uncertainty and unpredictability in the contractual relationship between the IXP and Members and between the Members themselves due to unclear conditions, details, and procedures related to the cases of withdrawal and termination of such contractual relationship, which may negatively affect stability of transactions and agreements and forbear potential

parties from engaging in such agreements, and consequently hinders the establishment an growth of an IXP in Jordan.

G) Specific Comments

Without prejudice to our comments above, Orange Fixed would like to provide below detailed comments:

Article No	Comments
1	As CDN is not a member and as all major service providers already hosting CDN in their network, it is not clear how this aim can be achieved. The main question is to have very clear CDN role in IXP if they will not be a member.
2.9	As CDN is not a member and as all major service providers already hosting CDNs in their network; the role and involvement of a CDN should be clarified.
2.33	As IXP will be working on commercial basis, It is not logic that major service providers cannot be considered the high available IXP points while they already heavily invested to achieve this and already attracted CDNs. Market is already competitive and any small ISP can choose and negotiate any BA with any of the major players.
4.1	Operations needs High End backbone network infrastructure (need high investment) to be able to handle critical traffic exchange and this high grade infrastructures are already existing in major service providers beside specialized international traffic networking experiences/skills are needed to operate these devices and these highly skilled experts (with High Salaries) are already found in major Server providers. Major provider cannot justify covering these expenses and here are no additional benefit or revenue, only additional costs.
4.5	TRC intervention in withdrawal of Member from the IXP is not legally justified and might create uncertainty and predictability. Please refer to our comments in section (F) above.
4.7	TRC intervention in terminating the membership of any Member in the IXP is not legally justified and might create uncertainty and predictability. Please refer to our comments in section (F) above.

Article No.	Comments
4.8	Does this term mean that initially there will be only one site? Traffic in IXP is very important and redundant IXP points are mandatory requirements to achieve available and performance requirements of Internet traffic. Major Service providers already run highly redundant data centers and Orange has TIER 3 data centers running Internet exchange and any IXP should run their data center at such scale.
5.1	The decision mentions that Peering can be done between IXP members and other international service providers and other IXP participants in other countries. This requires greater clarification from TRC as this deviation from original scope (exchange of local traffic). The term "Research and Education Networks" is not clear and should be defined in the definition section.
5.2	This term leave the door open to limit the number of Members joining the IXP, and constitute an intervention in the operation of the IXP.
7.3 Evaluating the applicant IXP	TRC should survey the applicant infrastructure in advance.
7.3 Readiness for operation in less than 3 months	It should be at least Tier 3 Data Center or complied with ISO27001 which cannot be done in 3 months.
7.3 Datacenter--- should consider High availability and Redundancy	This is contradiction in requirement for physical location; first it mentions one location and simple layer 2 switches and here mention High Availability.
Appendix 1.3	ISP to connect to the IXP at the National Datacenter if it provides Internet services for public organization is not clear. Is there an IXP in the National Datacenter, why such connection?
Appendix	If a network edge router is available, and a tagging traffic with BGP

Article No	Comments
1.5	communities for interconnecting, it will eliminate the need to have 1G member links and 10G IXP links, also having fewer nodes saves on CAPEX, OPEX and technical troubleshooting.
Appendix 1.9	This term needs clarification.
Appendix 2.1	Previously mentioned that IXP will be based on layer 2, here mentions Routers. If routing will be done by IXP and not members, there will be Cyber Security concerns and especially (Distributed Denial of Service (DDoS) attacks protection should be provided by IXP to protect the IXP shared infrastructure used by all members.
Appendix 2.5	Some hardware resources limitations might take more than one month to be available.
Appendix 2.6	All IXP infrastructure logs including all network devices, systems, routers, switches, devices, access controls for doors/cabinets, and CCTV systems should be sent to Centralized Security Information and Event Management (SIEM) to protect security logs of activities and for dispute purposes. Also there should be professional high-end Firewalls & Intrusion Prevention Systems (IPS) that will protect IXP infrastructures and systems and they should be monitored 24/7 by a specialized team. As discussed, DDoS (Distributed Denial of Services) Protection should be provided by IXP if IXP infrastructure contains routers or any stateful devices and/or possible Internet traffic will be passing the IXP devices and could affect the availability of IXP infrastructure that are serving all members.
Appendix 2.7 CPU Usage Information	This statement should be changed: It should refer to routers, devices not CPU of member.
Appendix 4.1	Traffic Statistics between peers should only be known by the concerned peers, IXP should not be able to provide such info to non-concerned entities.
Appendix 4.4	All IXP prospect applicants should be audited in advance for compliance with ISO27001 such as : information Security policies & processes (such as Security Incidents & complaints handling), Physical and Environmental Security , data flows and operational security and Security governance.

Article No	Comments
Appendix 5.8.6	This only refers to only blackholing with no reference to mitigation.
Appendix 6.1	This contradicts with mandating one site for IXP location stated in article 4.8 of the Decision.