



---

**Public consultation on the Telecommunication Regulatory  
Authority of Bahrain's proposed Position Paper on the Licensing  
Approach to Internet Protocol ("IP") Based Voice and Messaging  
Services in the Kingdom of Bahrain**

**Consultation Report**

**20 January 2021**

**Ref: LAD/0121/009**

---

## 1 INTRODUCTION

- 1.1 The Telecommunications Regulatory Authority of Bahrain (“**Authority**”) has previously issued two Position Papers which set out the Authority's approach to the regulation of Voice over IP (“**VoIP**”) services under the existing licensing regime under the Telecommunications Law, namely the:
- (a) Position Paper on the carriage of Voice calls using the Internet Protocol (IP) dated 17 April 2004 (MOU/DC/268) (“**2004 VoIP Paper**”); and
  - (b) Position Paper No.1 of 2007 on Regulation of Voice over Internet Protocol (“VoIP”) Services dated 30 May 2007 (LAU/0504/054) (“**2007 VoIP Paper**”).
- 1.2 Since the 2004 VoIP Paper and 2007 VoIP Paper were published, there has been substantial growth in the use of over-the-top (“**OTT**”) voice and messaging services in the Kingdom of Bahrain, which are often utilised on mobile phones.
- 1.3 The purpose of the proposed Position Paper is to update the Authority's position in relation to IP-based or OTT voice and messaging services.
- 1.4 The purpose of the Consultation was to invite comments from interested parties on the Authority’s proposed Position Paper. The deadline for responses was 16:00 on 20 August 2020.
- 1.5 The Authority received responses from Batelco, STC, Zain, Kalaam and Etisalcom.
- 1.6 The comments received from Batelco, STC, Zain, Kalaam and Etisalcom are summarised in Annex 1 to this Consultation Report, as are the Authority’s responses to each comment.
- 1.7 This Consultation Report reflects the views of the Authority on comments received in response to the Consultation Document. The Authority’s views as expressed in this Consultation Report are intended to provide an explanation of the Authority’s position on the comments received from the respondents.

## 2 LIST OF ACRONYMS AND DEFINITIONS

<b>2004 VoIP Paper</b>	Position Paper on the carriage of Voice calls using the Internet Protocol (IP) dated 17 April 2004 (MOU/DC/268)
<b>2007 VoIP Paper</b>	Position Paper No.1 of 2007 on Regulation of Voice over Internet Protocol ("VoIP") Services dated 30 May 2007 (LAU/0504/054)
<b>Authority</b>	Telecommunications Regulatory Authority of the Kingdom of Bahrain
<b>Batelco</b>	Bahrain Telecommunications Company B.S.C.
<b>Consultation</b>	The consultation published on 16 July 2020 which included the Discussion Draft of the Authority's Position Paper and which solicited responses to a number of questions set out in the consultation document
<b>Consultation Report</b>	This report
<b>EECC</b>	Directive (EU) 2018/1972 of the European Parliament and of the Council of 11 December 2018 establishing the European Electronic Communications Code (Recast)
<b>Etisalcom</b>	Etisalcom Bahrain Company W.L.L
<b>IP</b>	Internet Protocol
<b>Kalaam</b>	Kalaam Telecom Bahrain B.S.C (c)
<b>NB-ICS</b>	Number-based interpersonal communications services, as defined in Article 2(6) of the EECC
<b>NI-ICS</b>	Number-independent interpersonal communications services, as defined in Article 2(7) of the EECC
<b>Number-Based Services</b>	Number-based OTT voice and messaging services
<b>Number-Independent Services</b>	Number-independent OTT voice and messaging services
<b>OTT</b>	Over-the-top
<b>PSTN</b>	Public switched telephone network
<b>SMS</b>	Short message service
<b>STC</b>	STC Bahrain B.S.C.
<b>Telecommunications Law / Law</b>	The Telecommunications Law of the Kingdom of Bahrain, which was promulgated by Legislative Decree No. 48 in October 2002
<b>VoIP</b>	Voice over Internet Protocol
<b>Zain</b>	Zain Bahrain B.S.C.

**ANNEX 1**

**Draft Position Paper on the Licensing Approach to IP Based Voice and Messaging Services in the Kingdom of Bahrain:**

**Summary of responses received and the Authority's conclusions**

Summary of comment received	The Authority's view and conclusion
<b>Question 1: Do you have any comments on the general approach taken by the Discussion Draft of the Authority's Position Paper in relation to the licensing of certain OTT voice and messaging services? Please provide reasons for your answer.</b>	
<b>STC</b>	
<p>Whilst STC agrees with the Authority's position that "Number-Based Services qualify as Telecommunications services that are subject to the licensing requirement pursuant to Article 24(a) of the Law", the Authority should clarify how it intends to implement / enforce such obligation, considering that these services providers are located in foreign countries.</p> <p>STC considers that Number-Independent Services are Value Added telecommunication services provided over operators' networks utilizing their existing services should also be subject to licensing obligation since:</p> <ul style="list-style-type: none"><li>- OTT communications now serving as a key substitute for international/national voice calls and messaging with increasingly termination over operators' licensed networks globally in view of the wider spread of smart phones, the services being offered by the free OTT communication service providers are a direct substitute for the telecommunications services.</li></ul> <p>In this regard, TeleGeography, a global telecommunications market research and consulting firm, has completed the annual survey to obtain refreshed pricing, revenues, traffic volumes and other key performance indicators in the international voice market which estimated that international OTT voice traffic reached 1 trillion minutes in 2019, compared to just 432 billion minutes of international carrier traffic.</p>	<p>The Authority notes STC's agreement with the Authority's position that Number-Based Services are subject to the licensing requirement under the Law. The Authority notes that this is not a new position, since Number-Based Services have always been Telecommunications services subject to the licensing requirement pursuant to Article 24(a) of the Law (and indeed, subject to the provisions of the Law and relevant regulatory instruments including the Lawful Access Regulation). Therefore, the Authority shall continue to enforce compliance with this requirement as it has always done so.</p> <p>With respect to foreign service providers, the Authority refers to the requirements set out in Article 26(a) of the Law, which requires a Licensed Operator to be a juristic entity incorporated in the Kingdom, or a branch of a foreign company licensed to operate in the Kingdom in accordance with the Commercial Companies Law. Therefore, a service provider located in a foreign country would require a local presence in the Kingdom in order to provide a Number-Based Service in the Kingdom. The Authority further notes that the Law applies to all foreign service providers of Number-Based Services if they effectively, deliberately, and purposefully direct their activities to residents of the Kingdom. Therefore, the Authority or any other public authority of the Kingdom with the appropriate powers would not be precluded from taking the necessary steps to</p>

And that international voice revenues are estimated to have declined from \$99 billion at their peak in 2012 to just \$60 billion in 2019. At the current rate of decline, international service revenues will fall to \$50 billion by 2024, with the market losing roughly half of its value in just 12 years.

*“Retail international call revenues will continue to decline as OTTs capture greater market share while seeing growing traffic volumes. OTTs have a growing global user base matched with a free service offering that is dominating consumer voice traffic,” said Brodsky. “While retail prices were essentially unchanged in 2018, at about \$0.15 per minute, they declined in 2019 as traditional voice carriers continue to see traffic volumes decrease. It’s a challenging time to be in international voice after the high watermark of 2012.”<sup>2</sup>*

The same applies, at the domestic level in the Kingdom of Bahrain.

- OTT communications applications are breaching the national security requirements and data protection rules; and hence they should be considered unlawful applications and restricted. Data traffic of OTT communications services carried by most of OTT providers is encrypted, and technically inaccessible. This could impose serious threats to national security in view that these services might be used to transmit unlawful content without being detected or monitored.
- Most of OTT VoIP providers do not guarantee the protection of consumers’ personal data as mandated in Article 3(b) of the Telecommunications Law and IMTL obligations, and local judicial authorities are not in a position to control and ensure their compliance with data protection obligations.

In This Regard, EU Directive 2018/1972 of the European Parliament and the Council dated 11 December 2018 states that:

*“Given the growing importance of number-independent interpersonal communications services, it is necessary to ensure that they are also subject to appropriate security requirements in accordance with their specific nature and economic importance. Providers of such services should thus also ensure a level of security appropriate to the risk posed. Given that providers of number-independent interpersonal communications services normally do not exercise actual control over the transmission of signals over networks, the degree of risk for such services can be considered in some respects to be lower than for traditional electronic communications services. Therefore,*

restrict access to Number-Based Services that are being provided contrary to the Law.

The Authority disagrees with STC’s submission that Number-Independent Services are Value Added telecommunications services. Number-Independent Services do not qualify as Telecommunications services, since a provider of such services generally has no involvement in the conveyance of the user’s voice or other data over the internet – this is enabled by the user’s Internet Service Provider. This is consistent with the position on Internet Only services in the 2007 VoIP Paper and, by analogy, with the recent ruling of the EU Court of Justice in the *Gmail* case (also referenced in Batelco’s response to question 1 below).

The Authority notes STC’s comments regarding the level of substitution of OTT communications for traditional national/international communications and the effect on service provider revenues, national security requirements and data protection rules. The Authority notes that these important issues go beyond the scope of the Position Paper, which is focussed on the licensing approach of OTT voice and messaging services. Competition, national security and data protection issues may be appropriately handled in separate regulatory processes if these fall within the Authority’s powers in accordance with the Law, or by other relevant public authorities in the Kingdom as applicable. However, these issues are not valid reasons on their own to subject Number-Independent Services to the licensing requirement, as these services do not qualify as Telecommunications services as the Law currently stands. The Authority also refers to its response to Zain’s comments on question 1 below.

The Authority notes STC’s comments on net neutrality developments, which are made without any direct reference to any aspect of the draft Position Paper. In any event, the Authority has not raised any net neutrality issues in its proposed paper, and considers these to be beyond the narrow scope of the Position Paper as described above.

<sup>2</sup> <https://disruptive.asia/international-ott-voice-traffic-double-traditional-carriers/>

*where justified on the basis of the actual assessment of the security risks involved, the measures taken by providers of number-independent interpersonal communications services should be lighter. The same approach should apply mutatis mutandis to interpersonal communications services which make use of numbers and which do not exercise actual control over signal transmission.”*

As such OTT providers should be regulated to comply with a consumer protection, interoperability, privacy and numbering obligations as well as provide lawful access. This means that unless there are more appropriate rules in relation to the neutrality position, OTT Communications services will continue to operate in Bahrain in violation with the security and data protection laws.

### **Net Neutrality developments**

The issue of net neutrality and the way in which OTT services are regulated are matters that regulators worldwide have been contemplating for many years. The initial view to prevail was that net neutrality should be enforced, in keeping with the defined rules i.e. entities that carry internet traffic must treat all internet communications equally, and not discriminate or charge differently based on user, content, website, platform, application, type of equipment, source address, destination address, or method of communication etc.

However, with a clearer understanding of the market dynamics and with advances in technology (notably the emergence of the 5th generation mobile services, 5G), there has been a fragmentation in the approach to net neutrality with evidence of a general shift towards a more nuanced approach.

The position in the region is more definitive and can be seen in the context of VoIP regulation rather than a position on net neutrality per se. In countries such as Oman and the UAE, OTT VoIP services are blocked as they are deemed to be unlawful without a license. The actions in these nearby countries are worth mentioning for context where the Authority in its 2017 OTT<sup>3</sup> paper referred to UAE's approach towards OTT.

*“In the United Arab Emirates, OTT players are only allowed to provide their services if they work together with licensed telecommunications operators.”*

---

<sup>3</sup> Position Paper on Internet and Online Applications dated 6 October 2016 (LAD/1016/184)

Previous strong supporters of net neutrality, most notably the FCC in the USA<sup>4</sup>, have over the last few years altered their position<sup>5</sup>, citing the resulting stifling effect it has on innovation in the sector. It is now contended that any issues can be dealt with through established competition rules and regulations as the regulator has sufficient power to ensure fair and non-discriminatory treatment of OTT service providers seeking conveyance services from licensed operators. Any complaint based on discrimination may be considered to be a possible abuse of a dominant position in an upstream market to gain market power in a downstream market, a situation which is commonly addressed by competition authorities.

The retreat from net neutrality in the US is not contested by OTT service providers: the prevailing view from industry is typified by Google Chairman Eric Schmidt who states that;

*...while Google views that similar data types should not be discriminated against, it is perfectly reasonable to discriminate across different data types.*

It is worth noting that the FCC changes on their net neutrality position post-date the TRA position paper of 2016 (by one month).

The situation in Europe is following a similar trajectory. This is largely driven by the belief that the imposition of net neutrality sends a strong negative signal to existing and potential new investors, at a time when operators are embarking on a new investment cycle for which the business model has yet to be defined. This will serve to discourage new and temper existing investment plans. Operators across Europe have already complained of the adverse effect of net neutrality on investments<sup>6</sup> and that it does not make sense in a 5G world that will increasingly rely on network slicing and virtualization.

The French regulator, ARCEP, now acknowledge that the introduction of 5G may require a more finely tuned net neutrality approach owing to the significant concerns expressed by operators concerning the creation of uncertainty by BEREC's current stance.<sup>7</sup>

Furthermore, ARCEP now explicitly identifies the weak link of an open internet not as the underlying telecom networks that carry traffic but as the applications and

---

<sup>4</sup> It should be noted that a key (and singular) driver for net neutrality regulation in the US was lack of competition among broadband providers is very limited: almost half of households had no choice for their high-speed internet provider.

<sup>5</sup> The telecommunication authority in the USA, the FCC, voted on December 14th 2017 to dismantle net neutrality rules

<sup>6</sup> EU's net neutrality policy is failing operators and consumers, Mobile Europe News, 12th February 2019

<sup>7</sup> [https://www.arcep.fr/uploads/tx\\_gspublication/ARCEP\\_BD\\_5G\\_nov2018.pdf](https://www.arcep.fr/uploads/tx_gspublication/ARCEP_BD_5G_nov2018.pdf)

<p>devices used by the consumer. In 2018, ARCEP issued a report “Devices: the weak link in achieving an open internet”<sup>8</sup> in which they develop a series of actions for internet openness that focus on devices and applications rather than carrier network. The principle that ARCEP consider as fundamental is that:</p> <p><i>...the end-user as the one who is at the termination point of the network, be they customer or content provider, in keeping with the fundamental principle of the internet’s architecture, whereby the network’s intelligence is located at the extremities (and not in the intermediate steps)</i></p> <p>The arguments put forward by ARCEP are referenced in the TRA’s position paper and, given that the network is a ‘fundamental step’ between the end user and content, the implication is that it should not be the focus of attention. Instead, the means by which the bias that devices induce over the content consumed, such as the ability to delete pre-installed apps, should be controlled and/or limited. In short, device neutrality (and platform neutrality) are the real key issues and neither has anything to do with the companies being regulated at the moment.</p> <p>In Australia, the National Broadband Network provides a fixed-line network monopoly and there is full competition among internet providers which for the most part don’t have the incentive to degrade certain internet traffic in favour of other traffic. Even so, there are instances where priority is given to particular traffic. For example, one operator (Optus) has given customers the option to stream selected content from Netflix and Spotify without using any of their data allowance. To complete the picture for this service, Optus is considering charging Netflix and others like it a premium for delivering their content to ensure the quality of the video streaming.</p>	
<p><b>Batelco</b></p>	
<p>Batelco agrees with the Authority that there has been substantial growth in over-the-top (“<b>OTT</b>”) voice and messaging services since the Authority published its previous two papers (the “<b>2004 VoIP Paper</b>” and the “<b>2007 VoIP Paper</b>”). Batelco, however, would add that “substantial growth” does not capture the actual scale of change. For a great many end-users their default action is to make voice calls and send messages over OTT services such as FaceTime, Skype, WhatsApp, Facebook Messenger, Signal, etc. Such end-users rarely make traditional voice calls or send texts by short message service (“<b>SMS</b>”).</p>	<p>The Authority notes Batelco’s comments regarding the scale of change in the uptake of OTT voice and messaging services. The Authority’s published residential market survey conducted in 2019 also showed 96% of respondents using OTT messaging services over SMS. However, there was a decline in the willingness to pay extra for OTT services compared to 2018, indicating that consumers would be less inclined to choose a paid OTT service over traditional voice calls or SMS. The residential market survey also showed that the majority of</p>

<sup>8</sup> [https://www.arcep.fr/uploads/tx\\_gspublication/rapport-terminaux-fev2018-ENG.pdf](https://www.arcep.fr/uploads/tx_gspublication/rapport-terminaux-fev2018-ENG.pdf)

In the 2007 VoIP Paper, the Authority identified four types of VoIP service and concluded that “Internet only VoIP services” did not require a licence (because they involve peer-to-peer communications and do not ordinarily utilise numbering resources) whereas the other three types must be licensed because they interconnect with the public switched telephone network (“**PSTN**”). The Authority explains in this regard that “the regulatory approach differs depending on whether or not the particular service connects with publicly assigned numbering resources” (paragraph 3.2 of the draft Position Paper).

Batelco notes that the Authority appears or be applying this same core principle is proposing to reduce the four classifications of VoIP services down to the following two:

1. Number-based OTT voice and messaging services (“**Number-Based Services**”)
2. Number-independent OTT voice and messaging services (“**Number-Independent Services**”)

The Authority further proposes that a Number-Based Service is a “Telecommunications service” as defined, and therefore must be licensed, whereas a Number-independent OTT voice is not a “Telecommunications service” as defined and therefore does not have to be licensed (paragraph 3.7 of the draft Position Paper). The Authority considers that this simplified approach should provide greater certainty to service providers as communications technology continues to evolve (paragraph 4.1 of the draft Position Paper).

Batelco agrees with the TRA’s proposal, noting that it appears to mainly be a simplification of the four classifications adopted in 2007 but that the underlying principle has not changed to any significant extent. It also appears to be broadly consistent with the approach taken in other jurisdictions. For example, in two separate decisions issued in June 2019 the European Court of Justice (ECJ) decided that SkypeOut is an “electronic communications service” as defined for the purposes of the EU regulatory framework whereas Gmail is not.

In its SkypeOut ruling<sup>9</sup>, the ECJ focused on whether the service involved the “conveyance of signals”. The ECJ found that “SkypeOut” does involve the transmission of voice signals between the Skype user and the call receiver, first over the open Internet and second over the PSTN. This appears, allowing for the

consumers prefer to make direct mobile calls when an OTT messaging application or OTT calling is not available.

The Authority also notes Batelco’s agreement with the Authority’s proposed Position Paper, and that it considers this to be consistent with the reasoning adopted by the European Court of Justice in the *SkypeOut* and *Gmail* cases, and the new EECC.

---

<sup>9</sup> Skype Communications Sarl v IBPT, Case C-142/18

variations in facts and laws, to be the same overall reasoning as applied by the Authority.

In its Gmail ruling<sup>10</sup>, the ECJ referred to an earlier ruling in which it had determined that an "electronic communications service" as defined must involve the transmission of signals in order to be classified as such. Against that interpretation, the ECJ ruled that although Google may participate in the data transmission process, its Gmail service does not consist wholly or mainly in the conveyance of signals on electronic communications networks. Therefore, it is not an "electronic communications service" as defined.

The Authority has also cited the European Electronic Communications Code<sup>11</sup> ("EECC"), enacted in December 2018 and which must be implemented by all EU Member States by December 2020. The EECC explicitly broadens the scope of regulation to include OTT services, including that all number-dependent services, and specifically those that interconnect with a PSTN, are to be regulated to the same extent as "traditional" telecommunications services. Paragraph 15 of the Recitals to the EECC sets out the European Commission's reasoning:

*(15) The services used for communications purposes, and the technical means of their delivery, have evolved considerably. End-users increasingly substitute traditional voice telephony, text messages (SMS) and electronic mail conveyance services by functionally equivalent online services such as Voice over IP, messaging services and web-based e-mail services. In order to ensure that end-users and their rights are effectively and equally protected when using functionally equivalent services, a future-oriented definition of electronic communications services should not be purely based on technical parameters but rather build on a functional approach. The scope of necessary regulation should be appropriate to achieve its public interest objectives. While 'conveyance of signals' remains an important parameter for determining the services falling into the scope of this Directive, the definition should cover also other services that enable communication. From an end-user's perspective it is not relevant whether a provider conveys signals itself or whether the communication is delivered via an internet access service. The definition of electronic communications services should therefore contain three types of services which may partly overlap, that is to say internet access services as defined in point (2) of Article 2 of Regulation*

---

<sup>10</sup> Google LLC v Bundesrepublik Deutschland, Case C-193/18

<sup>11</sup> Directive (EU) 2018/1972 of 11 December 2018

(EU) 2015/2120 .... interpersonal communications services as defined in this Directive, and services consisting wholly or mainly in the conveyance of signals...

As to “interpersonal communications services” these are defined in the EECC as follows:

- ‘interpersonal communications service’ - a service normally provided for remuneration that enables direct interpersonal and interactive exchange of information via electronic communications networks between a finite number of persons, whereby the persons initiating or participating in the communication determine its recipient(s) and does not include services which enable interpersonal and interactive communication merely as a minor ancillary feature that is intrinsically linked to another service;
- ‘number-based interpersonal communications service’ - an interpersonal communications service which connects with publicly assigned numbering resources, namely, a number or numbers in national or international numbering plans, or which enables communication with a number or numbers in national or international numbering plans;
- ‘number-independent interpersonal communications service’ - an interpersonal communications service which does not connect with publicly assigned numbering resources, namely, a number or numbers in national or international numbering plans, or which does not enable communication with a number or numbers in national or international numbering plans;

Again, the Authority’s proposals appear to be fully consistent with the above approach.

## Zain

2. Zain Bahrain acknowledges that the Authority is adopting an approach similar to that reflected in the new European Electronic Communications Code (“EECC”)<sup>12</sup> in updating its position concerning the IP-based or Over-The-Top (“OTT”) voice and messaging services.
3. The EECC has proposed the classification of OTT voice and messaging services into two categories, namely Number-Based Interpersonal

As a general comment, the Authority notes that throughout its submission, Zain refers to the Authority’s proposed classification of OTT voice and messaging services as “NB-ICS” and “NI-ICS”, i.e. as used in the EECC. The Authority wishes to clarify that these terms, although similar to the Authority’s terms of “Number-Based Services” and “Number-Independent Services” are not the same. The terms used in the EECC need to be understood in their context, where NB-ICS and NI-ICS are both types of “interpersonal communications services”, which

<sup>12</sup> which will come into force in December 2020

Communications Services (“NB-ICS”) and Number-Independent Interpersonal Communications Services (“NI-ICS”)

4. Zain Bahrain notes the Authority’s proposed approach of only applying regulatory oversight to NB-ICS services but not to NI-ICS services. However, in Zain Bahrain’s opinion, given the growing scale and importance of NB-ICS with more domestic, and outbound and inbound international voice calls being undertaken by users, particularly in the wake of the recent pandemic, some form of regulation is recommended. It is important to note that this particular concern was identified in the EECC itself<sup>13</sup>. Issues such as ensuring appropriate security requirements<sup>14</sup> and a lack of interoperability with NB-ICS services<sup>15</sup> prompted the EECC to determine that “*national regulatory authorities should assess, in light of the specific national circumstances, whether any intervention is necessary and justified to ensure end-to-end-connectivity, and if so, impose proportionate obligations, in accordance with the Commission’s implementing measures, on those providers of number-independent interpersonal communications services with a significant level of coverage and user-uptake*”
5. Without regulatory oversight, the Authority is essentially stating that NB-ICS service providers do not have to comply with the following legislation or sector-specific regulations which are pertinent to customers in the Kingdom:
  - Broad areas of telecommunications sector-specific regulation including the Consumer Protection (Telecommunications Services) Regulation of December 2017; as well as the Lawful Access Regulation (Resolution No. 9 of 2009) which is designed to enable Security Organs to have Access to the call content and to access related information sent via telecommunications networks for purposes of fulfilling the requirements of national security
  - Personal Data Protection Law No. 30 of 2018 – which is designed to ensure that data subject rights are upheld and that the transfer of personal data to countries is conducted as per Article 12

is in turn a type of “electronic communications service”, as defined in Articles 2(4), (5), (6) and (7) of the EECC. In its responses to Zain’s comments in this Consultation Report, the Authority makes reference to the terms used in the draft Position Paper.

The Authority notes Zain’s comments with respect to the approach taken under the EECC and the regulation of NI-ICS, and Zain’s recommendation for some form of regulation to apply to Number-Independent Services. The Authority notes that the regulation applicable to NI-ICS has only recently been introduced through the EECC, which will come into force on 21 December 2020. The EECC is a recast of the existing European Directives that regulate electronic communications services, requiring the transposition of the EECC into national law, and hence the amendment of national laws. To adopt Zain’s recommendation and regulate Number-Independent Services in the Kingdom would similarly require amending the Law. The Authority also refers to its response to STC’s comments on question 1 above, noting that the proposed Position Paper is limited in its scope to the licensing approach to OTT voice and messaging services. It does not—and could not—state a position that would be contrary to the Law.

The Authority notes Zain’s reference to the security requirements imposed on NI-ICS providers, and issues raised regarding the security of OTT services. The Authority wishes to clarify that even under the EECC, NI-ICS are not subject to the same level of regulation as NB-ICS. Indeed, Recital 95 of the EECC states that it is necessary to ensure that NI-ICS are:

*“subject to appropriate security requirements in accordance with their specific nature and economic importance. Providers of such services **should thus also ensure a level of security appropriate to the risk posed**. Given that providers of number-independent interpersonal communications services normally do not exercise actual control over the transmission of signals over networks, **the degree of risk for such services can be considered in some respects to be lower than for traditional electronic communications services**. Therefore, where justified on the basis of the actual assessment of the security risks involved, **the measures taken by providers of number-independent interpersonal communications services should be lighter**”* (emphasis added).

<sup>13</sup> Recital 95 of the EECC

<sup>14</sup> Ibid

<sup>15</sup> Recital 149 of the EECC

6. It is important to highlight that the lack of regulatory oversight gives rise to other concerns:
- 6.1. Some of the more popular voice, messaging and video conference OTTs have been found to either have unencrypted communications or provide access to users' telephone numbers (provided as part of the authentication process for these services). On the other hand, regulated mobile operators are obliged to protect the privacy of its subscribers as per the obligation set out in the Individual Mobile Telecommunications Licence<sup>16</sup>:
- “The licensee shall not use or allow to be used any apparatus contained in the mobile telecommunication network, which is capable of recording, silently monitoring, or intruding into calls unless it complies with applicable law.”*
- 6.2. By combining the use of internationally available virtual number services with voice and messaging OTTs, fraudsters (situated locally) can spoof numbers to impersonate commercial and public entities and commit harmful fraudulent acts. Call-ID spoofing is becoming very frequent, adversely impacting the customer's trust and credibility in the telecommunications ecosystem. Zain had also raised such concerns in 2017<sup>17</sup> when fraudsters spoofed its numbers to impersonate the company and to offer prizes to the unsuspecting public falsely.
- 7. Therefore, and for the reasons set above, we strongly recommend that the voice and messaging OTTs offering NC-ICS services must be subject to some form of regulation.**
8. Furthermore, Zain Bahrain has taken note of the territorial jurisdiction conditionality set out in Articles 3.13, 3.14 and 3.15 of the Position Paper which states that *“the Authority would consider that the Law applies to all Number-Based Service providers irrespective of the jurisdiction of their establishment and the location of their technical equipment, if they effectively, deliberately, and purposefully direct their activities to residents of the Kingdom of Bahrain”*.

Further, the very nature of NI-ICS means that they are generally not interoperable, therefore providers of NI-ICS are subject to fewer regulatory obligations than providers of NB-ICS, since NI-ICS do not benefit from the use of public numbering resources. Recital 44 to the EECC observes that:

*“Contrary to the other categories of electronic communications networks and services as defined in this Directive, number-independent interpersonal communications services do not benefit from the use of public numbering resources and do not participate in a publicly assured interoperable ecosystem. **It is therefore not appropriate to subject those types of services to the general authorisation regime**”* (emphasis added).

The Authority notes that not requiring any authorisation or licensing requirement for Number-Independent Services is also consistent with the EECC as stated above and in Article 12(2) of the EECC.

The Authority wishes to clarify that the provision of the EECC quoted in paragraph 4 of Zain's submission is found in Recital 151. This provision correlates with Article 61(2)(c) of the EECC, which allows national regulatory authorities to impose:

*“in justified cases, **where end-to-end connectivity between end-users is endangered due to a lack of interoperability between interpersonal communications services, and to the extent necessary to ensure end-to-end connectivity between end-users**, obligations on relevant providers of number-independent interpersonal communications services which reach a significant level of coverage and user uptake, to make their services interoperable”* (emphasis added).

However, even in the very strict circumstances where end-to-end connectivity between end-users is endangered, the obligation above can be imposed only:

*“(i) **to the extent necessary to ensure interoperability of interpersonal communications services** and may include proportionate obligations on providers of those services to publish and allow the use, modification and redistribution of relevant information by the authorities and other providers, or to use and implement*

<sup>16</sup> Ref. LSU.LC.285.AA

<sup>17</sup> Dated 17 Oct 2017 (Ref. RI/1710/062)

9. It would be important to ascertain what the Authority means by “*effectively, deliberately, and purposefully direct their activities to residents of the Kingdom of Bahrain*”. Would services, that are offered by international NB-ICS providers globally but not explicitly targeted towards Bahrain (for example, whose adverts do not refer to Bahrain), be excluded? It is important to note that if an NB-ICS provider, signs interconnection contracts with international internet service providers who enter into agreements with licensed telecommunications operators in Bahrain, this should meet the standard specified by the Authority. This is because the NB-ICS calls would not be received in Bahrain, but for the existence of such relevant agreements made by the NB-ICS operator. The Court of Justice of the European Union (CJEU) case on Skype Out also provides useful context on the determination of territorial jurisdiction. The Court of Appeal in Belgium had ruled that because Skype participates in “*the economic life in Belgium, whether or not it has a registered seat in the Belgian territory, given that paying services were offered to Belgian users, as well as advertising targeted to Belgian users via the software*”<sup>18</sup>. Similarly, if an NB-ICS operator provides a website which is accessible in Bahrain and offers subscription services in Arabic and accepts payment for services made by users based in Bahrain, this should suffice to meet the Authority’s standard.
10. The traditional sources of income for telecom operators, based predominantly on subscriptions and metered services, are facing cannibalisation by OTT services, which in turn, are becoming more dominant. OTT players also make use of the communication networks which, inadvertently, may necessitate additional network investments. The regulatory imbalance between traditional operators and NI-ICS OTT operators will have to be addressed.
11. Zain Bahrain also wishes to advocate that Emergency Order No. 1 of 2015 be revoked or altered given that operators must now have the ability to block any NB-ICS operator offering services in the Kingdom without a valid licence. This approach will pave the way for operators to introduce new business models. For example, commercial wholesale arrangements could be made between

*standards or specifications listed in Article 39(1) or of any other relevant European or international standards;*

- (ii) **where the Commission, after consulting BEREC and taking utmost account of its opinion, has found an appreciable threat to end-to-end connectivity between end-users throughout the Union or in at least three Member States and has adopted implementing measures specifying the nature and scope of any obligations that may be imposed** (emphasis added).

Therefore, even though the EECC establishes a framework which may allow national regulatory authorities to require the interoperability of NI-ICS, such obligations do not currently apply to NI-ICS and there are a number of regulatory hurdles to overcome before any provider of NI-ICS becomes subject to such obligations. In this respect, the Authority notes that there is currently no evidence that end-to-end connectivity between end-users is endangered due to a lack of interoperability between Number-Independent Services that would justify the imposition of such obligations in the Kingdom.

The Authority disagrees with Zain’s comments that “*the Authority is essentially stating that NB-ICS service providers do not have to comply*” with the telecommunications sector-specific regulations or the Personal Data Protection Law. Indeed, Number-Based Services are Telecommunications services that must comply with the Law, the sector-specific regulations and the Personal Data Protection Law.<sup>21</sup>

The Authority also notes Zain’s concerns regarding security, Call-ID spoofing and the traditional sources of income for telecom operators. Similar to the Authority’s response to STC’s comments on question 1 above, these important issues go beyond the scope of the Position Paper, which is focussed on the licensing approach of OTT voice and messaging services. They are also not valid reasons on their own to subject Number-Independent Services to the licensing requirement, as these services do not qualify as Telecommunications services as the Law currently stands.

With respect to Zain’s comments on the territorial jurisdiction, the Authority would need to assess on a case-by-case basis whether Number-Based Service providers effectively, deliberately, and purposefully direct their activities to residents of the

<sup>18</sup> Mike Conradi, “Lawful intercept on VOIP services – Skype in Belgium”, March 2018, access from <https://www.lexology.com/library/detail.aspx?g=cf4cdf3a-f194-4754-a945-db00750edab0> on 26 August 2020

<sup>21</sup> Further, providers of Number-Independent Services may also be subject to non sector-specific regulations and laws of the Kingdom.

<p>traditional telecommunications operators and OTT players. Alternatively, at a retail level, commercial packages (with bundled OTT services) could be developed which offer tiered pricing for access to specific OTT services. Indeed, the details of such new commercial packages will be clearly stated to the public on Zain’s official website and in the standard subscriber agreement as per the requirements set out in the Consumer Protection Regulation<sup>19</sup>. Furthermore, any wholesale agreement will not impede the obligations set out in the Traffic Management and Pricing Practices Guidelines<sup>20</sup>.</p>	<p>Kingdom. As the Authority would need to take into account all relevant circumstances in a given case, it is not possible to conclusively state whether or not services offered by international NB-ICS providers globally but not explicitly targeted towards Bahrain would be excluded. However, the Authority notes that the factors considered in the <i>SkypeOut</i> case may be relevant in its assessment.</p> <p>The Authority disagrees with Zain’s reasoning advocating the revocation or amendment of Emergency Order No. 1 of 2015. Only the Authority has the power to determine whether or not a provider of NB-ICS is offering services in the Kingdom in compliance with the Law, and only the Authority may determine the appropriate enforcement action to take if necessary. Leaving this to the discretion of the Licensed Operators would be contrary to the Law.</p>
<p><b>Kalaam</b></p>	
<p>No comments on the general approach taken by the Discussion Draft.</p>	<p>The Authority notes that Kalaam has no comments on the general approach taken by the Discussion Draft.</p>
<p><b>Question 2: Do you have any specific comments on particular points made in the Discussion Draft? If so, please indicate the relevant paragraph(s).</b></p>	
<p><b>STC</b></p>	
<p>Please refer to our response to Question 1 above.</p>	<p>The Authority refers to its response to STC’s comments on question 1 above.</p>
<p><b>Batelco</b></p>	
<p>The Authority in paragraphs 3.13 and 3.14 of the Discussion Draft states “<i>that the Law applies to all Number-Based Service providers irrespective of the jurisdiction of their establishment and the location of their technical equipment, if they effectively, deliberately, and purposefully direct their activities to residents of the Kingdom of Bahrain</i>” and that Number-Based Services that offer receiving calls using numbers from the National Numbering Plan fall within the jurisdiction of the Authority.</p>	<p>The Authority notes Batelco’s understanding of the section on consumer protection applying only to Number-Independent Services. The Authority wishes to clarify that this section is applicable to both Number-Independent and some Number-Based Services. For example, a provider of Number-Based Services who would not be subject to the licensing requirement pursuant to Article 24(a) of the Law only because their services could be accessed by persons located in the Kingdom of</p>

<sup>19</sup> Ref. LAD/1117/251

<sup>20</sup> Ref. LAD/1117/252

<p>In the next section of the Discussion Draft, headed “Consumer Protection”, the Authority further observes that issues of extra-territorial jurisdiction (i.e. OTT services provided from outside the Kingdom of Bahrain but accessible to end users within the Kingdom) present difficulties for end users wishing to dispute a matter with a foreign service provider that is not licensed or regulated by the Authority in Bahrain.</p> <p>For this reason, the Authority notes in paragraph 3.21 that “<i>end users wishing to utilise a foreign OTT voice and messaging service provider’s services must ensure that they understand the terms and conditions of the service provider and must accept that there are some risks attendant in utilising a foreign service provider that is not licensed in the Kingdom of Bahrain.</i>”</p> <p>For the avoidance of doubt, Batelco understands that the above comments by the Authority would apply only to “Number-Independent Services” (unregulated and unlicensed) and not to “Number-based Services” (regulated and licensed).</p> <p>Batelco would also ask the Authority to confirm that licenced providers of Number-based Services will be regulated to the same extent as other licensees, in comparable circumstances.</p>	<p>Bahrain utilising Internet services (i.e. as described in paragraph 3.13 of the Position Paper) .</p> <p>With respect to Batelco’s question as to whether licensed providers of Number-Based Services would be regulated to the same extent as other licensees, in comparable circumstances, the Authority notes that paragraph 3.8 of the Position Paper describes the different Individual Licences under which Number-Based Services may be authorised. The Authority notes that the Position Paper does not propose any changes as to how the holders of the relevant Individual Licences are regulated.</p>
<p><b>Zain</b></p>	
<p>12. Zain Bahrain’s concerns focus on the following issues:</p> <p>12.1 <b>The lack of regulatory oversight and regime on Number-Independent Services:</b> Article 3.7 (b) highlights the fact that NI-ICS services will not require any licence; however, no other positions are put forward regarding regulatory oversight of these services. For example, there are no references throughout the Position Paper on the need for NI-ICS services to comply with prevailing sector-specific or cross-sector legislation including Consumer Protection Regulation or the Lawful Access Regulation or the Personal Data Protection Law. In fact, the position cited by the Authority in Article 3.21 of the Position Paper essentially places the onus on consumers to accept risks of exploitation and unfair treatment from foreign service providers. This position is entirely at odds with the stipulated responsibility of the Authority as set out in Article 3(b)(1) of the Telecommunications Law. This provision calls on the Authority to “<i>protect the interests of subscribers and users in respect of the tariffs charged for services, the availability and provision of service quality of services and protection of personal particulars and privacy of services</i>”.</p>	<p>The Authority disagrees with Zain’s comments on the lack of regulatory oversight and regime on Number-Independent Services, and refers to its response to Zain’s comments on question 1 above. Further, the Authority notes that the referenced paragraphs 3.7(b) and 3.21 of the Position Paper are not new positions taken by the Authority – indeed, this has been the Authority’s position since at least 2007 as described in the 2007 VoIP Paper. Furthermore, the Authority disagrees with Zain’s comment that this position is at odds with the Authority’s responsibilities under Article 3(b)(1) of the Law. The Authority notes that this provision refers to the protection of “Subscribers” and “Users”, which are both defined under the Law as persons being provided with Telecommunications services. As noted in response to Zain’s comments on question 1 above, Number-Independent Services do not qualify as Telecommunications services under the Law.</p> <p>The Authority notes Zain’s comments on the limits placed on territorial jurisdiction and refers to its response to Zain’s comments on question 1 above. Further, the Authority refers to paragraphs 3.4 and 3.13 of the Position Paper. On the one hand, OTT voice and messaging services used to make calls rather than to receive calls would presume Number-Based Service providers to be covered by</p>

<p>12.2 <b>Limits placed on territorial jurisdiction:</b> The Authority has stated, in Article 3.13 to 3.15 that it will only consider Number-Based Service providers being subject to licensing requirements if they effectively, deliberately, and purposefully direct their activities to residents of the Kingdom of Bahrain. It is unclear what “<i>effectively, deliberately, and purposefully direct their activities</i>” connotes</p> <p>Furthermore, the Position Paper states that “<i>In order to determine jurisdiction in the specific instance, the Authority will take into account the marketing practices of the respective undertaking. Provision of Number-Based Services that offer to receive calls using numbers from the National Numbering Plan of the Kingdom of Bahrain</i>”.</p> <p>Thus, for example, services such as Skype Out or Viber Out will not be subject to a licensing requirement since these are used to make calls using local numbers rather than to receive calls<sup>22</sup>.</p>	<p>the Authority’s jurisdiction (and therefore subject to the licensing requirement pursuant to Article 24(a) of the Law) where these services are <i>effectively, deliberately, and purposefully</i> targeted to residents of the Kingdom of Bahrain. On the other hand, the Authority would not consider Number-Based Service providers to be covered by its jurisdiction (and therefore not subject to the licensing requirement pursuant to Article 24(a) of the Law) only because their services could be accessed by persons located in the Kingdom of Bahrain utilising Internet services.</p>
<p><b>Kalaam</b></p>	
<p>No comments on any particular points made in the Discussion Draft.</p>	<p>The Authority notes that Kalaam has no comments on any particular points made in the Discussion Draft.</p>
<p><b>Question 3: Do you agree with the distinction that has been drawn between number-based services and number-independent services and the corresponding regulatory treatment for both?</b></p>	
<p><b>STC</b></p>	
<p>STC disagrees as detailed in our response to Question 1 above. [...]</p>	<p>The Authority refers to its response to STC’s comments on question 1 above.</p>
<p><b>Batelco</b></p>	
<p>For the reasons set out above, Batelco does agree with the distinction drawn between number-based services and number-independent services.</p>	<p>The Authority notes Batelco’s agreement with the distinction between Number-Based Services and Number-Independent Services.</p>

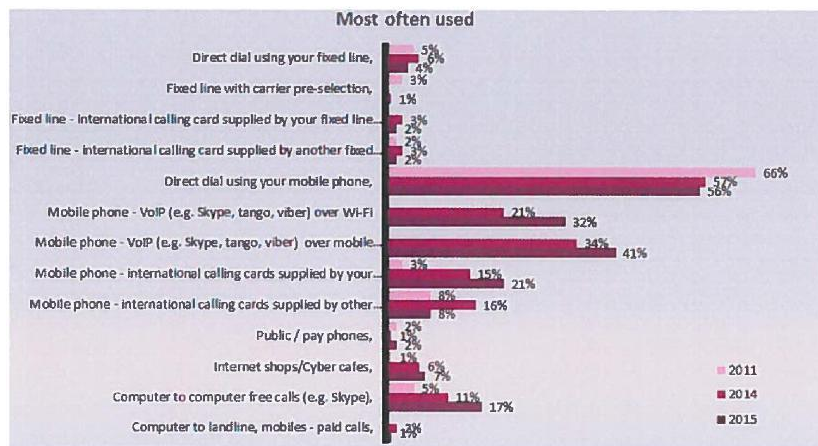
<sup>22</sup> Please note that Zain has raised to the Authority its concerns about the financial loss caused by hijacking international termination traffic by such OTT service via e-mails and a meeting (April-May 2017), and a letter sent to the Authority on 4 April 2018 (Ref. LRC/1804/021)

<b>Zain</b>	
13. While Zain may agree with the distinction made by the Authority between number-based (NB-ICS) services and number-independent (NI-ICS) services, Zain disagrees with the position that NI-ICS services should not be regulated. Our reasoning is set out in paragraphs 4, 5 and 6.	The Authority notes Zain's agreement with the distinction between Number-Based Services and Number-Independent Services, and Zain's disagreement that Number-Independent Services should not be regulated. The Authority refers to its response to Zain's comments on question 1 above.
<b>Kalaam</b>	
Yes, however, we are of the view that there should be a regulation for the illegal OTT apps being sold within the Kingdom of Bahrain. These illegal OTT apps are sold without any specific license which is affecting the sales and operations of licensed operator applications.	The Authority notes that Kalaam agrees with the distinction that has been drawn between Number-Based Services and Number-Independent Services. With respect to Kalaam's comments on illegal OTT apps being sold in the Kingdom, the Authority notes that the scope of the proposed Position Paper is limited to the licensing approach of OTT voice and messaging services. The proposed Position Paper does not intend to address broader issues of whether an OTT app may be illegal, which could be for reasons that fall outside the scope of the Law and the remit of the Authority.
<b>Question 4: Are there any relevant issues that are not covered by the Discussion Draft that you believe should be addressed?</b>	
<b>STC</b>	
In the its Determination of SMP in the Retail Market for International Outgoing Calls from Bahrain (2015), the TRA considered whether VoIP services such as Skype and Viber were in the same market as traditional international telephony services. TRA considered a number of factors including its own market survey, international precedents, particularly OFCOM and BEREC positions, traffic volumes and pricing trends. It concluded that the TRA, "for the purpose of the present review", did not need to determine that OTT services are part of a relevant market for outgoing international calls from Bahrain, since that determination would not alter the competitive assessment of the market. Therefore, TRA chose to remain agnostic on the matter.	The Authority notes STC's additional comments which relate to competition, net neutrality and the proposals on OTT monetisation and removing the net neutrality guidelines and consumer regulations. The Authority appreciates the details of these submissions but notes that they go beyond the limited scope of the Position Paper, which is focussed on the licensing approach of OTT voice and messaging services, and refers to its response to STC's comments on question 1 in this regard. However, in light of the various comments made in response to this Consultation, the Authority may consider reviewing its Position Paper on Internet and Online Applications and to potentially include this scope of work in its three year working plan.

Nevertheless, the TRA seemed to present strong evidence in support of substitutability of OTT VoIP for traditional international telephony services in the review, notably:

1. Responses to survey questions in 2015 about use of VoIP services and other services for outgoing international calls as shown in the Figure below:

**[Figure]: TRA survey results on means used to make international calls<sup>23</sup>**



Source: Telecommunications Services in Bahrain, Residential Services Survey, commissioned by the Authority in 2015.

This shows significant and growing use of VoIP over fixed and mobile services over both Wi-Fi and mobile services; indeed, VoIP over these means seemed to have eclipsed the use of calling cards which had been considered in the same market yet were discounted in this review due to low usage;

2. Marked falls in average revenue per minute from over .06 BD in 2008 to .02 BD in 2014, although the TRA was able to point to increased mobile international outgoing traffic every year for the period from 2008 to 2014;
3. Strong evidence of substitution between use of fixed and mobile services for international calls;
4. Strong evidence for substitution between use of fixed traditional international call services and OTT services from both residential and business respondents;

<sup>23</sup> Determination of SMP in the Retail Market for International Outgoing calls from Bahrain (2015)

Significantly in our opinion, the TRA did not report on substitution between mobile international calls services and OTT services and claims that it is not possible to distinguish in the data between complementary use of VoIP rather than substitution by VoIP. The TRA notes that further analysis would be required. The TRA is unclear as to why the TRA did not do that analysis, except to say that there is no reliable data on OTT usage. However, the TRA did show evidence from 69 countries aggregated by Telegeography that appears to show stagnation in international telephone call minutes between 2008 and 2014, with much of the growth in VoIP. Nevertheless, to provide precedent for its decision about inclusion of VoIP in the international outgoing calls market it reports on Ofcom's findings published in its 2015 Communications Market Report that most people use VoIP on a smartphone to complement traditional calls rather as a substitute. In this regard, the TRA states under Para 3.1 of this draft Position Paper that "Since 2007, not only has there been a substantial increase in VoIP calls, but also OTT messages that now outstrip the volume of consumer SMS".

#### **Net neutrality in Bahrain**

The position of the TRA is explained in some detail in its 2016 paper in Internet and Online Applications and associated regulation/guidelines<sup>24</sup>. The intent of the position paper is to set out the TRA's view in relation to the evolution of the Internet and of online applications, particularly with regards to the relationship between OTT players and licensed operators.

The position paper is not a binding legal document and does not contain legal, commercial, financial, technical or other advice. It specifically states that it may be reviewed in the light of market developments. STC considers that with the launch of 5G technology and the exponential increase of OTT communication traffic among consumers in the Kingdom, VoIP position paper should be reviewed in the larger context of updating the Internet and Online Application position paper of 2016.

#### **Areas of opportunity for MNOs**

---

<sup>24</sup> Reference: LAD/1016/184 Issued: 6th October 2016, LAD/1117/251 Issued 4th December 2017 and LAD/1117/252 Issued 4th December 2017

The following expand on aspects that should be considered in net neutrality regulation.

### **Maximising investment**

It is clear that an obligation on network operators to carry the traffic from OTT service providers without discrimination or reward is a significant expense. Hence there is an inevitable adverse effect on investments due to net neutrality regulations, one that eventually affects the quality of service and level of innovation offered to all end users.

The situation becomes worse as the speed and sophistication of applications increase. If net neutrality is applied in a 5G world many of the envisaged applications might not be viable. Even more likely is that the cost of services to the general public that do not require ultra-low latency, high capacity services will become prohibitively high because the networks would need to be designed to meet the needs to the most demanding users. While it is reasonable to expect network operators to cater for the highest levels of throughput and lowest levels of latency (which will be needed for safety critical applications) the obligation to cater for mundane applications in the same way does not seem reasonable.

Without scope for traffic discrimination, the only way in which operators can be incentivised to invest is the prospect of reward for carry OTT traffic.

### **Ensuring fair competition**

In today's internet, anti-competitive behaviour can and does occur at the application and device layer as well as in the network itself. Telecommunications regulators generally consider that net neutrality is important to avoid foreclosure of a geographic market to an OTT service provider through discriminatory behaviour by a telecommunications operator in that market, and an exercise of the market power arising out of a dominant position.

Such a position does not take account of the countervailing market power of the OTT service provider.

When net neutrality was first proposed as a principle, OTT service providers were frequently relatively weak market entrants whose access to geographic markets could readily be foreclosed by the behaviour of one or two telecoms operators. That position has now changed substantially. There is now effective competition in fixed and mobile internet access; indeed competition is particularly keen in Bahrain. In

addition, a small cohort of global OTT service providers has evolved with services that appeal directly to the consumer.

The competition between internet service providers lessens the impact of a single operator on an OTT service provider's market access. While an operator can foreclose its own market segment, it cannot do so for the whole market. An OTT service provider can then access that market through an alternative provider, and use its market power to challenge any access provider that discriminates against it.

An oligopoly has established itself in OTT services comprising, for Bahrain, mainly Microsoft, Alphabet, and Facebook. These companies provide OTT messaging services that STC believes are substitutes for rather than complement international call and messaging services and indeed domestic call and messaging services. Frequently, the OTT voice, video and text messaging services are provided below cost with cross subsidisation from other services or products. Often these services are preferred because they are now of a higher quality and offer more features than those offered by traditional means. However, traditional operators are not able to compete with these companies.

- There is no interoperability between platforms; it is possible only to communicate with registered users of a particular service; a registered user of one service cannot communicate with a registered user of another service; where registered users are counted in hundreds of millions and billions, it is not possible for a telecoms operator with registered users of one or two million to compete without such interoperability.
- The advertising pricing model for these services is generally unavailable to a telecommunications operator. Facebook's per user income in 2019 has been estimated at \$7.26 per user<sup>25</sup> and \$8.52 (see table below). Often this revenue arises from a different product. For example, WhatsApp does not currently carry advertising.

***[Table]: Facebook annual revenue per registered user by year and region<sup>26</sup>***

---

<sup>25</sup> "Why Facebook generates much more money per user than its rivals", CNBC, 1st November 2019

<sup>26</sup> Statistica

	Worldwide	North America	Europe	Asia-Pacific	RoW
Q4 '11	1.38	3.2	1.6	0.56	0.41
Q4 '12	1.54	4.08	1.71	0.69	0.56
Q4 '13	2.14	6.03	2.61	0.95	0.84
Q4 '14	2.81	9	3.45	1.27	0.94
Q4 '15	3.73	13.7	4.56	1.6	1.1
Q4 '16	4.83	19.81	5.98	2.07	1.41
Q4 '17	6.18	26.76	8.86	2.54	1.86
Q4 '18	7.37	34.86	10.98	2.96	2.11
Q4 '19	8.52	41.41	13.21	3.57	2.48

A second oligopoly is establishing itself in media services that includes Alphabet (YouTube), Amazon (Amazon Prime) and Netflix. Other content providers and intermediaries, mainly American, are entering this market.

These oligopolies offer differentiated sets of products and services directly to consumers. These products and services increasingly define the consumer requirement for telecommunications services, with traditional voice services having been reduced to a set of commodities. Thus, for consumers, the ability to access the services provided by these oligopolies, and the quality of such access, are now the differentiators in selecting telecommunications service providers and services. The operators that provide the best access at a given price will be preferred. This gives the members of the oligopoly power over telecoms operators. As such, they do not need the additional power arising from a net neutrality policy.

A telecoms operator in Bahrain is now an intermediary in the supply chain between the OTT service provider and the consumer. As such it is in a weak competitive position in relation to large OTT service providers. This is a reversal of the original power dynamic that was the justification for the introduction of net neutrality.

Addressing anti-competitive behaviours requires a mix of ex ante regulations (e.g. horizontal privacy laws) and a strengthening of ex post regulation in the field of digital platforms.

In truth, the TRA already has sufficient powers to address anti-competitive behaviour and the investigation of a complaint under a net neutrality regulation could just as readily be carried out as an investigation of a complaint of anti-competitive behaviour. This was implicitly recognised under Emergency Order No.1 of 2015 when the TRA reserved its rights to investigate the parties further for potential anti-competitive conduct. Like the order itself, we understand the investigation has not been closed.

Also, net neutrality is often justified by the existence of externalities between the demand for Internet access and content services but such interrelationships are more complex and do not provide a compelling rationale for regulation. Hence, there are strong arguments that more limited regulatory mechanisms provide a better framework for addressing competitive concerns raised by proponents of net neutrality.<sup>27</sup>

#### **STC Proposals on OTT Monetization**

STC requests the Authority to:

1. allow MNOs monetize OTT services by means of:

- **Offer restricted internet access dedicated to social media**

These comprise packages that provide internet access so that subscribers can use social media services from a particular vendor – Facebook, Twitter, etc but do not provide access to other services and data on the internet. Such packages are available in several countries; examples include

- Omantel's Hayyak plans that provide unlimited access to a single social media service for 1 OMR per 7 day period as an add-on to an existing prepaid plan. Omantel has a number of different data add-ons that might appeal to different segments of the low income consumer market. The base -Hayyak bundle provides data and there are data add-ons that would compete with these service-specific add-ons. Nevertheless, the social media add-ons are likely to appeal to expatriate workers who want to use social media to call home on a regular basis.
- Telenor Myanmar Facebook Packs that provide a daily (188MB @ 52Fils), weekly (950MB @ 260Fils) and monthly (2.78GB @ 794 Fils)

---

<sup>27</sup> [https://www.researchgate.net/publication/228199403\\_Net\\_Neutrality\\_and\\_Consumer\\_Welfare](https://www.researchgate.net/publication/228199403_Net_Neutrality_and_Consumer_Welfare)

add-ons for Facebook only access. It is not clear whether these add-ons are subsidized by Facebook. Other operators in Myanmar offer similar services which are used by the very low-income consumer market.

- o Mascom Wireless (Botswana) MyApp Data Bundle that provides daily (100MB), weekly (300MB) and monthly (1.2GB) access to any one of Facebook, Instagram, WhatsApp and Twitter for 3 Pula 93 Fils), 10 Pula 313 Fils and 40 Pula (BD 1.25). Mascom also offer MyTime add-ons for short periods of time (1 hour, 5 hours and 10 hours) for internet access, and MySocial add-ons for access to social media for 1 day, 7 days and 30 days with 200MB usage per day at 1Mbps.

These add-ons enable social media access to be monetized by an operator, at least to a degree. In addition, they may promote more general expenditure by the subscriber on data services. As such, they go some way to compensating the operator for lost international call revenue and the same would be the case in a market such as Bahrain.

- **Offer OTT services independently or in partnership with OTT service providers** This model has been successfully adopted in a number of markets. The following illustrates activity in the UK, India and the USA.

#### **UK**

The UK now has three combined telecoms and media companies. Sky, Virgin Media, and late-coming BT. All are subject to regulation by Ofcom in media and telecoms markets. Thus, both the content and the telecoms markets can be considered by the same regulator.

All offer own-content and third party content including Netflix and Amazon Prime. The combined offer of third party and own content is managed in a set top box. This limits access to competing media and other OTT services via the TV, and therefore places the provider of the set top box in a preferential position, relative to other content providers. Thus, the provider of the set top box is in a position to generate revenue from third parties through its set top box.

While unlimited internet downloads are possible in the UK, special offers are provided

where access to some media content does not count against any download budget.

Sky (part of the Comcast NBC Universal family): Sky provides internet access as an addition to its TV and video on demand content offer. Sky's original offer was DTH satellite services. However, extension into VoD required it to provide content over the internet. While this was possible over third party Internet Service Providers, Sky purchased an ISP. This, with the UK's two tier broadband service provision model, enabled Sky to provide near universal broadband access services over Openreach's copper and fibre infrastructure. This meant that Sky had control over the quality of access and in addition safeguarded it from competition in content markets from telecommunications operators Virgin Media and British Telecom.

Virgin Media (owned by Liberty Media): Virgin Media was built from an agglomeration of regional CATV service providers that were subject to consolidation down to one national CATV operator. While the consolidation was happening, the CATV service providers also started to offer internet access and then a broad range of telecommunications services over their infrastructure. Virgin Media now provides telecommunications services and TV content over its own fibre and CATV infrastructure to about 50% of the consumer market in the UK.

British Telecom: British Telecom (BT) was late to the media content market. But faced with competition in its core business from content providers and independent telecommunications operators, and recognising that it was leaving revenue from media services on the table, it now provides TV programming in conjunction with its broadband products. TV and VoD content includes BT provided sports programming content, access to third party sports content at a preferential rate, access to BT provided general TV and films, and access to third party content at a preferential rate. The purpose of these offers is to increase the "stickiness" of BT's broadband offer which is subject to aggressive price competition, as well as to safeguard it from competition from Sky and Virgin Media.

### **India**

Reliance Jio Infocomm, part of Reliance Industries Ltd (RIL), entered the telecoms and media markets in India in 2015 and has pursued a disruptive strategy that has included a triple play service, fixed fibre, mobile and media, and aggressive price promotions bordering on what the regulator would allow,

with ultimately a fixed monthly subscription at about Rs 300 with free calls and a Gigabyte of data per day. It is now the largest telco in India with 370m subscribers and an estimated 32% market share.<sup>28</sup> Ultimately, its pricing strategy has led to large increases in data and voice usage and has become profitable despite a very low mobile ARPU of Rs 128.4 (Q4 2019). It should be noted that Reliance Jio has embraced OTT by enabling free calls over Wi-Fi in addition to calls over its wireless network.

RIL tapped into the rapidly growing media and entertainment sector through acquisitions and partnerships providing it with content for the digital media segment, which with an annual growth rate of 43.4% in 2019 was the fastest growing segment of this market.<sup>29</sup> RIL investments in media and entertainment include:

2014: Network 18 Group, which owns and operates a bouquet of entertainment, new and infotainment channels across a number of Indian languages through TV18 Broadcast 2017: RIL acquired a 25% stake in Balaji Telefilms in 2017 enabling a content-sharing deal between Reliance Jio and ALTBalaji, the subscription-led OTT platform in early 2018.<sup>30</sup>

2018: RIL acquired a 5% stake in Eros International, a movie production and distribution studio, for access to Eros Now, its OTT digital arm to provide programming for Reliance Jio.<sup>31</sup>

2019: RIL acquired a 66% stake in DEN Networks, subsequently raised to 78.6%, and a 51.3% stake in Hathway Cable & Datacom, subsequently raised to 94.1%, cable companies enabling Reliance Jio to reach 1100 cities, targeting 50 million homes with its broadband services, and reducing the cost of reaching its customers.<sup>32 33</sup>

Reliance has also acquired a stake in JioSaavn a music streaming service and has its own content production firm, Jio Studios, and JioTV and

<sup>28</sup> Reliance Jio becomes biggest telecom operator in India by subscriber base, Vodafone Idea now second", India Today, 17th January 2020

<sup>29</sup> "Inside Reliance Jio's content factory", Fortune India, 30th October 2019

<sup>30</sup> "RIL buys 25% stake in Balaji Telefilms for Rs413 crore", livemint, 21st July 2017

<sup>31</sup> "Reliance Jio will help us scale our business: Eros Now COO Ali Hussein", livemint, 7th March 2018

<sup>32</sup> "Reliance increases shareholding in DEN, Hathway, GTPL through open offer", Television Post, 11th March 2019

<sup>33</sup> "What Hathway and Den deals mean for Reliance Jio", livemint, 19th October 2018

JioCinema which aggregate licensed content for linear TV and video on demand.<sup>34</sup>

RIL's stated intention is to build a pipeline of content to power the distribution platform and expand its reach. As this grows, content producers will seek to publish their content on the platform, and that will provide an attractive return. RIL notes that there is the possibility of multiple licensing and monetization models.<sup>35</sup>

RIL is seeking to consolidate the user experience through an app that would be the equivalent of a set top box giving access to a closed bouquet of content services and enabling dual screen media, one streaming and the other interactive.

Commenting on the Q4 2019 results, "Mukesh D. Ambani, Chairman and Managing Director, Reliance Industries Limited said:

*"...Jio has continued on its unprecedented growth journey receiving overwhelming customer response for best in class mobile connectivity services. We are delivering on our promise to be the driver of digital revolution in the country. Jio is also determined to redefine the wireline infrastructure, home entertainment and enterprise market in India with its FTTx services which bundle best-in-class connectivity with bouquet of digital content and services.[.] To drive the next leg of growth, a truly transformational and disruptive digital services company has been set-up which will bring together India's No.1 connectivity platform, leading digital app ecosystem and world's best tech capabilities, for creating a truly Digital Society for each Indian."*<sup>36</sup>

## **USA**

The Binge On service from Verizon is another example. This offers a host of video services from video partners such as Netflix, ESPN and Amazon. In the past year, Verizon, Sprint, and other operators have launched their own OTT services and expectation is that they will be able to charge for the services.

## **OTT media bouquet opportunity**

<sup>34</sup> "Inside Reliance Jio's content factory", Fortune India, 30th October 2019

<sup>35</sup> "Inside Reliance Jio's content factory", Fortune India, 30th October 2019

<sup>36</sup> Reliance Jio Now Has 370 Million Subscribers, Adding 14.8 Million in a Quarter, Gadgets 360, 17th January 2020

Reliance's strategy provides content for a number of different channels across STC's country markets and other markets, and in particular provide OTT content for its telecommunications operators to give it leverage in the content market.

The relaxation of prohibitions against cinemas in Saudi Arabia arising from Vision 2030 provides an opportunity to create a distribution network covering OTT and cinemas, and will also create a new market for film production in Saudi Arabia. These opportunities have been recognised by AMC and also by the Development Investment Entertainment Company (DIEC) which is acting as a catalyst for the development of the cinema sector. Several international cinema operators have already signed MoUs with local or regional partners.<sup>37</sup>

The emerging cinema sector will stimulate content provision in Saudi Arabia. Partnerships or acquisition of such content providers could give STC unique content that might be exploited across a number of distribution channels including cinemas, DTH satellite and OTT. For example, Netflix has already picked up six short films on social issues from Telfaz11 Studios.<sup>38</sup>

In a market where the competition in telecommunications markets and media markets are regulated by different bodies, it is important that these competition related power dynamics are appreciated and considered, and that operators and media providers can work together to their mutual benefit.

Key elements in such a venture comprise:

- Own TV set top box and mobile/tablet/PC app to aggregate content and create a closed bouquet with preferential access to the most profitable content; this is aimed at reducing subscriber churn
- A broadband distribution network providing preferential access to content via the set top box and app;
- A stream of new content provided first or preferentially to subscribers on the distribution network that can be monetized and that differentiates the offer from other offers (BT Sport is an example of such content);

---

<sup>37</sup> Cinemas in Saudi Arabia: A billion dollar opportunity, PWC, 2018

<sup>38</sup> "Netflix Nabs Short Films From Saudi Arabia Start-Up Telfaz11 Studios", Deadline, Penske Business Media LLC, February 2020

<ul style="list-style-type: none"> <li>• Access to popular content from other content providers.</li> </ul> <p>2. remove the current net neutrality guidelines and consumer regulations (notably chapter 5) and go back to self regulation. If countries such as the US and Canada can use existing rules, why can't Bahrain?</p>	
<b>Batelco</b>	
<p>Batelco believes that the Authority could add much needed clarity by naming some specific well-known OTT services and stating whether each one would be considered to be a “Number-based Service” (subject to regulation) or a “Number-Independent Service” (not subject to regulation), under the new classifications. For example, Skype &amp; WhatsApp both utilize telephone numbers and so, presumably, they would both be categorized as “Number-Based Services”.</p>	<p>The Authority disagrees with Batelco’s comment that the Position Paper should name specific OTT services. There are numerous OTT services available online which are constantly changing, and even the well-known OTT services are known to regularly adapt their functionalities. For example, a Number-Independent Service that adds a dial-out feature could potentially become a Number-Based Service. As the market is in a constant state of flux, any references in the Position Paper could quickly become outdated. Therefore, the Position Paper aims to strike the right balance between legal certainty and being future proof, without fettering the Authority’s discretion under the Law.</p> <p>Even with respect to the examples that Batelco has referenced, the Authority notes that these service providers offer different products and their various services utilise telephone numbers in different ways, which may not necessarily categorise all their service offerings as Number-Based Services. To this end, the Authority refers to paragraph 3.5 of the Position Paper which states that:</p> <p style="text-align: center;"><i>“the mere use of a number as an identifier is not the equivalent to the use of a number to connect with publicly assigned numbering resources, and this in itself would not qualify the service as a Number-Based Service.”</i></p>
<b>Zain</b>	
<p>14. Zain Bahrain also wishes to advocate that Emergency Order No. 1 of 2015 be revoked or altered given that operators must now have the ability to block any NB-ICS operator offering services in the Kingdom without a valid licence. This approach will pave the way for operators to introduce new business models. For example, commercial wholesale arrangements could be made between traditional telecommunications operators and OTT players. Alternatively, at a retail level, commercial packages (with bundled OTT services) could be developed which offer tiered pricing for access to specific OTT services. Indeed, the details of such new commercial packages will be clearly stated to</p>	<p>As stated in response to Zain’s comments on question 1 above, the Authority disagrees with Zain’s r advocating the revocation or amendment of Emergency Order No. 1 of 2015. Only the Authority has the power to determine whether or not a provider of NB-ICS is offering services in the Kingdom in compliance with the Law, and only the Authority may determine the appropriate enforcement action to take if necessary. Leaving this to the discretion of the Licensed Operators would be contrary to the Law.</p>

<p>the public on Zain’s official website and in the standard subscriber agreement as per the requirements set out in the Consumer Protection Regulation<sup>39</sup>. Furthermore, any wholesale agreement will not impede the obligations set out in the Traffic Management and Pricing Practices Guidelines<sup>40</sup>.</p>	
<p><b>Kalaam</b></p>	
<p>We understand that for free OTT applications, there are limited controls that can be used to regulate them and ensure their safety and compliance. However, based on our Answer in Q3 above, Kalaam is of the view that there should be control and regulation that governs illegal mobile apps that sell recharges within the Kingdom of Bahrain.</p>	<p>The Authority notes Kalaam’s comments on illegal mobile apps and refers to its response to Kalaam’s comments to question 3 above.</p>
<p><b>Other comments</b></p>	
<p><b>STC</b></p>	
<p><b>Introduction</b></p> <p>Thank you for the opportunity to provide our submissions on the Authority’s Consultation Paper on the OTT Position Paper dated 16 July 2020.</p> <p>As the Authority is fully aware, MNOs in Bahrain are suffering from the unlawful competition of the Over-The-Top Communication Services (the “OTT”) providers. MNOs have expressed their serious concerns on multiple occasions about the substantial usage of the unlicensed and free OTT Communication Services which reaches an alarming level impacting MNOs revenue streams.</p> <p>The characteristic of the telecommunications market in Bahrain, namely the reduction in prepaid revenue due to a marked reductions in voice revenues, is commonly cited as an issue by operators in many markets worldwide..</p> <p>Operators also report a difficulty in accessing revenues from OTT services. Many of these services are offered by service providers with revenue streams arising from advertising and subscription revenue. Many are offered free as part of a service</p>	<p>The Authority notes STC’s comments which generally relate to competition and net neutrality issues. The Authority disagrees with the comment that the Authority is ignoring mitigating the risks described by STC. Competition and net neutrality are issues that go beyond the scope of the Position Paper, which is focussed on the licensing approach of OTT voice and messaging services. The Authority refers to its response to STC’s comments on question 1 above in this regard.</p>

<sup>39</sup> Ibid

<sup>40</sup> Ibid

package. These service providers are often located in other countries and are not subject to regulatory control by an NRA.

In liberalised countries such as Bahrain, content delivery networks are usually allowed by the regulator with caching close to the access node. Even a radio access network, the delivery of this content requires network capacity sufficient to provide an attractive service.

OTT Communication Services providers such as WhatsApp, Skype, Viber, Facetime etc. are providing unregulated telecommunications services substituting the licensed operators' basic voice and messaging services without the burden to invest in building public telecommunications networks to convey these free-of-charge OTT Communication Services leveraging on the current regulatory framework, while network operators are incurring huge investments to build their networks.

As such, STC sees that having the Authority ignoring mitigating the above stated risks in its OTT Position Paper consultation<sup>41</sup>, is of a great concern despite having the industry raising their concerns on multiple forums including their responses' to the Authority's consultations related to the Consumer Protection Regulation and Guidelines on traffic management and pricing practices.

STC considers that the review of VoIP regulation should be conducted in parallel with the review of net neutrality approach in the Kingdom in line with international developments which we highlighted below in response to Question 4.

There are several options for an operator in dealing with OTT services that should be allowed by the TRA. These include:

- Levying additional charges on the subscriber for particular OTT services such as VoIP
- Charging a fixed subscription that includes a basket of call minutes, text messages and broadband use
- Levying charges on content and service providers to deliver specific content (for example, by offering a "fast lane" for services that have stringent delivery requirements).

[...]

**Kalaam**

---

<sup>41</sup> Para 2.2 of the OTT Position Paper states that "This Position Paper does not impact the 2016 OTT Paper or the 2017 TM Guidelines"

<p>Kalaam welcomes the opportunity to provide its comments on the TRA public consultation titled “Public Consultation on OTT Position Paper” dated 16 July 2020.</p> <p>Whilst Kalaam generally agrees with the objective of the Consultation, Kalaam approves the conclusions and the analysis provided in the Consultation; however, it also offers suggestions and elements that require further improvement and consideration from the Authority. [...]</p>	<p>The Authority notes Kalaam’s general agreement and approval of the Authority’s conclusions and analysis in the Consultation. With respect to Kalaam’s further suggestions, the Authority refers to its response to Kalaam’s comments above, and in particular on question 3.</p>
<p><b>Etisalcom</b></p>	
<p>Regarding this public consultation on OTT position paper, Etisalcom broadly agrees with the contents of the draft paper. We just had one comment, which is that calling cards should also come under number based services and only companies with relevant licenses should be allowed to offer calling card services in Bahrain. Companies like Etisalcom who already have all the relevant licenses to provide OTT services should not be asked to pay any more in licensing fees for these OTT services, the existing licenses should suffice. Furthermore, TRA should have the power to enforce that any calling card company selling its cards in Bahrain, which is not licensed with TRA is not allowed to sell the cards in the market. TRA should figure out a way to block/ban these cards from being distributed from the market.</p>	<p>The Authority notes Etisalcom’s broad agreement with the draft Position Paper.</p> <p>With respect to Etisalcom’s comments on calling cards, the Authority notes that the draft Position Paper aims to take a more technology-neutral approach by differentiating only between Number-Based Services and Number-Independent Services, rather than the different categories of VoIP services described in the 2007 VoIP Paper. Therefore, the Authority does not consider the need to specifically address calling cards in the Position Paper. If a particular calling card service is an OTT voice service that connects with publicly assigned numbering resources, then it will fall within the category of a Number-Based Service and be subject to the licensing requirement under the Law. The Authority also notes that it has the power to monitor and investigate compliance with the Law, and to take enforcement action accordingly where Telecommunications services are provided in the Kingdom without a Licence.</p> <p>With respect to Etisalcom’s comments on the licence fees, paragraph 3.8 of the Position Paper describes the different Individual Licences under which Number-Based Services may be authorised. The Authority notes that the Position Paper does not propose any changes to the applicable licence fees for these Individual Licences.</p>