The General Director
Telecommunications Regulatory Authority
P.O.Box 10353
Manama
Kingdom of Bahrain

Dubai, 7 October 2007

Dear Sirs

**Re: Public Consultation on the TRA's Strategic and Market Review**

FRiENDi mobile welcomes the opportunity, and is pleased to provide herewith its response ("the Response") to the public consultation on the TRA's Strategic and Market Review[1] (the "Consultation Document")[2].

In providing this Response FRiENDi mobile firmly believes, effectively provisioned and implemented, MVNOs will grow the overall market and offer more choices at better value for Bahrain's mobile consumers and benefit the overall economy.

FRiENDi mobile would welcome the opportunity to discuss the Response with the TRA. If the TRA requires any further information relating to any aspect of the Response please contact Mr. Mikkel Vinter, CEO or Mr. Phil Reynolds, CLO. Contact details for FRiENDi mobile are provided in the footer below.

**FRiENDi mobile**

FRiENDi mobile is an innovative telecommunications company offering mobile telecommunications services across the Middle East and North Africa (MENA) region as a Mobile Virtual Network Operator (MVNO), which is a proven business model that brings significant benefits to end users, telecom operator partners and the general economy of the countries where FRiENDi mobile operates.

FRiENDi mobile is a recent re-branding of Moobility Telecom.

Mikkel Vinter
CEO

[1] TRA. *Strategic and retail market review: a public consultation document issued by the Telecommunications Regulatory Authority of the Kingdom of Bahrain, 27 August 2007*. Manama: the TRA, 2007

[2] FRiENDi mobile comments do not contain any business or confidential information. In the interests of openness and transparency, FRiENDi mobile has no objection to the publication by the TRA of its Response on the TRA's website

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## Response to the TRA

## Strategic and Retail market Review

**A public consultation document issued by the Telecommunications Regulatory Authority of the Kingdom of Bahrain**

**27 August 2007**

**Submitted 7 October 2007**

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# Executive Summary

## Part A: Introduction

### 1. General

- FRiENDi mobile congratulates the TRA on the quality and comprehensiveness of the Consultation Document.
- FRiENDi mobile generally agrees with the TRA's framework for removing regulatory constraints in mobile telephony in Bahrain and welcomes and supports this important pro-competition regulatory initiative.
- Nevertheless, and notwithstanding the high quality of the Consultation Document, FRiENDi mobile recommends in this Response some additional "fine tuning" and tightening in selected areas relating to the TRA's proposed further opening of the mobile market.

## Part B: Comments on TRA's specific MVNO proposals

### 1. Further opening of the mobile market

- FRiENDi mobile fully supports the TRA's conclusions and intentions regarding further opening of the Bahrain mobile market.

- It appears from the TRA's Report on the Possibility of Issuing Additional Mobile Licenses in the Kingdom of Bahrain ("the Report")[3] that the incumbent MNOs have unfortunately attempted to paint a bleak picture of the Bahrain mobile market if any MVNO enabling regulation goes ahead.

- FRiENDi mobile takes a more positive view of:
    - the capacity and willingness of consumers to understand and relish competing service options, to make and change their choices and to penalise providers for poor service; and
    - the positive impact delivered by a wholesale business proposition to a host network operator's (HNO's) bottom line.

- The clear evidence from abroad is that MVNOs have delivered:
    - more choice;
    - lower prices;
    - high customer service; and
    - innovative products.

- Further, the entry of MVNOs is by no means a "zero sum game" for MNOs. International experience suggests that the intensification of competition which results from the entry of MVNOs grows the whole market, i.e. "all boats rise with the tide".

- FRiENDi mobile draws the TRA's attention to the very recent decision of the Jordan TRC to open the mobile market to further competition through provisioning

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[3] Bahrain. TRA, *Report on the Possibility of Issuing Additional Mobile Licenses in the Kingdom of Bahrain.* Manama: the TRA, 13 May 2007

of MVNOs ("the Jordan TRC Decision") We encourage the TRA to consider the Jordan TRC's Decision on provisioning of MVNOs which FRiENDi mobile considers is a particularly important and relevant precedent for the region[4].

## 2. Provisioning of MVNOs should in the first instance be on commercial terms

- FRiENDi mobile supports commercial negotiation as being the overarching principle for MVNO provisioning. MVNO arrangements must be a win-win for both the host network and virtual partner.
- However, it is vital that such a process is underpinned by a regulatory requirement for MNOs to open their networks for access.
- In summary FRiENDi mobile advocates the following regulatory model for MVNOs (which is very akin to that already proposed by the TRA, save for the first additional and, in FRiENDi mobile's view, vital element):

**Recommended MVNO Regulatory Framework**

1. The TRA should publish a clear and unequivocal Policy Statement or Decision requiring the MNOs in Bahrain to provision MVNOs on their network.
2. The detailed terms and conditions of MVNO provisioning should then first be left to the players to negotiate on a purely commercial basis.
3. The TRA should exercise its various regulatory mandates to monitor the market and the negotiations so as to ensure that MNOs conduct negotiations in good faith and fairly and that the policy objectives of the mobile market liberalisation are fulfilled.
4. If an MNO is acting in bad faith or engaging in any form of anti-competitive conduct, or if after a reasonable period (say 3 months) of in-good-faith negotiations, a commercial agreement cannot be reached between the parties, it would be in the public interest for the TRA to intervene and assist the parties or, if necessary, adjudicate and make a determination appropriate in each circumstance or case.

## 3. TRA intends to monitor MVNO negotiations

- FRiENDi mobile fully supports monitoring and oversight as an equally vital part of the proposed regulatory framework in Bahrain. However, FRiENDi mobile is mindful that mere monitoring, while essential, is not enough. The TRA needs to provide a specific remedy or mechanism for redress, when all else fails, to give effect to the permission or license being granted to MVNOs.

## 4. TRA may consider modifying the current framework if commercial processes fail

- FRiENDi mobile notes, and is concerned, that the only remedy presented to failed negotiations is an uncertain and vague threat to *"…consider…the current framework…"*. FRiENDi mobile believes that without specifics as to when, how and within what time frame such "consideration" is to occur, this significantly weakens

[4] Jordan. TRC, *Regulatory Decision on the Provisioning of Mobile Network Operator Services in Jordan*, Amman: the TRC, 16 September 2007 (and accompanying Information Memorandum).

the prospect of MNOs engaging MVNOs as serious, equal and credible partners in any negotiations.

- In practice, the absence of a specific remedy of direct intervention when negotiations fail is likely to defeat or frustrate the overall legislative purpose and intent of any final TRA decision or regulation.

- In certain circumstances, such as where anti-competitive behaviour is occurring, FRiENDi mobile considers the TRA has an overriding statutory duty and the obligation to intervene and adjudicate, and FRiENDi mobile assumes, in such circumstances the TRA would wish to do so.

- Further, a regulatory mechanism allowing the TRA to intervene in the MVNO negotiations, <u>but as a last resort only</u>, is essential to:

    - bring parties to the negotiating table at the earliest opportunity
    - instil and safeguard the principle of in-good-faith commercial negotiations
    - safeguard fair and non-discriminatory competitive behaviour
    - ensure fair and reasonable terms for access
    - avoid any potential frustration of the policy goal and legislative purpose.

- FRiENDi mobile advocates that the TRA must have a reserved mechanism to be activated when commercial forces do not produce - or anti-competitive behaviour[5] prevents - the desirable policy outcome.

- In short, without some form of last resort “safety net” or “back-stop” intervention mechanism and some basic ground rules establishing a framework in which commercial negotiations can take place, the TRA’s policy on MVNOs may not be implemented, or just implemented in a perfunctory manner, or the commercial negotiations will become unreasonably protracted and may ultimately stall.

## 5. The most appropriate form and type of ‘MVNO license’

- FRiENDi mobile considers that within the current licensing framework in Bahrain an additional class licensing regime is the most appropriate for MVNOs in Bahrain (subject to adequate regulatory safeguards being in place to address the key enablers to MVNOs and other matters covered in this response).

## 6. MVNO Licensing before or after negotiations with MNOs?

- FRiENDi mobile strongly supports the concept of licensing before negotiation.

- It is axiomatic that successful and non-discriminatory negotiations require MVNOs to be viewed as legitimate and appropriately empowered players in the market. This requires the MVNO being accorded a particular and appropriate legal status within the relevant jurisdiction.

## 7. MVNOs may be permitted to purchase existing spectrum from one of MNOs.

- FRiENDi mobile is somewhat agnostic about the right to purchase spectrum from an MNO in any secondary market. FRiENDi mobile does not consider that acquisition of any GSM or 3G spectrum bands fits comfortably with the MVNO concept or business model.

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5 For example, abuse of a dominant position or collusion.

## Part C: Comments on Key Specific MVNO Enablers

### 1. General

- There is an additional need for the TRA to prescribe an holistic regulatory framework to effectively enable MVNO provisioning. This requires the TRA determining and managing a number of practical matters necessary for effective operation of MVNOs. The key operational enablers are discussed following.

- Determination and management of these important general operational matters by the TRA does not derogate in any way from the overarching principle of commercially negotiated arrangements between the parties. Regulatory certainty surrounding these matters merely creates a set of parameters and conditions within which meaningful negotiations can most effectively take place.

### 2. Subscriber Numbers and Network Codes

- The allocation of mobile subscriber numbers is a fundamental enabler for MVNOs. The absence of non-discriminatory access to numbers would be a major impediment to MVNO market entry and market success.

- With the advent of MVNOs, we suggest that clear blocks of 100,000 be a suitable minimum allocation, either, (a) preferably, directly from the TRA or (b) if not immediately possible, indirectly as sub-blocks from the host MNO.

- While not essential to threshold MVNO provisioning, the allocation of separate mobile network codes (MNCs) to MVNOs significantly improves the competitive positioning of MVNOs, particularly in the absence of MNP, as is the present case in Bahrain.

### 3. Wholesale Pricing and Interconnection

- A retail-minus approach to wholesale pricing may be appropriate where an MVNO is a pure reseller of the MNOs own price plans.
- However, where an MVNO has invested in and provides it own infrastructure components, and has its own pricing freedom and plans, MNOs should be required to supply access services on a long run incremental cost basis and on non-price terms which are non-discriminatory compared to the supply of similar services to the MNOs competing retail operation. By way of example, this is the approach taken in Hong Kong to MVNOs.
- MVNOs also require interconnection for both national and international services on a non-discriminatory basis with sharing of both in-bound and out-bound revenues and reflecting, as appropriate, traffic volume discounts.

### 4. Mobile Number Portability (MNP)

- MNP in itself can be a key facilitator of competition. Quite apart from the general consumer welfare benefits of MNP, MNP would almost certainly ease the conditions of entry for MVNOs and we would strongly encourage the TRA to ensure MNP is implemented in Bahrain, including for MVNOs, as soon as possible.

### 5. Own infrastructure and Co-location

- What distinguishes the MVNO types from each other is the infrastructure they control, and hence the level of control the MVNO has on services, pricing, customers, routing and messaging etc. Accordingly it is critical that there be no limits placed upon the level of infrastructure investment and deployment of MVNOs.

- Further, it is desirable that the access granted to MVNOs should specifically also require fair and reasonable collocation rights with the host network operator (HNO). Provided the threshold requirement exists, the detailed terms can be left to commercial negotiation.

**6. No retail price controls**

- MVNOs will need significant retail price flexibility in order to respond quickly to emerging technical and product developments and to offer customers innovative and niche or segmented services at the earliest opportunity. Accordingly, FRiENDi mobile cautions against any form of retail tariff approval mechanism or other form of retail price control.

**7. Prevention of "Win-back" Campaigns and "Chinese Walls"**

- It is not an option to disregard the reality of the negative experiences for consumers and competing operators of aggressive win-back programs conducted in other international mobile markets.
- 'Win back' campaigns have been judged by regulators around the world as inconsistent with the competitive market.
- Consistent with progressive regulation in other countries, a total prohibition, but only for a pre-determined period (say 6 months), is the best way to prevent win back campaigns from undermining the competitive market and in particular, the launch of new services.
- Further, in the same vein and consistent with present interconnect arrangements in Bahrain, a host MNOs wholesale division must be prohibited from passing an MVNOs customer, network and traffic data to its retail division.

## Part D: Comments on the General MVNO Matters

**1. General**

- The demonstrated benefits of MVNO provisioning are buttressed by three fundamental underpinning propositions relevant to MVNO provisioning. These are summarised next.

**2. Services based competition (SBC) and facilities based competition (FBC) are complementary**

- SBC and FBC are not opposites and SBC does not disincentivize infrastructure investment. On the contrary, SBC remains important, not only in its own right, but also as a platform and catalyst for FBC. Bahrain has adopted an SBC model and regulatory approach but so far only in relation to fixed line services. That is why we welcome the new initiative in the Consultation Document to now open up mobile services to SBC.

**3. Enough Mobile Competition in Bahrain Already?**

- Two mobile operators is adequate FBC but insufficient SBC in Bahrain to deliver (a) a vigorous, healthy and long term sustainable mobile market and (b) through further and targeted segmentation of the market, the most innovative mobile services for consumers at the lowest possible prices.

**4. Reliance on ex-post Competition Law will not work**

- Because of the way in which the current regulations are constructed, allowing direct recourse to Bahrain Courts, reliance on the TRA's ex-post general competition powers is insufficient to deliver the required levels of competition in mobile services in a timely manner.

# Part A - Introduction

## 1. General

FRiENDi mobile congratulates the TRA on the quality and comprehensiveness of the Consultation Document.

FRiENDi mobile generally agrees with the TRA's framework for removing regulatory constraints in mobile telephony in Bahrain as contained in the Consultation Document and welcomes and supports this important pro-competition regulatory initiative.

This Response both complements and supplements Moobility Telecom's (now re-branded as FRiENDi mobile) earlier response dated 31 August 2006 relating to the TRA's consultation on the Possibility of Issuing Additional Mobile Licenses in the Kingdom of Bahrain (the "Initial Response")[6]. In this Response FRiENDi mobile has deliberately avoided repeating material provided in FRiENDi mobile's Initial Response.

Fully and effectively implemented, FRiENDi mobile believes this informative, helpful and visionary Consultation Document will:

- bring significant long term benefits for Bahrain's mobile telecommunications consumers through delivery of additional, innovative and competitive mobile offerings by MVNOs;
- inject a new level of competitive vigour into Bahrain's mobile market; and
- maintain Bahrain's status as the most competitive and liberal communications market in the Middle East region.

Nevertheless, notwithstanding the quality of the Consultation Document and FRiENDi mobile's general overall agreement with it, in relation to the TRA's specific proposals on MVNO provisioning, FRiENDi mobile believes the current proposals would benefit from some "fine tuning" and tightening in selected areas. In particular the TRA's proposals relating to further opening of the mobile market. FRiENDi mobile's comments in this Response are principally provided towards that end.

## 2. Mobile Service Market

FRiENDi mobile's response is limited to commenting upon and answering the TRA's questions in Section 10.4 relating to the "Mobile Services Market". More particularly Section 10.4.3.2 "Reducing unnecessary regulatory barriers". Otherwise, FRiENDi mobile has not commented in any detail on the other specific questions in the Consultation Document relating to the broader Strategic and Retail Market Review.

FRiENDi mobile notes that the TRA has indicated in the Consultation Document that the "TRA considers that the mobile market in Bahrain should be opened to new entrants or to existing entrants to expand their service base[7]".

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[6] *The Possibility of Issuing Additional Mobile Licenses in the Kingdom of Bahrain – a reponse to the consultation document issued by the TRA.* Dubai: Moobility Telecom, 31 August 2006

[7] Consultation Document, Section 10.4.3.2, pp. 100.

The Consultation Document contains the following key specific regulatory reform proposals for the mobile services market[8]:

1. One of the main pathways to further opening of the mobile market is to allow the provisioning of a Mobile Virtual Network Operator (MVNO) and the TRA is minded to do so.

2. Any negotiation and agreement on provisioning between a potential MVNO and an existing MNO licensed in Bahrain should in the first instance be on commercial terms and the assumption is that commercial negotiations should enable the provisioning of MVNO services.

3. TRA will, however, where required, monitor any negotiations between potential MVNOs and existing MNOs to ensure they are conducted in good faith and that the TRA's policy objectives of the introduction of competition into the mobile market through the allowance of MVNOs is being fulfilled.

4. Should commercial agreement not be able to be reached on reasonable terms then the TRA may consider the extent to which the current framework for wholesale regulation requires amendment, in particular to ensure that network prices would allow for efficient entry by MVNO service providers.

5. The most appropriate form and type of 'MVNO license' that will apply also needs to be determined. Options include:

    a. an additional MVNO license class; or
    b. extending one of the existing license classes, for example a Value Added Service (VAS) License to include MVNO services.

6. The point in time any MVNO license should be awarded also needs to be determined. Here TRA considers that two options exist:

    a. Licensing before negotiation or
    b. Licensing after negotiation

7. MVNOs do not require a spectrum license in their own right to provide mobile telecommunications services, although depending on the model of MVNO introduced, may purchase existing spectrum from one of the mobile network operators (MNOs).

8. Finally, FRiENDi mobile note the TRA welcomes comments on all aspects of MVNO provisioning.

FRiENDi mobile's Response addresses each of these reform proposals in turn within the following structure:

## 3. Structure and Content of Response

**Executive Summary**

**Part A: Introduction**

[8] Consultation Document, Section 10.4.3.2, pp. 100-101.

1. General
2. Mobile Services Market
3. Structure and Content of Response

**Part B: Comments on TRA's specific MVNO proposals**

1. Further opening of the mobile market
   - 7.1.1 MVNOs in best interests of consumers
   - 7.1.2 MVNO entry also in the best interests of the incumbent operators
   - 7.1.3 Conclusion
2. Provisioning of MVNOs should in the first instance be on commercial terms
3. TRA intends to monitor MVNO negotiations
4. Possible modification of current framework if commercial processes fail
5. The most appropriate form and type of 'MVNO license'
6. MVNO Licensing before or after negotiations with MNOs?
7. MVNOs may [be permitted to] purchase existing spectrum from one of MNOs.
8. Other aspects of MVNO provisioning.

**Part C: Comments on Key Specific MVNO Enablers**

1. General
2. Subscriber Numbers and Network Codes
3. Wholesale Pricing and Interconnection
4. Mobile Number Portability (MNP)
5. Own infrastructure and Co-location
6. No retail price controls
7. Prevention of 'Win-back' Campaigns and "Chinese Walls"

**Part D: Comments on the General MVNO Matters**

1. General
2. Services based competition (SBC) and facilities based competition (FBC) are complementary
3. Enough Mobile Competition in Bahrain Already?
4. Reliance on ex-post Competition Law will not work

## Part B: Comments on TRA's specific MVNO proposals

### 1. Further opening of the mobile market

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|---|
| **"One of the main pathways to further opening of the mobile market is to allow the provisioning of a Mobile Virtual Network Operator (MVNO) and the TRA is minded to do so".** |

For the following reasons, and the reasons set out in FRiENDi mobile's Initial Reponse, FRiENDi mobile fully supports the TRA's conclusions and intentions regarding further opening of the Bahrain mobile market.

FRiENDi mobile described in its Initial Response the numerous benefits MVNOs will bring to the Bahrain mobile market and Bahraini consumers. FRiENDi mobile does not repeat those benefits here. However, many of the submissions and comments in our Initial Response have continuing relevance to this Consultation Document in the context of the possible further opening of Bahrain's mobile market.

It seems from the TRA's Report on the Possibility of Issuing Additional Mobile Licenses in the Kingdom of Bahrain ("the Report")[9] that the incumbent MNOs have attempted to paint a bleak picture of the Bahrain mobile market if any MVNO enabling regulation goes ahead. More specifically, they are apparently predicting, among other things:

- a highly fragmented market wherein consumers are presented a multiple and confusing array of services with the consequence that overall quality of service (QoS) falls;
- innovation in mobile services will be stifled; and
- unsustainable pricing competition will prevail until the financial viability of operators collapses when they then have to raise prices.

On possible negative impacts upon QoS the Report states:

> *"Both incumbents expressed the opinion that the introduction of further competition was likely to have a negative impact on the quality of services provided, given the relatively high quality of services that existed and the risk that entry would lead to a reduction in the network investment of the incumbents. The incumbents believed that no significant network improvements would result from the entry of MVNOs. One incumbent stated that MVNOs would also be likely to have no, or negative impact on customer care and service quality levels".*[10]

FRiENDi mobile considers the incumbents may be taking a narrow view of 'quality'. Quality is much more than network performance quality. Quality should be measured

[9] Bahrain. TRA, *Report on the Possibility of Issuing Additional Mobile Licenses in the Kingdom of Bahrain.* Manama: the TRA, 13 May 2007 ("the Report")

[10] The Report p. 16.

against the total customer experience. Quality should be viewed in the context of the complete lifecycle of the customer, with opportunities for improvement in every facet of service delivery. Ultimately quality is about meeting customers expectations. Applying this holistic view of quality it is clear from international evidence (as is discussed further below) that MVNOs have indeed consistently been able to deliver higher quality services to their customers. By providing more 'niche' or segmented offers this drives higher levels of customer satisfaction. For the same reason MVNOs are closer to, and better positioned to understand and deliver what customers really want.

On alleged stifling of innovation and unsustainable price competition, the Report states:

> *"Both incumbents also point out potential new MVNOs, given their primary focus on retail – rather than network – competition – will not encourage product innovation as compared to additional MNOs. One of the incumbents also points out that a higher number of operators may drive down prices, which would reduce the amount of resources available to existing operators to invest in new technologies and product development."*[11]

FRiENDi mobile takes a more positive and proven view of:

- the capacity and willingness of consumers to understand and relish competing service options, to make and change their choices and to penalise providers for poor service; and
- the positive impact delivered by a wholesale business proposition to a host network operator's (HNO's) bottom line.

Each of these benefits is discussed next.

### 1.1 MVNOs in best interests of consumers

Viewed through the lens of consumer welfare rather than individual operator interest, the incumbent operators' arguments about:

- "inefficient customer churning" in fact means customers have more variety of choice and exercising it more often than if competition was weaker;

- "unnecessary price wars" means consumers are benefiting from lower prices than the operators might otherwise offer if competition was weaker;

- operators focusing "on [marketing and sales] rather than the technical area" means operators have to work harder to win and keep customers than if competition was weaker.

FRiENDi mobile is not aware of any evidence from any of the countries in which MVNOs operate of the types of problems which the opponents of further entry put forward.

On the contrary, the clear international evidence is that MVNOs have delivered:

- more consumer choice;

- lower prices;

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[11] The Report, p.18.

- better customer service; and
- innovative products.

MVNOs have lead the way in increasing customer choice. An MVNO, without a network of its own, has to differentiate itself through retail level innovation. The experience in other markets is that MNOs follow the lead set by MVNOs in introducing innovative retail pricing and packaging approaches.

MVNOs have consistently high levels of customer satisfaction. For example:

- In 2004 Virgin Mobile got the top ranking in J.D. Power's UK Mobile Telephone Customer Satisfaction Study[12]; and
- In a recent survey of 7.000 people, Which magazine (the consumer advocacy organisation in the UK) concluded that "Tesco Mobile offers the best service out of all the mobile networks" in the UK. In the pay-as-you-go category, Tesco Mobile came out top for overall customer satisfaction and top for cost of calls[13]
- The recent 2nd annual J.D.Power & Associates 2007 Wireless Prepaid Customer Satisfaction Study ranked Virgin Mobile USA highest overall in prepaid customer satisfaction for a second consecutive year. Boost Mobile also ranked above industry average.[14]
- Telmore was consistently rated highest in customers satisfaction among Denmark's mobile providers despite its bare-bones offer.[15]

In fact, the Danish MVNOs have managed to consistently maintain higher customer satisfaction rankings than the MNOs. Over 60% of the customers of the largest MVNO, Telmore, say they are "highly satisfied" with its customer service compared to only 23% of the customers of the largest MNO, TDC, which report they are "very satisfied" with its service[16].

In the United States, the MVNO Virgin Mobile ranked highest of America's pre-paid service operators for customer satisfaction. Ease and variety of ways of replenishing an account, flexibility in plan choices, access to live customer service representatives, and timeliness in making requested changes to service were just some of the areas where Virgin Mobile performance exceeded its competitors[17].

Although MVNOs do not have their own radio network, they are able, if access and interconnection conditions allow, to build their own IN platforms, provide their own access to the internet and develop and acquire their own content. These varying levels of

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[12] *Virgin Mobile enters the 2004 J.D. Power and Associates UK Mobile Telephone Customer Satisfaction Study with a top ranking among pre-pay providers. Vodafone ranks highest among contract providers*. J.D. Power and Associates Media Release 26 May 2004

[13] Source: Tesco Mobile

[14] J.D.Power & Associates. *Wireless Prepaid Customer Satisfaction Study*. 2007

[15] McKinsey Quarterly 2004

[16] *A Moment of Truth – A Portrait of the success of the discount mobile service providers in Denmark*, Strand Consulting, at page 35.

[17] *Virgin Mobile ranked highest.* Unstrung, 24 August 2006

infrastructure deployment have enabled MVNOs to introduce innovative services and products into the markets they have entered. For example:

- In the UK and Australia, Virgin Mobile has led the market in the offering of "value-added" services which provide access to entertainment focused, music-centric lifestyle services, including video releases, "what's on" and music releases.
- Transatel - an MVNO focused on Benelux & France, offers international business travellers with significant reduction on roaming tariffs while they stay within the Transatel countries.
- Boost Mobile was founded to target the children of Nextel's primarily blue-collar customers, who's needs were completely different from their cost-conscious parents. Instead, Boost Mobile focused on creating a "hip" brand, offering exciting value added services and leveraging co-branding arrangements with other strong youth brands.
- Ay Yildiz launched with an exclusive focus on the Turkish population in Germany, offering special rates for both calls to Turkey and roaming in Turkey as well as offering news from home and marketing itself in Turkish.

The service and product innovation opportunities for MVNOs have, to some extent, been constrained by the technology limitations of 2G technology. Given the limited bandwidth of 2G, MVNOs inevitably have had to focus on voice services and to acquire most of their products from the host MNO. Even so, the use of data services seems to be higher for MVNOs than for MNO networks. For example, although the largest MVNO in Denmark, Telmore, accounted for 9.5% of subscribers in 2002, its customers sent 13.6% of all SMS in Denmark. Telmore's customers send three times as many SMS as the host MNOs own retail customers[18].

### 1.2 MVNO entry also in the best interests of the incumbent operators

The entry of MVNOs clearly will have an impact on the MNOs because they will have to compete harder to win and keep customers. However, the entry of MVNOs is by no means a "zero sum game" for MNOs.

International experience suggests that the intensification of competition which results from the entry of MVNOs grows the whole market, i.e. "all boats rise with the tide". Figure 1 below compares minutes of use in Denmark, where there is a vibrant MVNO sector, with minutes of use in Sweden, Finland and Norway, where MVNOs did not have a significant role before 2003[19]. While the annual growth in minutes of use declined in the other markets (reflecting a maturing of the market), Denmark's minutes of use continued to climb, although Denmark also has similar high levels of mobile penetration. This suggests that MVNOs can add new "life" to a maturing market.

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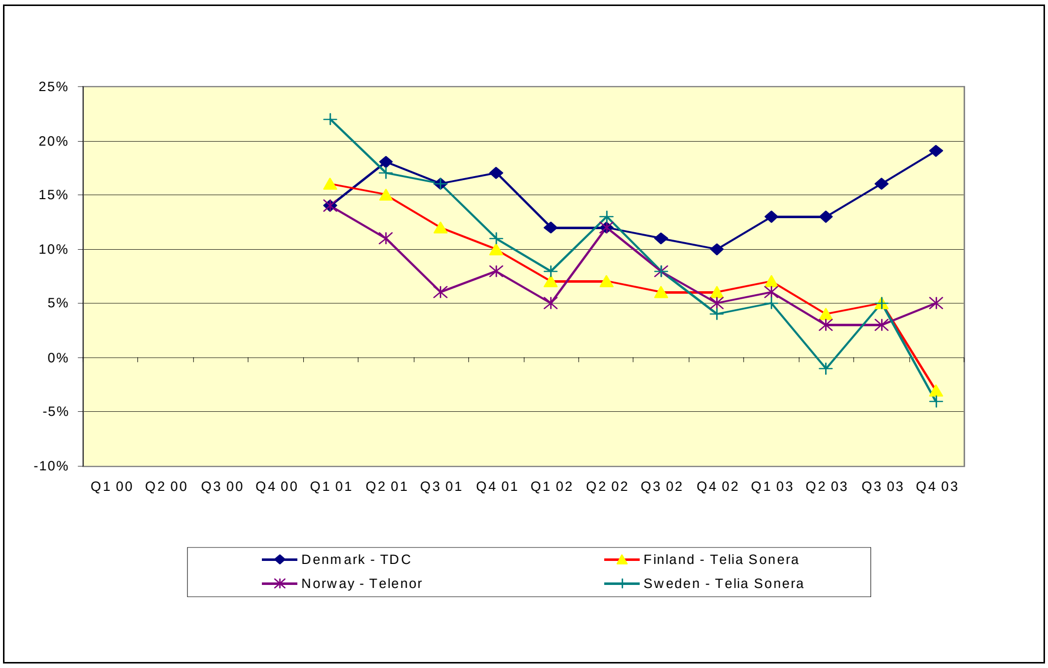
[18] *A Moment of Truth – A Portrait of the success of the discount mobile service providers in Denmark*, Strand Consulting, at page 33.

[19] Source: *A Moment of Truth – A Portrait of the success of the discount mobile service providers in Denmark*, Strand Consulting.

## FIG. 1 CHANGE IN MINUTES OF USE




MVNOs also can open new market segments for competition by focusing on niche customer groups. In developed markets, MVNOs have lead the way on pre-paid services and in data usage, such as text services. MVNOs have helped MNOs penetrate new market sectors. Sprint PCS, Virgin's MNO in the USA, commented[20]:

> *"...We are extremely pleased to partner with the Virgin Group. Their focus on pay-as-you-go wireless service for young Americans under the age of 30 should allow Sprint PCS to quickly and cost effectively penetrate this market segment in a way that is complementary to our efforts. Combining the clarity and coverage of Sprint PCS nationwide network with a powerful youth-oriented brand like Virgin is expected to add users to our network and effectively capture an even larger proportion of the relatively untapped market of young wireless users."*

FRiENDi mobile has recently concluded its own MVNO market research of 18 countries in Western Europe with a total of 399 million people. In summary the results of that research reveal:

- There are a total of 394 million mobile subscribers (i.e. 98.8% penetration) served by 63 MNOs and 209 active MVNOs. This is approximately 3.32 MVNOs per MNO - this does not take into account a large number of planned MVNOs especially in Italy and Spain, which have recently been fully liberalised.
- Countries with the most MVNOs: Netherlands (43), Belgium (38), Germany (31) and France (22).
- Most active Host Network Operators (HNO) are: KPN in Netherlands (35), Base in Belgium (31) and E-Plus in Germany (11)
- Most active MNO Groups acting as HNO are: T-Mobile (19 MVNOs in 3 countries) and Orange (15 MVNOs in 5 countries).

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20 *"Sprint and Virgin announce Joint venture"*, Media release, 5 October 2001

- Country with the highest MVNO market share: Netherlands with 3.05 million customers (18.3%) served by MVNOs in Q1 2007
- Largest MVNOs by number of subscribers are Debitel (roughly 13 million in Germany alone) and Virgin Mobile (roughly 6 million in the UK alone).
- Fastest growing new MVNOs include: Tesco Mobile in the UK (500.000 customers during first 12 mo's, +1.5 million today), M6 in France (400.000 customers in first 12 mo's, +1.0 million today), Virgin Mobile in France (300.000 customers in first 10 mo's), NRJ Mobile in France (300.000 customers in 12 mo's, +400.000 today).
- 28 of the 209 MVNOs (13.4%) are either fully or partly owned by an MNO. The most active MNOs using this strategy is KPN (E-Plus).
- 21 of the 209 MVNOs (10.0%) are either fully or partly owned by a retailer.
- 35 of the 209 MVNOs (16.7%) are using an MVNE rather than own infrastructure.

### 1.3 Conclusion

In conclusion, therefore, FRiENDi mobile submits there is ample evidence supporting the the TRA's conclusions and its intention to further open the mobile market to MVNOs.

Supplementary material evidencing that a robust service based competitive dynamic will drive increased infrastructure investment and a truly long-term commitment on the part of carriers is provided in Section C of this Response. There is a demonstrated strong complementary dynamic between services based competition (SBC) and facilities based competition (FBC).

FRiENDi mobile also includes as part of Section C of this Response an internal White Paper on *"How MVNOs Can Help Mobile Network Operators Benefit From The Opportunities of Service Competition".*[21] The White Paper is attached as Attachment A. The White Paper outlines in more detail the various MVNO strategies and the generic business case for MVNO partnering.

Finally, FRiENDi mobile draws the TRA's attention to the very recent decision of the Jordan TRC to open the mobile market to further competition through provisioning of MVNOs ("the Jordan TRC Decision")[22]. FRiENDi mobile provided submissions to the Jordan TRC throughout the development of its regulatory reforms for further mobile competition. Because of the obvious significance of the Jordan TRC Decision to the Middle East region, we make several references to it, where appropriate, throughout this submission. We encourage the TRA to consider the Jordan TRC's Decision on provisioning of MVNOs which FRiENDi mobile considers is an important and relevant precedent.

[21] FRiENDi mobile. *"How MVNOs Can Help Mobile Network Operators Benefit From The Opportunities of Service Competition".* Dubai: FRiENDi mobile, n.d. (circa 2007).

[22] Jordan. TRC, *Regulatory Decision on the Provisioning of Mobile Network Operator Services in Jordan*, Amman: the TRC, 16 September 2007 (and accompanying Information Memorandum).

## 2. Provisioning of MVNOs should in the first instance be on commercial terms

> **"Any negotiation and agreement on provisioning between a potential MVNO and an existing MNO licensed in Bahrain should in the first instance be on commercial terms [and the TRA's assumption is] … commercial negotiations should enable the provisioning of MVNO services. "**

### 2.1 General support for commercial terms

FRiENDi mobile indicated in its Initial Response support for commercial negotiation as being the overarching principle for MVNO provisioning. FRiENDi mobile's position has not altered. MVNO arrangements must be a win-win for both the host network and virtual partner.

However, we also mentioned in our Initial Response that it is vital that such a process is underpinned by a regulatory requirement for MNOs to open their networks for access[23]. Our more detailed reasons relating to this important threshold requirement follow.

### 2.2 Threshold "open network" policy requirement

Based on international evidence and research FRiENDi mobile considers that some MNOs may be inherently reluctant to permit resale of their mobile services and that without some form of regulatory pressure full competition in mobile services in Bahrain may not evolve as quickly as it should, or at all. This inherent reluctance of some MNOs to open their networks to independent wholesale customers may manifest itself as outright refusal to deal. Accordingly, FRiENDi mobile believes a totally commercial and unregulated option is unrealistic in practice and may prove unworkable. FRiENDi mobile, therefore advocates, in addition to mere regulatory oversight of the market, specific competitive safeguards for MVNOs.

Ideally, FRiENDi mobile believes Bahrain would benefit substantially from implementing an "open network" requirement, similar to that adopted in Hong Kong, Sweden, Ireland and elsewhere. FRiENDi mobile considers that such an enabling approach:

- is fundamental to the effective provisioning of MVNOs in Bahrain;
- is <u>not</u> inconsistent with the overarching principle of commercially negotiated MVNO provisioning; and
- is consistent with the Bahrain Government's policy objective of introducing more competition at the content and service application level in mobile.

Under an "open network" policy the licensees - the MNOs - would be required to open up their networks to service providers, including resellers and MVNOs.

Within the framework of a threshold "open network" requirement, the subsequent role for commercial negotiations is preserved. However, the likelihood of success of purely commercial negotiations is an issue that has been considered carefully by other regulators. And in Ireland, Hong Kong and most recently Jordan, for example, the regulator's there have determined that without a formal access requirement on MNOs, together with some basic ground rules backed up by an enforcement mechanism as a last resort, the "open network" model might not be implemented, or just implemented in a perfunctory manner, or it would take too long for the commercial negotiations to be completed. Thus, in those countries mentioned, an "open network" requirement was

[23] FRiENDi mobile. Initial Response in answer to TRAs Question 5.4, p.25.

determined as essential, albeit only as a reserved mechanism to be activated when commercial forces do not produce the desirable policy outcome.

Approaches to access for MVNOs have varied from country to country. Often the absence of MVNO-specific regulation is taken to imply that MVNO provisioning is unregulated or non-mandated in those countries. However, the MVNO concept in many such countries has been enabled indirectly as part of other regulatory requirements, such as interconnection, co-location, infrastructure sharing and national and international roaming. For example, although MVNO-specific regulation does not exist in the Nordic countries, the Swedish regulator treats MVNOs as a specific form of network sharing.

The regulator's rationale for promoting MVNOs includes stimulation of price competition, stimulation of innovation and increase in the choices available to consumers allegedly decreasing the possibility for downstream collusion.[24] The summary below provides some anecdotal case examples of approaches taken by international regulators to MVNO provisioning.

- In Finland, following complaints from operators about difficulties in reaching commercial agreement for "MVNO facilities" with the national SMP mobile supplier, the regulator considers that the recognition of the MVNOs SIM card is interconnect or roaming.
- In Norway, questioned about national roaming, the regulator explained that it would not see any problem for Telenor to convert an "MVNO agreement to an agreement for national roaming, as these services are quite similar, technically speaking";[1]
- In Sweden, the regulator also is empowered by legislation to impose obligations on mobile network operators with excess network capacity to satisfy a request to provide access, on normal market terms, to network capacity.
- In Finland, the regulator is similarly empowered to impose an obligation on a network operator with significant market power to relinquish access rights to its mobile network to service operators. Furthermore, the regulator may specify the access prices to ensure that they are either cost-oriented or non-discriminatory.
- In Denmark, Danish regulation requires MNOs to provide access to service providers. The standard wholesale offerings which MNO offers to fulfil this access obligation provide for two access models: a service provider model in which the access seeker acquires a "white label" resale service, including SMS, MMS and other services, and an MVNO model in which the access seeker utilizes the MNOs radio network and its own or a third party network core[1].
- In France, in 2002, the French regulator, ART, refused to intervene in a dispute between an MNO, Orange France, and a would-be MVNO, Tele2, because MVNO access "is not covered by current Community law or French legislation".[1] However, in early 2004, French regulatory restrictions on parties other than MNOs selling airtime were removed with the explicit purpose of encouraging the entry of MVNOs. The regulator's main purpose seems to be to "shakeup" the mobile market, principally to drive down retail prices:
    - *"Q: What do you say to those who think that competition in the mobile market is not effective?*
    - *A: The situation is not different from what we observe in other European countries. Mobile penetration is lower and the number of multi-SIM cards*

[24] Northstream 2001, "*Network Sharing*", available at http://www.pts.se/Archive/Documents/SE/Network%20Sharing%20Study.pdf

*is lower. France is more rural. The fixed network is excellent and universally accessible. While mobile prices are below the European average for medium and high user, it is not the case for low-user. We can't help but think that this is because of the absence of MVNOs."*[1]

  - Notably, the French Communications Minister subsequently announced that unless the MNOs offer fair commercial arrangements for MVNOs that he would legislate to require MVNO access. France, therefore, cannot be regarded as an unregulated MVNO market.

- In Japan, Soumosho (the Government Communications Department) does not formally mandate MVNOs, but, nevertheless, has issued MVNO guidelines. These guidelines form part of the "informal" regulatory approach which characterises the Japanese Government and operators are expected to comply with Ministry guidelines.

### 2.3 Conclusion

In conclusion, because of the limitations in the supply of the available spectrum and the general high level of investment in spectrum licenses, as well as the demonstrated international experience, FRiENDi mobile suggests there is reason for the TRA to doubt whether the incumbent operators in Bahrain will necessarily voluntarily commercially negotiate with MVNOs in the absence of some "light handed" underpinning regulation.

FRiENDi mobile maintains that the MVNO policy objective needs to be underpinned by a formal requirement requiring MNOs to open their networks to MVNOs in much the same incumbent fixed operators are required to facilitate access to fixed networks. In FRiENDi's view, such a requirement, at least initially, could be as generic as a Ministerial policy statement made within the existing regulatory framework. This will be necessary to enable negotiations to commence on a credible and legitimate basis.

In summary FRiENDi mobile advocates the following regulatory model for MVNOs (which is very akin to that already proposed by the TRA, save for the first additional and, in FRiENDi mobile's view, vital element):

**Recommended MVNO Regulatory Framework**

1. The TRA should publish a clear and unequivocal Policy Statement or Decision requiring the MNOs in Bahrain to provision MVNOs on their network.
2. The detailed terms and conditions of MVNO provisioning should then first be left to the players to negotiate on a purely commercial basis.
3. The TRA should exercise its various regulatory mandates to monitor the market and the negotiations so as to ensure that MNOs conduct negotiations in good faith and fairly and that the policy objectives of the mobile market liberalisation are fulfilled.
4. If an MNO is acting in bad faith or engaging in any form of anti-competitive conduct, or if after a reasonable period (say 3 months) of in-good-faith negotiations, a commercial agreement cannot be reached between the parties, it would be in the public interest for the TRA to intervene and assist the parties or, if necessary, adjudicate and make a determination appropriate in each circumstance or case.

FRiENDi mobile believes that the above recommended framework is entirely consistent with the TRA's overarching intention for MVNO provisioning occuring through commercial negotiations, and will produce a more stable, durable model. This particular approach has most recently been adopted and implemented in Jordan pursuant to the Jordan TRC Decision.

This section has dealt primarily with the requirement to strengthen the TRA's proposals through the publication of a clear and unequivocal policy directive on MVNO provisioning. The following sections in this Part B deal with the equally important requirement relating to regulatory oversight and, where appropriate, intervention in MVNO negotiations, but only as a last resort.

### 3. TRA intends to monitor MVNO negotiations

> **"TRA will … monitor any negotiations between potential MVNOs and existing MNOs to ensure they are conducted in good faith and that the TRA's policy objectives of the introduction of competition into the mobile market through the allowance of MVNOs is being fulfilled."**

The clear overall policy objective of the TRA's Draft Decision is to facilitate the entry of MVNOs into Bahrain's telecommunications markets.

For the reasons contained in the preceding Section of this Response, entry will not freely occur in telecommunications markets, even in a highly liberalised market such as exists in Bahrain.

Moreover, as has been evidenced in other developed markets, in addition to an unequivocal requirement to provision MVNOs, MNOs require some level of regulatory monitoring and oversight. Therefore, similarly, MVNO entry in Bahrain vitally depends on the degree of the TRA's monitoring and oversight under the regulatory framework. Accordingly, FRiENDi mobile fully supports this monitoring element as an equally vital part of the proposed regulatory framework in Bahrain. The Jordan TRC Decision, by way of example, provides for regulatory oversight and monitoring[25].

However, as is discussed in more detail in our response in Part B, Section 4 below, FRiENDi mobile is concerned that mere monitoring, while essential, is not enough. The TRA needs to provide a specific remedy or mechanism for redress, when all else fails, to give effect to the permission or license being granted to MVNOs.

If the TRA is true to its belief that further competition is required then the only realistic alternative is it must have a positive and substantive remedy of intervention and dispute resolution.

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[25] See Jordan TRC Decision, Article 3.8.5, p.6

## 4. Possible modification of current framework if commercial processes fail

> **"Should commercial agreement not be able to be reached on reasonable terms then the TRA may consider the extent to which the current framework for wholesale regulation requires amendment, in particular to ensure that network prices would allow for efficient entry by MVNO service providers".**

As mentioned in Part B, Section 3, above, FRiENDi mobile believes that, by itself, monitoring of negotiations by the TRA is not enough. And, even though the TRA is minded that entry of MVNOs should be left to market forces and commercial negotiation (which FRiENDi mobile supports) the TRA should nevertheless be satisfied that the legal and regulatory framework is sufficiently robust in Bahrain to guarantee a 'level playing field' and that such commercial negotiations can realistically occur and take place on a fair and non-discriminatory basis.

FRiENDi mobile is concerned that in the TRA's above proposal the only remedy presented to failed negotiations is an uncertain and vague threat to "…consider…the current framework…". FRiENDi mobile believes that without specifics as to when, how and within what time frame such "consideration" is to occur, this significantly weakens the prospect of MNOs engaging MVNOs as serious, equal and credible partners in any negotiations. FRiENDi mobile believes some MNOs may exploit this weakness to delay agreements being reached and that this remedial uncertainty may itself become a contributing factor to cause some negotiations to fail altogether.

A decision not to intervene in the negotiation process is not equivalent to non-intervention in the mobile market. By not allowing itself direct intervention as a last resort, the TRA may inadvertently be maintaining the status quo of "two is enough". In practice the absence of a specific remedy of direct intervention when negotiations fail is likely to defeat or frustrate the overall legislative purpose and intent of any final Decision or regulation.

Further, in certain circumstances, such as where anti-competitive behaviour is occurring, FRiENDi mobile considers the TRA has an overriding statutory duty and the obligation to intervene and adjudicate, and FRiENDi mobile assumes, in such circumstances the TRA would wish to do so.

FRiENDi mobile submits that without some form of "safety net" or "back-stop" intervention mechanism and some basic ground rules establishing a framework in which commercial negotiations can take place, the TRA's policy on MVNOs may not be implemented, or just implemented in a perfunctory manner, or the commercial negotiations will become unreasonably protracted and may ultimately stall.

A regulatory mechanism allowing the TRA to intervene in the MVNO negotiations, <u>but as a last resort only</u>, is essential to:

- bring parties to the negotiating table at the earliest opportunity
- instil and safeguard the principle of in-good-faith commercial negotiations
- safeguard fair and non-discriminatory competitive behaviour
- ensure fair and reasonable terms for access
- avoid any potential frustration of the policy goal and legislative purpose.

In short, and for the reasons set out following, the TRA must have a reserved mechanism to be activated when commercial forces do not produce - or anti-competitive behaviour[26] prevents - the desirable policy outcome.

FRiENDi mobile's submission on the need for a "back-stop" regulatory mechanism as a last resort is buttressed by international research[27], as well as the overall international experience, discussed briefly below. Both the research and experience presents clear evidence that some MNOs are instinctively unwilling to discuss providing services where the provision of such services will compete with their own retail services. Accordingly, MNOs will not always enter into commercial negotiation with the generality of potential MVNOs voluntarily. If such negotiation does take place it has often been on an arbitrary and discriminatory basis.

For example strong opposition was recently taken by MNO respondents to the Jordan TRC's consultation on MVNOs, some characterising the proposed measure as "highly interventionist" and unwarranted[28].

In the light of resistance that some MNOs have expressed towards MVNOs, and the international research, FRiENDi mobile believes it is open to, and reasonable for, the TRA to ask itself the fundamental question, *"Even where the MVNO model is commercially prudent and viable, will MNOs' nevertheless facilitate and conduct negotiations in a fair and reasonable manner in the absence of a TRA mechanism to intervene as a last resort?"* As recently as 2006, for example, the European Commission answered the latter question with a "no" and endorsed a measure proposed by the Spanish national regulator, CMT, to regulate access to the networks of the three Spanish MNOs (Telefónica, Vodafone, and Armena) by MVNOs (see European Commission, 2006).

There area reasons why mandated access in some form exists, or has existed, in Australia, Belgium, Denmark, Ireland Hong Kong, Malaysia, Netherlands, Norway, Slovenia, Spain and Sweden. In Ireland and Hong Kong, for example, the regulator's there determined that a mandated intervention by the regulator to MVNOs, and a concomitant access obligation on MNOs, together with some basic ground rules backed up by an enforcement mechanism was essential, albeit only as a reserved mechanism when normal commercial negotiations failed.

The demonstrated reluctance and inertia of MNOs to negotiate with MVNOs represents a failure in normal market forces. It is to a large extent premised upon the joint and several dominance of the MNOs who are able to act as "gate keepers" of access to the most essential facility needed by MVNOs, namely the radio network. FRiENDi mobile respectfully submits that we anticipate it is the TRA which would want to retain the "gate keepers" role in relation to market entry and prevents player exercising any such power in the market.

FRiENDi mobile nevertheless concedes that regulatory intervention should be used only as a last resort. The existence of a "backstop" role for the TRA is, in fact, likely to facilitate and accelerate commercial outcomes by balancing the negotiating incentives and relative bargaining strengths between MNOs and MVNOs.

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26 For example Abuse of a dominant position or collusion.

27 Dewenter R. and Haucap, J. *Incentives to license virtual mobile network operators:* n.d; n.p. circa. 2006 – (copy previously provided to the TRA) illustrating the absence of incentives on MNOs to open their networks, especially in small markets. The research concludes that the appropriate regulatory framework is one of mandating MNOs to open up their networks for MVNOs.

28 See for example the XPress submission (available on the TRC web site), page 4.

In conclusion, FRiENDi mobile considers the Consultation Document and the TRA's intentions would benefit from further "fine tuning" and strengthening in this area relating to further opening of the mobile market.

While remaining faithful to our support for the overarching principle of commercial negotiated MVNO arrangements, we believe the Bahrain regulatory framework, nevertheless, must be made fit for purpose by enabling last resort regulatory intervention in MVNO provisioning in the face of evidence that an MNOs is:

- abusing its market power;
- negotiating in bad faith;
- colluding to prevent entry or to set unfair terms; or
- unreasonably delaying or unfairly frustrating the commercial negotiation process.

There are, in fact, good reasons for the TRA to consider a decision to intervene as a last resort as being desirable and largely non-interventionist. By monitoring and intervening only as a last resort, the TRA is not mandating that MVNOs should exist. The TRA is only removing a regulatory barrier which may exclude MVNOs from the market or unreasonably delay their entry thereby defeating the policy objective of increased competition and improved consumer welfare.

## 5. The most appropriate form and type of 'MVNO license'

> **"The most appropriate form and type of 'MVNO license' that will apply also needs to be determined. Options include:**
>
> **a) an additional MVNO license class; or**
>
> **b) extending one of the existing license classes, for example a Value Added Service (VAS) License to include MVNO services".**

Subject to adequate regulatory safeguards being in place to address the barriers to MVNOs and other matters covered in this response, FRiENDi mobile considers that within the current licensing framework in Bahrain an additional class licensing regime is the most appropriate for MVNOs in Bahrain.

FRiENDi mobile's position supporting an additional class licence is largely a consequence of Bahrains current and unique environment of preferring multiple types of individual licenses - there already exists in Bahrain 11 types of individual license and 2 types of class license. FRiENDi mobile's position may differ if Bahrain moves to the "unified licensing system" it has proposed in Section 3 of the Consultation Document. In Jordan, for example, where an "integrated licensing system" already exists, MVNOs will be allocated an individual licence[29].

As no spectrum allocation is required for MVNOs (i.e. beyond what is already held by the MNO pursuant to a spectrum license), no direct scarce resource issue arises in relation to the existing spectrum, save for numbers which is dealt with in Section 9. This suggests, based on best regulatory principles, that individual licensing may be less appropriate. The Jordan TRA has, nevertheless, determined that use of numbers is a sufficiently scarce resource to justify individual licensing.

Overall, FRiENDi mobile are somewhat agnostic about the particular type of license, provided it contains terms appropriate to MVNO provisioning. As always the "devil is in the detail". What FRiENDi mobile considers is most important regarding licenses is that the terms should fully address all the key MVNO enablers and other issues raised in this response and FRiENDi mobile's Initial Response.

Finally, in issuing licenses to MVNOs, FRiENDi mobile firmly considers that minimum pre-qualification rules should be adopted. Criteria could cover such mattes as:

- Evidence that the bidder has the financial, technical and MVNO management capability to operate an MVNO and is experienced in working with MNOs.
- Submission of a business plan demonstrating such financial, technical and management capability, in addition to proposals for marketing, customer service levels and resourcing.
- Submission of a performance bond.

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[29] See Jordan TRC Decision, Article 3.2.2, p.4

### 6. MVNO Licensing before or after negotiations with MNOs

**"The point in time any MVNO license should be awarded also needs to be determined. Here TRA considers that two options exist:**
**a) Licensing before negotiation or**
**b) Licensing after negotiation"**

FRiENDi mobile strongly supports the concept of licensing before negotiation. The TRA has described this process as applying when an MNVO applicant which does not require a spectrum license in their own right to provide mobile telecommunications services has not yet negotiated and agreed on provisioning to mobile network infrastructure of one of the existing MNOs in Bahrain on commercial terms. The applicant will first apply to TRA for an MVNO License and if they fulfil any basic financial, technical, legal, and consumer protection requirements as determined by TRA a license will then be awarded. The next stage for the MVNO licensee would then be to negotiate and agree on provisioning with one of the existing MNOs on commercial terms.

FRiENDi mobile fully agrees with the TRA, and confirms, that awarding MVNO licenses before commercial negotiation would give the Licensee "..greater grounds.." to commercially negotiate with incumbent mobile operators to achieve network provisioning. We confirm that licensing beforehand has a significant 'levelling' impact in terms of player certainty, credibility and legitimacy in any negotiations.

This "pre-negotiation license" model is the option most consistent with FRiENDi mobile's views expressed in the preceding sections in Part B of this Response wherein we maintain that MNOs should be required to open their networks to MVNOs, subject to commercial terms being reached between the parties. In FRiENDi mobile's view it is axiomatic that successful and non-discriminatory negotiations require MVNOs to be viewed as legitimate and appropriately empowered players in the market. This requires the MVNO being accorded a particular and appropriate legal status within the relevant jurisdiction.

Licensing beforehand can also assist in parallel negotiations with potential 3rd party local joint venture partners, where appropriate or required.

### 7. MVNOs may [be permitted to] purchase existing spectrum from one of MNOs.

**"MVNOs do not require a spectrum license in their own right to provide mobile telecommunications services, although depending on the model of MVNO introduced, may purchase existing spectrum from one of the mobile network operators (MNOs)".**

FRiENDi mobile is somewhat agnostic about the right to purchase spectrum from an MNO in any secondary market. Apart from the ability to acquire radio links as an alternative to leased lines for any part of its backbone network FRiENDi mobile does not consider that acquisition of any GSM or 3G spectrum bands fits comfortably with the MVNO concept or business model.

## 8. Other aspects of MVNO provisioning.

**"The TRA welcomes comments on all aspects of MVNO provisioning."**

We have structured our comments relating to other aspects of MVNO provisioning into the following Sections:

**Part C: Comments on Key Specific MVNO Enablers**

1. General
2. Subscriber Numbers and Network Codes
3. Wholesale Pricing and Interconnection
4. Mobile Number Portability (MNP)
5. Own infrastructure and Co-location
6. No retail price controls
7. Prevention of "Win-back" Campaigns and "Chinese Walls"

**Part D: Comments on the General MVNO Matters**

1. General
2. Services based competition (SBC) and facilities based competition (FBC) are complementary
3. Enough Mobile Competition in Bahrain Already?
4. Reliance on ex-post Competition Law will not work

# Part C: Comments on Key Specific MVNO Enablers

## 1. General

Concomitant with the requirements for:

- An express requirement for MNOs to provision MVNOs;
- Commercial negotiations of detailed terms;
- Regulatory monitoring of negotiations and the mobile market;
- “Back stop” intervention by TRA, only as a last resort, where appropriate; and
- Some form of class licensing,

there remains an additional need for the TRA to prescribe an holistic regulatory framework to effectively enable MVNO provisioning. This requires determining and managing a number of practical matters necessary for effective operation of MVNOs. The key operational enablers include the following:

- Subscriber Numbers and Network Codes
- Pricing
- Mobile Number Portability (MNP)
- Co-location
- No retail price controls
- Prevention of ‘Win-back’ Campaigns

FRiENDi mobile comments next on each of these specific matters.

We point out that determination and management of these important general operational matters by the TRA does not derogate in any way from the overarching principle of commercially negotiated arrangements between the parties. Regulatory certainty surrounding these matters merely creates a set of parameters and conditions within which such negotiations can most effectively take place. Further, these above matters are as relevant as between competing MNOs as they are between an MNO and an MVNO. Any MVNO, as a full operator, would simply seek that it be treated in a non-discriminatory manner in relation to these matters.

## 2. Subscriber Numbers and Network Codes

We note that under the current regulatory framework that only individual licensee’s are entitled to an allocation of numbers under the National Numbering Plan NNP.

FRiENDi mobile considers that the allocation of mobile subscriber numbers is a fundamental enabler for MVNOs. We have mentioned in out Initial Response that the absence of non-discriminatory access to numbers would be a major impediment to MVNO market entry and market success.

Any new MVNO entrant would require access to numbering resources and also the ability to control the allocation and use of those numbers. Further, if entry into the market is facilitated for MVNOs, it would not be sufficient for the TRA to rely entirely on the ‘host’ MNO to voluntarily provide sub-allocations from existing number blocks, without some ground rules. MNOs would be a position to manage the allocation of numbers so as to favour itself and to maintain competitive advantage. The number allocation issues include both the integrity of the blocks of numbers allocated and the handling of so called “easy to remember numbers” (ETRs). “Gaming” by MNOs or a restriction on access to number blocks could restrict an MVNOs service proposition, its ability to route according to tariff, its ability to change host MNO and potentially leave the MVNO significantly competitively disadvantaged in the market.

Accordingly, FRiENDi mobile advocates amending the existing regulatory framework to facilitate equal and non-discriminatory access to mobile numbers as an essential prerequisite to MVNO enablement in Bahrain. FRiENDi mobile has no objection to being subject to the same regulatory obligations as the MNOs relating to the efficient management of numbers.

FRiENDi mobile also notes that the current allocation denominator for blocks of numbers is 1 million numbers. With the advent of MVNOs, we suggest that clear blocks of 100,000 be a more efficient minimum allocation, either directly from the TRA or indirectly as sub-blocks from the host MNO.

Finally, while not essential to threshold MVNO provisioning, the allocation of separate mobile network codes (MNCs) to MVNOs significantly improves the competitive positioning of MVNOs, particularly in the absence of MNP, as is the present case in Bahrain.

## 3. Wholesale Pricing and Interconnection

The terms on which MNOs supply services to MVNOs will vitally affect the level of competition which MVNOs can bring to the market, and therefore the benefit to consumers from MVNO provisioning.

We note the TRA has indicated a leaning towards retail minus pricing for access. Aggressive business propositions, however, can often be defeated or stifled because of the uncertainty under the retail minus pricing proposition. Only if the pricing principles are suitable can the TRA be confident that that there will be sufficient interested players of the right qualifications to deliver long term sustainable competition in the mobile market.

### 3.1 Retail-minus only appropriate for pure resellers of the MNOs own price plans

FRiENDi mobile considers that a retail-minus approach to wholesale pricing may only be appropriate where an MVNO is a pure reseller of the MNOs own price plans. Even in this situation, one view of retail minus charging is the mobile operator retains all of the margin it would have made on a call had the call not been carried by the MVNO. The MVNOs margin coming only from the savings it can make on the mobile operator's avoidable costs. This is clearly inequitable and it is unlikely that even an efficient MVNO would have a viable business in these circumstances.

However, more importantly, where an MVNO has invested in and provides it own infrastructure components, and has its own pricing freedom and plans, MNOs should, for the reasons set out following, be required to supply access services on a cost orientated basis and on non-price terms which are non-discriminatory compared to the supply of similar services to the MNOs competing retail operation. By way of example, this is the approach taken in Hong Kong to MVNOs.

MVNOs also require interconnection for both national and international services on a non-discriminatory basis with sharing of both in-bound and out-bound revenues and reflecting, as appropriate, traffic volume discounts.

The “cost plus” approach to access would be based on the relevant long run average incremental cost (LRAIC) in operating the network and providing the conveyance service including an appropriate cost of capital, where relevant, commensurate with the risk of investment in a mobile network.

### 3.2 Cost-based pricing most appropriate for true MVNO’s

Cost-based access pricing, rather than retail minus, is the appropriate approach for enhanced MVNOs with infrastructure components for the following reasons:

- Elemental charging based on cost and a reasonable rate of return is the most practicable method of charging MVNOs for access to MNO functionality. This would be (a) advantageous in assuring MNOs as regards the return on their investments and (b) encourage potential MVNOs to make their own not insubstantial investments to enter the market and increase competition. Such investment can go all the way up to own switch and HLR.

- A retail minus charging mechanism cannot take account of an efficient MVNO who, for instance, interconnects at more than one point with a mobile operator or whose customers' usage is confined to a locality close to the point of interconnect. In both of these cases the MVNO causes the mobile operator to incur less cost in delivering calls to the point of interconnect. Issues like this can only be dealt with through element based charging which has absolutely no relationship to retail prices.

- MNOs retail prices for call services are themselves interdependent and dependent on other things, incoming call revenue and customer acquisition costs for example. MNOs can move costs between different parts of their retail prices. If a retail minus approach was taken to pricing calls for MVNOs there is considerable scope for a mobile operator to increase its retained margin on those call types provided to MVNOs and thus discriminate against them.

- The spectrum used by the MNOs in the supply of airtime services to MVNOs represents a bottleneck. MVNOs do not have the option of avoiding the input supplied by the MNOs but must use their airtime services to be able to compete. Economic theory supports the use of cost based pricing for bottlenecks;

- Retail-minus or so called avoidable cost approaches are inappropriate where the retail prices are likely to embed supra-normal returns (i.e. above the returns that would be expected in a vigorously retail competitive market). The effect of using these retail prices to calculate a wholesale price is that the supra-normal returns are "trapped" in the wholesale price. If so, the supra-normal returns will not be exposed to the added competitive tension at the retail level which MVNOs will bring to the market and the MNOs will have a much better chance of holding onto those supra-normal returns. As a result, consumers will pay more than would otherwise be the case if wholesale prices were calculated at long run incremental cost;

- It is difficult nowadays to determine precisely what the applicable and relevant baseline retail price is. Retail-minus cost approaches are particularly difficult to apply to unbundled wholesale services compared to simple resale services. The MNOs retail price is based on a full retail service and includes not only the airtime but platform services and other products and facilities which the MVNO would provide itself. The retail service and the unbundled wholesale service involves an "apples and oranges" comparison. The regulator first has to make complex adjustments to the baseline retail prices to get a comparable ("stripped down") retail service to which it can then apply the retail minus approach. By contrast, applying retail minus to simple resale services involves a "like with like" comparison between the retail and wholesale connectivity services and the avoidable "off net" costs of retail supply, such as bad debt, are more readily quantifiable. MVNO access is broadly analogous to bitstream services in the fixed environment and regulators around the world have had great difficulty deriving avoidable cost wholesale prices for bitstream from the bundled retail broadband services;

- Applying avoidable cost approaches in the mobile environment is doubly difficult because of the complexity of MNO retail pricing plans. Retail minus requires the establishment of a single retail minus as the baseline against which to apply the avoidable cost calculation. The objective is to determine the “real” or most common retail price paid by the retail customers of the operator supplying the regulated wholesale service. Most MNOs have a welter of pricing plans, with options for time of day, weekdays vs weekends and on net and off net calling. The popularity of the plans differs and the calculation of the base line retail price would need to have a weighting to reflect this. Pricing plans may also include subsidies for handsets and cross subsidies to other services which the MVNO does not acquire. Given these complexities, it will be a very difficult exercise to “boil down” the MNOs retail prices to a single imputed retail price which fairly represents the price paid by most MNO customers;

- Moreover, each of the mobile operators’ retail prices are determined by their services provision businesses (or should be) for the bundles of services they choose to offer to customers. It follows that such prices will be inappropriate for different or alternative bundles of innovative services that an MVNO may choose to offer.
- The very complexity of the retail pricing provides opportunities for MNOs to “game” the calculation of the wholesale price by structuring their retail tariffs in a way which inflates the wholesale price. This has occurred with the calculation of bitstream prices using avoidable cost approaches, as in the UK and New Zealand. Even if the MNO does not deliberately game the wholesale price, the MVNO is susceptible to shifts in the wholesale price based on the MNOs retail pricing strategy: for example, if the MNO decided to shift from per minute calling to flat call charges. The purpose of introducing MVNO competition is to foster retail level competition, but if the MVNO is locked into a wholesale price which reflects the MNOs’ retail prices, the scope for the MVNO to innovate is obviously reduced;
- MVNOs may also be susceptible to mobile operators’ predatory pricing of particular services, international calls for example, that would otherwise be an attractive area for competing services. If experience around the world is true, we suspect that the TRA may find it difficult to effectively enforce measures designed to prevent anti-competitive practices by mobile operators, in particular predatory pricing conduct. This seriously undermines the confidence of prospective MVNOs that any retail minus scheme would be monitored regulated in a timely and effective fashion.
- Cost-based access pricing is a known and stable model. Regulators around the world have devoted significant effort in recent years to building cost models for mobile networks to calculate the cost-based charges for mobile termination services. Long Run Average Incremental Cost (LRAIC) is, for example, that adopted and applied by the European Commission and other international regulators, including those in the United States, Australia and New Zealand to interconnection and mobile termination pricing. This is the price which would be paid if there was a competitive wholesale market for the supply of airtime services to MVNOs. In workably competitive markets, prices tend towards cost. The purpose of regulation is to substitute for the lack of effective competition. Therefore, charges calculated at long run incremental cost are not a “helping hand” or “subsidy” to MVNOs, but mimic a competitive wholesale market. While the MVNO wholesale service differs from mobile termination, these cost models still can be used to calculate a cost-based charge for MVNO access.

### 3.3 Cost plus access charges needed for use of the mobile networks

Finally, FRiENDi mobile cautions that it would be wrong to assume that MVNO access provided at cost plus prices will enable service providers to grossly undercut the mobile operators’ competitive retail prices and attract significant numbers of customers. This “price wars” argument is frequently raised by MNOs in their opposition to further mobile competition. The issue at present is that the retail prices for calls in Bahrain may be substantially above the competitive price, due to in-efficient competition, especially where the operators have dominant market power. An MVNO has to invest significant sums in marketing in order to create a brand and customer proposition that would attract any relevant numbers of the mobile operators' existing subscribers. When we say relevant numbers here we mean numbers that would cause the operators to reduce their retail prices to the competitive level.

In short, FRiENDi mobile recommends the following principles are appropriate to be applied in the context of commercial negotiations with MNOs:

1. Non-discriminatory interconnection for national and international with sharing of both in-bound and outbound call revenues;

2. Non-discriminatory access based on LRAIC including, as appropriate, volume discounts.

3. Retail minus pricing only where an MVNO is a pure reseller of the MNOs own price plans.

### 3.4 Conclusion

In conclusion, FRiENDi mobile considers that access at cost plus prices, in addition to providing for market based competition in call prices, has several other benefits in the mobile market. It will:

- permit for the first time competition in elements of call conveyance and provide a choice of call routing for customers;
- enable MVNOs to develop enhanced services and compete with those already provided by MNOs for themselves;
- provide some of the inputs for the MVNOs to develop their own services including those services which, in particular, use components from more than one network

## 4. Mobile Number Portability (MNP)

A further numbering issue relating to MVNO enablement is mobile number portability (MNP). MNP in itself can be a key facilitator of competition. Ease of consumer switching enables consumers to exercise their choice more effectively, and therefore, contribute to the competitive process. It is a very pro-consumer benefit which should be accorded significant weight in any cost benefit analysis. Mobile numbers are a unique personal identifier, and a national resource, and the ability of a person to retain a number as part of their identity could almost be elevated to a personal and legal right nowadays.

Quite apart from the general consumer welfare benefits of MNP, MNP would almost certainly ease the conditions of entry for MVNOs and we would strongly encourage the TRA to ensure MNP is implemented in Bahrain, including for MVNOs, as soon as possible.

## 5. Own Infrastructure and Co-location

An true MVNO is dependent on creating a differentiated service through intelligent network applications, lateral thinking marketing departments and leveraging advantages from its existing businesses. The level of differentiation, innovation, and choice of new products is in turn proportionate to the degree it is able to deploy its own infrastructure within the host operators operating environment.

The various types of MVNOs may be categorized as shown in the following table constructed by FRiENDi mobile:

| | | MNO | Brand MVNO | Reseller MVNO | Service Provider MVNO | Enhanced Service Provider | Full MVNO |
|---|---|---|---|---|---|---|---|
| | Spectrum license | | | | | | |
| | Base Station Subsystem | | | | | | |
| | MSC/VLR | | | | | | |
| | MNC (Network code) | | | | | | |
| | HLR/AUC | | | | | | |
| | Gateway MSC | | | | | | |
| | GGSN to support VAS | | | | | | |
| | MMSC | | | | | | |
| | SMSC | | | | | | |
| | IN with IVR and USSD | | | | | | |
| | SIM programming & branding | | | | | | |
| | Number range | | | | | | |
| | Packaging | | | | | | |
| | Billing | | | | | | |
| | Customer care | | | | | | |
| | Service branding | | | | | | |
| | Sales | | | | | | |

What distinguishes the MVNO types from each other is the infrastructure they control, and hence the level of control the MVNO has on services, pricing, customers, routing and messaging etc. Accordingly it is critical that there be no limits placed upon the level of infrastructure investment and deployment of MVNOs.

Further, in some cases the inability of an MVNO to co-locate key elements of its infrastructure within an MNOs existing facilities ( on fair and reasonable terms, including site access) can prove to be a significant barrier to MVNO entry and operation. Accordingly, FRiENDi mobile considers that it is essential that the access granted to MVNOs should specifically also require fair and reasonable collocation rights with the HNO. Provided the threshold requirement exists, the detailed terms can be left to commercial negotiation.

## 6. No retail price controls

In relation to the MVNOs retail prices, MVNOs will need significant retail price flexibility in order to respond quickly to emerging technical and product developments. Moreover, new entrant MVNOs will lack any market power. Accordingly, FRiENDi mobile cautions against any form of retail tariff approval mechanism or other form of retail price control. Such approval mechanisms or official oversight would result in unnecessary and inappropriate costs and delays and would also represent a barrier to MVNOs. This particulary so given that the TRA has clearly signalled in the Consultation Document that it that it will be relaxing the retail price controls on Batelco along with futher liberalisation.

## 7. Prevention of “Win-back” Campaigns and need for “Chinese Walls”

FRiENDi mobile considers that it is not an option to disregard the reality of the negative experiences for consumers and competing operators of aggressive win-back programs conducted in other international mobile markets.

Since the liberalisation of the telecommunications services market through the introduction of carrier pre-selection and other indirect access methods, including MVNOs, the marketing activities of former incumbent operators have been a continual source of contention and dispute. In the context of marketing practices an MVNO is in an entirely analogous position to an indirect access (IA) operator. The host MNO will have access to its own customer churn records and the network will have access to a plethora of network data relating the MVNOs operations. This information can be ‘mined’ to empower their marketing strategies, particularly for customer win-back.

In its eighth report on implementation of the regulatory package, the European Commission stressed that “the introduction of carrier pre-selection has turned out to be a very sensitive issue in the European Union. The Commission has stated:

> “*In practically every Member State new entrants are complaining about win back campaigns conducted by incumbent operators. Promotional offers appear to be specifically directed at subscribers who have recently converted to carrier pre-selection. The new entrants have also been complaining that the retail divisions of the former incumbent operators often appear to be using privileged information about consumers which is passed on by the network business*”[30].

Challenges to the legality of win back campaigns have generally been made to the national regulatory authority with responsibility for the telecommunications sector. In practice the legal questions raised by win back campaigns such as the network or wholesale divisions of the operator passing confidential information to the retail division, possible abuse of a dominant position, or violation of data protection rules, require the expertise of specialist authorities. In the majority of European Member States, it is the regulatory authority for the telecommunications sector which has stepped in to rule on the win back campaigns of the operator.

In Spain, the Commission for the Telecommunications Market (the NRA) has prohibited Telefonica from taking any steps which are designed to win back a customer which has pre-selected an alternative operator, until the expiration of a four month period. Prior to this particularly innovative decision, the Irish Regulatory Authority adopted on 17 August 2000, an injunction which prohibited those employees of Eircom who were involved in win back campaigns from having access to information concerning the identity of the pre-selected operator.

Outside Europe the Canadian Regulatory Authority issued a decision at the start of 2002 prohibiting each local incumbent operator from trying to win back clients who had chosen pre-selection, within a 3 month period. The relevant part of the decision was in the following terms: “…*an (incumbent operator) is not to attempt to win back a business customer with respect to primary exchange service, and in the case of a residential customer, with respect to primary exchange or any other service, for a period of three months after that customer's primary local exchange service has been completely transferred to another local service provider, with one exception: ILECs should be allowed to win back customers who call to advise them that they intend to change local service provider.*”[31]

Some national regulatory authorities have elected to condemn win back practices by requiring the incumbent operator to pay a fine, generally following a decision prohibiting the incumbent from using privileged information. Thus the Italian Regulatory Authority (AGCOM) decided on 9th January 2003 to impose on Telecom Italia a fine for having used information from its network division in its win back campaign in violation of a previous decision prohibiting this. The Swiss Regulatory Authority did something similar, imposing a fine on Swisscom, the former incumbent, for using confidential information in its win back campaign.

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[30] European Commision. *8th Report on the Implementation of the Regulatory Package*. Brussels: 1999.

[31] Canadian Radio-Television and Telecommunications Commission, *Decision CRTC ref 8622-C25-12/01 10 January 2002*. Otawa: CRTC, 2002

In summary, 'win back' campaigns have been judged inconsistent with the competitive market. There are three types of penalty that have been imposed on operators for win back campaigns by a national regulatory authorities:

- a warning;
- a straight forward prohibition; and
- a fine.

FRiENDi mobile believes and recommends, consistent with progressive regulation in other countries, that a total prohibition, but only for a pre-determined period, is the best way to prevent win back campaigns from undermining the competitive market and in particular, the launch of new services.

FRiENDi mobile suggests the TRA could affect this rule through a subordinate Regulation or Direction. The Jordan TRC has imposed an outright prohibition on MNO engaging in any such activity for a 6 month period from the date on which the customer first receives service from the MVNO[32].

We believe reliance on the general competition prohibitions in MNOs licenses would be fraught with difficulties.

Based on the reported experiences in other international markets. FRiENDi mobile's position remains that a total prohibition on any win-back activity, but only for a pre-determined period (say 12 months), is the best way to prevent win-back campaigns from undermining the competitive market.

Further and finally, in the same context as "win back" and consistent with present interconnect arrangements in Bahrain, a host MNOs wholesale division must be prohibited from passing an MVNOs customer, network and traffic data to its retail division. A "Chinese Wall" arrangement is required not only as a safeguard against win-back. An incumbent host MNOs retail division can potentially derive significant competitive advantage from "mining" and analysing their service providers, traffic forecasts, actual network traffic, customer calling patterns and other information and data, as well as any direct customer information they are required to obtain. We would be pleased provide information to the TRA of instances in other countries where this has occurred, thereby incurring sanctions from the regulator.

32 See Jordan TRC Decision, Article 3.8.1, p.6

# Part D: Comments on the General MVNO Matters

## 1. General

In Part B, Section 1, above, FRiENDi mobile established its reasons for supporting the TRAs intention to provision MVNOs in Bahrain and the likely resulting benefits for the Bahrain mobile market.

Further to FRiENDi mobile's analysis of the specific benefits of MVNO provisioning, FRiENDi mobile believes those likely benefits are buttressed by three fundamental underpinning propositions relevant to MVNO provisioning. Namely:

1. Services based competition (SBC) and facilities based competition (FBC) are in fact complementary – contrary to the view taken by some regulators who have (erroneously) viewed SBC and FBC as opposites[33];

2. Two mobile operators is insufficient competition in Bahrain to deliver (a) a vigorous, healthy and long term sustainable mobile market and (b) the most innovative mobile services for consumers at the lowest possible prices; and

3. Reliance on ex-post general competition regulations is insufficient to deliver the required levels of competition in a timely manner.

Each of these additional matters, which are highly relevant, to understanding the need for MVNO provisioning in Bahrain, is discussed in turn following.

## 2. Services based competition (SBC) and facilities based competition (FBC) are complementary

A robust service based competitive dynamic will drive increased infrastructure competition and a truly long-term commitment on the part of carriers. There can be a balance between the two extremes. With the exception of two or three countries, it is likely the case that Middle East telecommunications consumers, businesses and national economies have not enjoyed the level of services they deserve sooner as a consequence of governments not fully applying the fundamental economic principles of competition to their markets and through consequential delay in full liberalisation of their markets.

FBC need not and should not be at the expense of SBC. SBC remains important, even at the outset of liberalisation, and even in mobile - not only in its own right, but also as a platform and catalyst for improved FBC. Bahrain has adopted an SBC model and approach but so far only in relation to fixed line services. That is why we welcome the new initiative through the Consultation Document to now open up mobile services to SBC.

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[33] This was clearly view taken recently by ictQatar, the Qatar national communications regulator, in imposing a moratorium on SBC for a three year period following the entry of the second mobile operator in Qatar - see *Consultation on Liberalisation of the Telecommunications Sector in the State of Qatar*, Consultation Document by the Supreme Council of Information and Communication Technology (ictQATAR), 23 April 2007 (Liberalisation Consultation).

FBC and SBC are in fact not opposite, but instead, complementary models of regulation providing a "spectrum of opportunity", with one type of regulation facilitating the other. As the European Regulator's Group (ERG) has stated:

> *"It is important that infrastructure and service competition are not seen as opposed to each other, but are linked through the ladder of investment allowing competitors, through a sequence of regulated access products that are consistently priced to invest in a step-by-step manner in own infrastructure. Service competition based on regulated access at cost-oriented prices can be (and in general is) a vehicle for long term infrastructure competition"*[34]

Regulators have reconciled FBC and SBC by structuring regulation into a "ladder of investment"[35], which is essentially a regulatory model which assumes that investments are made in a step-by-step way by new entrants:

> *"In order to allow new entrants to gradually (incrementally) invest in own infrastructure they need a chain of (complementary) access products to acquire a customer base by offering their own services to end users based on (mandated) wholesale access. Once they have gained a critical mass generating revenues to finance the investment, they will deploy their own infrastructure taking them "progressively closer to the customer and increasingly able to differentiate their service from that of the incumbent"*[36]*, also making them less dependent of the incumbent's infrastructure. This involves migration from one access product (or access point) to another (moving to the next rung). Thus "the entrant passes progressively through several stages of infrastructure competition, as it ascends a "ladder of infrastructure"*[37]*, the initial phase being service competition, which can therefore be seen as a vehicle to infrastructure competition, which is the ultimate aim as it ensures sustainable competition in the long run. Once the process gets started and provided the right regulatory measures are taken (see next paragraph), the process will get its own dynamic and with the different elements reinforcing each other will become self propelling*[38]*."*[39]

However, SPC is important, not only as a rung on the way to FBC, but also in its own right. As the ERG points out:

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[34] ERG, *Consulation Document on Regulatory principles of Next Generation Access*, ERG (07) 16, (ERG NGA Consultation Paper).

[35] Cave, M. *The Economics of Wholesale Broadband Access*, Proceedings of the RegTP Workshop on Bitstream Access – Bonn – 30 June 2003, MMR-Beilage 10/2003.

[36] Cave, M. *Remedies for Broadband Services,* Study for the Commission, Sept. 2003, available at http://europa.eu.int/information_society/topics/ecomm/useful_information/library/studies_ext_consult/index_en.htm#2003, p.20.

[37] Ibid, p.10.

[38] Allowing ultimately to remove regulation.

[39] ERG NGA Consultation Paper, p 41.

"…the promotion of service competition, where replication is not feasible, is an important goal. Service competition increases consumer choice, which is an important end in itself.[40]"

## 3. Enough Mobile Competition in Bahrain Already?

Notwithstanding the clear specific benefits to both consumers and the MNOs, a core question for the TRA is whether two is an optimal number of competitors for an efficiently competitive mobile market in Bahrain?

This question is not answered by just looking at what competition has achieved in Bahrain so far. FRiENDi mobile agrees that competition between the existing operators has delivered benefits to consumers. FRiENDi mobile also agrees that the Bahrain market is performing well among most markets in the Middle East.

Rather, the issue is whether the entry of more operators would deliver even more benefits to consumers than competition to date. Regulation for MVNO entry is not a vote of no confidence in the current operators but a vote of confidence in the beneficial effects of open competition. The most appropriate benchmarks for Bahrain are the top performing mobile markets in the world and not the markets in the Middle East which in general have not, with the exception of Jordan, Oman and perhaps Saudi Arabia, had the same determination which Bahrain has shown to liberalise its telecommunications markets.

The issue of "how many competitors is enough" has been considered by economists and regulators. The leading paper on the issue is by the Nobel Laurate, Professor Selten, who concluded that "four are few and six are many"[41]. The risks of co-operative behaviour amongst competitors rapidly escalates as the number of competitors decreases. Co-ordinated behaviour, in the worst case, can involve collusion between operators in which they agree on common prices and terms. However, co-ordinated behaviour can also include "conscious parallelism" or "tacit collusion" in which firms, without relying on an actual agreement, align their behaviour to moderate the intensity of competition. The fewer the number of competitors, the easier it is for each firm to observe the others and for them to fall in line with each other. Selten concluded that four or less competitors was the "tipping point" where risks of co-ordinated behaviour escalated substantially.

Regulators have struggled to address the risks of conscious parallelism in oligopolistic markets using general competition or industry specific ex-post powers. These remedies usually require evidence of an explicit or implicit agreement, but oligopolistic conduct is so effective because it does not need an agreement. The market structure itself is conductive to and perpetuates the conduct. Consumers are obviously harmed because the oligopolistics capture rents which would be passed through to consumers if competition was stronger.

The most effective solution, then, is the one currently being undertaken through the Consutaltion to address the market structure itself by lowering barriers to entry. If the oligopolistic market structure has produced above-normal prices, regulatory action to

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[40] *Revised ERG Common Position on the approach to appropriate remedies in the ECNS regulatory framework*, ERG (06) 33, Final version, May 2006, available at http://erg.eu.int/doc/meeting/erg_06_33_remedies_common_position_june_06.pdf, page 57.

[41] Selten, R. A *simple model of imperfect competition where four are few and six are many*, International Journal of Game Theory 2, 141-2-1.

lower barriers will result in market entry. The new entrants will shake up the market, acting as a "maverick" which is unprepared to join in the oligopolistic behaviour. The larger number of competitors will simply make it impossible for firms to monitor each other's behaviour (i.e. firms will have an incentive to "cheat" by breaking from the pack and offering lower prices).

The evidence from other mobile markets does suggest that markets with more than four operators delivers superior competitive outcomes. Hong Kong for example has six facilities based operators.

On this basis, if the number of competitors was greater than the current two operators, the risks of co-ordinated behaviour in the Bahrain mobile market, would be significantly lower, and the potential benefits to consumers would be greater.

Of course, the number of competitors which is sustainable will vary between markets. Factors such as the number of subscribers, density, potential market growth and geographic topology can affect the number of competitors which is viable.

This is where MVNOs come into their own for small markets. The MVNO concept allows small markets to achieve the benefits of more competitors (and the reduced risks of co-ordinated behaviour) without the risks of further deployment of network infrastructure that may prove non-viable. A market of the UK's size can support five competitors each with their own end-to-end networks. While five separate networks may not be viable in smaller markets, it is still possible to secure many of the benefits of retail level competition between five operators by one or more of those operators being MVNOs.

In conclusion therefore FRiENDi mobile submits that while two facilities based mobile operators is appropriate to FBC, the TRA's conclusions that the current number of mobile players in insufficient for the required level of SBC is overwhelmingly supported by international research and the experience of what has occurred at the global level. The intention in the Consultation Document, therefore, to open the market to MVNO entry is a correct one.

### 4. Reliance on ex-post Competition Law will not work

FRiENDi mobile cautions that any suggestion that reliance upon competition law, applied in an ex-post manner, with redress for breaches or anti-competitive prohibitions available only through the court system in Bahrain, would prove adequate as a process to effectively enable an MVNO, is flawed for many reasons. The difficulties include complexity, high costs, long delays and the limitations of judges and the courts to fully and adequately understand and deal with the latest technology and services and the fast moving developments within the communications industry. And, as is particularly the case with competition in telecommunications markets, justice delayed is frequently justice denied. Accordingly, we support the TRA's intention to provision MVNOs in Bahrain through an appropriate level of ex-ante regulation.

# ANNEX A

To

Response to the TRA's

Strategic and Retail market Review

A public consultation document issued by the Telecommunications Regulatory Authority of the Kingdom of Bahrain
27 August 2007

Submitted 7 October 2007

WHITE PAPER

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HOW CAN MVNOS HELP MOBILE NETWORK OPERATORS BENEFIT FROM THE OPPORTUNITIES OF SERVICE COMPETITION?

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## 1. EMERGING MARKET OPPORTUNITY

The mobile telecoms market in Middle East and North Africa (MENA) has experienced rapid growth over the past few years. With 2-3 Mobile Network Operators (MNO) in almost every country across the region, the region is now approaching a situation where sufficient network infrastructure is in place to ensure both the coverage and quality requirements for the future.

As a result, the mobile sector in MENA is now ready for the natural transition from infrastructure to service competition – similarly to the evolution seen previously in both Europe and North America.

The transition to service competition is a natural evolution but represents a paradigm shift in market structure. It means moving from a generic one-size-fits-all proposition to a segmented market approach with customised propositions. The evolution to a multi-segment, multi-brand approach is not unique to the mobile industry but similar to the evolution experienced in other industries such as automotive as illustrated below.

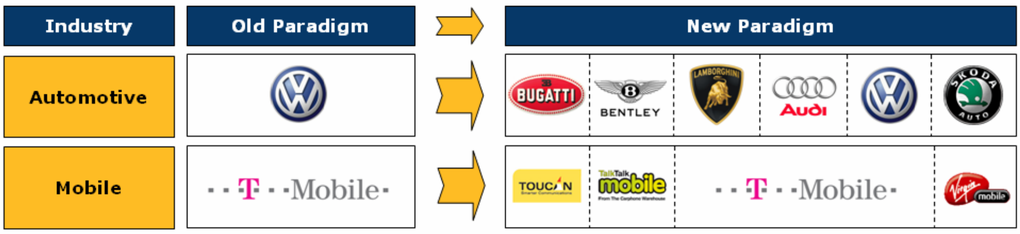


*Figure 1: paradigm shift from single brand to multi-brand strategy*

Henry Ford is famous for his statement: "the customer can have a car painted any colour that he wants as long as it is black" regarding the Ford model T in 1908.[1] Today, the automotive market is dramatically different and most car manufacturers actually own multiple automotive bands, each focused on a specific market segment with the product tailored for the unique needs of the segment.

> *Example 1: Volkswagen owns brands ranging from Skoda, at the low-end, to Bugatti, Bentley and Lamborghini at the high-end, and hence, is following a multi-segmentation strategy of addressing distinct market segments with a product tailored to their unique needs.*

Similarly, the mobile industry outside MENA has matured from simply addressing different customer segments with a couple of prepaid and post-paid price plans to a strategy of addressing market segments with unique brands and propositions.

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[1] Henry Ford: My Life and Work

This paradigm shift to multi-segmentation driven by market saturation and transition to service competition creates an opportunity for new type of companies, Mobile Virtual Network Operators (MVNO), to be introduced and integrated into the telecoms market.

## 2. MVNOS CHANGING STRUCTURE OF THE MOBILE INDUSTRY

Mobile Virtual Network Operators or MVNOs are organisations which provide mobile telephony services to their customers, but do not have allocation of spectrum.[2] Hence, rather than building additional radio networks like Mobile Network Operators (MNO), MVNOs buy voice and data capacity on a wholesale basis from an MNO and resell this onwards to customers.

This new wholesale market creates significant opportunities for forward-thinking MNOs as they are able to complement their own go-to-market strategies with MVNO partnerships which enable them to target different customer segments with unique and independently managed propositions, including unique brand, products and services as well as price plans.

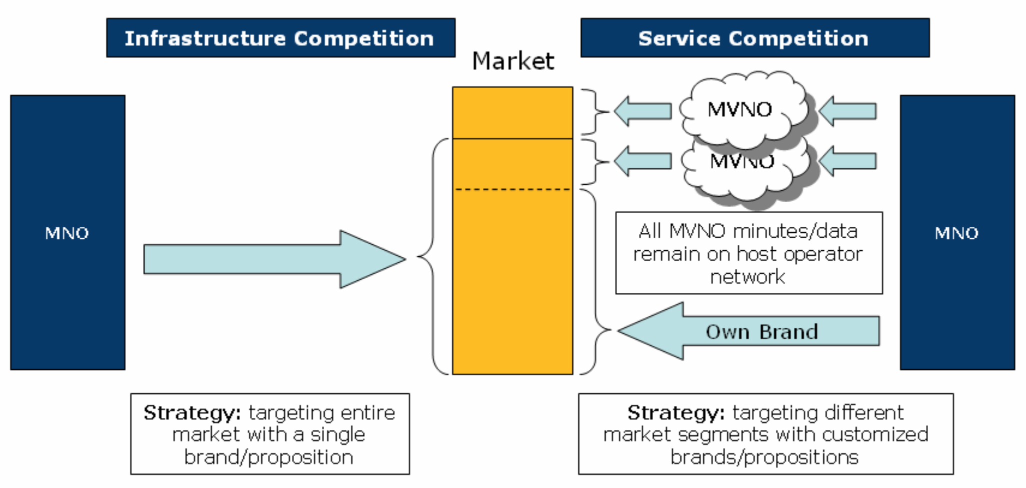


*Figure 2: multi-brand go-to-market strategy through MVNO partnerships*

MVNOs are key for MNOs addressing the multi-segmentation requirements of service competition. In light of the heavy infrastructure and related operational structure and processes, MNOs generally have a high cost base, which makes it difficult to justify addressing niche market segments.

Further, when MNOs choose to target sub-segments with b-brands of their own, they face a classical sub-brand challenge as a result of relying on existing infrastructure, human resources and other resources of the mother company rather than introducing something dramatically different to the market.

[2] Office of Communication (Ofcom), United Kingdom

MVNOs on the other hand have limited or no infrastructure, very lean organisations and more flexibility with service offering, business processes, partnerships and other aspects of their strategy, which enable MVNOs to focus on small segments and therefore effectively target sub-segments that are either under-served or overlooked today such as ethnic groups and communities.

*Example 2: New entrant MNOs typically require 500.000-1.000.000 customers to become EBITDA positive whereas MVNOs in the same markets can reach positive EBITDA with 50.000-100.000 customers and hence make it commercially feasible for the MVNO to focus on niche segments.*

The introduction of MVNOs means that MNOs need to move from pure retail market share thinking to focusing on their network market share, which takes into account both retail customers serviced under the MNOs own brand as well as the customers of MVNOs using the MNOs network.

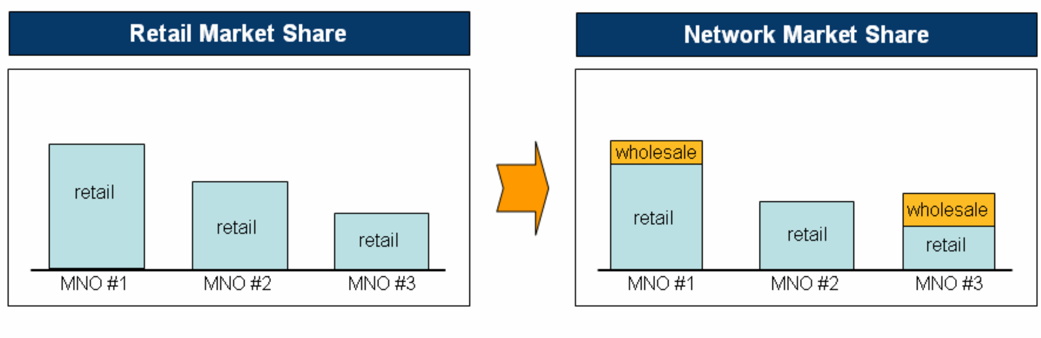


*Figure 3: moving focus from retail to network market share*

The shift from infrastructure to service competition presents a once-in-a-lifetime opportunity for MNOs to redefine the positions in their local market. The opportunity enables those who embrace the paradigm shift to gain significant strategic advantages through partnerships with MVNOs.

*Example 3: O2 Netherlands [previously Telfort Mobiel] used to be a struggling 4th largest operator with 10% market share in Netherlands when O2 Group sold the company to a private equity group for USD $27 million in 2003. Following the sale, O2 Netherlands changes its strategy and started pursuing MVNO partnerships aggressively. Only 18 months later, in 2005, the company still had a retail market share of 10%, but thanks to its leadership in the wholesale market with 39% share, the company's network market share had grown to 15% and the company was acquired by KPN Group for USD $1.36 billion.*

## 3. MVNO STRATEGIES

Today, there are over 200 MVNOs worldwide. The two leading regions are Europe with approximately 150 MVNOs and North America with approximately 50 MVNOs, with the latter being the fastest growing MVNO market worldwide.[3]

In Western Europe, this means that on average every MNO is acting as HNO for at least two MVNOs, although in reality, some MNOs have taken a proactive approach to the wholesale market while others have been slow to react and paid the price in market share loss.

Despite the large number of companies, MVNOs remain a niche proposition, serving roughly 30 million or 10% of the total subscribers in Western Europe. Further, even the most successful MVNOs have not grown beyond 10% market share in their local market and thus highlighting that MVNOs are best-suited for addressing small segments and hence highly complementary to MNOs serving the mass market.

The companies pursuing MVNO strategies can be split into three categories; existing telecoms companies expanding their service portfolio with mobile telephony to create multi-play offerings, companies looking to use their capabilities such as brand or existing retail distribution network to expand into telecoms and new start-ups, created specifically to address an MVNO opportunity.

| | Portfolio Extension | Brand/Capability Extension | New Opportunity |
|---|---|---|---|
| Go-to-Market Strategy | Telecom | Non-Telecom | Start-Up |
| No-Frills | TELE2, yesss!, simyo | TalkTalk mobile, easyMobile.com | TELMORE, halebop, CBBMOBIL |
| Distribution | SAUNALAHTI | 7-Eleven speakout, TESCO, Carrefour | transatel, TALKLINE, debitel |
| Communities | ay yıldız, mobiSud, KDDI | Virgin mobile, Disney, Extreme, NRJ mobile, Universal Mobile | movida, kajeet, LEBARA, boost mobile, TracFone |
| Content/Services/ Handsets | djuice, BT | ESPN, M6.fr | amp'd mobile, HELIO |

*Source; Analysys & FRiENDi mobile*

*Figure 4: MVNO strategies*

[3] Analysys, 2006

Further, the go-to-market strategies of MVNOs can be split into four categories:

- **No-frills MVNOs** targeting the extremely price-sensitive customer segment typically with heavy use of self-service tools and Internet distribution.

- **Distribution focused MVNOs** are typically existing retailers pursuing a capability extension strategy and simply adding a new product to their existing distribution channel.

- **Community focused MVNOs** target special interest groups or ethnic communities.

- **Content, services or handset focused MVNOs** build sophisticated valued added services (VAS) offerings over 3G networks or around specific handsets.

There are success stories across all the go-to-market strategies of MVNOs in Europe. These examples highlight that the comment sometimes used by those that do not fully understand the MVNO proposition that "MVNOs are all about low price and only destroy value" is unfounded and actually most successful MVNOs have pursued something other than a pure no-frills strategy.

MVNOs can also choose different strategies from an infrastructure perspective. The simplest form of MVNO is a brand-MVNO, which has no infrastructure and relies completely on the MNO acting as their Host Network Operator (HNO), simply rebranding the existing price plans of the MNO and reselling these under their own brand.

On the other end of the spectrum is a full-MVNO, which has significant infrastructure, similar to that of the MNO, apart from the radio network, which gives the MVNO full control over tariff plans, billing and special offers.

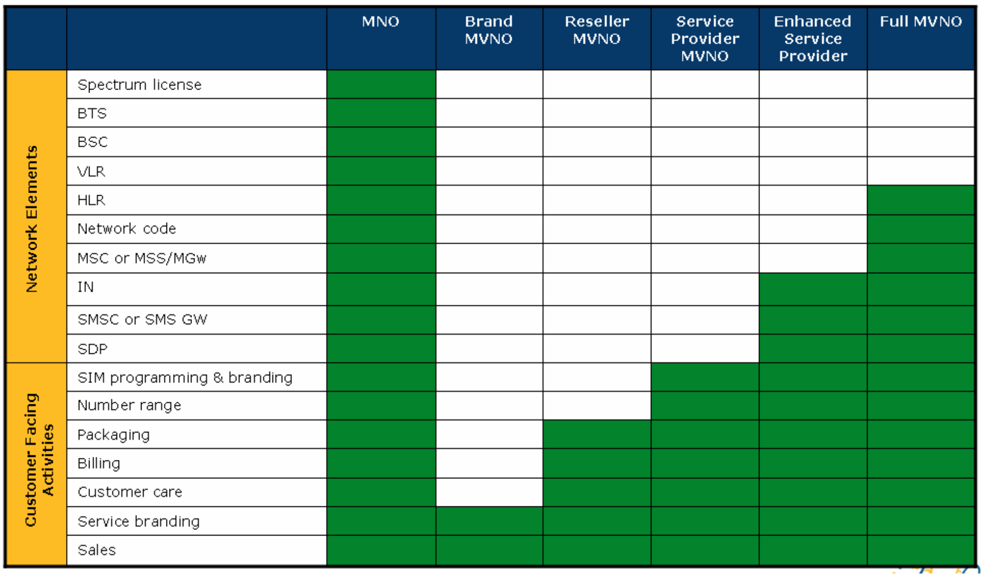


*Figure 5: MVNOs infrastructure strategies*

It should be noted that the wholesale margins are closely tied to the amount of infrastructure and services required by the MVNO from its HNO i.e. the wholesale margin to brand-MVNO would be lower than a full MVNO due to the latter having less impact on the infrastructure of the HNO.

## 4. BUSINESS CASE FOR MNO

Partnerships with MVNOs can provide MNOs with significant advantages as part of both offensive and defensive strategies in both early stage and mature markets.

For example, incumbent MNOs can use MVNOs to address competitive pressure in price-sensitive market segments without eroding ARPU for their higher-end customers or risk diluting their brand. Similarly, MNOs in a challenger position can grow their network market share through partnerships with MVNOs.

The financial benefits available for MNOs from hosting MVNOs are tangible and quantifiable:

- **Increased market size:** by targeting overlooked or poorly served customer segments, MVNOs drive market penetration beyond its natural threshold i.e. what would be the case if only served by MNOs directly.

- **Wholesale revenue:** MVNOs can add a significant new revenue stream to HNOs through buying wholesale access and hence enabling MNOs to drive better utilization of their network assets and also achieve faster ROI for the associated CAPEX.

- **ARPU protection**: by using MVNOs to address customer segments with stand-alone propositions, the HNO will relieve downward pricing pressure and avoid eroding its own ARPU i.e. benefit from ARPU protection.

- **Efficiency gain:** almost without exception, the contribution margin of wholesale revenue from MVNOs is higher than the contribution margin of the HNOs retail revenue and hence MVNOs have a significant positive impact on the Profit & Loss (P&L) of the HNO.

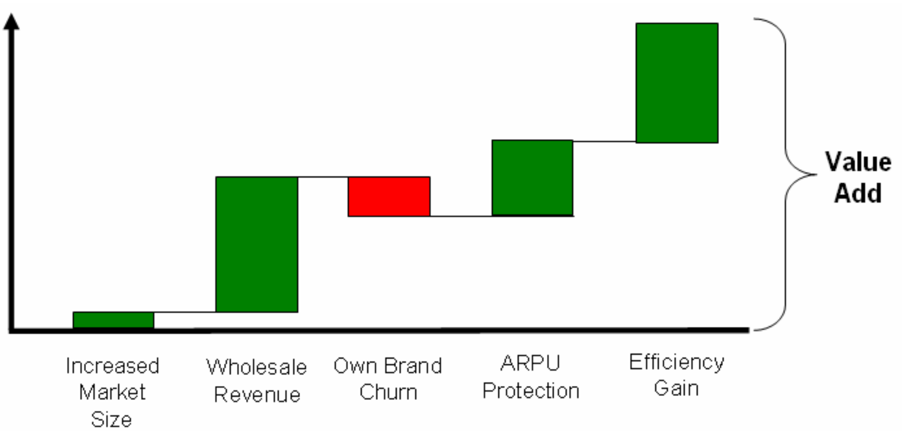


*Figure 6: MVNOs can provide significant and tangible financial benefits to HNOs*

Naturally, even with the best alignment and coordination between the MVNO and the HNO, there's likely to be some cannibalization of the HNOs customer base, which is highlighted as own brand churn above and should always be taken into account when evaluating MVNO partnerships. The key to minimising this own brand churn, is to ensure that the target customer segments of the MVNO is complementary to that of the HNO and managing the development of the offer and the selection of the target segments in close partnership between the MVNO and the HNO.

The actual wholesale margins for MVNOs typically range between 30-50%[4] of retail rates depending on the regulatory environment (i.e. mandated vs. non-mandated access), maturity of the wholesale market (i.e. competitive situation) as well as the infrastructure and services sourced by the MVNO from the HNO.

In addition to the benefits outlined above, MVNOs provide additional strategic advantages such as ability to penetrate previously unreachable market segments, accelerating network market share growth through acquiring customers across multiple segments with several unique offers (e.g. new entrants wanting to maximise impact at market entry) or reducing network churn when new MNO competitor enters the market or when Mobile Number Portability (MNP) is introduced.

In light of the significant commercial and strategic benefits, many successful MVNOs in Europe and North America are actually joint ventures in which the HNO has an equity stake and hence ensures the alignment of interests between the MVNO and the HNO.

## 5. CONCLUSIONS

The transition from infrastructure to service competition is a natural development of the mobile telecoms industry and follows a similar evolution experienced previously in other regions and industries.

The imminent arrival of MVNOs will introduce multi-segmentation and change the structure and dynamics of the mobile industry in MENA. From the consumer perspective, the evolution leads to more choice and better service offering with a closer match with customer needs.

The introduction of MVNOs represents a significant opportunity for MNOs. Those that embrace the opportunity can use MVNOs as part of both offensive and defensive strategies to gain a strategic advantage. Also, for some MNOs, the MVNO business model may even offer an opportunity for geographic expansion into markets where network licenses may not be available.

Industry observers agree unanimously that it is not a matter of if there will be MVNOs arriving to the MENA region, but a matter of who acts with foresight and decisiveness to benefit from this opportunity?

[4] Arthur D. Little, 2006

## 6. WRITER

Atte Miettinen is the Chief Strategy & Business Development Officer of FRiENDi mobile. His responsibilities include the company's strategy, acquisition of licenses from national regulatory authorities, partnerships with MNOs, building local joint ventures as well as mergers & acquisitions.

Previously, Mr Miettinen built End2End into one of the leading managed service solutions providers for mobile data services with customers across 25 countries on five continents, first as Chief Marketing Officer and later as Managing Director.

Before End2End, Mr Miettinen co-founded the Mobile E-Services Bazaar, which became the cornerstone of HP's mobile strategy at the turn of the century and had a partner network of over 1.000 companies and presence across 14 countries.

## 7. COMPANY

FRiENDi mobile is looking to become the first pan-regional MVNO in MENA. The company is headquartered in Dubai Internet City in the United Arab Emirates and financed by a group of leading international and regional private and institutional investors.

For more information about FRiENDi, please visit www.friendimobile.com.

## 8. CONTACTS

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