Marco Cozzi
INFO 250 - Mini-Project Assignment (due 3/11/2010)

MVNO – Mobile Virtual Network Operators

Executive Summary

What is an MVNO?

An MNVO is a company that provides mobile phone service but does not have its own licensed frequency allocation of radio spectrum or does it necessarily have all of the infrastructure required to provide mobile telephone service.[i] Consequently, MVNO's have to purchase its airtime from one of several "nonvirtual" (real) operators, otherwise simply known as Mobile Network Operators (MNO). MVNO's fully manage the relationship with their customers, including sales, marketing, care, and billing. From a customer's perspective, there is little difference between an MNO and an MVNO[ii]— MVNOs even provide their own SIM cards.

How does it work?

The most likely type of MVNO would be one with it's own core network (CN).[iii] The connection to the rented radio access network would be through the host (MNO) CN and calls routed through a mobile switching center (MSC). The MNO-MSC coordinates routing with the MVNO-MSC anytime an MVNO customer places or receives a call. Depending on the specific agreement between the MNO & MVNO, the customer's airtime use will be noted and billed to the MVNO.

Why allow MVNOs to use the MNO network?

From a business perspective, it's not a trifle decision for an MNO to decide whether it wishes to engage in a contract with an MVNO— MVNOs act as customers and competitors at the same time.

There are several reasons why an MNO would want to allow MVNOs to use their networks. Because networks are expensive to maintain, MVNOs can help offset the MNO's operational costs by purchasing unused network capacity that is underutilized. Additionally, because MNVOs have lower overhead costs, they are more apt to target specific market segments. Examples of this include Boost Mobile (younger, lower-income), Jitterbug (elderly), and Firefly (children). Because large MNOs (e.g., AT&T, Verizon, Sprint) often find it challenging to be successful across all customer segments, MVNOs offer an opportunity to implement a more specific marketing mix.

Current regulation debate

An MVNO cannot exist without the contractual agreement with an MNO. However many telecommunications regulators have tried to force MNO to open up their networks to MVNO's but this usually has been followed by legal complications which ultimately destroys any future relationship between the two parties. This is more damaging to the MVNO who cannot exist without the MNO and may ultimately cause its failure.

There is no global consensus on the decision whether to impose regulatory standards or not. Those in favor of regulation argue that the MNO's control the radio licensed spectrum, and as a barrier to entry for new mobile network operators. Those opposed to regulation argue that the MVNO market is still yet unproven, and it is not certain that a market failure has occurred.[iv] However many EU countries (like France and Ireland) have been in favor of regulation and have forced operators to open up their networks to MVNOs.[v]

Why does it matter?

In 2009, there were over 366 MVNOs worldwide compared to 240 MVNOs in 2006.[vi] Countries including Netherland, France, Denmark, U.K., Germany, Finland, Norway, Ireland, Hong Kong, Australia and U.S. have the most MVNOs. While Western Europe and America have were the early MVNO adopters, it is becoming more common in other parts of the world including Asia Pacific, the Middle East[vii] and South America[viii]. Many countries believe the introduction of MVNO is a "natural progression towards enhancing free market principles and contributing to the efficient use of existing telecommunication infrastructure."[ix] The MVNO market will continue to grow in the near future, and it is important that we understand how it works and what the driving forces behind it are.

Works Cited

[i] http://en.wikipedia.org/wiki/MVNO

[ii] *Introduction to 3G mobile communications*, Juha Korhonen, p.300

[iii] *Introduction to 3G mobile communications*, Juha Korhonen, p.299

[iv] http://www.itu.int/itunews/issue/2001/08/mvno.html

[v] http://en.wikipedia.org/wiki/MVNO

[vi] MVNOs of the World - http://www.mvnodirectory.com/freeMVNOlist.html

[vii] http://www.telecoms.com/10774/first-mvno-launches-in-middle-east

[viii]http://www.bnamericas.com/news/telecommunications/MVNO_regulation_may_be_approved_next_year,_analyst_says

[ix] *Recommendations on Mobile Virtual Network Operators (MVNO)*, 2008. Telecom Regulatory Authority of India