

## Mythology and mobile data

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Ten years have passed since the first GSM mobile networks were launched. Since then, well over 1.2 billion people around the world have purchased and made regular use of a 'Global System for Mobile Communications' (GSM) phone. No other technology has had such a rapid and universal impact—not even the Internet. Today there are more GSM mobile phones on this planet than there are computers, and mobile users outnumber active Internet users two to one.

But during the course of this incredible spell of growth, mobile operators have been forced into a rather uncomfortable position. The period of aggressive customer acquisition has all but ended in the West, and operators now find themselves in a position where, in order to grow their revenues, they must encourage their customers to use their mobile phone more. "More users", therefore, has been replaced by "more uses" and "more frequent use". The move from customer acquisition to retention and growth has given rise to a curious and unhelpful mythology—a mythology that is increasingly causing the mobile industry as a whole to veer off course and make potentially catastrophic mistakes.

### Voice is dead—Long live voice

The first, and arguably most important myth is that for growth to continue in a sustainable fashion, an entirely new source of mobile revenues will be required. As a result, most mobile operators have singularly abandoned their core voice business, in strategic terms, and have begun the search for the next 'killer application'. So seriously is this myth taken, that the large majority of operators have built their businesses around it.

Look at the organisational structure of any mobile operator today and you will find senior executives responsible for data, for portals, for content and for Internet services; all of them with huge teams of busy people. At the same time, however, you will struggle to find a sen-

ior executive for voice. In other words, you will struggle to find someone responsible for the service that today represents upwards of 80 percent of operator revenues. You will struggle to find someone whose role it is to manage the development and growth of the only service that 100 percent of mobile phone owners use. You will struggle to find someone whose sole responsibility is the technical advancement of the core service offering of all mobile operators. So before we even consider data, we should perhaps remind ourselves that the real 'killer application' for mobile has been with us from day one. And that killer application still has huge latent value—value that is not being unlocked because it is afforded too little attention.

According to Ovum, a leading market research company, the global market for voice (fixed and mobile) will be worth upwards of \$1,000,000,000 by the end of 2007. This should not come as a surprise. Total voice traffic has grown year on year at an astonishing rate, and for the mobile world, it will continue to do so on a global basis for the foreseeable future. This is largely because of continued subscriber growth in the developing world, which has surged in China, India and Latin America. As a result, mobile lines now outnumber fixed lines by several hundred million, and while fixed line growth has slowed very substantially, mobile is likely to continue its impressive trajectory for several years to come.

At the same time, mobile calls represent substantially less than one third of all calls made—the large bulk are still carried on fixed networks. And whilst volumes on both fixed and mobile networks are growing, the share of total voice traffic held by mobile is growing rapidly.

The extent to which this volume growth can be translated into revenues is dependent on the extent to which mobile operators seek to manage the strategic development of their voice offering. Mobile voice reliability remains substantially lower than the 'five nines' reliability of many fixed networks (99.999 percent call success rate)—a reliability benchmark that represents a downtime of approximately 6 seconds per week (Percy 2003). Similarly, mobile call quality remains lower than that of fixed; and both of these points serve to limit the perceived value of the mobile voice service as a whole.

But mobile networks are—theoretically at least—just as technically capable and substantially more flexible than copper wire networks, and of course, mobile handsets have received many hundreds of times more investment in research and development than their fixed equivalents, and it shows. Ten percent of calls made from European homes are made on mobile phones, simply because the device is easier to use, and in particular, contact numbers are much more readily stored and retrieved (Lehman Brothers 2003).

Since there is a well-established link between the number of

contacts stored and the number of calls made, operators could rapidly accelerate voice volume growth by helping their customers to store more contacts in their phone or SIM card.

Simplifying tariffs would also help. One of the major barriers to greater mobile phone usage is cost, and even though the cost per unit of time is becoming increasingly competitive with fixed networks, customers remain wary of call charges, in no small part because they do not understand the structure of tariffs. Mobile operators do themselves absolutely no favours in this regard. One of Europe's leading international wireless operators presently has over 1,000 different tariffs in its top five European markets. Over 800 of those tariffs have been changed during the course of the last twelve months, leaving customers with an eternal struggle to understand the true cost of ownership.

The bottom line is that mobile operators have diverted their attention to data before they have optimised their core business. Second generation (2G) infrastructure—and the voice services provided by it—could readily be turned into a very healthy cash-generating machine. With most infrastructure written off in accounting terms, 2G has the potential to deliver very substantial profits. People call people, not places—and it is inevitable that mobile will ultimately become the primary voice communications medium for most of the developed (and indeed developing) world. Given such an opportunity, mobile operators should initially worry less about data and worry substantially more about how to extract long-term value from voice.

## Mass demand for data

Mobile operators have managed to convince themselves that there is an unarguable, mass demand for data services amongst customers. But evidence from the fixed world would suggest otherwise.

The large majority of domestic Internet access is still based on a dial-up connection, as opposed to broadband or cable. Though this is partly because cable and DSL broadband operators have been painfully slow to roll out their infrastructure, it is also because demand for high-speed connectivity is limited. Even before broadband access has reached substantial penetration rates, operators are competing aggressively on price. There is a noticeable trend toward offering more bandwidth for less money, across the board. This suggests that for the most part, people are prepared to pay for 'fast enough access'—not 'as fast as possible'.

The other immediately obvious issue is that fixed broadband operators sell Internet access, and Internet access only. Their attempts at selling a broader portfolio of data services—as a means of increasing real and perceived value—have tended to yield very little customer in-

terest. For example, early experiments with television over broadband have so far been an expensive failure—consumers do not see any inherent value in being able to download television programming that they generally receive either for free, or at a markedly higher quality, elsewhere. Only now are ‘triple-play’ services from companies like France Telecom and Homechoice (within the M25 region of London) beginning to combine internet, fixed-line telephony and TV over a broadband line in a way that is leading to decent numbers of subscribers.

Similarly, attempts to sell broadband appliances have tended to meet with indifference amongst consumers. Even the most popular networked device—the gaming console—is only just beginning to generate noticeable traffic volumes. And with its niche demographics, the gaming market is unlikely to confer a huge opportunity on fixed carriers, since their role is little more than that of a fat pipe.

Perhaps ironically, the services that have attracted greatest consumer interest—above and beyond Internet access—are simple communications services: e-mail, instant messaging, chat rooms and more recently, blogs (personal weblogs) and wikis (editable web pages). The popularity of these services hints at the colossal demand for services that allow consumers to indulge in conversations, self-expression and social activity. But their popularity does not infer the need for more bandwidth—they are all relatively low-bandwidth applications that can run quite happily on a dial-up connection.

Not surprisingly, in the mobile world, a similar pattern has arisen. The single most popular mobile service after voice is text messaging. Dominated almost exclusively by interpersonal messaging, the text market now contributes up to 20 percent of operator revenues. The next most popular service is voicemail—used by upwards of 50 percent of the customer base. These services—combined with voice—make up more than 98 percent of total operator revenues.

Other data services—which include ringtones, wallpaper and other downloads—make up less than 2 percent of revenues. And it is interesting to note that the large majority of these data services fall comfortably into the category of ‘phone personalisation’—a category that is clearly linked to self-expression.

So what does all of this mean for the future of mobile data? On the positive side, it means that the very best place to start in the search for successful data applications is communications. Adding mobility, presence and immediacy to chat, instant messaging, blogging and other services has the potential to generate substantial value. The principle advantage of the mobile medium—its ubiquity—lends itself well to all forms of communications services. Already there is evidence that mobile e-mail, for example, is becoming extremely popular. E-mail specific devices such as the RIM Blackberry have demonstrated exceptional

growth. And although each e-mail generates only modest revenues for operators on a per-unit basis, the sheer volume of e-mail sent suggests a very substantial total market. Consumers around the world still buy mobile phones for one reason—communications—and for the time being, this is the primary, if not only, market that operators should focus their resources on.

### **Content is King**

At present, however, operators are focusing their attention not on communications, but on content—believing the myth that “Content is King”. There can be no doubt that content generates colossal revenues. Newspapers, music CDs and DVDs, movies, pay-television, books and all manner of other published content generate billions of dollars in revenues. But there are two important issues here. The first is that the bulk of revenues from content go to the producers of content—not their intermediaries. The second is that whilst content revenues are huge, communications revenues have always been, and will continue to be, far greater. For example, even the largest and most successful global movie studios generate net revenues that are a fraction of those generated by a single-country GSM operator. So the notion that putting content over mobile phones will revolutionise the industry and generate billions in net additional revenues is entirely flawed.

According to Forrester Research, a telecommunications and technology research organisation, content over mobile phones is unlikely to generate substantial revenues. By contrast, however, conversations between users—conversations that are powered by content—have the potential to create a multi-billion dollar market (de Lussanet et al. 2002). Their research indicates that for mobile operators, downloads and content are substantially less important than the communications services that envelop them. The small-talk that has powered the massive growth of mobile voice can be further stimulated and grown, therefore, by using content as its raw material. Content becomes a means to an end, not an end in itself.

### **Bandwidth equals success**

With a focus on content, mobile operators have begun to investigate—and indeed invest in—an increasingly long list of wireless technologies. Based on the assumption that ultimately huge amounts of content will be delivered to the mobile device, operators seem to be ‘spread betting’—investing large sums of money in new technologies in the hope that they will deliver additional bandwidth which will translate into

value for customers. To the already huge investment in third generation networks (UMTS/3G) is being added wireless LAN for local access; HSDPA (high-speed downlink packet access), which allows 3G infrastructure to deliver connection speeds of up to 10Mb/S; DVB-H (digital video broadcast—handheld) for digital television services, and several others. These technologies may well be extremely powerful, but they are also highly disruptive on several levels. First of all, consumers are already unconvinced by the need to upgrade to 3G. Add more technologies, and their uncertainty will rise—if operators cannot decide which technology is best, why should consumers? Secondly, the addition of each new technology increases the capital expenditure (CAPEX) burden on operators, making balance sheets even more difficult reading. And finally, each new network element essentially serves to compromise the window of opportunity for 3G.

There is no precedent to suggest that people have an all-consuming desire for bandwidth and speed. Moreover, there is little evidence that mobile customers see many meaningful uses for the bandwidth. Almost without exception, consumers buy a mobile phone for communications, and as intimated earlier, they may well be prepared to pay for ‘fast enough’—but there is scant evidence to suggest that they will pay for ‘as fast as possible’.

### **Everything belongs on mobile**

The final myth that plagues the mobile industry is the notion that everything—from betting to banking, music to movies—belongs on the mobile device. This is simply wrong. The mobile device is extraordinarily powerful, and its capabilities are growing rapidly as a function of time. But that does not infer that consumers will ever see it as a panacea—capable of doing everything they need to do.

There is a clear social and practical context to mobile usage. Mobile is the perfect medium for voice, because it works virtually everywhere and is the one device that consumers carry with them wherever they go. It is the ideal medium for messaging and mail, because it is ubiquitous and immediate. It is the ideal platform for controlling other services—perhaps very many other services—but not necessarily for consuming them. And the separation of control and consumption is key. It is not inconceivable that customers will actively want to search for, order and pay for a movie on their mobile phone. But they will almost certainly prefer to watch it on a full sized screen, in the comfort of their own home. They may want to scan newspaper headlines, but they will want to read whole articles either on a large format screen or on paper.

The true position of the mobile phone—above and beyond its

role as a critical communications tool—is as the remote control. The remote control that allows customers to seek and find. The remote control that keeps customers informed. The remote control that allows customers to choose and pay. But resolutely not the platform for the consumption of everything.

## Conclusion

So does all this spell disaster for mobile operators? No—but they must step back and look carefully at the foundations of their business. Starting with voice, operators must begin to realign their focus on the service that generates the large majority of their revenues and profits.

Instead of encouraging the erosion of voice margins through increasingly generous bundled tariffs, operators might instead focus on taking voice into its third generation. Most operators have assumed that the ‘killer application’ for 3G will be a data application, but there is no reason why that application could not be next generation voice service. Arguably the best way to displace fixed voice (and indeed voice over IP) altogether is to develop a sustainable quality differential. 3G networks have sufficient bandwidth and capacity to offer high-fidelity voice. Even stereo voice.

It seems ironic that operators have so far overlooked the opportunity to bring voice up to date. For too long customers on all networks—fixed and mobile—have put up with audio reproduction that is low bandwidth and low quality. High-fidelity, combined with universal mobility, would give mobile networks an invincible edge over all other voice media.

Operators must also recognise that content is not their business—communications is. As such revenues will be generating by developing communications services that take interpersonal interaction into new areas. That means leveraging all of the power of the mobile network and device. More particularly, it means making sure everything works. It is a sad truth that even today, customers can leave a store with a new, high specification phone that is not properly configured for basic services such as picture messaging and e-mail. If operators really want to see data revenues grow, they must ensure that a customer simply cannot leave a store without a phone that is ready to send and receive every meaningful type of mobile communication.

Operators would also do well to think about handset design. Adoption of even the simplest non-voice services, such as text messaging, are impacted by the wide variety of user interfaces and operating systems available in modern mobile phones. Get into a car—any car—and a user will be able to drive away. The headlights, the gear stick, the windscreen wipers and even the stereo are in a standard position—so

the user immediately knows how to operate it. This is not the case on mobile phones, and operators must work to standardise interfaces—otherwise all but the most technology literate customers will simply not use the services.

And services—not bandwidth and technology—are what sells. Operators must focus on the development of a long-term suite of practical, meaningful and relevant services, and then decide which technologies allow them to deliver those services most efficiently—not the other way round.

## Communications is King

The services themselves need not be complex or advanced. Indeed, arguably the simpler they are the more popular appeal they will have. And there are plenty of seemingly obvious mobile services that still do not exist. Users still cannot book a wake-up call with their mobile operator. They cannot send a post-it note to their colleagues. They cannot do a crossword puzzle on their phone.

In the end, the numbers are massively stacked in the favour of mobile operators—so failure will only ever be self-inflicted. Historically, demand for communication has grown consistently as a function of time, and as a function of new media and communication forms.

Within this context, the very notion of ‘data’ is irrelevant. If we accept that communications is king, then there is no need to arbitrarily divide the world into voice and data. Because ultimately customers don’t—and won’t.

## References

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