i-Mode

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I am very happy to speak to you here about i-mode, the great success story in Japan. I will pose the question, is its success based on the past or the future? This is an important question because many people can read different explanations into the success of i-mode.

Initially, the growth of mobile communications in Japan was below average. Compared to the growth path of penetration of other major economic countries, Japan is actually in the middle.

But that changed quite dramatically after 1999 when DoCoMo's management embarked on a very innovative and courageous policy, leading to great success. Today there are over 40,000 different sites reachable through i-mode, although only a small number of those are on the short menu, or easy menu, the so-called partners that account for 80 percent or more of the actual usage. The other sites have to be accessed by typing in the URL, which is more complicated.

As a consequence of that popularity and usage, the average revenue per user has increased from about $75 per month, depending on the exchange rate , to $99, which is extraordinarily high internationally. Revenues from i-mode account for $13-18 of that, and are rising. The market share of NTT DoCoMo that hovered around 50 percent has increased to 60 percent. Its trend is clearly upward while its competitor's trends are down.

Based partly on their technological and marketing success, and partly on their profits, DoCoMo has moved into international alliances. DoCoMo is now part owner of AT&T wireless, based, in part, on AT&T's financial pressures. DoCoMo is also involved in strategic alliances with KPN in Europe and others.

Recently, i-mode has been in the press continuously, which raises the following question: is its success part of the old or part of the new? The old representing not only superior engineering and a classic telecommunications monopoly, but also market power in market dominance of vertical integration into suppliers and providers, and preferential treatment by regulators. Conversely, its possible that i-mode really stands for the future of competition; the Internet driven, digital economy -- e-commerce, and m-commerce.

To some extent, i-mode is a bit of an ink-blot test into which everybody reads their own fantasies and fears. I am sure I will do some of that too, but certainly the press and other observers do as well. What are the new factors for NTT DoCoMo's success with i-mode? To what extent does that success rely on the pricing scheme, the openness, the data network, and the browser software?

By itself, i-mode stands for a wireless portal; a portal that one can reach just like an AOL portal or Yahoo portal, but by way of wireless communications. Sprint was the first to offer a wireless internet portal. I use it for e-mail, but it is based on a different upgrading system than DoCoMo. Namely, Sprint uses the wireless applications protocol (WAP), which is the major international standard that is used almost everywhere in the world.

The function of the WAP is to convert information from the websites where HTML is used into a form that is displayed on the mobile screen. The protocol was invented and developed in the U.S. and adopted internationally, particularly in Europe, and by some American and Japanese companies (competitors of DoCoMo). However, WAP really is not doing very well. It is not very effective and, I can testify from my own experience, it is very slow. What is on the screen is totally controlled by the mobile operator; and its security is not great (fortunately nobody really has engaged in major attacks, but that is just a matter of time). Furthermore, WAP also lacks the "always on" feature that i-mode has. This means that in i-mode, users can continuously receive messages. With WAP, one has to call in, log in, and go through a complicated menu.

From a technological perspective i-mode major advance over WAP. It is a packet switched, rather than a circuit switched network, which offers a great advantage in terms of flexibility. The user charges are based on the actual bytes that have been sent out or received, rather than the per minute charges. In other words, one pays only for what one actually eats rather than paying by the minute, and that makes a huge difference. Japan has really moved enormously and today about 80 percent of the world's wireless Internet users are actually in Japan. By contrast, U.S. mobile Internet users account for an astonishingly small percentage.

What are the old factors of superiority? One is that the Japanese government has licensed spectrum to DoCoMo, as well as their competitors, for a fairly nominal fee. This contrasts the method used by the rest of the world, which is to auction off spectrum or to establish some high-priced conditions on the usage. For example, in the U.S., Germany, and Britain, competitors have spent billions of dollars getting spectrum, whereas in Japan, the spectrum was given out for free.

Companies competing for the next generation of wireless communications recently participated in auctions where they spent 30-50 billion dollars just for the license. In consequence, many banks, partly because of the bubble in wireless enthusiasm, have given out credit lines of astonishing size, and a whole range of banks have extended loans for $20 billion and more. I think if you went to look at the next bubble economy, aside from Japan, this is the list of people who will be in trouble. Those companies, banks that have only one academic scientific paper showing the health impact of wireless communication, so that any other form of threat of profitability of the wireless use applications away from having these loans becoming weak rather than solid. (CLARIFY?)

What has been the response to NTT DoCoMo from its competitors? They have been negatively affected by the success of i-mode, and this has driven users to the DoCoMo network. Why not? After all, it makes a lot of sense for the users: if you are involved in communicating with your friends using the short messaging system, you would want to have a large group of other users. Economists call this a network externality or network effect. DoCoMo has it, the competitors have much less of it. Of course economies have scaled on top of that, on the supply side, the network _____, and on the demand side. So what you have is something like a network tipping situation in which invoiced, it was okay, you could have each one of them; but when it comes to the text, the i-mode gives NTT a kind of overwhelming competitive advantage. (CLARIFY)

Consequently, the competitors had to lower their prices to give more generous terms of usage, such as much longer limits on e-mail length and promotions in which the handsets were given free or bundled with subscriptions. Even so, their market shares keep sliding. DoCoMo has the advantage of a set scale of externalities; once people are there, they find it hard to switch to another carrier because they trust the brand of NTT DoCoMo.

There are other factors that exist in Japan. One of them is the low penetration of the Internet relative to Japan's income and technological sophistication. i-mode created a way around various bottlenecks that were an obstacle to the Internet in Japan. At least one of the bottlenecks was created by NTT itself. Fairly high international access prices, in particular, access prices that are not flat, discourages long usage. NTT DoCoMo has also established an "acceptable use" policy on partner sites. For example, one cannot link partner sites to either outside sites or portals, nor can they provide chatting or bulletin boards. Even advertising, to some extent, is restricted.

Now all of this would be no real problem if the user, the DoCoMo subscriber, had alternative portals to visit; but that ability is limited. Another, but lesser worry, is the potential vertical power of DoCoMo in relating to equipment manufacturers. As a result, we have a situation in Japan where DoCoMo has, for reasons partly of its technological and strategic foresight and partly of its sheer size, achieved a re-monopolizing of the communications environment. People are flocking to their service and as a result, NTT DoCoMo is winning the competition.

All of this has started to raise policy issues in Japan, so their partners - their affiliated companies, regional companies, fixed line companies, entity east, and entity west - recently proposed something called the "L-mode". This is basically an i-mode with a wire that can access the Internet from a regular phone (without all of the fancy screens). . It was supposed to be easy and simple, but NTT is now engaged in fairly severe regulatory battles over whether it is part of competition law and NTT's agreement with the government.

The policy question for Japan is whether in fact the enormous success of i-mode validates the old system of

market power and of NTT family arrangement? The Japanese government does not think so. It thinks that something has to be done, and has proposed either to regulate DoCoMo as a dominant carrier, or to potentially divest DoCoMo from NTT itself.

Is this an "old regulation" to deal with an old monopoly, or is it new, forward-looking regulation? Those kinds of regulatory approaches that try to reach pricing in the structure of companies are indeed old regulations dealing with old power, but one should focus on new responses, in particular of access and of choice. Parallel is the situation in which the Federal Trade Commission in Washington had to deal with the proposed merger of AOL and Time Warner. It reached a consent decree that established a whole range of openness, access and user choice regulations, rather than a price regulation. The real question was how to reduce the old sources of superiority without killing the new ones? I think this is important for DoCoMo as well. Once re-monopolization takes place, things slow down. DoCoMo performed best when it was in a competitive situation..

About 15 years ago, the Mini-Tel in France had a similar success story. Every newspaper in the world was writing glowing reports about how all the Frenchmen were using it. And its success was based on very similar reasons. Subsequently, however, the competitive and innovative forces of the Internet eclipsed the Mini-Tel. So sometimes advantages are only temporary unless you imbed them in a market structure, an openness of competition, and institutionalize them. The broader question for Japan, as well as for the U.S., then, is how do we move forward when one of the competitors wins the competition? Do you move backwards and regulate it, like the old way, or do you move forward and try to establish a competitive environment? That is a very important question for Japan in general terms and certainly in telecommunications. It is also a very important question for the U.S. right now, as the number of telecom competitors keep shrinking, and will continue to shrink in thecoming years.