Perspectives:
Wireless Data ARPU

Chetan Sharma
June 2005

As voice is becoming more and more commoditized, importance of wireless data revenues to our industry can't be understated. Additionally, with the introduction of new technologies such as 3G, LBS, SIP, video, audio, etc., existing solutions can be enhanced and completely new services can be enabled. Operators who have been open, creative, and innovative have benefited from such an approach. To understand, how wireless data solutions have benefited various operators around the world, we looked at wireless data ARPU (Average Revenue Per User) for the year 2004 for over 80 leading operators[1] in over 35 countries to identify leaders and trends and use the study to jot down lessons learned from success stories. Understanding of ARPU dynamics is critical to all in the mobile ecosystem.

In this article, we will summarize the results from the study. Lessons learned and recommendations will be the topics for our forthcoming articles[2]. These are based on Chetan Sharma Consulting's research and field experience in defining and implementing successful wireless data strategies around the world.

[1] Data was collected from company presentations, company financial reports, Chetan Sharma Consulting interviews, and analyst reports.
[2] If you would like to suggest a topic, kindly do so.

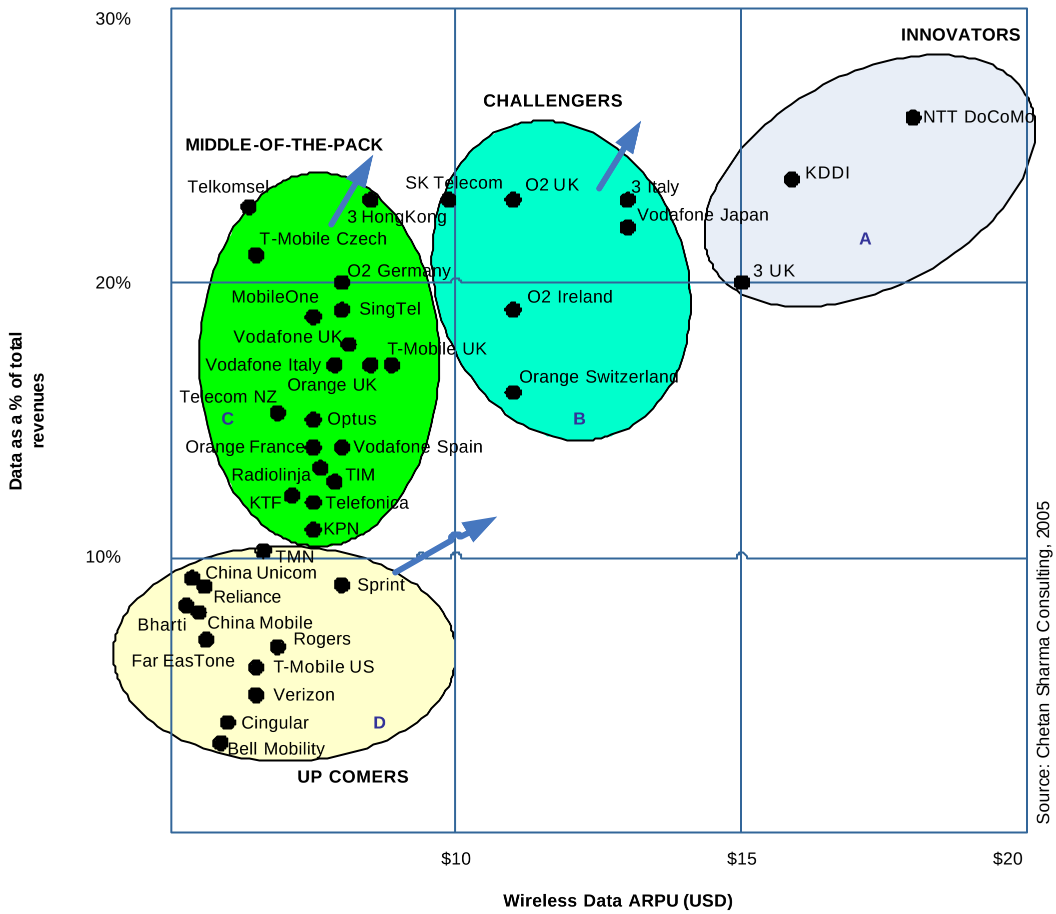

Figure 1. Wireless Data ARPU for major operators worldwide

Figure 1. shows the matrix of *wireless data as a percentage of total revenues vs. wireless data ARPU in USD* for 40 major carriers worldwide[3]. It is no surprise that NTT DoCoMo and KDDI lead the pack - having done ground breaking work in this space since 1998. NTT DoCoMo is by far the leader by earning over $1B/month from data services. Their stated goal is to derive 80% of their revenues from data services by 2010[4].

Based on the wireless data revenues and its contribution to their ARPU, we have broadly categorized the operators into 4 distinct groups:

A) Innovators
B) Challengers
C) Middle-of-the-pack

[3] The data revenues include revenues from content as well network usage.
[4] Source: NTT DoCoMo.

D) Upcoming players

A) In the **Innovators** group, apart from the two players from Japan, 3 UK has made some impressive strides with its 3G service in UK. They have been launching various multimedia applications that moved their data ARPU to over $15.

B) **Challengers** are a mix of Asian (SKT and Vodafone Japan) and Western European operators (O2 UK and Ireland, Orange Switzerland, and 3 Italy). Their data ARPU is in the range of $10-$15 which contributes 15-25% to their overall ARPU.

C) For rest of the operators, wireless data ARPU is less than $10, the main difference amongst them is how big of an impact it makes on their overall ARPU. There are a number of operators (19) in **Middle-of-the-pack** group whose data ARPU contributes to over 10% to their overall ARPU.

D) The **Upcoming players** consist of operators from North America, China, and India. Wireless data contribution to their overall ARPU is less than 10%[5]. It should be noted that the two biggest wireless markets – China and US respectively lag in data revenues[6]. Also, though India is the fastest growing market in the world right now, contribution from data ARPU to total revenues is still relatively small.

It is also clear that the introduction of 3G has helped carriers to boost their data ARPU, in some cases tremendously. Hutchinson Wampoa's 3G properties across Europe and Asia derive approximately 20% of their revenues from data services[7]. Similarly, the average non-voice ARPU for Vodafone operators was over 17%[8]. EV-DO helped generate more than four times the revenue (on a per subscriber basis) as compared to its 1x data service for SK Telecom's[9].

---

[5] Sprint recently pushed past the 10% mark. They recently reported that data services accounted for nearly 10 percent of the carrier's $61 in ARPU during the first quarter of this year, compared with 7.5 percent for Cingular, 6.6 percent for T-Mobile USA Inc., 6.1 percent for Verizon Wireless and 3.7 percent for Nextel Communications Inc.

[6] It should also be noted that wireless data usage in BRIC (Brazil, Russia, India, and China) countries will grow rapidly but revenues generated will be far less compared to Japan or other western nations. This phenomenon will be unique to these countries as the market can be sustained at low ARPUs. Operators and product companies need to be creative and adaptive to the address the needs of such markets.

[7] Source: Hutchinson Wampoa Ltd 2004 Full year results, March 2005.

[8] Source: Vodafone press release, Jan 2005.

[9] Source: SK Telecom, Jan 2005.

Similarly, KDDI's EV-DO service generated approximately $35/sub, more than twice its overall data ARPU[10]. There were also a couple of interesting outliers such as the two operators in Philippines, namely Smart and Globe whose data contribution to the overall ARPU were 45% and 38% respectively[11].

Figure 2. summarizes the data revenue figures by country. For example, Japan's operators gain approximately $16 (or 24%) from their wireless data services as opposed to Canada where operators average about $2.1 (or 4%) in wireless data related revenues. In terms of improvement over previous year, North American operators clearly earned the most improved player award with over 150% increase in data revenues.

[10] Source: KDDI, Jan 2005.
[11] The ARPU was approximately $3 for both of the operators.

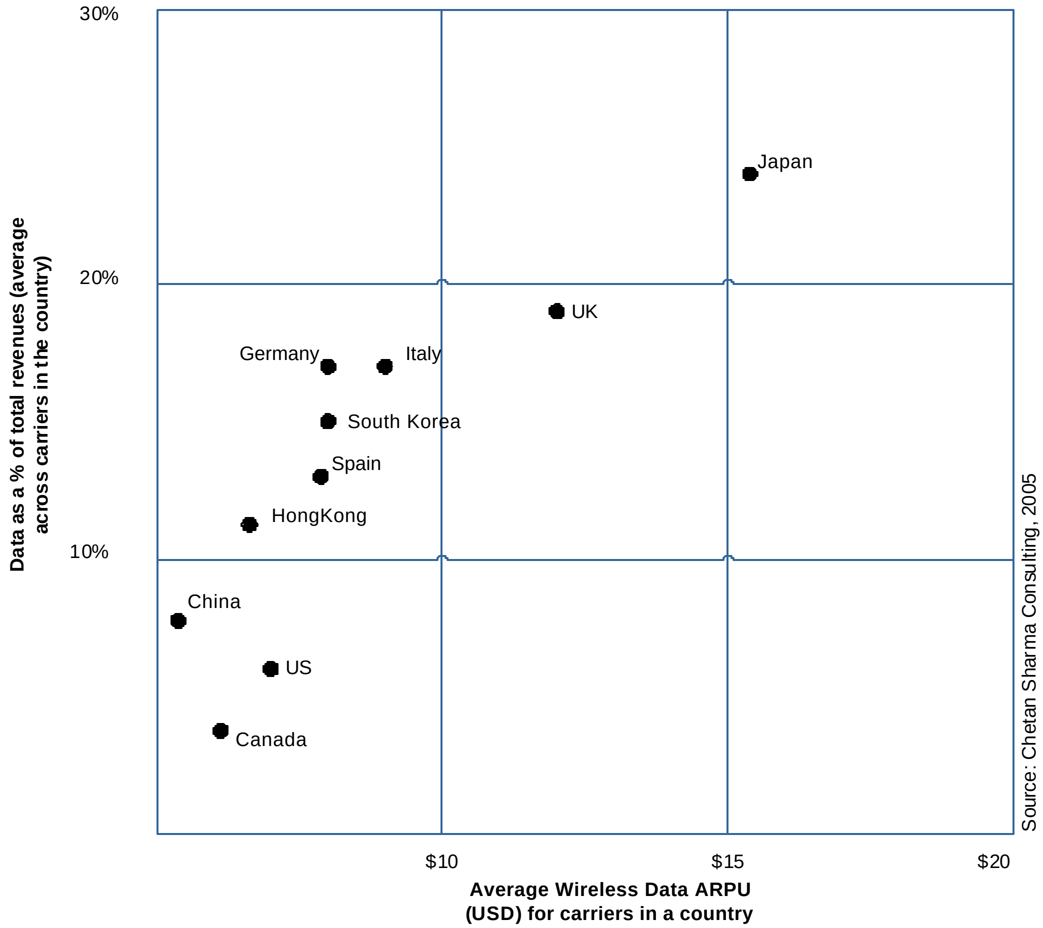

Figure 2. Average wireless data ARPU by country

The good news is that wireless data usage is on the rise. However, to translate usage into revenues, one still has to be innovative, offer differentiated solutions, and put strong emphasis on consumer user experience, education, and marketing the services (not the technology), and provide good customer care. It is also clear that higher wireless data ARPU is directly correlated to creative business models that empower the entire ecosystem, device customization that enhances user experience and brand loyalty, and applications and services that benefit the customers.

In the next few upcoming articles, we will discuss some of the strategies that product companies and carriers alike can introduce into the market to be successful. We will also discuss how lessons learned in one region can be applied elsewhere.

Acknowledgements

Many thanks to Dave Smiddy, Dmitry Kaplan, Joe Herzog, and Sunil Jain for their help with the article.

About Chetan Sharma Consulting

We are a consulting and advisory firm focused on ASSISTING companies in the **mobile and voice communications** sector with product management, technical due diligence, market and competitive research, patent and IP strategy, technology and business strategy. Our clients range from small startups with a disruptive idea to multinational conglomerates looking for an edge. We are very focused on evolving trends, emerging problems and opportunities, new business models and technology advances that will take our industry to the next level.

About Author

Chetan is a recognized industry expert in strategy and implementation of wireless data and pervasive computing solutions. He has a strong background in developing and launching technologies, products, and solutions for the wireless Industry, including extensive experience in managing and delivering all phases of the product development cycle. He has worked with major wireless carriers around the globe, from multinational players such as NTT DoCoMo to regional carriers such as Cincinnati Bell Wireless.

Chetan is the author of best-seller: *Wireless Internet Enterprise Applications* (John Wiley & Sons, 2000) and co-author of *VoiceXML: Strategies and Techniques for Effective Voice Application Development* (John Wiley & Sons, 2002). His most recent book titled *Wireless data services: Technologies, Business models, and Global markets* was published by Cambridge University Press, UK (Jan 2004) and is a collaboration with Dr. Yasuhisa Nakamura, SVP, NTT DoCoMo. Chetan has patents in wireless communications, is regularly invited to speak at conferences worldwide, is an active member in industry bodies and committees, is interviewed frequently by leading international media publications. Chetan has published several articles and industry reports on topics ranging from wireless multimedia to WLAN to UMTS. He has also been involved as a wireless technology expert witness in intellectual property litigation cases.

Chetan is advisor to CEOs and CTOs of some of the leading wireless technology companies on product strategy and IP development. He also sits on the advisory board of SignalLake - an early-stage telecom venture capital fund. In addition, Chetan also advises some of the largest financial institutions on wireless technology and companies in the sector. Chetan is regularly invited by various US government agencies to speak on wireless data and security related matters. He is co-chair of wireless technology committee of Integration Consortium - IC. Chetan has MSEE from Kansas State University and BE from Indian Institute of Technology, Roorkee.

http://www.chetansharma.com

