



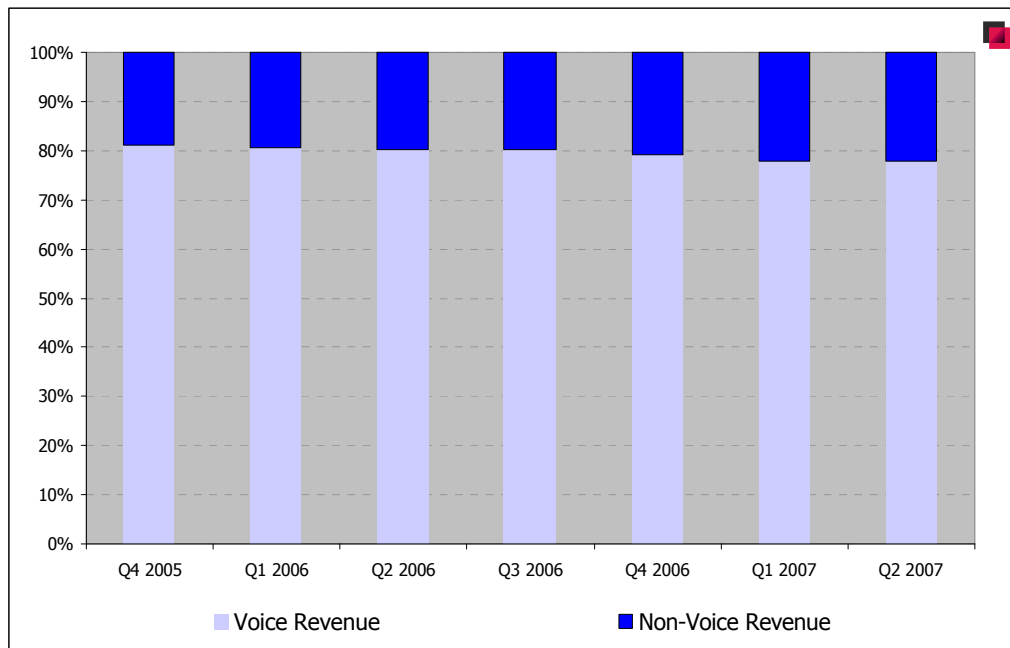
Data revenue growth and challenges

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Data revenues have been growing substantially on a quarterly basis to reach around 22% of total recurring revenues, compared to 19% a year ago (across selected operators). The US & Canada is the region showing the fastest growth since 2006. Asia Pacific is following a flat trend, while European operators are growing at a steady pace. While SMS traffic accounts for the majority of data revenues, non-SMS data revenue growth is picking up in Western Europe. Data revenues are affected by seasonality patterns and the split between contract and prepay in the market. Among the factors inhibiting data revenue growth are coverage, capacity, price and user experience.

Figure 1 **Voice versus non-voice revenues as a % of recurring revenues, weighted average across 65 operators**



Source: Wireless Intelligence, October 07



Globally, 65 operators report a split of their recurring revenues by voice and non-voice revenues. Recurring revenues are generated by the use of the wireless network (i.e. excluding handset revenue and connection fees) and commonly include voice, data and messaging, and traffic generated by the operator's subscribers and by other operators.

Analysis

Across all the 65 operators that report revenue splits, data revenues have been growing substantially on a quarterly basis to represent around 22% of total recurring revenues, compared to 19% a year ago. The multiple SIMs per user phenomenon happening in mature markets is skewing the aggregated ARPU trend as, in effect, ARPU per real user is growing. Although SMS accounts for most of the non-voice revenue (up to 90% in some cases), non-SMS revenues are slowly picking up – particularly in markets where operators have commercially deployed WCDMA HSDPA networks.

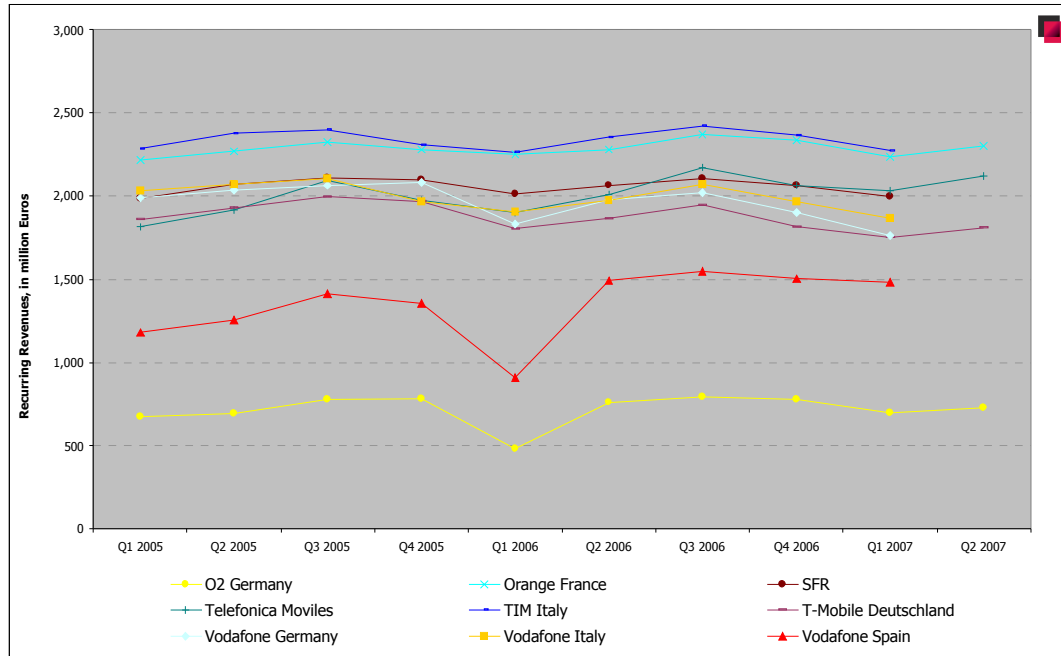
Data revenue growth dependent on seasonality

As shown in *Figure 2*, European operators' recurring revenues have followed seasonal changes over the last two years. Q3 appears to be the highest revenue period and Q1 the lowest. This reflects the effect of roaming during the holiday season.

In contrast, most Asian operators are following a flat trend as data is growing at a slow pace, except in mature markets such as Australia, Japan and New Zealand. In the US, recurring and data revenues are growing fast with Verizon Wireless and T-Mobile averaging around 5% quarterly recurring revenue growth in Q2 2007. Over the same period, data as a percentage of service revenues represented 20% of Sprint's recurring revenues.



Figure 2 **Recurring revenues, Europe**



Source: Wireless Intelligence, October 07

In a previous report, we described how multiple SIMs per user are skewing penetration rates, ARPU and minutes of use per user. For instance, Western Europe is often referred to as a saturated market, but analysis shows that real penetration is around 75% and that there is still room for growth before reaching saturation. Although aggregated ARPU is declining quarterly, the reality is that average revenue per real user is actually growing. Looking at quarterly growth rates, Eastern European operators’ data revenues are growing faster than in Western Europe, mainly in markets where high-speed services have been launched. However, growth of non-SMS data revenues is still to be identified as few operators report it.

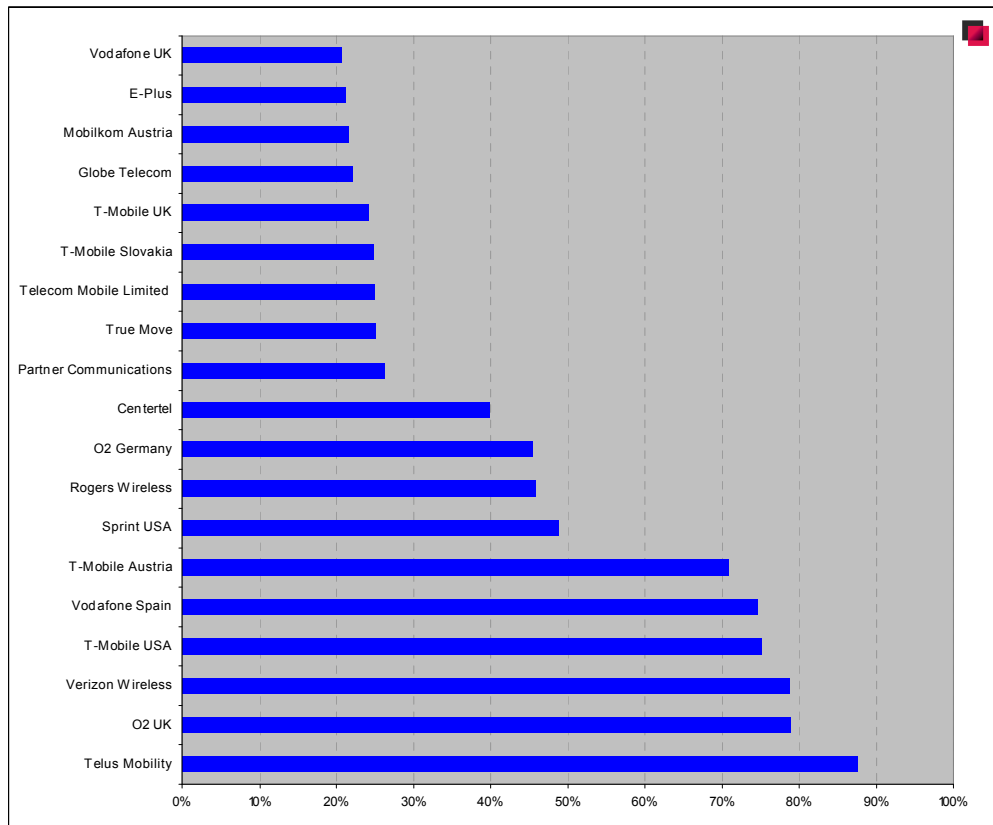
Data revenue growth dependent on mobile services

As shown in *Figure 3*, between Q1 2006 and Q1 2007, the top operators in the US & Canada were showing strong growth in data revenues, with increases of more than 40%. However, those operators are not reporting non-SMS revenues. In the region, around 90% of cellular connections are on contracts, so most consumers are likely to have messaging offers/voice and data plans, whereas the European market is around 70% prepay. Western European operators’ data revenues have been growing by 20–40%. Vodafone, O2 and T-Mobile are showing signs of strong growth in Europe – particularly in the UK and Germany where they have launched



high-speed services, unlimited data plans, and are focusing on migrating their prepay users to contracts.

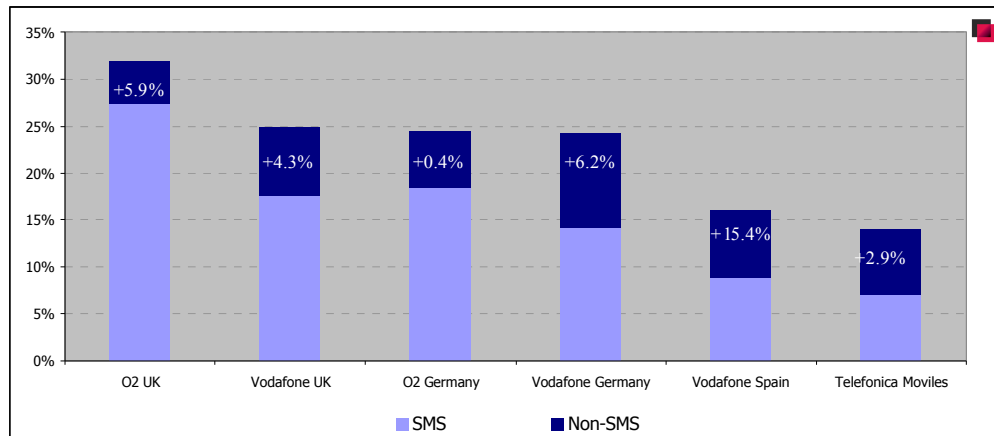
Figure 3 **Data revenues: fastest-growing operators, Q1 2007 yearly growth**



Source: *Wireless Intelligence, October 07*

In Europe, the predominance of prepay means that data revenues are mostly driven by SMS revenues. For instance, O2 is reporting flat growth in non-SMS revenues in the UK and Germany, stagnating at around 5% and 6% of service revenues respectively. O2’s SMS revenues as a percentage of ARPU are 27% in the UK and around 18% in Germany. *See Figure 4.* In contrast, Vodafone is reporting that during the first half of this year, across its Western European markets, data accounted for around 7% of its ARPU, reflecting a quarterly growth of 4% in the UK and 6% in Germany in Q2 2007.

Figure 4 Data as a % of ARPU, SMS vs. non-SMS split in Q2 2007, inc. quarterly non-SMS growth



Source: operators' earnings, October 07

Factors influencing data revenue growth

Technology, mobile services and devices are three factors that can influence the growth of non-SMS data revenues. Technology is one of the main drivers behind the growth of data revenues as the development of high-speed networks is driving the fast adoption of value-added services (VASs). In markets where WCDMA is taking growth from GSM, and broadband penetration is high, operators can focus on delivering VASs to encourage consumers towards more data-centric usage rather than 'voice and text' only. However, coverage and capacity are inhibitors to such a trend. Poor WCDMA coverage and low capacity in most markets in Europe are limiting opportunities for data ARPU growth as the user experience is not improving quickly enough.

User experience is also limited by high VAS tariffs. Therefore, to generate more interest in VASs, operators have started to launch unlimited data plans and bundled offers. In Europe, operators are revisiting the pricing of their services and have started to offer unlimited data plans in most markets with high WCDMA and broadband penetration to encourage the mass adoption of high-speed services and the migration from prepay to contract.

Similarly manufacturers are focusing on user experience rather than pure technology. WCDMA devices are moving down the tiers with handsets targeting the sub-€150 (ASP) segment for the upcoming holiday season, and smartphones and feature phone ranges are expanding to generate higher ARPU. Such devices include the right features at the right price: large display, fast processor, long battery life and intuitive user interface. This week, key industry players gathered at the Symbian Smartphone show in London to keep the momentum going over the development of smartphones and feature phones. Software companies,



manufacturers, content providers and operators are focusing on delivering an Internet-based experience into the devices in the most cost-efficient and user-friendly environment for the end user.



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