



Effective price per minute trends

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Effective price per minute (EPPM) measures the revenue achieved by a mobile operator for each minute carried on its network. The level varies widely across regions from €0.35 down to €0.02. During 2005 EPPM generally fell by 15% around the world, with the higher growth markets seeing the highest falls. Where operators have increased EPPM it appears to be thanks to database cleaning raising ARPU, combined with increased traffic from active users.

Figure 1 EPPM change in 2005 - top 20 operators (by EPPM)

Rank	Operator	Country	Q4 04	Q4 05	Y-o-Y change
1	Swisscom	Switzerland	0.4368	0.3466	-21%
2	NTT DoCoMo	Japan	0.3334	0.326	-2%
3	E-Plus	Germany	0.3158	0.2273	-28%
4	KDDI	Japan	0.3063	NA	
5	Mobilkom Austria	Austria	0.2788	0.2528	-9%
6	Promonte	Yugoslavia	0.2604	NA	
7	O2 Germany	Germany	0.2571	NA	
8	Centertel	Poland	0.2567	0.1748	-32%
9	KPN	Netherlands	0.25	0.2197	-12%
10	O2 UK	United Kingdom	0.25	NA	
11	Telefonica Moviles	Spain	0.2493	0.2184	-12%
12	Belgacom	Belgium	0.2476	0.2497	1%
13	O2 Ireland	Ireland	0.2334	NA	
14	Netcom	Norway	0.2289	0.2114	-8%
15	Telefonica Mexico	Mexico	0.2286	0.1945	-15%
16	Cosmote	Greece	0.2285	0.2152	-6%
17	Orange UK	United Kingdom	0.227	0.2217	-2%
18	Elisa (Radiolinja)	Finland	0.2263	0.1689	-25%
19	Telenor	Norway	0.2152	0.2146	0%
20	KPN Base	Belgium	0.2143	0.1953	-9%

Source: Wireless Intelligence, April 06

EPPM is a metric we calculate to show the overall level of revenue achieved by an operator for each minute carried on its network. We calculate it using ARPU / MoU per user.

At the end of 2005 the range of EPPM achieved varied from €0.347 for Swisscom down to €0.02 for MTS Belarus, with China Mobile, China Unicom, Grameen and



Orascom in Bangladesh, Bharti and Hutchison in India and Uzdunrobita in Uzbekistan close to the same level.

Generally speaking the level of EPPM at the end of 2005 by region was:

- Western Europe: €0.10 – €0.25
- Eastern Europe: €0.05 – €0.20
- Asia Pacific: €0.02 – €0.05 for emerging markets and Hong Kong; €0.10 – €0.20 for Taiwan and South Korea; €0.30 – €0.35 for Japan
- US/Canada: €0.05 – €0.15
- Americas: €0.05 – €0.20 with a cluster around €0.15.

During 2005 the level of EPPM generally fell for most operators as competition continues to bite in most markets, with only a few achieving increases in EPPM. Across the world the average fall was around 15% during the year.

Some operators have not reported their Q4 2005 figures yet, so we cannot see the change for them.

EPPM is not a pure measure because it uses total monthly ARPU divided by minutes of use per user per month. Strictly we should use voice ARPU and have a separate measure for data (data ARPU / Mbytes per user). However, reporting of voice ARPU is not as widespread as reporting of total ARPU and we currently prefer to have an impure measure that gives a good indication for over 100 operators, than a purer one that only informs us for about 60-70. We have checked the error and found that it does not materially affect the analysis of EPPM trends.

Analysis

The trends in EPPM for 2005 are shown in *Figures 2 to 6*, for operators in each of the major regions where suitable data is available.

Western Europe saw declines averaging 15%, with the strongest reductions in the most expensive countries, notably Switzerland. The reduction has also been steep in Finland, where MVNOs have brought substantial tariff reductions. The main drivers in Western Europe are increasing competition as the market moves above 100% penetration and, associated with that, the introduction of larger voice bundles on new WCDMA networks.

In Eastern Europe the average decline was also around 15%, with the strongest reductions in the Ukraine, which is seeing some of the highest subscriber growth rates in the region and in Poland.

In Asia Pacific the EPPM declines were polarised between the wealthier countries which had higher and more stable EPPM, and the emerging economies where EPPM is lower, subscriber growth rates much higher and there are quite steep declines in EPPM as operators compete to win market share through the very high growth phase.



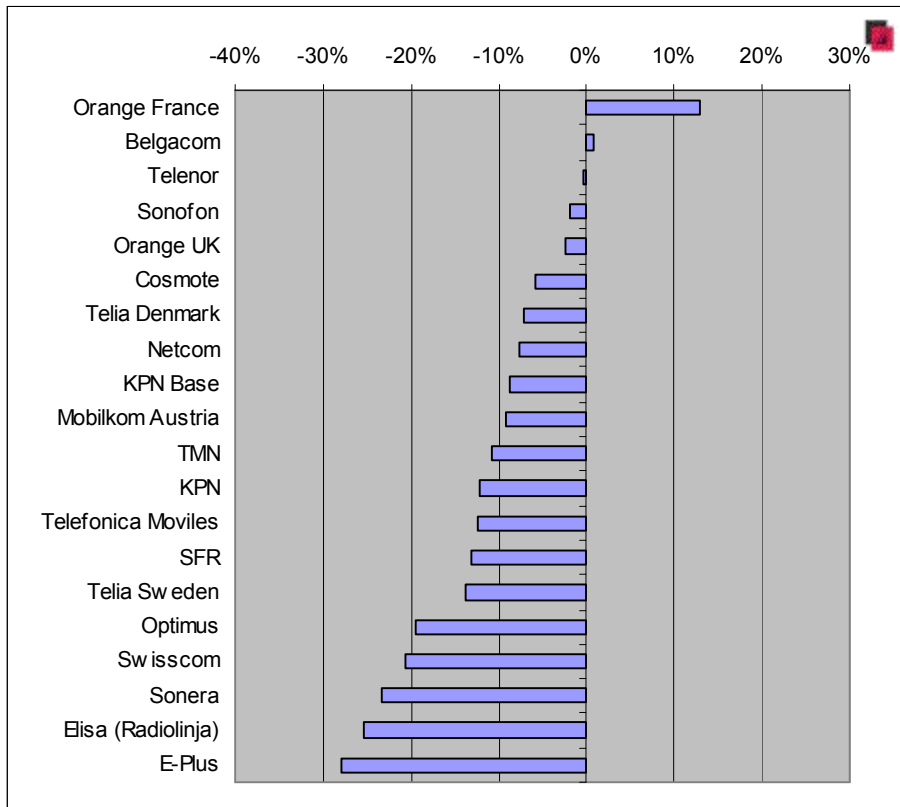
For those US/Canada operators where we have recent data (not a fully representative group), 2005 brought an average reduction of around 10% - a more stable market than other regions. For the US in particular the strong growth of minutes of use per user that we have seen over the previous five years (against a stable ARPU) has started to flatten out, so the EPPM is falling more slowly.

Orange France and Taiwan Cellular stand out as the companies that have increased EPPM in the more mature markets.

In the case of Orange France, ARPU rose 8% during 2005 with gains in both contract ARPU and voice ARPU. However, average minutes of use per user fell 4%. One suggestion for why this might have happened relates to France's leadership position with VoIP - it may be that we are starting to see some substitution of mobile with VoIP traffic.

For Taiwan Cellular we saw a 30% drop in the number of prepaid connections during 2005, which brought a steep rise in prepaid ARPU. This is most likely to be the result of clearing out inactive users from the prepaid database, combined with increased traffic from active users.

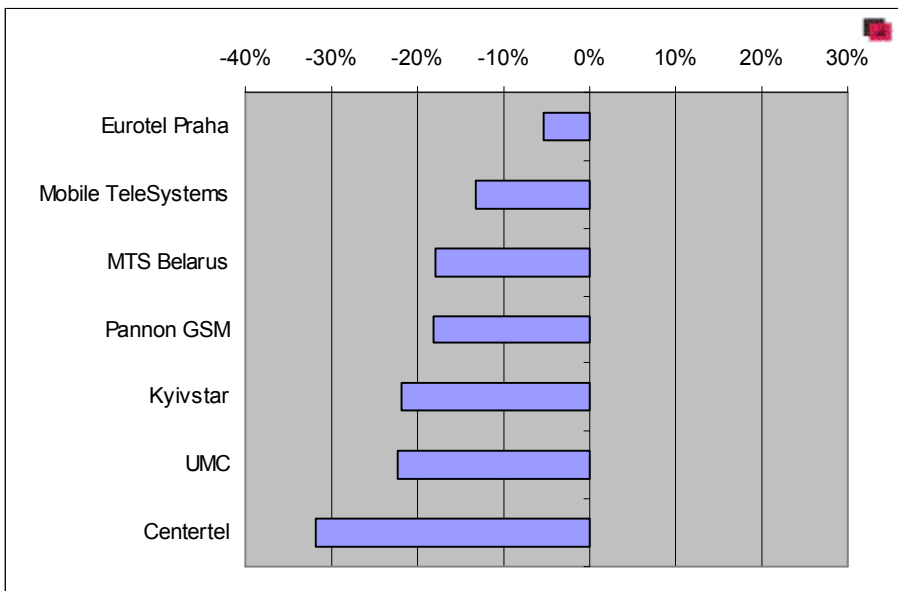
In the Americas the picture is more mixed with as many companies increasing their EPPM as decreasing it. Generally, where it is increasing, it is happening as very high subscriber growth rates are slowing down. We expect that this is also mostly down to database cleaning.

Figure 2 Year-on-year change in EPPM in Western Europe


Source: Wireless Intelligence, April 06

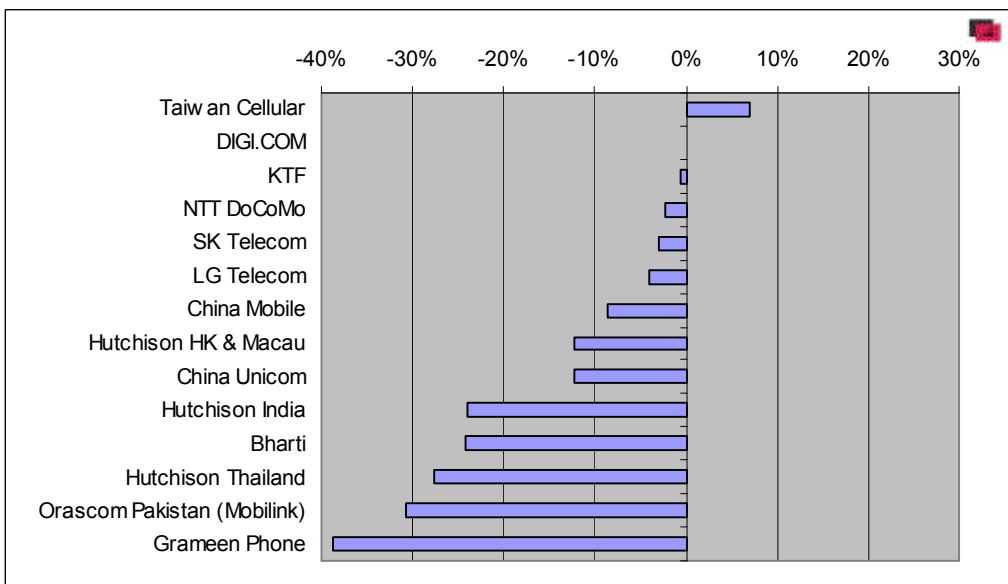


Figure 3 Year-on year change in EPPM in Eastern Europe



Source: Wireless Intelligence, April 06

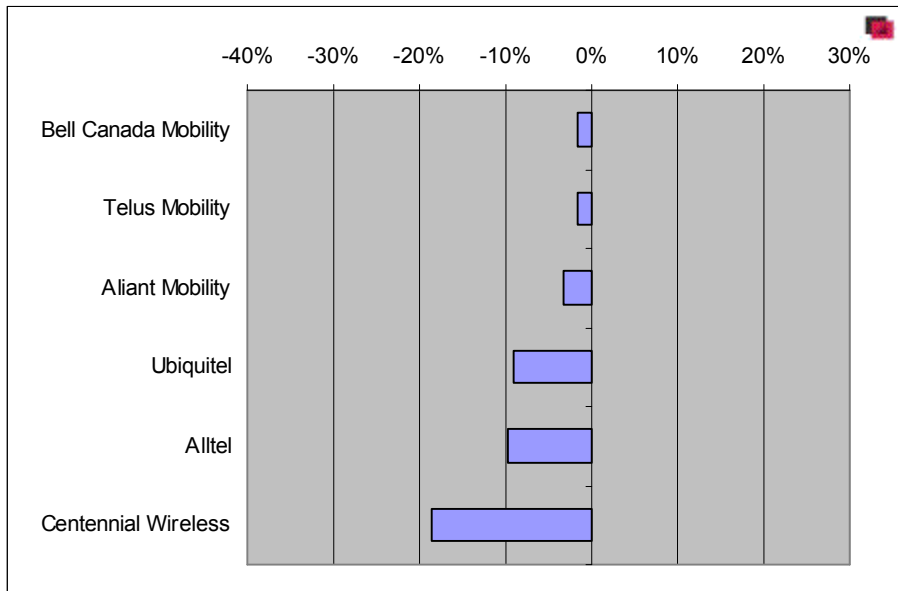
Figure 4 Year-on-year change in EPPM in Asia Pacific



Source: Wireless Intelligence, April 06



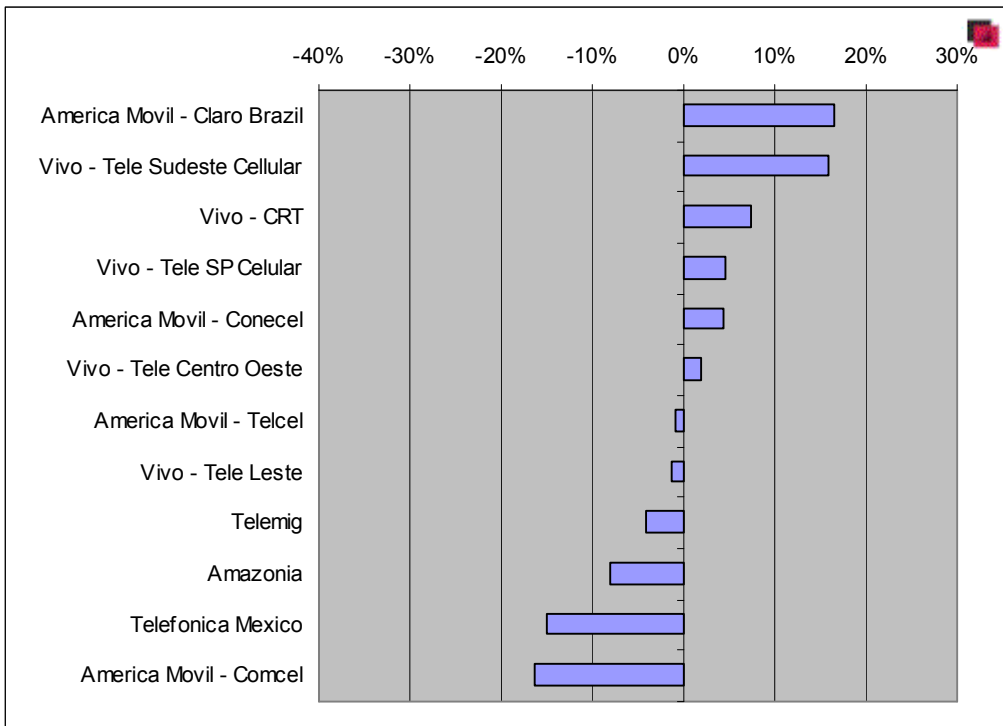
Figure 5 Year-on-year change in EPPM in selected operators in US/Canada



Source: Wireless Intelligence, April 06



Figure 6 Year-on-year change in EPPM in selected operators in Americas



Source: Wireless Intelligence, April 06



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