

The Future of Mobile Data Billing

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The Future of Mobile Data Billing

How to price and bill for data services is perhaps the most pressing issue facing mobile operators today. It is a legacy of the 3G era, in which the industry's key goal was the creation of demand for smartphones, mobile data services and the longer, post-paid contracts with which they tend to be sold. Pricing, in particular the use of unlimited data plans, was structured to stimulate that demand – but there has been a significant downside. Growth in revenue from mobile data did not compensate for the decline in voice and text revenues and networks were pushed to breaking point.

As the industry moves to LTE – and networks designed for data services and devices rather than voice services

and people – there is an urgent need for a new approach to charging and billing for mobile data.

Much has been made of the fact that LTE is a more efficient technology than its predecessors, offering a lower transport cost per bit. But revenue per bit is not likely to exceed the level achieved on 3G networks. Mobile operators, the players funding the deployment of this new technology, must find new ways of making it pay. In July 2012 Telecoms.com surveyed more than **200 mobile operators** worldwide for their opinions on this critical issue. The survey revealed that:

› **Mobile operators believe their pricing and billing strategies for**

mobile data services must become more sophisticated and diverse in the immediate term if they are to maximise revenues from these services.

- › **Certain network controls – and a wider range than are currently in widespread use – are essential to increasing that sophistication and creating new charging opportunities around mobile data services.**
- › **Greater diversity in network controls and pricing and billing strategies cannot be achieved without the availability of real-time data to the billing system and the integration of that real-time data with policy infrastructure.**

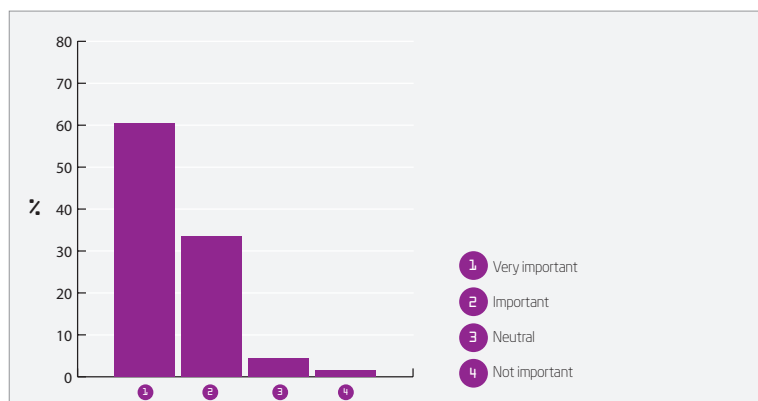


Fig 1: For post-paid customers do you think it is important that data usage is available in the billing system in real-time?

- › **Almost 80 per cent of operators surveyed said their existing post-paid billing system did not currently provide real-time data collection and rating. Almost 90 per cent said they thought that it should.**
- › **Almost 80 per cent of operators believe that bills should be delivered to an interactive smartphone-based application or portal.**

Future charging models

It is accepted industry-wide that mobile data billing needs to evolve from its current form. While there are a number of early moves and movers in this regard, billing by volume of traffic is by far the dominant approach in mid-2012. Almost 90 per cent of respondents to the Telecoms.com Future of Mobile Data Billing survey reported that data transactions are rated and charged by volume in their businesses (fig 2).

Unlimited data plans are still very much in effect, with 38 per cent of operators continuing to offer them. These plans are part of the charge-by-volume mass as, despite the name, they almost all feature usage caps.

Operators are experimenting with different parameters. Charging structures that price by event, by duration of usage and by speed tier are all in use by roughly one quarter of the operators surveyed in mid 2012.

Asked to forecast their mix of charging models 12 – 24 months into the future, operators offered a fair diversity of opinion, reflecting the reality that data charging will never be addressed by a one-size-fits-all solution.

They are clearly keen to phase out unlimited transaction plans, with just over half of all respondents believing these plans will be either obsolete or in use by only a minority of operators come mid-2014. But this might be wishful thinking. More than 30 per cent of respondents felt that unlimited data plans would still be in widespread use in two years' time.

Volume is expected to remain by far the most favoured parameter for data billing, with 43.7 per cent of respondents believing it will be used by a majority of operators in the near future and almost 30 per cent expecting it to still be the industry norm. Of the emerging

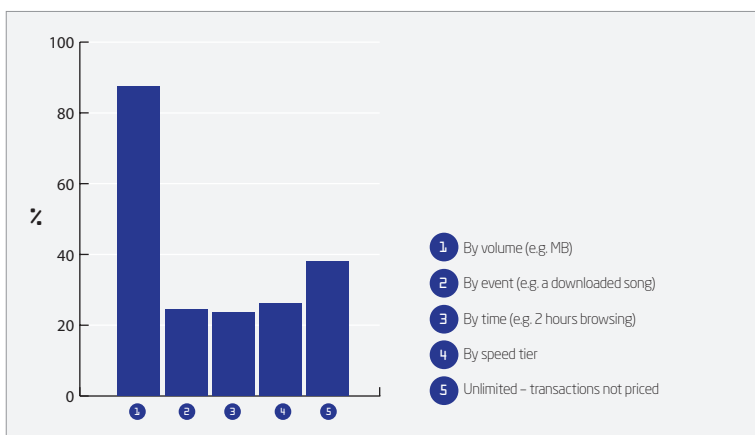


Fig 2: How do you currently rate and price data transactions?

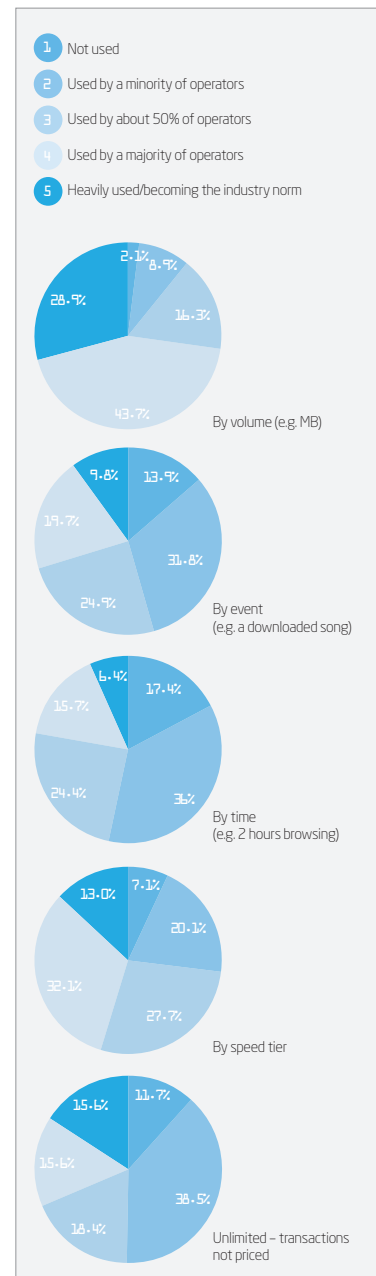


Fig 3: How do you believe operators will be rating and pricing data transactions in 12 – 24 months' time?

models, charging by speed is a clear front runner, with 32.1 per cent of respondents expecting it to be used by the majority of operators.

Operators are less universally convinced by charging based on event or duration. These models were rated as being most likely to be in use by only a minority of operators in 2014, although opinion was split. Around one quarter of respondents believed that 50 per cent of operators will be using these models in two years' time.

Network Controls

Many new and future mobile data billing models depend on network controls for effective implementation. Fair usage limits can't be applied without some kind of action when the limit is reached and no kind of tiered service, be it by application or by user segment, can function without controls.

Today the network control most in use – by 61.5 per cent of operators – is throttling, where throughput available to customers who have exceeded their usage limit is restricted. Related, and offered by 28 per cent of respondents, is service cessation in response to the same user behaviour. Bill shock monitoring is the next most widespread, offered by 47 per cent of operator respondents, with speed tier by customer segment, network congestion control and service prioritisation for high value customers all moderately popular (see fig. 4).

Looking forward two years, operators expect these early indicators to be

borne out. Throttling will remain widespread and respondents expect a surge in the use of the moderately popular network controls mentioned above. More than half of operators surveyed believe speed tier by customer segment will be in widespread use.

Application-based tiers are not expected to be quite as popular, with 33.5 per cent expecting half of operators to be using them and 27.5 per cent believing they will be used by the majority.

Service prioritisation for high value customers had a strong showing, with 48 per cent of respondents expecting it to be in widespread use and 30 per cent predicting that around half of operators will be using it by 2014.

Network controls to prevent device tethering also ranked reasonably strongly in respondents' forecasts, along with a continued enthusiasm for bill shock monitoring.

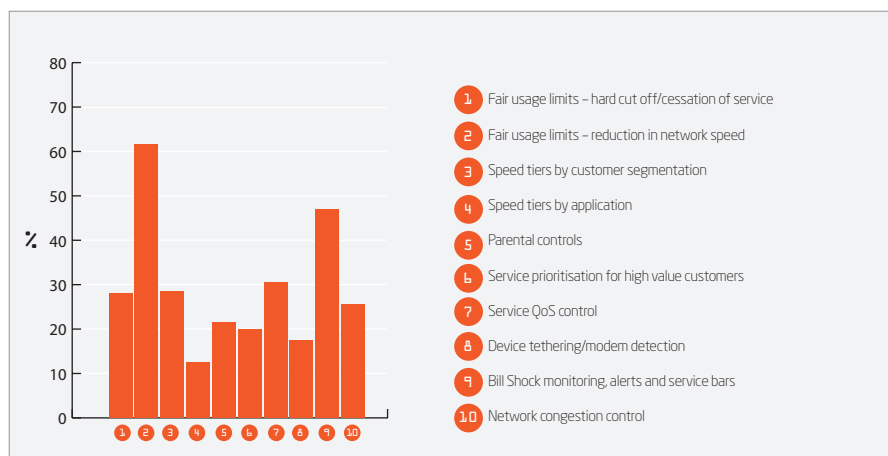


Fig 4: Which network controls do you currently provide as part of your data plans?

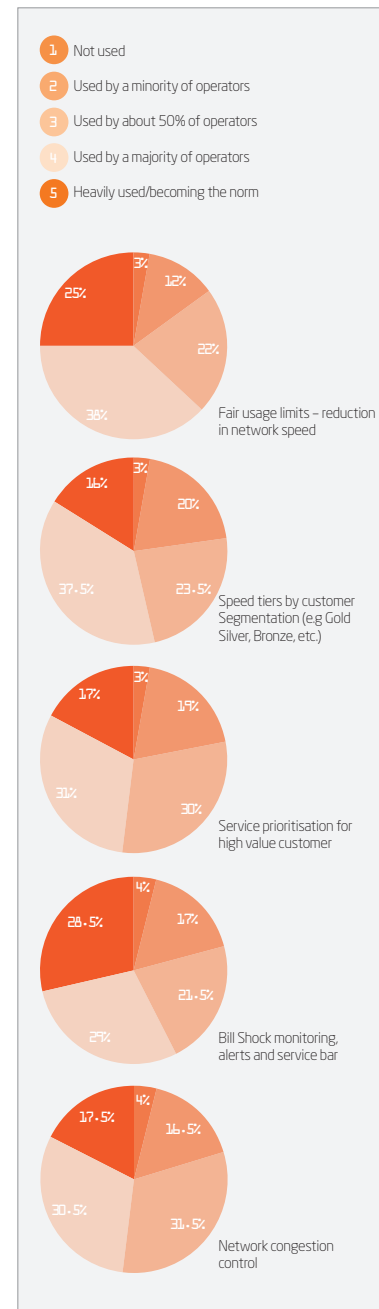


Fig 5: What network controls do you expect to see being used in 12 - 24 months' time?

The message is clear: as the types and volume of traffic continue to grow, operators are looking to introduce a system of relative values that will enable more appropriate pricing, as well as helping them to manage network resource.

Enabling control – the importance of Real-Time and Policy Management

Just as new billing models depend on network controls, so those controls themselves require input. The availability of real-time data in B/OSS is perhaps the most important enabler of these controls; something reflected emphatically in the survey. While real-time data is a routine element of prepaid billing, it has been viewed as less important in the post-paid environment, which has always adhered to monthly billing cycles.

The survey found that **94 per cent** of operators believe the availability of real-time data to be important or very important for operators looking to apply network controls and notifications.

Furthermore, for seven of eleven separate operator services about which respondents were asked (see fig 6), real-time data was given an importance rating of 4 or 5 (where 1 is not important and 5 is very important) by a majority of respondents. In the other four cases, the share of respondents scoring it at 4 or 5 was between 45 and 49.5 per cent.

Operators rated real-time data even more highly when asked about its importance relative to a number of emerging billing models, such as shared tariff plans, tiered pricing and post-paid/prepaid hybrid accounts (see fig 7).

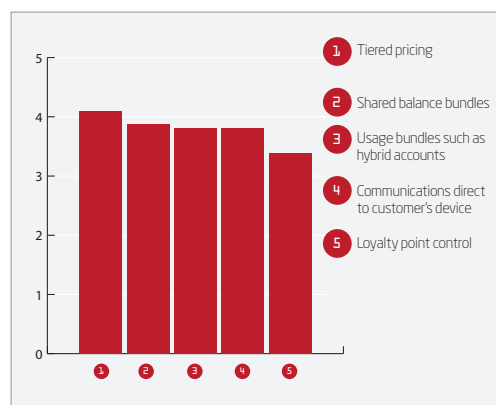


Fig 7: How important (1 - 5) is real-time data to the following charging models?

75% of operators believe that existing post-paid billing systems need real-time rated data usage records.

75% of operators believe that existing post-paid billing systems need real-time balance and quota management capabilities.

75% of operators believe all traffic should be handled in real-time until events are sent to existing B/OSS systems.

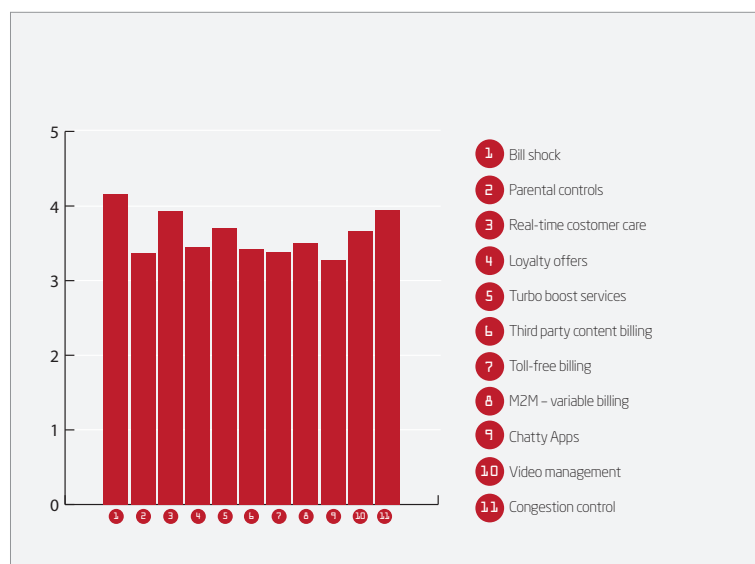


Fig 6 How important (1 - 5) is real-time data to the following services?

Enabling control – the importance of Real-Time and Policy Management

Real-time billing data can be useful to a range of other systems in the operator's back office. But chief among them, in particular when considering future mobile data billing models, is policy management. Asked to rate the importance of real-time data to a number of other systems, again on a scale of 1 – 5 where 5 is Very Important, 70 per cent of operators rated it as 4 or 5 for Policy Management, putting policy second only to Customer Care.

Policy function is crucial to a number of mobile data billing models that operators expect to become much more widespread in the near term – including the control of bandwidth according to application, service tier or customer profile. The survey reveals a clear link between the need for real-time data and policy to be

well integrated if new, more effective charging models are to be introduced.

Operators' conviction around the importance of real-time data for post paid billing is clear – 88.1 per cent of operators surveyed said they believed their billing system should provide real-time capabilities.

So the discrepancy between the number of operators who want real-time data and the number of them that have it was perhaps the most arresting discovery of the survey.

Just 22 per cent of operators surveyed had a post-paid billing system that provides real-time data collection and rating, a statistic that creates a sense of real urgency around the availability of real-time data if mobile data billing practices are to be changed for the better.

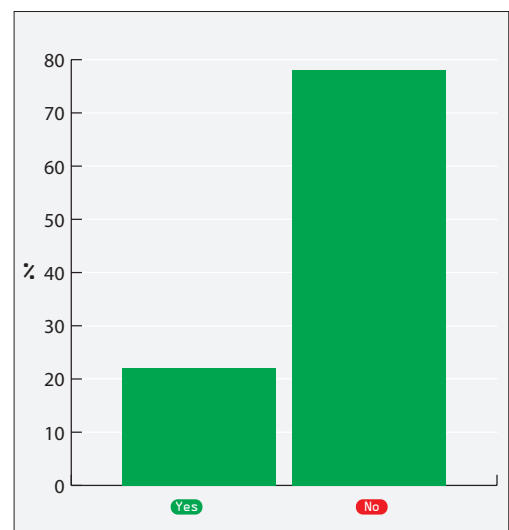


Fig 8 Does your existing post-paid billing system provide real-time (less than 1 second) data collection and rating?

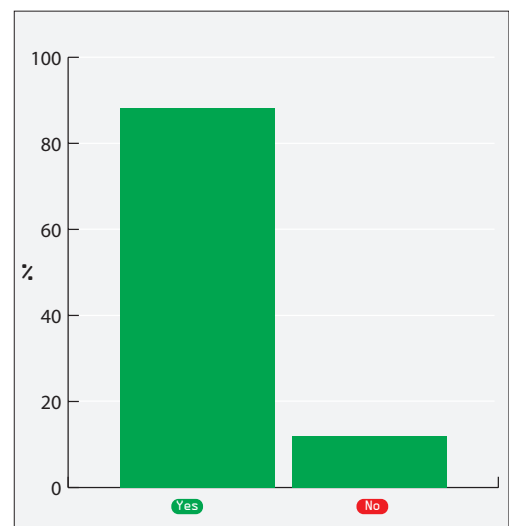


Fig 9 Do you think that your post-paid system should provide real-time capabilities?

Future billing interaction

The growing importance of real-time data to post-paid billing systems – with post-paid taking on some of the characteristics of prepaid – illustrates a trend that has been gathering momentum for some time. The historical segmentation of customers as prepaid or post-paid, and the assumptions that went along with it, are no longer valid.

of data usage to put them in control of their consumption.

In order to make truly effective time-sensitive offers to consumers, however, the method of bill delivery needs to evolve along with the charging model. While many operators have successfully reduced their reliance on paper billing, persuading customers to visit their desktop internet sites to manage bills, respondents to the survey felt that they haven't gone far enough.

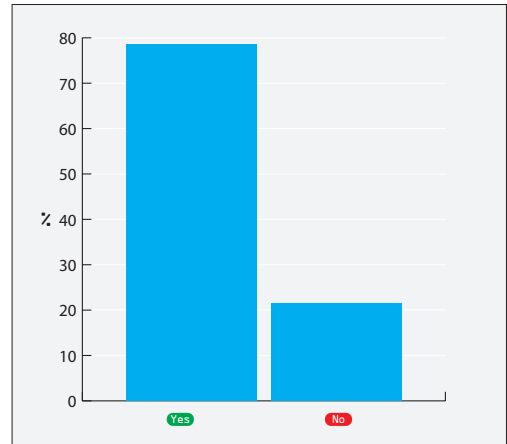


Fig 10: Do you see bills delivered to smartphones as the ideal way for operators to deliver bills?

Almost 80 per cent of operators said that they believed that the ideal way to deliver a bill to the end user is to the smartphone, via a portal or application (see fig 10). By delivering the bill right to the device, operators are more likely to be able encourage upgrades and extension spending from their customers base.

Respondents to the survey believed that upsell for top ups and for real-time contextual services like short term speed boosts, parental controls, shared plan management and usage alerts should all be made available to customers through the device (see fig 11).



When asked, 65 per cent of operators said that it should be possible to treat a subscriber as prepaid or post-paid depending on the service or the circumstance. This has crucial importance to future mobile data billing models, as it allows operators to sell post-paid customers one-off products and allowance extensions when the need arises.

Almost three quarters of operators agreed that they need real-time visibility of data usage to drive marketing offers and more than three quarters agreed that customers need real-time visibility

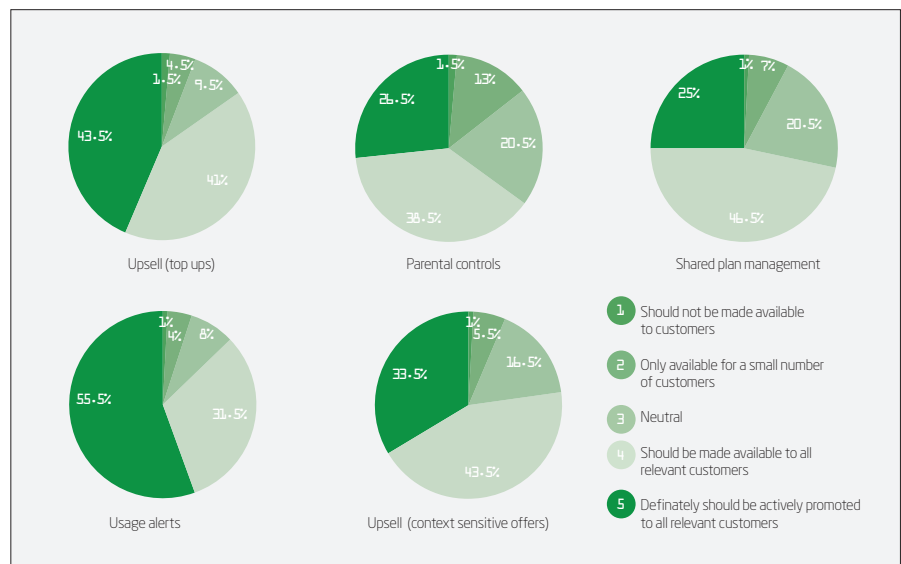


Fig 11: What other services do you think should be made available through a mobile portal?

CONCLUSION

The Telecoms.com Future of Mobile Data Billing survey, carried out in association with Openet, showed that operators see the need for change in their data charging practices and believe that change will occur in the short term.

While their support for different charging models varied from case to case, operators were emphatic in their conviction on three key points.

1) The availability of real-time data in the post-paid billing system is essential to the future of mobile data billing.

2) The integration of that real-time data with the operator's policy function is fundamental to the creation of the kind of diverse network controls that will enable more sophisticated data billing solutions.

3) Bills should be presented to users on the device to increase customers' control over their own usage and to create lucrative opportunities to sell them extensions and upgrades on an 'as-needed basis'.

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