

The retail premium on US international calls to mobiles – is it cost based?

**A Report to Vodafone in response to Worldcom's
Comments on the FCC's NPRM on international
settlement rate reform**

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1 Summary

This short paper provides a response to the *Reply Comments of Worldcom* on 18th February 2003 in the matter of the FCC's Notice of Proposed Rule Making on international settlement rate reform¹. On Pages 22 to 24 of its Reply Comments Worldcom analyses an Ovum study for Vodafone which looks at the extent to which US retail surcharges for international calls to mobiles reflect the wholesale payments US operators make to terminate those calls. We consider each of Worldcom's comments in detail in Sections 2 to 7.

In summary we conclude that Worldcom's comments have little effect on our estimates of the difference between the retail surcharge which it levies on its customers and the additional cost of delivering a call to a mobile terminal which the charge is purported to recover. We agree that we need to increase our estimates of the average mobile termination rate in Italy and Spain to take account of the higher termination rates of the smaller operators there². These were not included since the data are not readily available and since these operators account for less than 20% of the market, it was likely only to have marginal effect. But we estimate that this adjustment has the effect of increasing the average termination rate in these countries by just over 1% as described in Section 6. Our revised comparison of the retail surcharges and the additional costs of delivering an international call to a mobile terminal are set out in Figure 1. But the key conclusions of our first report remain the same:

- the retail surcharge on international calls to mobiles generates substantial additional profits as well as recovering the additional costs of delivering these calls;
- in many cases it is clear that the originating operator retains these additional profits itself. In other cases the additional profits may be distributed over a number of operators involved in delivering the call to the terminating mobile operator. In any case it is difficult to say whether the additional profits are used to cross subsidize prices for other services or flow through in profits to shareholders;
- in the case of calls made from the USA to Europe via AT&T and Worldcom the average surcharge is just over 70% greater than the additional costs of delivering a call to a mobile terminal;
- only a small proportion of this difference can be attributed to higher retail collection costs and bad debt or to the costs of differentiating between international calls to fixed and mobile terminals;
- the additional profits associated with these surcharges are growing. Mobile call termination charges fell by over 10% since AT&T introduced its surcharge but the surcharge has remained unchanged.

¹ IB docket number 02-324

² With a further adjustment in Spain to allow for the minimum one minute charge by mobiles there when charging for call termination

If Worldcom have data which indicates otherwise for the study countries, we would be most interested to see it.

Figure 1 The surcharge and additional costs compared – July 2002 - revised

Calls from USA to	Surcharge (1)		Ave. mobile termination charge (2)	Ave fixed termination charge avoided (3)	Additional costs for mobile termination	Surcharge / additional cost	
	AT&T	Worldcom				AT&T	Worldcom
Austria	19.2	20.4	12.9	1.1	11.8	162%	172%
Italy	21.6	21.6	16.9	1.0	15.9	136%	136%
Spain (4)	15.0	20.7	11.9	1.1	10.8	139%	192%
Sweden	25.2	25.2	12.0	0.7	11.4	222%	222%
UK	26.4	26.4	16.5	0.7	15.8	167%	167%
Average						165%	178%

(1) In Euro cents per minute at 1.0 Euro/\$ with 20% uplift for per minute charging

(2) In Euro cents per minute with 1.2% uplift in Italy and Spain to adjust for the higher MTRs of the small operators

(3) Double tandem call termination charge in Euro cents per minute less transit charge

(4) Surcharge in Spain only subject to 15% uplift to allow for minimum 60 second charge for mobile call termination

2 US carriers' mobile surcharges do not reflect input costs

On Page 22 of its comments Worldcom rejects Ovum's conclusion that "on average the surcharge is 80% greater than the additional costs incurred". It claims that the input costs of US carriers for terminating international calls are a direct function of the international settlement rate paid to the foreign international fixed line carrier (the foreign correspondent). So the proper comparison to make is between "the mobile settlement rate that a US carrier pays to its foreign correspondent on the one hand and the retail mobile service charge that the US carrier charges consumers on the other". This line of argument is flawed in two main ways.

First a comparison between the mobile settlement rate that a US carrier pays its foreign correspondent and the retail mobile surcharge is meaningless. Presumably what Worldcom meant to compare with the retail mobile surcharge was the **difference** between the mobile settlement rate and the fixed settlement rate which the US carrier pays to its foreign correspondent.

Secondly the argument implies that Worldcom pays its foreign carrier an additional fee for delivering calls to mobiles which is equal to (or within less than a cent of) the retail mobile surcharge. This is unlikely to be the case in the five study countries covered by the Ovum report. In any case it is clearly not the efficient way for

Worldcom to deliver calls to mobile terminals in those five study countries³ as we describe below.

Worldcom is easily the world's largest international carrier which operates a European network with points of presence in all five of the study countries (and many more). We understand that this network is interconnect with both the fixed incumbent and, in some cases, directly interconnected with the mobile operators in the study countries⁴. The efficient way to deliver calls international calls to mobiles is to use this network.

There are constraints on Worldcom's ability to interconnect directly with the local incumbent in some countries, typically those where the market for the supply of fixed and/or international telecommunications remains a monopoly. There Worldcom is required to pay an international settlement rate to its foreign correspondent. But these restrictions do not apply in the EU where Worldcom is free to negotiate far end interconnect and the concept of payment to a foreign correspondent is either irrelevant or inefficient.

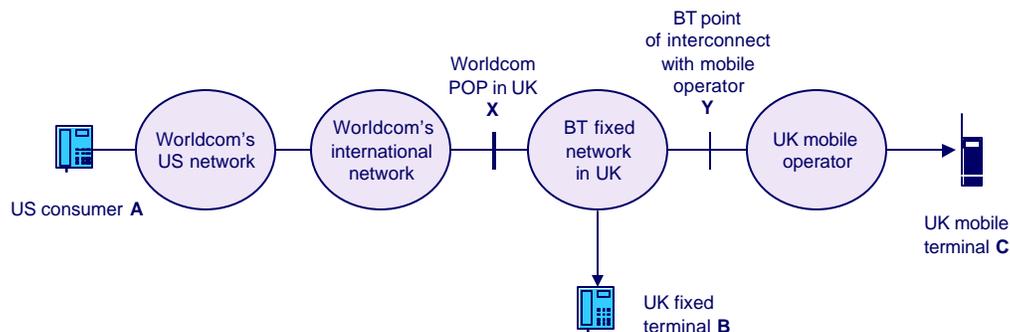
In the most favourable case Worldcom interconnects directly with the mobile operators in these countries. Less favourable is the case where Worldcom uses a local fixed incumbent to deliver its calls. Let us consider the costs which Worldcom would incur in this case⁵ to deliver calls to a fixed terminal and a mobile terminal in the UK. The routing and estimates of costs of the different components of the call are set out in Figure 2.

³ Austria, Italy, Spain, Sweden and the UK

⁴ For example Vodafone tells us that Worldcom has interconnected directly with Vodafone's mobile networks in the UK and Italy since the 1990s, and interconnects directly with Worldcom in many other jurisdictions.

⁵ It is this case which is used in deriving all the estimates of Figure 1

Figure 2 Estimating a cost based retail mobile surcharge in the UK



Leg of call

Costs incurred

	<i>Call from A to B</i>	<i>Call from A to C</i>
US consumer to Worldcom POP in UK	C_{AX}	C_{AX}
Worldcom POP to BT POI with mobile operator	-	C_{XY}
Call termination on mobile network	-	C_{YC}
Call termination on BT's fixed network	C_{XB}	
US consumer to Worldcom POP in UK	C_{AX}	C_{AX}
Worldcom POP to BT POI with mobile operator		0.35 cpm
Call termination on mobile network		16.5 cpm
Call termination on BT's fixed network	1.0 cpm	
Total	$C_{AX} + 1.0$	$C_{AX} + 16.85$

The efficient cost based premium is given by:

$$C_{XY} + C_{YC} - C_{XB}$$

where:

- C_{XY} is the rate charged by BT for transit through the BT network from Worldcom's point of interconnect to BT's point of interconnect with the mobile operators
- C_{YC} is the mobile call termination rate
- C_{XB} is the relevant fixed call termination rate. Typically this is a double tandem rate.

When we insert the relevant rates into this equation we get a mobile termination premium of 15.85⁶ cents per minute. This compares with Worldcom's 22 cents per minute retail mobile surcharge or, when uplifted to correct for per minute charging as discussed in Section 4 below, 26.4 cents per minute. We can see that this difference of 10.55 cents per minute is substantially greater than "a differential of less than one cent on average for those five countries" as stated on P23 of Worldcom's comments.

Of course it is possible that Worldcom uses a less efficient route for the delivery of calls to UK mobile terminals. But this is clearly not in the interests of US consumers. In other words the current premiums may reflect Worldcom's **actual** costs. But they are very substantially above its **efficient** costs.

3 Time lags are not substantial

Worldcom implies that there is a substantial time lag between a foreign mobile operator cutting its call termination rate and a US international carrier negotiating a corresponding reduction on its mobile settlement rate with its foreign correspondent. On P28 of its Reply Comments for example Worldcom states that:

"Worldcom has made reductions in response to decreases in foreign mobile termination rates as those reductions have been reflected (sic) in the corresponding settlement rates"

(We assume that by reflected Worldcom means reflected).

This argument does not apply to Worldcom since efficient delivery of calls in the study countries would not be via the settlement rate system. Using the delivery mechanism of Figure 2 the incumbent in the terminating country charges at a rate which is specified in its Reference Interconnect Offer and which has two components – the mobile operators call termination charge and its own transit charge. When a mobile operator cuts its call termination charge the fixed incumbent is required by the regulator to cut its charge immediately by a corresponding amount. So the charges for delivering calls from X to C (Figure 2) are cut without any delay or any need for negotiation by Worldcom. If they are not, local regulators would be pleased to hear about it.

Worldcom also raises the point that many of the mobile termination rates which we have identified took place before October 2001 when Worldcom introduced its surcharge. We are unable to assess how much mobile termination rates in Europe have fallen since that date simply because we do not have data for these rates at October 2001. But we do know that mobile call termination rates fell by over 10% since AT&T introduced its surcharge in May 2001 while AT&T's surcharge remained unchanged.

⁶ 16.85 – 1.0

4 Per second versus per minute charging

Worldcom asserts that the 20% mark-up used in the Ovum study, to correct for the fact that the retail mobile surcharge is applied on a per minute basis while the mobile operators charge on a per second basis, should not be used. Worldcom asserts that *"in fact US carriers pay mobile settlement rates to their correspondents on a per minute basis"*. Again Worldcom may pay in this way. But it does not reflect the additional costs which are incurred in delivering the call to a mobile rather than to a fixed terminal. These are charged on a per second basis⁷. So in comparing the additional costs efficiently incurred by Worldcom with the retail mobile premium it is important to apply the 20% uplift to the latter.

5 Subtracting the fixed call termination charge

Worldcom argues that it is wrong to subtract the average fixed call termination charge in a terminating country from the average mobile call termination charge when calculating the retail mobile premium. We cannot see why. It is clear that, if a call is terminated on a mobile network it avoids termination on the fixed network. So it is correct to subtract the cost of fixed termination in estimating the true additional cost of mobile termination. Perhaps Worldcom is arguing that the cost of transit in the terminating incumbent's network (X to Y of Figure 2) is the same as the cost of termination (X to B in Figure 2). This is clearly not the case. In general transit charges are around 35% of call termination charges for EU incumbent operators.

6 Calculating the average mobile termination rate.

Finally Worldcom suggests that the Ovum study has underestimated the average mobile call termination rates in the five study countries by ignoring the higher call termination rates charged by the smallest operators. Clearly this is not the case in the UK, Austria or Sweden where we include all mobile operators.

In Italy and Spain we have excluded the rates charged by operators who account for around 20% of the market - simply on the grounds that reliable data on the rates of these operators were not available to us. We do not however expect the effect of such an exclusion to be significant. For example, according to data supplied recently to Ovum, the call termination rates for the two smallest operators in Italy, Wind and Blu, were 7% higher than those of TIM and Omnitel in mid 2001. If this information is accurate then we need to raise the average Italian rate by a mere 1.2%⁸ to take

⁷ We acknowledge that in one of the five study countries, Spain, there is a minimum charge for sixty seconds of use. So the uplift in this country should be smaller than the 20% used in our original report. We have adjusted for this minimum charge in our revised Figure 1

⁸ $20\% \times 7\%$

account of this exclusion - given that these two operators held a combined 20% market share in mid 2001. The revised estimates are set out in Figure 1 where we have assumed, in the absence of any published data, that the same uplift of the average mobile termination rate applies in Spain as in Italy.

7 Conclusions

Worldcom argues that its retail mobile surcharge for international calls to mobile is reasonable because this premium reflects accurately the charges which Worldcom pays to its foreign correspondent. We consider the premium which Worldcom would be entitled to levy if it delivered calls to these terminals in an efficient manner, since we believe that this is a reasonable standard against which to judge if Worldcom is acting in the best interests of the US consumer. When the Ovum estimates are judged in this way all of Worldcom's main objections no longer apply. So we conclude that the current retail mobile premiums charged by Worldcom are substantially above the additional costs incurred by an efficient operator.