

# Tracking the future?

## Orbcomm's proposed IPO

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This week has seen the announcement of a proposed IPO by Orbcomm, seeking to raise up to \$150M, and potentially marking the first IPO by one of the mobile satellite operators rescued from bankruptcy just a few years ago. Orbcomm successfully secured over \$72.5M of new funding only a few months ago, at a (post-money) valuation of approximately \$160M, and now appears to be looking for a valuation of at least \$300M in its IPO. While Orbcomm generated only \$15.5M in revenues during 2005 and had just 138,000 subscribers at the end of March 2006, it needs to invest around \$200M over the next five years to deploy its next generation satellite system. Since (unlike many other MSS companies) Orbcomm can't rely on ATC to support a PCS-based spectrum valuation for its allocation in the 137-150MHz VHF band, it is worth examining whether Orbcomm's future revenue growth potential is sufficient both to justify deployment of its replacement constellation and to sustain a high IPO valuation.

Although the actual terms of the IPO may vary, let us assume that Orbcomm is valued at \$300M (pre-money) in the IPO<sup>1</sup>. Given that current enterprise values for satellite radio companies, with their demonstrated growth trajectory, are around 8-12 times 2010 EBITDA, it seems implausible to value Orbcomm at more than say 5 times 2010 EBITDA. In order to justify a \$300M valuation, this would imply a projected 2010 EBITDA of around \$60M. Orbcomm's business has two main components, service revenues and equipment sales. In 2005 it generated a monthly ARPU of roughly \$7.60 per terminal in service revenues, while generating approximately \$200 per unit from sales of 27,000 terminals. Gross margins on terminal sales are less than 10%, and Orbcomm intends to maintain its gross margins on terminal sales as prices decline in line with reductions in manufacturing costs. As a result, it is likely that almost all of Orbcomm's EBITDA will have to come from service revenues, which may ultimately achieve EBITDA margins of perhaps 40%-50%<sup>2</sup>.

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<sup>1</sup> We assume Orbcomm will probably raise around \$100M of new money, which should be sufficient, along with its existing \$60M in cash, to fund its capex plans for replacement satellites

<sup>2</sup> For comparison, Inmarsat generates an EBITDA margin of around 70%, as a much larger pure wholesale business, while XM and Sirius are expecting EBITDA margins (including equipment sales) of around 30% by 2010.

This implies that Orbcomm will potentially need to generate between \$120M and \$150M in service revenues in 2010, in order to support a \$300M IPO valuation. For comparison, Worldspace currently has a market capitalization of around \$250M (with around \$125M of debt), even though it is projected to generate roughly \$400M in revenues (but only \$13M in EBITDA) in 2010<sup>3</sup>. Orbcomm expects its ARPU to decrease in the future as it targets lower revenue market segments, so even at the lower end of this revenue range, it would need to have a (year average) subscriber base of around 1.4M terminals in 2010 (generating an ARPU of \$7 per month). For simplicity we will therefore consider the reasonableness of Orbcomm reaching 1.5M active terminals by the end of 2010, in other words achieving net adds of around 300,000 terminals per year on average over the next five years.

At first sight, this level of growth doesn't seem too challenging, given the market size quoted in Orbcomm's S-1 of 18.5M machine-to-machine (M2M) communications devices in 2006, which is expected to grow to 129.5M devices in 2012. However, this market projection includes both satellite and cellular devices, and at present, satellite terminals represent only a very small proportion of this market. Orbcomm had 113,000 devices in use at the end of 2005, while we estimate that the other satellite low data rate services had a total of about 530,000 users (Qualcomm Omnitrac 270,000, Inmarsat 110,000, MSV/Skybitz 100,000, Iridium 30,000 and Globalstar 20,000). Growth of Qualcomm and Inmarsat's markets is fairly limited (around 10,000 net adds per year for each provider), since their devices are relatively expensive (several thousand dollars), but Globalstar, Skybitz and to a lesser extent Iridium have achieved rapid growth from a low base in the last two years, with upwards of 50,000 net adds between them in 2005. Globalstar and Skybitz have focused particularly on low cost simplex data devices (from the device back to the control center) for applications such as trailer tracking, and it does not appear that Orbcomm's two-way communicator has offered a substantial advantage, since it had only about a 35% share of net adds in 2005, and only achieved marginally higher ARPU per device than Globalstar's simplex service (\$7.60 as opposed to \$6.30 for Globalstar). Instead, it appears that the main competitive driver is low cost terminals, which seems to have been borne out by the sharp rise in Orbcomm's net adds in the first quarter of 2006 (to around 24,000 in this three month period), after introduction of its new lower-cost modems.

However, despite Orbcomm's use of VHF frequencies, it is unclear whether their modems really have a sustainable price advantage over Globalstar and Skybitz's simpler, one-way devices, or whether it is

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<sup>3</sup> Cowen and Company research note, May 10, 2006

really just a question of which company is using the most recent generation of chipset. As a result, it may be difficult for Orbcomm to gain more than 50% of net adds amongst satellite low rate data terminals in the long term. To achieve our forecast, this would imply an overall market of at least 3.5M satellite M2M devices in use by 2010, which is much higher than most analyst estimates (for example NSR project that the total narrowband MSS market, including both handheld voice and low rate data, will have only 3.5M terminals by 2010).

The discrepancy between the 650,000 satellite low rate data terminals in use at the end of 2005 and a total market projection of 18.5M terminals in 2006 also bears closer examination. In reality the satellite opportunity is largely confined to the commercial transportation at present, with a small number of units in the maritime market (mostly the 70,000 Inmarsat C and D+ maritime terminals used for GMDSS distress and safety services). The total size of the commercial transportation market is estimated by Orbcomm as 2.6M satellite and cellular M2M devices in 2006, increasing to 14.6M by 2012. However, use of satellite systems is largely confined to the North American market, which represented around 85% of Orbcomm's 2005 revenues (excluding a gateway sale), and accounts for all of MSV's devices and the vast majority of Qualcomm and Globalstar's low data rate terminals as well. Significant growth may take place within the trailer tracking market in North America, which has been a key focus for Globalstar and Skybitz as well as Orbcomm, but it is probably unrealistic to expect much more than 1M additional trailers to be equipped with satellite tracking devices by 2010, since intense competition is likely from cellular-based solutions, and the overall potential market in North America is no more than about 6M trailers.

In order to see growth beyond this level, a substantial breakthrough is needed in either other geographic regions or in some other market, such as the heavy equipment, fixed asset and container monitoring segments identified by Orbcomm in its S-1<sup>4</sup>. Of these options, a breakthrough in other geographic regions is likely to be difficult, since in developed European countries cellular technologies will be overwhelmingly dominant, while the transportation market in less developed markets is often very fragmented, and thus may see less need to invest in tracking equipment. Other markets will develop, but the heavy equipment market is relatively small (Orbcomm estimates 0.9M satellite and cellular devices in 2006 increasing to 4.0M by 2012) and much of the fixed asset

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<sup>4</sup> We believe that of the other two segments identified by Orbcomm, the maritime segment is much smaller than stated in the S-1, since most of the 46 million vessels identified as the target market are very small recreational boats (there are fewer than 100,000 commercial ships of more than 100 gross tons worldwide), while Orbcomm itself admits it will not be able to address the consumer transportation segment

monitoring market (e.g. automated meter reading) is extremely price sensitive. Even at \$100 per device, it may not be practical to deploy satellite-based automated meter reading systems (and in any case the resulting ARPUs would probably be only \$1-\$2 per month). The container tracking market remains promising in the medium to long term, with 8 to 9 million shipping containers arriving in US ports each year, but is highly dependent on the imposition of government mandates to install tracking devices. Given the lengthy period associated with consultations and the ultimate decision-making process, along with the possibility that a single technology standard might be developed (by larger companies) and could exclude Orbcomm, considerable doubt must exist as to whether this segment can be relied upon to generate substantial revenues for Orbcomm in the next five years.

Similarly, Orbcomm will receive several million dollars per year for supply of data from a demonstration Automatic Identification System (AIS) payload on one of its new satellites, scheduled for launch later this year. The AIS system is a radio fitted on most commercial ships, which broadcasts their position and identification information in the 160MHz band, and is picked up by receivers which are installed at a number of US ports to allow tracking of commercial ships. By incorporating an AIS receiver on an Orbcomm satellite, the US Coastguard will be able to receive AIS information about ships well away from the US coast. However, there are some technical problems to resolve with packet collisions between transmissions from different ships, and because the demonstration payload is only fitted on one satellite it will only provide 1-2 position reports per day<sup>5</sup>. Given that the initial trial will only start later this year, it seems unlikely that the US Coastguard will decide to pay for installation of this payload on a substantial proportion of Orbcomm's next generation satellites soon enough to meet Orbcomm's deployment timeline, and thus it may be difficult to move beyond the currently planned trial system generating a few million dollars per year (over and above reimbursement of the payload cost). The total potential of this market is also limited by the amount which the US Coastguard (and other governments) would pay Orbcomm for the supply of data, since the ships themselves would not pay for satellite airtime.

Overall, we therefore conclude that while it seems feasible that Orbcomm could potentially add as many as 200,000 devices per year by 2010, it may be overly optimistic to expect significant further acceleration in its net adds. We estimate that Orbcomm could potentially reach an overall customer base of perhaps 1M devices at the end of 2010, adding around 600,000 terminals in the North

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<sup>5</sup> See Coastguard AIS presentation at [http://www.rhppublishing.com/AIS\\_05pres/Brian%20Tetreault.ppt](http://www.rhppublishing.com/AIS_05pres/Brian%20Tetreault.ppt)

American commercial transportation market and around 300,000 terminals in other regions and market segments to its current customer base. As a result, we estimate that Orbcomm's service revenues may be closer to say \$75M in 2010 (plus another \$25M-\$30M in equipment revenues), with EBITDA of up to perhaps \$30M. While this is probably sufficient to justify deployment of a \$200M next generation constellation, it may not support as high a valuation as Orbcomm might wish for in its IPO.

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