Mobile Satellite Services – On the edge of … a Renaissance?

Mobile Satellite Services, or MSS, that sometime pie-in-the-sky industry that has made so many promises (seamless communications anywhere!) has so often been on the edge – the edge of capability, the edge of coverage, the edge of innovation, the edge of inspiration and megalomania and too often at the edge of bankruptcy and rationality. Now, with so much subscriber and revenue growth and so many promising recent events in the industry – new constellations being built (Globalstar, ORBCOMM), new satellites launched (TerreStar, Inmarsat) or soon to be launched (SkyTerra), successful financial transactions closed (Iridium, GlobalStar) and high-profile agreements being struck (TerreStar with AT&T, Skyterra with Harbinger), and well over a million and a half subscribers in the industry - we dare say that MSS is now on the edge of a Renaissance.

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The sight of so many MSS companies, not only continuing to exist but actually getting stronger if not quite yet thriving, is very encouraging to those that have endured the tumult the industry went through just ten years ago. Few thought they would ever see Iridium as a public company again; fewer still using the same satellites that the press reported would be de-orbited following their high-profile bankruptcy. Now, with the industry heating up, let's look at a couple of value drivers, value threats and rather unexpected new players that drive this most unusual industry.

The rise of the machines, MSS edition

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As we discussed in last month's article ("The rise of the machines"), M2M or Machine-to-Machine networks are growing perhaps faster any other telecom sector. The MSS sector is an important part of M2M, indeed an enabler, central to its growth. If anywhere, all-the-time connectivity is to be achieved for the most mobile assets (shipping containers, marine vessels, tractor trailers), then satellite is going to have to a part of the solution. Already, M2M is the largest growth area for MSS, with Iridium experiencing an almost doubling of M2M subscribers from first quarter 2008 to 2009. ORBCOMM, which has a business model based almost exclusively on M2M, noted an increase in subscriber counts in the last year from 420k to 483k, a 15% increase, even in the midst of a global recession.

Even with all this growth, it is clear that the market for machines is not even close to full penetration and promise. Between technology for cargo tracking, identification, monitoring and the deployment of comprehensive world-wide logistic networks, M2M could be to trade and transport in the present era what containerization and inter-modal transport was in the 1950s and 60s – a game changer. Within the next decade, it is likely that almost nothing will sail the high seas or cross continental expanses without satellite technology being an integral part of every stage of its transport and delivery.

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The play in M2M is not limited to the globe-spanning satellite constellation operators. Regional operators can also support extensive M2M activities. With the successful launch of their high-power satellite, TerreStar has a chance to be a player in the M2M space too. Between their ATC spectrum holdings and their roaming agreement with AT&T, TerreStar is now well-positioned to provide affordable M2M connectivity to underserved areas and industry verticals in North America, such as along inland trade corridors and throughout remote and underserved regions.

The question is not capability, it is about will and positioning. The rapid growth of M2M and the multiple players in the market belie the absence of dominant standards. With Inmarsat, Iridium, Orbcomm, Globalstar, Thuraya and Skyterra already offering different platforms alongside terrestrial GSM/CDMA networks, and against a backdrop of dozens of tags, terminals and other monitoring devices and software platforms, it is unclear what standard, if any, will become key and which company will end up holding that key. Some, such as Inmarsat through its investment in SkyWave Mobile, have tried to throw their weight and market position behind their own standards. We believe, however, that this industry is still in its infancy, and that new players with innovative solutions can enter, to the further benefit of all MSS players.

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Where Fixed is Mobile - VSAT in play

While M2M growth picks up pace, MSS has been under threat in what has been its core market since the founding of industry grandfather, Inmarsat, that of maritime communications. With ever increasing data and ever increasing connectivity to every corner of the world, it is fast becoming unacceptable to not have broadband Internet access anywhere, even in the middle of the ocean. Although Inmarsat and Iridium have tried to keep up with demand with FleetBroadband and OpenPort, respectively, due to their

limited spectrum and high cost structure, neither can truly compete on price and throughput with the promise of maritime VSAT and greater affordability of tracking-antenna technology. These sophisticated antennas track and pull down capacity from Ku-band and C-band transponders from now inaptly-named Fixed Satellites, accessing the same connectivity that stationary land-lovers have always enjoyed. Every couple of weeks, yet another maritime telecom reseller and channel partner is announcing new VSAT services and equipment as well as the upgrade of one fleet or another to VSAT systems. And, with new, even smaller antenna tracking technology such as that being developed by ThinKom and others, what is happening in maritime is likely to see extensive application to land based mobile users.

The trade winds clearly seem to be blowing in a certain direction. The value proposition in maritime telecom may well be in those providers that can stitch together Fixed capacity into a seamless global network, such as that offered by SeaMobile's MTN service. For MSS channel partners, such as Vizada and the plethora of smaller maritime telecom value-added resellers and service providers, their value to potential acquirers may likely be in leveraging their customer base to up-sell to VSAT systems. That said, it is certainly too early to count MSS out of maritime. It shall be interesting to see how Iridium, Inmarsat and regional player Thuraya will be able to counter the VSAT threat through competitive pricing as well through innovative and upgraded services.

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Whither spectrum values?

What of the value of the spectrum, that invisible real estate that has been the subject of much interplay within the MSS industry within the last few years? The ancillary terrestrial networks (ATC) that these companies were supposed to build out have foundered on the extreme capital costs of building out a network, but the spectrum assets remain. Certainly, this has attracted the attention of at least one major financial player, Harbinger, through its large stakes in cash-poor but spectrum-rich MSS companies, such as SkyTerra. As a result, a few companies have become not so much operators of telecom networks, but retainers of spectrum holdings.

We here at Near Earth have often been favorable to the idea of spectrum as an investment thesis, driven by the belief that connectivity demand from business, government and the media-happy consuming public will drive the search (primarily by the large

carriers) for more parts of the electromagnetic spectrum to pipe data. While the long-run thesis remains sound, it remains to be seen whether spectrum value is being realized in today's market. Amidst the recent ICO North America (now DBSD North America) bankruptcy proceedings, it has come to light that DISH bought senior debt, perhaps thinking it would get a majority equity stake in the restructuring but, because of DBSD's S-band spectrum value, the court said their debt was covered by collateral and had a good chance of getting par back in several years. DISH, however, disputes this assessment, and is now accusing DBSD of having no value and having no credible potential to create value commiserate with its large debt, spectrum value or not. While this may be courtroom maneuvering, it should at least be a reminder that not everyone is on the same page on spectrum value.

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Moreover, some consolidation activity may need to occur for MSS spectrum allocations to realize their value. A merger of TerreStar and ICO for S-band and a merger of SkyTerra and Inmarsat for L-band are looking to be increasingly likely eventualities, foreshadowed by Harbinger's SkyTerra take-private transaction and their moves to acquire large stakes in Inmarsat. In the latter case of Inmarsat/SkyTerra, it is a question of a merger of a company with extensive operations and profitability (Inmarsat) with a company with more minimal operations but great spectrum resources (SkyTerra). As for TerreStar however, the announcement of the marketing by AT&T of a TerreStar-enabled hybrid satellite/terrestrial phone heightens speculation that maybe, just maybe, there is something to TerreStar beyond its mere spectrum holdings.

Enter Export Credit

The past year has seen export credit enter the MSS industry in a major way, in particular with the French export credit agency Coface, providing guarantees for a $574m facility designed to allow the manufacture of the next generation Globalstar constellation of 48 satellites. Given the deterioration of Globalstar's position in the previous year – failing satellites, a fleeing customer base, severely constrained credit markets – the Coface deal was like manna from heaven, and a shock to competitors who had just as well assumed that Globalstar was about to exit stage left.

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This was not the only time Coface stepped in to a satellite financing – in the beginning of September; it again stepped in to provide financing for the developing-world satellite broadband constellation,

O3b. Whatever the economic merits of each of deal, clearly there are ancillary benefits to France's satellite manufacturing capability, through both companies' prime contractor, Thales Alenia. Moreover, Thales as well as Lockheed Martin, the two competitors for Iridium's 66 satellite NEXT constellation, are said to be actively seeking export credit guarantees through Coface and the US Export-Import Bank (EXIM) for that project too. It remains to be seen whether Coface would assist the financing of a direct competitor (Iridium) to a project and company (Globalstar) it which it already has a large financial participation, in the face of potential overcapacity. It also remains to be seen whether Coface is willing to put up money prior to the expenditure of substantial privately funded amounts, as was the case in both previous examples. However, the prospect of supporting the development of an assembly-line of medium-sized satellites may end up being the type of thing that the US DoD, American export credit and both their various interests and associates may be prepared to support.

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On the bright side for space enthusiasts, the financing and manufacturing of so many low earth orbit satellites, in assembly-line fashion at that, ought to be a boon for those interested in finding new uses for cheaper, standardized satellite buses. A spare ORBCOMM bus of the previous generation's constellation was, in one instance, repurposed for the US Air Force's Operationally Responsive Space initiative, creating the TacSat-1 low-cost demonstration satellite. Likewise, the O3b constellation is said to be based on the Globalstar bus developed by Thales Alenia. With so many ideas percolating in academic or NewSpace circles, the availability of these lower cost buses should spur all the more interesting uses, whether for platforms for scientific study, education or even as a transportation structure to bring, for profit, instruments and payloads to farther reaches of the Solar System. Indeed, wouldn't that truly signal the start of a new Renaissance?

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