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Twins separated at birth? or ICO and TerreStar: A study in contrasts

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From a regulatory perspective, the Mobile Satellite Service (MSS) companies ICO and Terrestar look remarkably the same. Granted, they followed different paths initially (I could write a whole separate story on that, but will save it for another time…), but eventually wound up with similar spectrum assets: 2x20 MHz of spectrum in the 2 GHz band, not far from the wildly popular PCS band used by Sprint and other carriers. This spectrum is licensed for providing MSS, but more importantly comes with authorization for Ancillary Terrestrial Components (ATC), more commonly know as cell towers. Augmented with this capability, this spectrum is technically capable of providing a wealth of services like broadband wireless internet, mobile video/audio broadcasting, telematics, and perhaps most notably, communications very much like the economically proven PCS.

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So far, so good. Where it gets interesting, is noting how differently these two firms have decided to address the opportunities this spectrum resource makes possible. This is particularly topical given the recent developments at the respective firms: In ICO's case, the successful launch of the ICO G1 satellite this month (which successfully deployed its antenna this week), and in the case of TerreStar, the departure of its CEO, COO, CMO and EVP Finance followed by massive layoffs of nearly half the firm's workforce.

Some idea of the contrast is evident in the following table:

	ICO	**TerreStar**
Number of Employees (12/07)	46	175
Satellites Ordered to Date	1	2
Terrestrial Repeaters Ordered (in dollars)	0	$400 million
2007 Operating Expenses	$51mm	$183mm
First Satellite Launch Date	4/2008	~1/2009
Affiliations	ClearWire, Craig McCaw	EchoStar, Harbinger

Source: Near Earth LLC

One doesn't have to be a rocket scientist to see that ICO is being run more economically than Terrestar, recent cuts notwithstanding.

This is largely a reflection of approach – ICO is initially offering a MSS service they call ICOmims – a mobile video, navigation, emergency text and assistance bundle targeted at motorists. While actual commercial service launch is more than a year away (at least), the overall service seems to be more of an MSS offering than a PCS like service with heavy deployment of terrestrial repeaters.

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We think that a part of the reason for this is the technical difference between the respective satellites (ICO's bird uses a 12 meter reflector with 250 beams, while TerreStar's uses a 20 meter reflector with 500 beams – allowing for lower power, smaller terminals). Simply put, ICO's satellite is better suited for communicating with vehicles (which have less power and size constraints) than handsets, so instead of bringing out a handheld service that would be hard pressed to compete with TerreStar, ICO has opted for a cheaper to offer service that can be upgraded later with larger, more powerful satellites if warranted. And, in the process, they have held off on constructing their second satellite, which is required for MSS/ATC authorization but not pure MSS authorization. In the process, they have taken the lemon of having a tougher (i.e. quicker) regulatory implementation schedule (that, in turn, forced them to buy a technologically less advanced satellite) and made the lemonade of having substantially reduced cash burn while they wait to see how the market for their service, and more importantly their spectrum pans out.

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At TerreStar, the approach has been decidedly bolder. As a *de facto* spinoff of L band MSS operator Mobile Satellite Ventures, TerreStar has always had a similar strategic focus on providing what they call "transparency" – a service that users find virtually indistinguishable from conventional cellular service. This is no mean feat, as it requires a very robust terrestrial network and a powerful satellite with breakthrough technology that even today is resulting in slipping satellite delivery dates. And, it requires two such satellites (one a ground spare), since nationwide ATC is an integral part of the overall system. None of this capability comes cheap, or easy, and spending the cash to make it happen with no customer identified represents a big wager.

Here at Near Earth, we have always believed that to maximize the value of the spectrum assets held by these companies, it will be necessary for them partner or be acquired with wireless or other telecomm firms. [Form more on this subject, see our white paper

Mobile Satellite Service with valuation of Ancillary Terrestrial Components, available for free download at http://www.nearearthllc.com/analysis/whitepapers.asp] Thus, we've watched with some interest the recent investments (and spectrum license contributions) that have brought TerreStar close to satellite television provider Echostar, as well a financial investor Harbinger Capital.

TerreStar's bolder construction approach offered potential advantages of permitting more rapid entry to market, with the risk that the market itself might not be ready. [We note that the company has frequently cited a strategy of being a "carrier's carrier", which could lead to it being independent indefinitely.]

Apparently in this latest move, TerreStar's board has decided to pull in its horns. Coming on the heels of the recent board additions its new investors have provided, we could be seeing a significant shift in TerreStar's approach – perhaps in a direction that leads to an eventual combination with Echostar, or at least a joint service offering, or perhaps just a reduction in monthly burn rate to wait out an eventual telco investment or sale of the firm.

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Finally, we note that despite these divergent cultures, the fact that their spectrum is directly adjacent makes ICO and TerreStar a natural combination, assuming regulatory approval could be secured. As there would still be L-band competition, we would expect the regulatory approval would be easier than the proposed XM / Sirius merger, especially as there is no reason for NAB to fight it. Seeing which culture emerges after that merger would be interesting indeed.

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