SPECIALISTS IN SATELLITE, TELECOM AND AEROSPACE INVESTMENT BANKING

FROM THE GROUND UP

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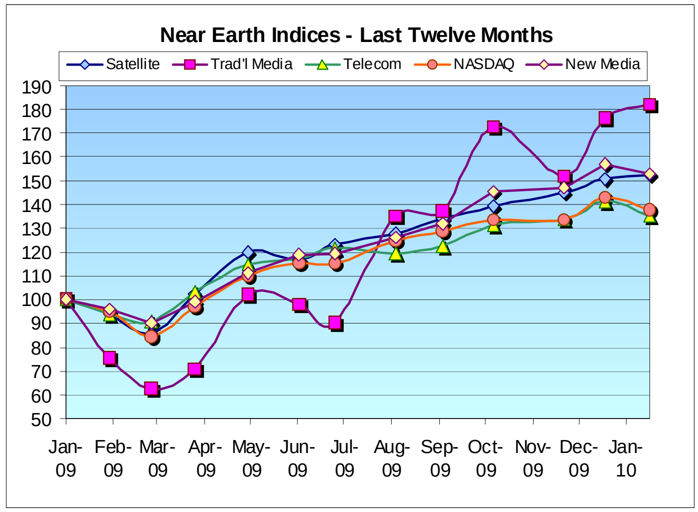

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THE WAY WE SEE IT…

Satellite:

Canadian satellite broadband provider **Barrett Xplore** entered into a long term lease for **Loral's** capacity on **Viasat's** Viasat-1 satellite, due for launch in 2011. Coming on the heels of their previous deal with **Hughes Communications'** Jupiter satellite, **Barrett** is rapidly becoming a major player in the sector. Not to be outdone, their competitor **Omniglobe Networks** announced plans for their own Ka band satellite to be launched in 2013. The fate of the ProtoStar 2 satellite reached a conclusion, as **SES** picked it up at auction for a cool $185 million. Closer to home, the FCC granted **Terrestar Networks** authorization to provide services using an Ancillary Terrestrial Component (i.e. cell towers), avoiding a potential covenant default on its debt. Their shareholders can now resume breathing. And, in M&A action, **Broadcast Facilities Inc**., owner of **Andrita Studios**, enlarged their empire considerably with an acquisition of **Crawford Communications'** satellite assets. Is this the beginning of a more extensive rollup, we wonder?

Telecom:

Verizon Wireless lowered prices on unlimited voice plans while increasing prices and mandatory contract requirements on data plans, reflecting changes in customer usage with the mass adoption of data hungry smart phones. The move was clearly targeted at **AT&T**, which responded in kind nearly immediately. With pricing already below **Verizon's** and **AT&T's**, we expect the remaining carriers to be less affected. For more on the sector, see this month's article. In a different part of the mobile data sector, **Aircell**, which provides broadband connectivity to aircraft, closed on $176 million in new financing. Given their willingness to commit such significant resources, **Aircell's** early adoption numbers must be good indeed… Wireless middleware provider **Motricity** filed for a $250 million IPO – expect VCs and private equity firms to watch this transaction closely and a slew of additional filings…

Aerospace:

Embattled launch services provider **Sea Launch**, currently mired in chapter 11 proceedings, secured a $12.5 million DIP financing from **Space Launch Services, LLC**, an entity backed by **Excalibur Almaz** and **Planetspace**, which presumably would bundle Sea Launch's offerings with their own. **Goodrich Corporation** closed its acquisition of **Atlantic Inertial Systems**, provider of navigation systems, from an affiliate of PE firm **J.F. Lehman and Company**.

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Marketing and pricing strategies will … play a big role [in differentiating their offerings], as evidenced by the rapid growth of prepaid and/or no contract service plans …

As the big four wireless carriers position themselves for the long haul, we expect continued efforts by the carriers to maintain growth and avoid the pricing pressures a four way slugfest is likely to bring on. Clearly, some of this will be through efforts to differentiate their product (i.e. AT&T's iPhone) or service offerings (Verizon's claim to superior 3G coverage, for example). Marketing and pricing strategies will also play a big role, as evidenced by the rapid growth of prepaid and/or no contract service plans such as Boost, metroPCS and Cricket. And finally, as we detailed in our September article *The Rise of The Machines*, Machine to Machine (M2M) networking offers an additional growth option to the majors.

In many instances, we expect the majors to pursue these growth initiatives through M&A activity, which to date has been a major part of their toolkit for growth. Because the M2M players remain small, for the moment, let's focus on the potential for larger transactions – in other words, acquisitions of other more or less conventional wireless carriers. Transactions like these offer immediate scale benefits – ranging from marketing cost savings to savings on network equipment and handsets through greater buying power. The transactions also reduce the potential for churn by reducing customer options at the margin in markets where carriers overlap. Finally, the smaller carriers have substantial spectrum assets in addition to their network assets. With the ever increasing consumer demand for faster connectivity, and the limitations that physics imposes, this valuable and limited resource is a key to competitively meeting consumer expectations.

With the ever increasing consumer demand for faster connectivity … [spectrum assets] is a key to competitively meeting consumer expectations.

In the table below we've collected important financial and operating statistics (as of Q3 2009) for a number of relevant wireless firms. In addition to the big four ("The hunters"), we've identified four more smaller carriers ("The hunted") as well as some recently acquired carriers ("The trophies"). In the case of the acquired firms, we have used the last public operating data available prior to their acquisition, and the enterprise value is simply the transaction value. Note: since the Alltel and Rural Cellular transactions were negotiated before the worst of the recent financial crisis hit, they should be viewed in that perspective when comparing their growth rates and valuations.

Next moves in the wireless endgame (cont.)

The Hunters	Subscribers (mm)	Total ARPU	yr/yr Wireless Revenue Growth	EBITDA Margin	Churn	Technology	Spectrum Holdings ($bb)	Enterprise Value ($bb)	EV/Sub
Verizon Wireless	89.0	$51	5%	39%	1.5%	CDMA	NM	NA	NA
AT&T	81.6	$51	8%	35%	1.4%	GSM	NM	NA	NA
Sprint	48.3	$43	-8%	19%	2.3%	CDMA/iDEN	$19.7	$25.7	$532
T-Mobile	33.4	$47	-2%	29%	3.4%	GSM	NM	NA	NA
The Hunted									
metroPCS	6.3	$41	30%	29%	5.8%	CDMA	$2.5	$4.6	$730
U.S. Cellular	6.1	$47	-3%	19%	1.7%	CDMA	$1.4	$3.9	$639
Leap Wireless	4.7	$40	21%	18%	5.4%	CDMA	$1.9	$3.2	$681
Clearwire	0.6	$40	13%	NM	3.1%	WiMax	$4.5	$4.9	$8167
The Trophies									
Alltel	13.8	$56	10%	35%	2.0%	CDMA	$3.2	$28.1	$2036
Virgin Mobile	4.8	$19	-10%	6%	4.9%	NA	NA	$0.7	$152
iPCS	0.7	$50	7%	16%	2.4%	CDMA	NA	$0.8	$1153
Rural Cellular	0.8	$53	11%	45%	1.9%	CDMA/GSM	$0.5	$2.7	$3380

Note: Alltel figures reflect Q3 2008
Rural Cellular figures reflect Q2 2008

Source: Data compiled from public filings

The lion [Verizon] is probably still digesting its recent quarry … but may be ready to start hunting soon …

Given a free marketplace, for transactions to occur you need a willing buyer and a willing seller – more or less. So, respectively, let's consider the propensity of each of the larger firms to strike out on the hunt.

In the case of Verizon, the lion is probably still digesting its recent quarry (i.e. $28 billion Alltel), but may be ready to start hunting soon. They certainly have the wherewithal, and with their CDMA technology all of the hunted save Clearwire are easily digestible. Given the common use of this technology by the smaller carriers, from Verizon's perspective this introduces a certain amount of fungibility, which it can use to play the respective targets off against each other when negotiating price. However, as the largest carrier, Verizon is most likely to attract unwanted attention from the game wardens (more commonly known as the DOJ and FCC). Because all the potential targets are significantly smaller than Alltel, we believe this risk appears manageable, though there can be no certainty, especially given the greater antitrust sensitivities of the current administration.

AT&T has been quiet on the acquisition front, focusing more on operational issues such as coping with rapid data traffic growth …

In contrast, AT&T has been quiet on the acquisition front, focusing more on operational issues such as coping with rapid data traffic growth from iPhone sales. Whether from choice or not, this has the effect of having AT&T avoid the technology integration issues that have plagued Sprint with its fundamentally incompatible CDMA and iDen technologies, not to mention the reduced scale benefits. As a consequence, Verizon benefited from being the only real bidder at the table for Alltel, and for the moment is the only viable bidder for the remaining CDMA systems. But there is a sea change in technology coming: Long Term Evolution (LTE).

LTE (a flavor of 4G) promises to bridge the technological gulf between carriers that adopt it – meaning that from an M&A perspective AT&T will be on a level playing ground with Verizon as carriers adopt this technology. And as this occurs, more bidders means higher prices – for the hunted.

Sprint has focused on bringing in-house its relatively captive affiliates Virgin Mobile and iPCS …

Sprint, the third largest carrier, is like Verizon also a CDMA carrier in part, but also has its Nextel unit which relies on an incompatible technology called iDEN, and its 57% owned affiliate Clearwire, which relies on a third (also incompatible) technology called WiMax. In their latest M&A efforts, Sprint has focused on bringing in-house its relatively captive affiliates Virgin Mobile and iPCS. In the case of Virgin, Sprint was clearly defending a financially ailing affiliate with a substantial base of "Sprint" subscribers (since Virgin was reselling capacity on Sprint's network). The transaction was cheap, partially because there was no other logical buyer and also because Virgin needed the deal. With both Virgin and Boost now under the Sprint umbrella, Sprint has the largest "uncontracted" (i.e. pay-as-you go and prepaid) user base of the majors (over 10 million subscribers). This is reflected in their lower overall ARPU and higher churn as compared to the other majors.

Financially, Sprint is clearly the weakest of the majors. It has the lowest margins, and while it is bigger than T-Mobile and has lower churn, T-Mobile has a rich uncle (Deutsche Telecomm) and Sprint does not. With its substantial debt load and depressed share price, capital is dear for Sprint, so we think it likely to remain on the sidelines until it can get its house in order and raise its share price (i.e. its currency for acquisitions).

While a combination with Sprint would vault T-Mobile just ahead of AT&T in customers, the logistical issues of combining four wireless technologies are daunting …

T-Mobile is in a similar position to AT&T – temporarily on the sidelines but as the smallest of the big four, clearly needs greater scale. While it would make a good technological fit with AT&T, the sheer scale of the transaction would be very likely to attract regulatory attention. We thus view T-Mobile as a hunter rather than the hunted. While a combination with Sprint would vault T-Mobile just ahead of AT&T in customers, the logistical issues of combining four wireless technologies are daunting, and would blunt much of the advantages of the combination. At the right (i.e. low) price this deal starts to make sense for them, but clearly this is a very high risk strategy. As the LTE rollout progresses, some of this risk is mitigated, but prices may not be as attractive then either.

What then, of the hunted?

metroPCS has demonstrated the best growth (30% yr/yr) in the industry through the Great Recession – an impressive feat. It also has a financial engine that makes a decent if unspectacular profit from lower revenue subscribers despite withering churn (the highest of all the firms we examined). How do they do it? In two words, cost leadership. From the point of view of an acquirer, metroPCS brings substantial spectrum holdings and low cost infrastructure to the table, along with a differentiated and growing brand recognized for value pricing. With positive free cash flow, metroPCS's management can negotiate with suitors from a position of strength, and as they transition to LTE they are likely to appeal to a wider audience of buyers. With two substantial uncontracted brands of its own, and operational issues to boot, we do not see Sprint as a likely bidder for the time being. As such, we think the most likely scenario is an acquisition by Verizon in the short term, or AT&T, Verizon or T-Mobile later on when they are up and running with LTE.

With positive free cash flow, metroPCS's management can negotiate with suitors from a position of strength …

Leap Wireless markets its Cricket brand of uncontracted wireless service and at first blush looks much like a somewhat smaller version of metroPCS. However, Leap has slightly lower growth (21%) and ARPU and is significantly less profitable, due principally to scale effects. As a consequence, when capex is factored in, the company continues to expend its cash reserves, though their June 2009 secondary did buttress them by $264 million. With over $600 million in cash and positive operating cash flow, Leap appears to have adequate resources for its budgeted capital program, and has indicated that it will adjust its capital plans to live within the resources that are available. As it is somewhat more levered than metroPCS, LEAP's ability to issue additional debt is relatively constrained.

From the perspective of a buyer, Leap is somewhat cheaper on a pre-subscriber basis than metroPCS. In terms of the bidding dynamic, Leap's more levered balance sheet is actually an advantage. This is because most of its enterprise value is tied up in debt, and as such (thanks to the miracle of leverage) a small premium in enterprise value translates into a large premium for stockholders – the people who get to vote on the deal. In contrast, generating a similar premium for metroPCS's shareholders requires a buyer to bid at a higher premium on an enterprise value basis.

As long as both metroPCS and Leap are both independent, potential acquirers can be expected to play them off against one another …

Given this overall backdrop, we believe that Leap is somewhat more motivated to do a transaction sooner, and if recent press accounts that Leap may be shopping for bankers to explore "strategic alternatives" are true this could be the reason. From a technology and spectrum perspective, Leap looks a lot like metroPCS, and we would expect the potential suitors to be identical. As long as both metroPCS and Leap are both independent, potential acquirers can be expected to play them off against one another – a tactic that is likely to work better against Leap (the more "motivated" target) than metroPCS.

While we have considered metroPCS and Leap as potential targets, we would be remiss to not mention that the two firms previously tried to merge (metroPCS offered to acquire Leap in a stock for stock deal in 2007) and a reprise of that scenario is a possibility. While the geographic coverage of the two company's networks is complementary, and the combined firm would enjoy substantial scale advantages compared to the separate firms, we remain skeptical that this combination can proceed. With its substantial debt load and cash needs, Leap is easier for a larger player to digest. We also wonder whether the substantial dilution that a stock for stock deal would impose on metroPCS would make sense for their shareholders. Looking further down the road, the combined firm would also be large enough that it could be substantially more difficult for Verizon or AT&T to get regulatory approval to acquire it, reducing the potential bidding pool by 50%. Assuming that hurdle could be cleared, the merged firm would benefit from bidders playing off Leap and metroPCS against each other.

As such, [U.S. Cellular] would make a very digestible morsel for [Verizon], and boasts a very reasonable cost per subscriber and a clean balance sheet to boot …

U.S. Cellular is a different animal entirely. Unlike metroPCS and Leap, which specialize in uncontracted service, over 95% of U.S. Cellular's customers are under contracts. In this sense U.S. Cellular is best thought of as a miniature, regional version of Verizon, with a nearly identical business model and technology. As such, it would make a very digestible morsel for them, and boasts a very reasonable cost per subscriber and a clean balance sheet to boot. On the downside, U.S. Cellular is a high cost provider, making margins comparable to Leap or Sprint despite having significantly higher ARPU. Perhaps more damning, especially for Verizon, is that from a marketing and branding perspective buying U.S. Cellular (as opposed to metroPCS or Leap) doesn't really get them anything they don't already have.

When this is combined with its flat to shrinking customer base, we think a transaction will come down to price. Given the potential to realize substantial cost synergies across a decent sized customer base, a U.S. Cellular transaction has the potential to create substantial value. How that value gets distributed between buyer and seller will be the chief factor in its willingness to do a deal. However, given that Verizon is large enough that regulators may only allow them one more chance to do an acquisition, we don't expect them to chase this one too strongly. We thus see Sprint, T-Mobile and AT&T as the more likely bidders – down the road when their operational issues and LTE rollouts are complete.

We expect that within 3 years, all of "The hunted" will be hanging on the wall, save Clearwire.…

With 57% of its equity owned by Sprint, Clearwire is really just a division of its parent with some outside ownership. Given this substantial stake, and its WiMax technology that is incompatible for everyone, Sprint is the only viable bidder for Clearwire. Given Sprint's financial pressures and their effective control of Clearwire, we think Dan Hesse probably considers the status quo an effective way to finance Sprint's 4G initiative. To the extent that Sprint garners the wherewithal to acquire Clearwire, we believe they would be better served expending it on the other targets discussed here.

In closing, we expect that within 3 years, all of "The hunted" will be hanging on the wall, save Clearwire. If recent press accounts are true, Leap with be the first target in the cross hairs, but it is unlikely to be the last. With the ability to move now before bidding competition heats up, we would expect Verizon to extend overtures to all the hunted (save Clearwire), opportunistically acting before its competitors. If they make a move now, we think it will reduce prices for all the targets by muting bidding competition. Conversely, if we get to the middle of 2011 with no acquisitions done, then things get really messy as you potentially could have four way auctions break out. It could be an interesting next few years, indeed.

By John Stone
Near Earth LLC

Never underestimate the potential for the fate of whole industries to turn on a dime, especially when Google is involved. On October 28th 2009, in Google's ever expanding quest to be the source of everyone's information, it took aim at the GPS navigation device industry with the release of Google Navigation, the first turn-by-turn navigation application to be distributed free on smartphones. The reaction was fast and furious. On the day of Google's announcement, the share price of the largest of the GPS device companies, Garmin and TomTom, fell 16% and 20% respectively, reflecting the market's fear that Google was undercutting their most significant and lucrative products, their so-called Personal Navigation Devices upon which so many otherwise lost drivers now depend. While both Garmin and TomTom have the resources to adapt to this environment by focusing on custom hardware and specialized navigation products, the landscape has been permanently changed. On January 21st 2010, Nokia announced that it too would hereafter include free turn-by-turn navigation software in its smartphones.

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The GPS device makers may not be the only navigation companies threatened by Google. Less noticed, but probably of equal import, was Google's announcement that it would be suspending its relationship with Tele Atlas, the supplier of detailed road maps upon which a great many navigation and mapping systems depend. This was only a year after switching from NAVTEQ, Tele Atlas's main rival and essentially only other company with a similar comprehensive set of road maps. Rather interestingly, Google did not announce a return to NAVTEQ, but a source at Tele Atlas confirmed that Google had instead preferred to rely, as it has in so many other areas, on its own data and on user-created content.

Google's displacement of first NAVTEQ and then Tele Atlas, although done in an almost trivial manner, is in fact no small matter, especially not for the companies that acquired them in 2007 (Nokia of NAVTEQ and TomTom of Tele Atlas) for $8.1 billion and $2.7 billion respectively. The service provided by these firms is no mere series of lines crisscrossing each other on a diagram, but a meticulously collected ensemble of geographical and descriptive information of almost every navigable corner and avenue of developed civilization. To be able to provide precise and practical directions to users, a typical street section mapped out by a NAVTEQ surveying vehicle may have more than 200 data points describing such details as direction, gradient, medians and a wide variety of similar data. The sheer difficulty of generating a new road database from scratch was at least a part of the justification for the high valuation of the assets of these map companies.

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Of course, that was so 2007, an era known not just for being the peak of the 2000s market bubble but also the predecessor to so many things that have since changed media irrevocably. Among them include the rise of location-based services riding on top of the aforementioned GPS-enabled smartphones – the Foursquares, Gowallas and MyTowns of the world that are already generating massive amounts of geo-social data on the basis of simple mobile games. This is on top of the user-generated content contributed through open source mapping projects, such as Wikimapia or OpenStreetMap, where users can not only tag relevant destinations, but can also change and correct street layouts.

None of these factors… may be nearly as significant as the very fact that Google now has at its disposal … its fleet of photo-collecting Street View cars…

None of these factors, however, may be nearly as significant as the very fact that Google now has at its disposal a resource that is collecting far more than 200 data points per street segment, that is, its fleet of photo-collecting Street View cars. Already generating both awe and controversy by imaging vast swaths of the roadways of North America, Europe, Australia and Japan (and surely more to come), Google has already collected not just a 'map' more elaborate than any that could ever fit on a page but, with its own fleet and its own processing algorithms, all the information it could need to reproduce its own navigation tools.

While much of the discussion of Street View up to now has centered around privacy, it bears considering the implications of Google offering a ground visualization of much of the navigable world. If NAVTEQ and its maps could once be valued at over $8 billion, what can that mean for Street View? Not only may it be useful for navigation, already there is talk of placing advertising within the Street View world, and not merely as ads placed alongside the viewing window. Virtual digital signage and virtual promotions and offerings may become a new form of roadside advertising as Street View, and potential other similar offerings, inevitably become integrated into smartphones and GPS devices. Such an asset, in the hands of a player with such a dominant position in the world's mindspace, could be lucrative indeed. With so much talk in the last few years about the value of virtual online worlds, ironically, the most valuable virtual world may end up being a virtualization of the real world itself.

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In the short run, end-users will always demand precision and accuracy, especially when it comes to providing something as important as driving directions. The professional and value-enhanced map gathering methods of Tele Atlas and NAVTEQ may yet win the day for now, but the rise of Street View and user generated map content may spell a new era of cartography and personal navigation. Expect Microsoft and other map services (such as Yahoo and AOL Mapquest) to develop their own similar capabilities, or to acquire the few companies that tried to implement Street View-like capabilities before Google came along. The one thing that is clear is that this is likely only the beginning, with many more capabilities and changes to the landscape ahead of us. However, the era is here. It can be said – there's a map for that.

By Ian Fichtenbaum
Near Earth LLC

By now you have all probably seen heart breaking, high resolution satellite imagery of the destruction in Haiti. The speed with which **GeoEye** and **DigitalGlobe** disseminated these images around the world was truly amazing. With extensive databases of recent imagery, these companies were even able to provide side-by-side pictures of before and after. **Google** is also putting images from multiple sources into Google Earth together with maps, including earthquake epicenters, so that anyone with an Internet connection can freely access up to date imagery and related geographic information. These satellite based capabilities are fundamentally changing the world's ability to respond to disasters and no doubt played a major role in accelerating and energizing not only the relief efforts of many governments but also the charitable contributions of millions of people. On the ground, these images continue to provide rescue and relief operations with critical intelligence information. Because of this capability hundreds of millions of dollars will move more expeditiously and be deployed more efficiently; yet it is almost for free. What is this capability worth to an ever more fragile and dangerous world?

… satellite based capabilities are fundamentally changing the world's ability to respond to disasters …

As usual, satellites have also been crucial in providing the communication networks necessary to support rescue and relief efforts. The earthquake took out much of the landline and wireless infrastructure and even severed the submarine cable linking the island to the global network, but within literally hours, satellite firms were setting up emergency networks and in many cases even donating satellite capacity and equipment to governments, media and telecom companies and humanitarian organizations. This has been true of past disaster incidents as well, but this time the speed and magnitude of the support is quite breath taking.

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I understand that **Intelsat S.A.** had a dedicated team and a fly-away system in Port-au-Prince airport almost immediately, providing on-site coordination and transmission services. They quickly established two communication networks—one in C-band and one in Ku-band, including Intelsat's GlobalConnex Network Broadband service, using capacity on Intelsat 907 and Horizons 2 satellites. Not to be out done, **SES World Skies** donated satellite capacity on five of its satellites (AMC-1, AMC-6, AMC-21, NSS-7 and NSS-806) plus access to teleport facilities. **CapRock Government Services** provided full end-to-end satellite communications support and connectivity to the U.S. Marines Corps. **Iridium** had already pre-positioned its satellite handsets with a variety of services and organizations for their use in such emergencies, including local telephone companies and to Spirit Airlines, which has resumed flights in and out of Haiti. **Inmarsat** provided its Broadband Global Area Network (BGAN) terminals to Telecom without Borders and **DBSD** is making available to the U.S. government its S-band satellite capacity for two-way mobile communications or broadcast video services throughout Puerto

Rico. **Stratos** is providing Inmarsat, Iridium, and VSAT satellite equipment and services to several agencies and **Spacenet** is offering help through its existing services to Haiti. **Globecomm** has joined in as has **SkyTerra** and **SkyPort. PSSI** is even donating its satellite trucks for a Haiti fund raising concert in the U.S.

… the importance of restoring communications quickly and broadly is now widely recognized as step one and the satellite industry has responded accordingly …

Perhaps with practice the satellite industry and relief agencies are just getting better at disaster response or perhaps it is just the greater power, usability and availability of today's satellite technology. Either way, there seems to have been vital lessons learned from previous disasters, not that we are now anywhere close to perfection. However, the importance of restoring communications quickly and broadly is now widely recognized as step one and the satellite industry has responded accordingly.

I am proud of the satellite industry for its progress and its generous contributions, but the scary part is that even today most of these communication efforts are being done on a somewhat ad hoc and uncoordinated basis. With an international effort involving many countries and dozens of agencies, who is in charge? Setting up communications involves emergency requests by a vast array of first responders and service providers for satellite capacity, equipment and services going out to a large number of satellite telecommunications companies. On top of that is a need to integrate the unsolicited donations of satellite capacity, equipment and services. Who decides which agency should get which satellite assets? Who sets the priorities for utilization of scarce bandwidth? If robust and quick satellite communications is critical to saving lives and efficiently utilizing disaster recovery resources, is patching together a multitude of solutions in real time the right strategy?

Shouldn't we also have peak capacity for satellite communications; capacity that is dedicated and ready at a moment's notice for disasters…?

With electrical power we have learned our lesson from costly brown outs and black outs. Today, the electric grid is designed to have excess capacity to handle unusual peak loads (e.g. extremely hot summer days). That peak capacity mostly sits idle and is therefore very expensive per kilowatt-hour of usage, but when needed its existence is critical to sustaining our lives and economy. Shouldn't we also have peak capacity for satellite communications; capacity that is dedicated and ready at a moment's notice for disasters and with agencies and users trained to use it? What if like Haiti, a once in 200 year earthquake hit Los Angeles or New York was hit by a weapon of mass destruction and you had 10 million people at risk and without communications? How forgiving would the citizens be that their government did not plan for such a scenario? Just as with Katrina, there would be headlines that the need was foreseeable and the politicians did nothing. After all, some Black Swans are really just Grey Swans. We know a "Big One" will hit one day and we know the terrorist want to hit us hard.

With high throughput satellites and steerable spot beams, we now have the ability to launch what would basically be a nationwide or even regional insurance policy …

There is no technological excuse. The technology to establish emergency satellite connectivity is well in hand. With high throughput satellites and steerable spot beams, we now have the ability to launch what would basically be a nationwide or even regional insurance policy; guaranteeing the availability of dedicated fast 2-way bandwidth targetable to an impacted area in the event of a mega-disaster. A robust capability could also be built over time by adding one or more steerable beams to each new FSS satellite that is placed into GEO. With excess MSS capacity (Iridium, Globalstar, SkyTerra, TerreStar and ICO), we also have the ability to lock up significant capacity for emergency mobile communications.

The conceptual leap that has to be made is that like peak electrical generating capacity that mostly sits idle, this emergency satellite capacity is just as vital to our livelihoods. Its cost should therefore not be compared to normal marginal usage, but to the value delivered when needed. If we are truly serious about homeland defense, whether against manmade or natural disasters, shouldn't significant dedicated satellite capacity be part of the planning?

… wise investments of taxpayer dollars have generated substantial and global benefits …

Having the government as an anchor tenant for an appreciable amount of stand-by capacity would also enhance the ability of satellite companies, particularly the MSS and satellite broadband providers, to finance, launch and maintain their businesses and thereby offer consumers and corporations affordable 21st century satellite services. To hold the cost down, any standby capacity acquired by the government could be made available for resell by the satellite operators on a preemptable basis. There are many other potential public/private models that might work. The key point is that like the U.S. government's support of Iridium, GeoEye and DigitalGlobe, wise investments of taxpayer dollars have generated substantial and global benefits. Let's remember that the next time we view a satellite image on the front page of our morning newspaper or hear about a doctor in Haiti using an Iridium phone to order medical supplies.

When it comes to disaster relief and recovery, isn't it time to get serious and plan for tomorrow's needs? The technology is here; we just need the political will.

By Hoyt Davidson
Near Earth LLC

NEAR EARTH ANALYSIS: MARKET COMPARABLES

Public Market Valuation Analysis of Selected Companies in the **NEAR EARTH MEDIA INDEX**

($ in millions, except per share data)		Stock Price:			Enterprise Value as a Multiple of:			Price as a Multiple of:		
		1/22/10	Market Value of Equity	Enterprise Value (a)	LTM Sales	LTM EBITDA	LTM EBIT	LTM EPS	Trailing EPS (b)	Forward EPS (b)
	Satellite Broadcast (DBS and DARS)									
BSY.L	British Sky Broadcasting (f)	£ 5.44	$15,368.28	$18,485.31	2.1x	10.2x	13.8x	23.3x	28.6x	23.1x
DISH	Dish Network Corp	$ 18.81	$8,404.31	$11,899.24	1.0x	4.2x	6.4x	7.6x	13.8x	9.9x
DTV	DirecTV Group Inc.	$ 31.38	$30,065.18	$34,260.18	1.6x	6.7x	14.3x	23.1x	22.6x	14.1x
SIRI	Sirius XM Radio	$ 0.69	$2,673.73	$5,784.65	2.4x	12.7x	n/m	n/m	n/m	n/m
				Mean	1.8x	8.4x	11.5x	18.0x	21.7x	15.7x
	Cable Television									
CMCSA	Comcast Corporation	$ 15.85	$45,246.68	$74,013.68	2.1x	5.3x	9.8x	13.5x	13.4x	13.2x
MCCC	Mediacom Communications Corp.	$ 4.23	$285.36	$3,603.87	2.5x	6.9x	12.1x	n/m	6.0x	5.6x
TWC	Time Warner Cable Inc.	$ 43.84	$15,449.22	$37,376.22	2.1x	5.8x	11.1x	6.8x	14.4x	12.1x
CVC	Cablevision Systems Corp	$ 25.86	$7,802.74	$19,846.93	2.6x	9.8x	21.2x	n/m	24.2x	16.6x
				Mean	2.3x	6.9x	13.6x	10.2x	14.5x	11.9x
	Television									
TVL	LIN TV Corp.	$ 4.49	$230.70	$899.76	2.6x	8.2x	16.5x	n/m	n/m	6.9x
SBGI	Sinclair Broadcast Group	$ 4.90	$390.92	$1,690.86	2.5x	6.3x	13.5x	20.9x	n/m	10.4x
FSCI	Fisher Communications Inc	$ 13.12	$116.24	$188.79	1.3x	8.9x	n/m	n/m	n/m	38.6x
				Mean	2.2x	7.8x	15.0x	20.9x	n/m	18.6x
	Radio									
CMLS	Cumulus Media Inc.	$ 2.58	$107.41	$730.66	2.8x	10.5x	12.5x	n/m	n/m	n/a
ETM	Entercom Communications	$ 8.29	$313.86	$1,110.40	2.9x	11.1x	13.3x	n/m	10.5x	8.1x
				Mean	2.9x	10.8x	12.9x	n/m	10.5x	8.1x
	NewsPrint									
MNI	The McClatchy Company	$ 4.76	$400.17	$2,328.58	1.5x	6.8x	12.9x	19.7x	12.5x	28.0x
NYT	New York Times	$ 12.45	$1,799.03	$2,690.73	1.1x	10.0x	20.4x	37.0x	n/m	25.9x
WPO	Washington Post	$ 444.57	$4,178.96	$3,681.78	0.8x	6.4x	14.9x	n/m	n/m	na
				Mean	1.1x	7.7x	16.1x	n/m	12.5x	27.0x
	New Media									
MSFT	Microsoft Corporation	$ 28.96	$257,744.00	$227,012.00	4.0x	10.5x	11.8x	18.4x	15.7x	13.8x
AAPL	Apple Inc.	$ 197.75	$177,937.43	$154,473.43	4.2x	18.6x	20.2x	31.2x	25.1x	20.8x
YHOO	Yahoo! Inc.	$ 15.88	$22,223.11	$18,427.65	2.8x	12.9x	28.2x	n/m	36.9x	33.8x
GOOG	Google Inc.	$ 550.01	$174,320.17	$152,325.78	6.7x	18.7x	23.1x	37.0x	24.1x	20.7x
IACI	Interactive Corporation	$ 20.49	$2,703.66	$1,060.45	0.8x	12.9x	n/m	11.5x	n/m	28.5x
ERTS	Electronic Arts Inc.	$ 16.77	$5,450.25	$3,438.25	0.9x	n/m	n/m	n/m	34.2x	22.4x
				Mean	3.2x	14.7x	20.8x	24.5x	27.2x	23.3x
	Satellite Imagery									
GEOY	GeoEye	$ 25.96	$482.86	$682.96	3.5x	9.9x	17.2x	13.0x	20.3x	16.6x
DGI	DigitalGlobe Inc.	$ 23.42	$1,052.26	$1,299.06	4.6x	7.7x	15.2x	21.2x	22.5x	27.9x
				Mean	4.1x	8.8x	16.2x	17.1x	21.4x	22.3x

MEDIA SERVICES INDEX

	LTM Sales	LTM EBITDA	LTM EBIT	LTM EPS	Trailing EPS (b)	Forward EPS (b)
High	6.7x	18.7x	28.2x	37.0x	36.9x	38.6x
Mean	2.2x	8.5x	13.4x	15.8x	16.2x	18.0x
Low	0.8x	4.2x	6.4x	6.8x	6.0x	5.6x

(b) EPS estimates from Thompson First Call. Near Earth does not estimate EPS and does not condone or validate these estimates.
(c) Converted to US $ from Euro at an exchange rate of 1.413 US $ per Euro.
(d) Converted to US $ from C$ at an exchange rate of 0.9451 US $ per C$.
(f) Converted to US $ from British Pound at an exchange rate of 1.6117 US $ per British Pound.

n/m Not Meaningful.
n/a Not Available

Member of NEAR EARTH SATELLITE INDEX

NEAR EARTH ANALYSIS: MARKET COMPARABLES

Public Market Valuation Analysis of Selected Companies in the **NEAR EARTH TELECOM INDEX**

($ in millions, except per share data)

		Stock Price:			Enterprise Value as a Multiple of:			Price as a Multiple of:		
		1/22/10	Market Value of Equity	Enterprise Value (a)	LTM Sales	LTM EBITDA	LTM EBIT	LTM EPS	Trailing EPS (b)	Forward EPS (b)
	Fixed Satellite Services (FSS)									
ETL.PA	Eutelsat Communications (c)	€ 23.50	$7,293.26	$10,793.05	8.1x	10.0x	16.2x	20.9x	29.9x	26.6x
SESG.PA	SES Global S.A. (c)	€ 15.53	$8,768.38	$13,945.62	5.9x	8.5x	15.1x	15.6x	19.1x	19.1x
				Mean	7.0x	9.3x	15.6x	18.2x	24.5x	22.8x
	Mobile Satellite Services (MSS)									
ISAT.L	Inmarsat (f)	£ 6.73	$4,980.81	$6,398.71	6.3x	11.5x	17.2x	13.4x	19.8x	15.6x
IRDM	Iridium Communications Inc.	$ 7.96	$543.27	$423.36	1.3x	4.6x	5.4x	15.4x	7.1x	7.5x
ORBC	ORBCOMM Inc.	$ 2.31	$98.08	$49.04	1.6x	6.0x	n/m	n/m	n/m	n/m
GSAT	Globalstar Inc.	$ 1.17	$178.50	$510.53	7.6x	n/m	n/m	n/m	n/a	n/a
				Mean	4.2x	7.4x	11.3x	14.4x	13.4x	11.6x
	Satellite Ground Segment									
CMTL	Comtech Telecommunications	$ 35.64	$1,004.34	$718.49	1.2x	7.0x	8.6x	18.0x	15.8x	15.6x
GCOM	Globecomm Systems Inc.	$ 7.07	$147.55	$97.80	0.6x	9.1x	22.6x	n/m	21.4x	16.4x
GILT	Gilat Satellite Networks	$ 5.53	$221.92	$121.88	0.5x	9.8x	n/m	n/m	n/m	n/a
HUGH	Hughes Communications, Inc.	$ 26.43	$570.89	$974.40	0.9x	7.0x	16.6x	n/m	n/m	25.7x
ISYS	Integral Systems Inc.	$ 8.11	$140.55	$145.32	0.9x	37.3x	n/m	n/m	23.2x	14.7x
VSAT	ViaSat Inc.	$ 27.96	$884.93	$891.60	1.4x	11.8x	18.1x	22.0x	17.4x	14.4x
				Mean	0.9x	13.7x	16.5x	20.0x	19.4x	17.4x
	Satellite Space Segment									
ORB	Orbital Sciences	$ 16.16	$918.37	$673.22	0.6x	9.2x	12.4x	20.0x	26.9x	21.3x
CDV.TO	COM DEV International (d)	$ 3.73	$268.27	$270.81	1.2x	8.5x	12.7x	14.8x	n/a	n/a
MDA.TO	McDonald Dettwiler and Associates (d)	$ 39.00	$1,579.50	$1,920.80	2.0x	11.8x	15.0x	16.4x	n/a	n/a
OHB.DE	OHB Technologies (c)	€ 14.01	$344.45	$298.84	0.8x	9.5x	12.3x	32.4x	24.4x	22.0x
				Mean	1.1x	9.7x	13.1x	20.9x	25.7x	21.6x
	Towers									
AMT	American Tower	$ 42.18	$16,694.84	$20,809.73	12.4x	19.4x	31.5x	n/m	n/m	n/m
CCI	Crown Castle	$ 37.35	$10,875.57	$17,056.46	10.4x	18.1x	n/m	n/m	n/m	n/m
SBAC	SBA Communications	$ 34.50	$4,028.57	$6,245.95	11.5x	20.0x	n/m	n/m	n/m	n/m
				Mean	11.4x	19.2x	31.5x	n/m	n/m	n/m
	General Telecom									
S	Sprint Nextel Corporation	$ 3.37	$9,692.12	$25,965.12	0.8x	3.8x	n/m	n/m	n/m	n/m
T	AT&T	$ 25.39	$149,826.39	$217,751.39	1.8x	5.2x	9.9x	12.2x	12.0x	11.4x
VZ	Verizon Communications, Inc.	$ 30.34	$86,185.32	$188,708.32	1.8x	5.3x	10.5x	14.3x	12.5x	12.5x
				Mean	1.4x	4.8x	10.2x	13.2x	12.3x	12.0x
					TELECOM SERVICES INDEX (excludes Towers stocks)					
				High	8.1x	37.3x	22.6x	32.4x	29.9x	26.6x
				Mean	2.4x	10.3x	12.8x	17.9x	20.9x	17.1x
				Low	0.5x	3.8x	5.4x	12.2x	7.1x	7.5x

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n/m Not Meaningful.

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