

# HIGH SPEED ACCESS REPORT

Quarterly Report Covering the Current State of High Speed Access Including xDSL, Cable Modems, and FTTx  
Published Quarterly by [Information Gatekeepers, Inc.](#) Edited by [Clifford Holliday](#)

## Fourth Quarter 2007 High Speed Access Report

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4. **Direct access to the author** – Clifford Holliday – for questions related to the quarterly publication, or for comments on the subject.
5. **Earliest and personal notification** of any new reports that become available in the area of high-speed access, often with special offers for subscribers.
6. **Customer's Corner has been added** – an opportunity to state your thoughts on these issues, or ask questions.

Note: These reports typically are issued a month and a half or so after the end of the quarter. The delay is caused by the need to wait for the service providers to make their quarterly financial reports. We only take data from those reports, so we must wait for their availability. This report contains estimated data for Rogers and Charter because of their extended reporting times.

**As a Special Bonus, this month's report includes "[Holliday's Holiday Horoscope](#)." This is an annual publication of IGI that provides a top ten forecast for the coming year. It is developed by the author of this newsletter, and results are published on the IGI web site. (See [Holliday's Holiday Horoscope Results – 2007](#).) See end of report for this bonus.**

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## High Speed Access News for the Quarter

### ***RBOCs Are Way Down!***

This quarter, we are seeing the impact that we began discussing three months ago. Both major RBOCs are way down in total number of high-speed accesses added. Recent popular (and even financial) press stories have glorified the RBOCs’ (at least Verizon and AT&T) fourth-quarter results. Information Gatekeepers Inc has been noting in various publications over the last several months that the RBOCs are falling behind in implementing their high-speed access plans, as well as noting the critical nature of those plans to the firms’ successes. The latest quarter’s results for Verizon serve to put a large exclamation point by those problems. While the wireless business is going very well, the RBOCs continue to lose wireline subscribers, and the revenue associated with wireline is going south at a relentless and increasing pace! The party line has been to expect data revenues to increase to more than

replace the cash flow stream lost to wireline. This is not happening! As an example, Verizon’s data revenues increased by \$139 million in the fourth quarter, but wireline decreased by \$327 million – an over two-to-one loss!

To further emphasize the point, Verizon reported a gain of 264,000 high-speed access lines in the fourth quarter – almost all FiOS. This is the lowest total Verizon has posted for a quarter since 2003!

The same pattern is directly in evidence at AT&T. their numbers are a little harder to consider in a meaningful way because of the BellSouth merger, but the same trend is still there. Their revenues are behaving the same way as Verizon’s. AT&T added 396,000 high-speed access lines in the fourth quarter, its lowest total in 2007 and one of its lowest totals in the last several years. Before the BellSouth merger, AT&T was typically adding more high-speed access lines than this.

The reason that the RBOCs are slowing down in access line additions is that it takes much longer to do an install on the new super-high-speed services FiOS and U-verse. Because of the extra labor needed, both companies are beginning to ignore their legacy base of xDSL customers and the market for additions there. Ultimately, this is going to result in nonrecoverable losses to the cable companies and a very slow growth of data revenues – both of which we are seeing already.

### **VERIZON – FIOS – Great! But**

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This was a record quarter for Verizon in adding FiOS and FiOS video. They added 245,000 FiOS lines and 226,000 video customers. However, they only added 19,000 xDSL customers, for a total add of 264,000 high-speed customers. This is the lowest number of high-speed customers added by Verizon since 2003. It is the lowest number of xDSL high-speed adds since we began keeping these data in 2000!

### **We Know What Is Wrong!**

As we have been noting for Verizon in our last two reports, the installation of FiOS is deterring them from achieving the same level of high-speed access gains, because of the added time to install and cut over each new FiOS customer. We see this in the results very

clearly. They are hitting records every quarter for FiOS installs, but their xDSL installs are going to nearly zero. The total of the two is much less than they were achieving with just xDSL.

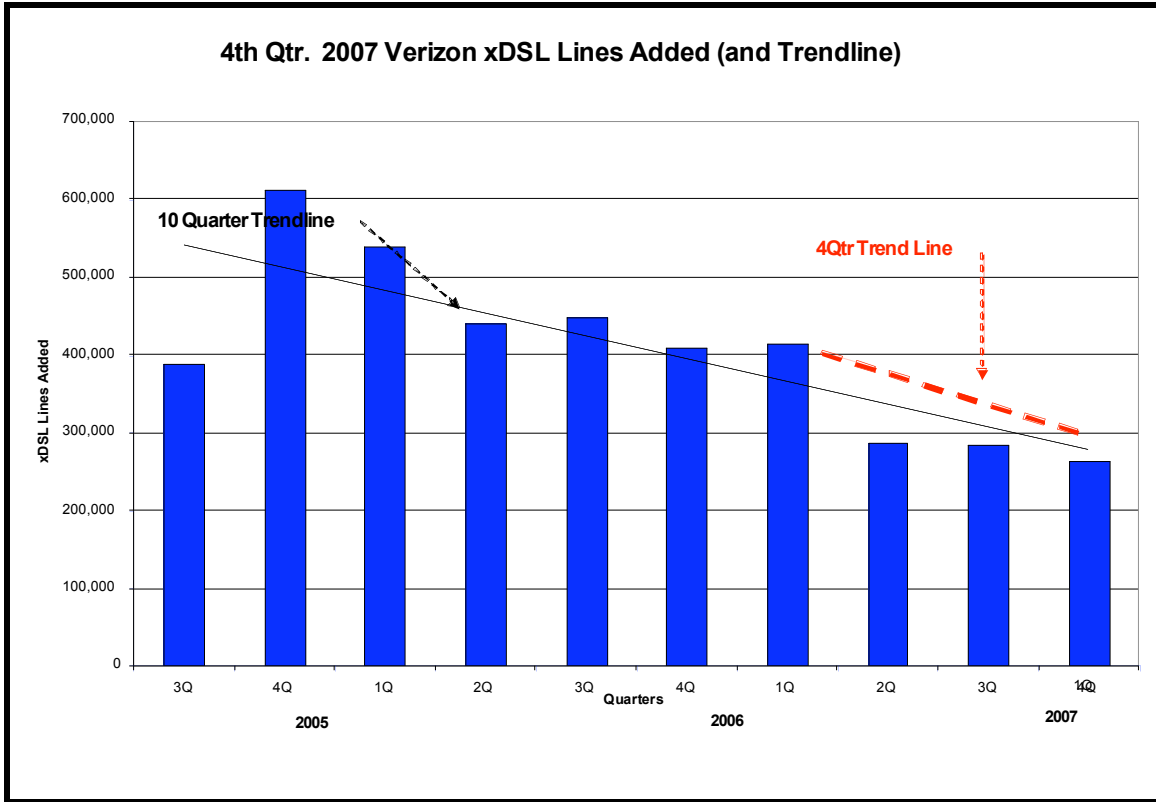
This started as our educated (somewhat) guess, but Verizon has publicly alluded to moving personnel (back office and installers) around the country to try to deal with this problem. Now, after three quarters, it is very clear that Verizon is turning its back on the legacy xDSL market. (Additions of only 19,000 this quarter tells the story.)

With the results this quarter, another shoe has fallen. As we predicted, the same thing is now happening to AT&T. They reported a record number of U-verse installs, but their total high-speed additions are way down!

**As we noted last quarter, there is a real risk of losing the initiative to the cable companies. Once customers are lost in this business, they are very hard to get back! Verizon and AT&T need to do better; and not just a little better. Last quarter we suggested that Verizon needed to almost double what they had done in the third quarter in order for the fourth quarter to be considered a good one. Instead, they actually did about 10% worse!**

**The following graphs will illustrate these points, starting with Verizon.**

Figure 1, Verizon High-Speed Additions – Ten Quarters



The above chart shows this Verizon problem continuing and getting worse! Both trend lines are now sloping down, with the four-quarter trend line more decidedly downward, and the ten-quarter trend line has been brought down by the last three quarters' performance.

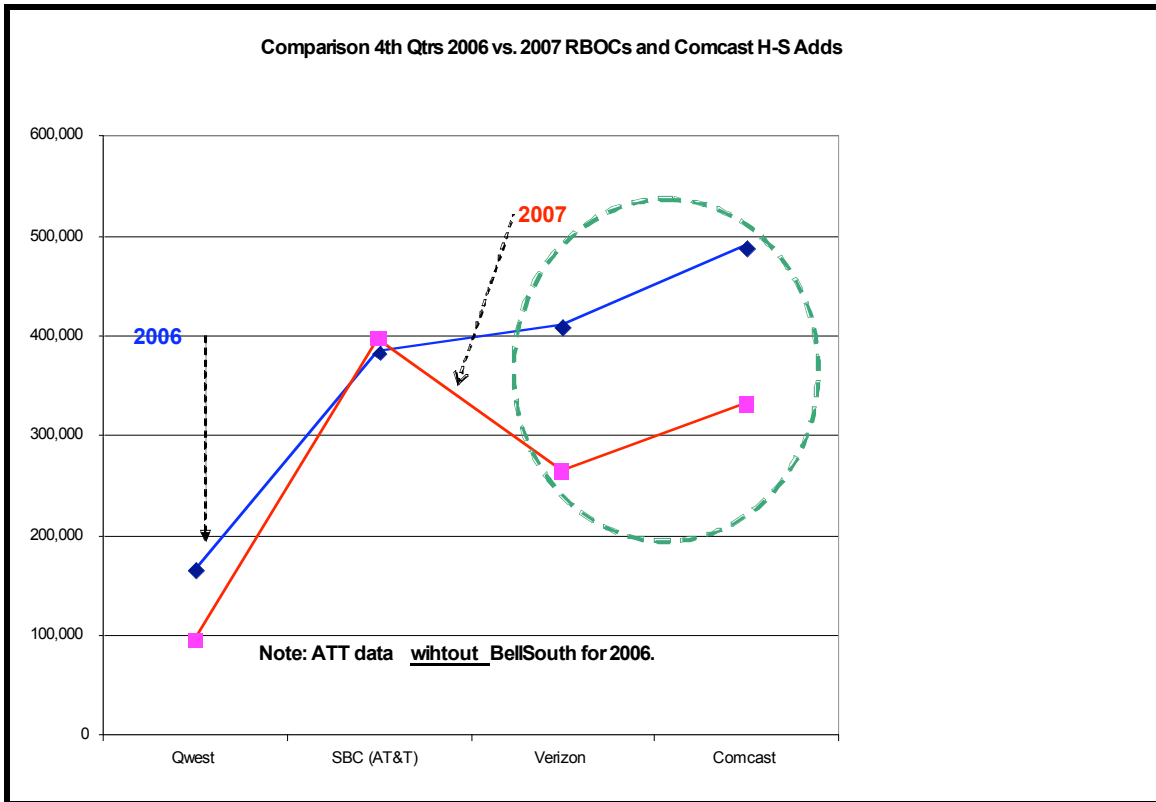
Please note that this chart includes FiOS as well as xDSL.

## AT&T

Now let us turn to AT&T. the picture here is more complicated because of the BellSouth merger, but we will work through that. The following chart shows

the three RBOCs' year-over-year performance in the fourth quarter, and also includes Comcast for comparison.

**Figure 2, RBOCs' High-Speed Performance Year-over-Year**



While this quarter's performance is actually above the AT&T performance for fourth-quarter 2006, to get an accurate picture we need to include the BellSouth quantities for 2006, since those quantities are in the 2007 numbers.

This is achieved by looking at the red values on top of the AT&T values for 2006. By adding these together, we can see that AT&T's performance for fourth-quarter 2007 was actually about 170,000 short of 2006!

### **AT&T and BellSouth**

At the first of 2007, we started reporting on the combined AT&T/BellSouth merger high-speed access additions totals in a manner to allow accurate continuing comparisons. To help consider the relative performance and meaning of the combined data, we are using a stacked bar chart to present the

AT&T data for all this year. The chart shows (for 2006 and the quarters of 2007 as we go through the year) the two companies' high-speed access data.

As we noted last quarter, the results for AT&T are not much better in terms of trends than Verizon. The reader will note

the same general trend as with Verizon – not very good results.

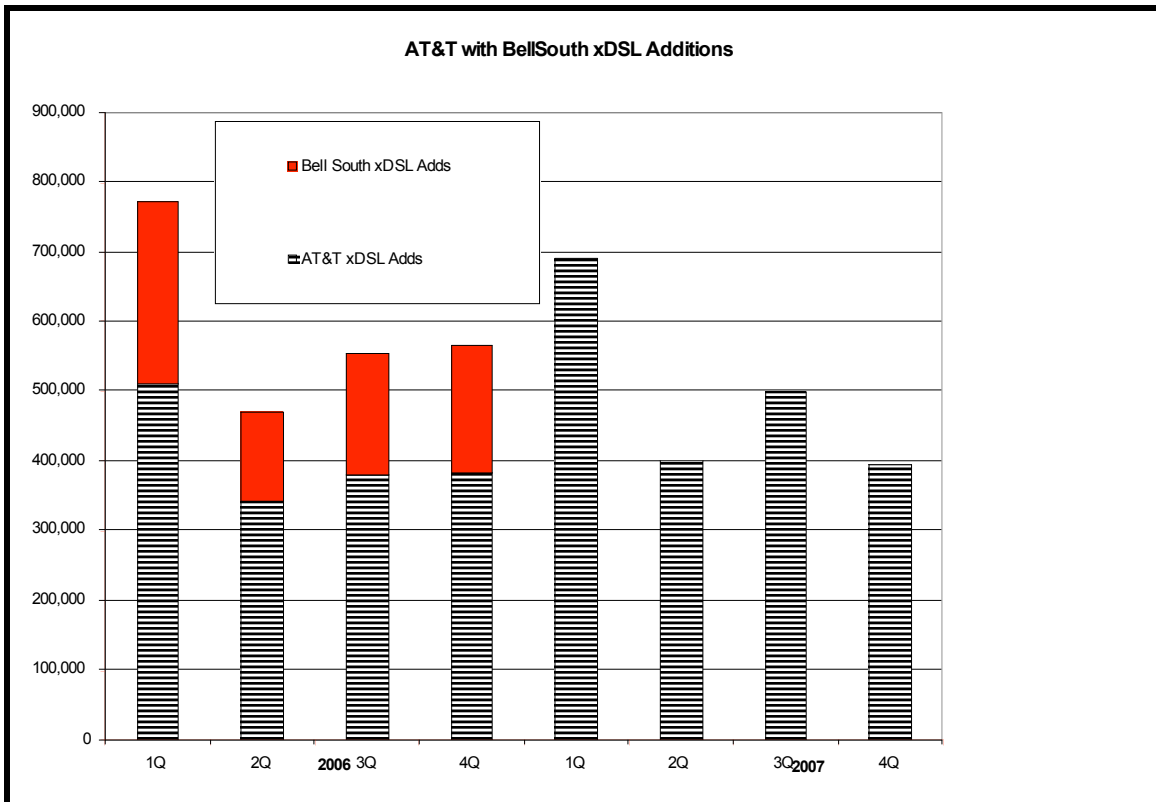
**Perhaps AT&T is also beginning to focus its resources on U-verse.**

The chart illustrating this follows. Note that each quarter of 2007 is inferior to

each quarter of 2006, considering the combined (AT&T and BellSouth) data.

**Like Verizon, AT&T is spending approximately \$17 billion in capital this year, a good portion of which is to upgrade its access plant. To begin to justify this expenditure, they must improve these results.**

**Figure 3, AT&T and BellSouth Data Combined**



## Other News

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### **AT&T Raises xDSL Rates**

In what seems to be a basic misunderstanding of supply-demand dynamics, AT&T is raising the rates on its lower-level xDSL services. This increase is coming in spite of the downturn in additions to this service that is noted in our lead stories.

AT&T has added a level to its U-verse offering. This is a tier with data rates of 10Mbps down and 1.5Mbps up. This is \$55 a month when bundled with U-verse video.

AT&T is also offering free access to its Wi-Fi network to U-verse subscribers.

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### **AT&T Makes Other U-verse Changes**

It is reported that AT&T will raise by \$5 a month the cost of its three slowest-speed xDSL services. This increase will be in the old SWC territories (all of AT&T except the former BellSouth area). It will be effective March 1.

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### **Verizon Adds Business FiOS**

In spite of its trouble meeting installation requirements for residences, Verizon is now moving to offer its FiOS services to small businesses. Verizon has announced the availability of a symmetrical, 20Mbps variety of its FiOS

for SMBs. Other speeds are also available. It also throws in static IP addresses for the business customer. This service is available in some of the company's FiOS offering areas.

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## Verizon to Attack Urban Market

Perhaps in an effort to raise its number of new FiOS installs over what it is now getting, Verizon is working on entering several large-city urban markets. It is in the process of trying to get franchise deals in New York and Washington, D.C., among others. Because these

might be largely in the nature of MUD (multiple unit distribution), it is conceivable that the per-customer install time could be less. This could help alleviate the installation resource issue discussed in the opening of this newsletter.

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## Money not in Making Telecom Equipment

Equipment makers Ericsson and Alcatel-Lucent have both reported substantial losses for the quarter and the year. Both firms are planning layoffs and/or reductions in dividends to help make up for lagging profits.

None of the traditional telco manufactures seems able to make a

profit in this business now. Even mighty Cisco just reported a so-so quarter, with an outlook that caused the market to tumble. See our [Horoscope](#) section at the end of this Newsletter for our 2008 forecast in this regard. We do not believe that all of the current equipment manufactures can continue in the US market.

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## Cisco's Chambers Sees Video Driving Upgrades for a Decade

In a more optimistic note regarding current equipment vendor problems, John Chambers, CEO of Cisco, has been quoted as believing that video will drive network upgrades for the next decade. Chambers thinks that business use of video teleconferencing will begin to have as big a place as entertainment video and things like YouTube.

Our reports, "[How Much Bandwidth Is Enough in the Access Network](#)," and "[Network Growth](#)" deal with this issue and generally agree with Chambers; however, we see much more growth in the non-business uses of video on the Internet.

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## Online Gaming Important to Network Growth

Much more in line with our estimates noted in the above reports is a recent forecast for online gaming. This forecast is not including gambling, but rather is directed at video-type games. The forecast is for the number of console

online subs to increase at an annual rate of 43% for the next four to five years, and handheld will increase by 37% a year. That is a tremendous growth, and they tend to be bandwidth hogs!

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## Video (Movie) Downloading Growing Rapidly

Another video service that is a bandwidth hog is downloading videos. A recent report sees that activity growing from 2008 with about 215 million (per year worldwide) to 2.4 billion by 2012. This is only slightly less than doubling

every year! By itself, this would be a huge bandwidth-provision problem.

This type of service is also much more in line with our forecasts in the above-mentioned reports.

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## Qwest Announces “New” Video “Strategy”

Qwest’s new CEO, Ed Mueller, has announced what they claim is a new video strategy. In short, it relies on delivering video over the Internet to computers and computer-like devices. They plan to leave the delivery of cable-like video to the cable companies (they will take it) and to their partnership with DirecTV (which they resell.) They are

including in this plan the ability to get up to 38Mbps to the customer’s premises (via VDSL2 and pair bonding), but don’t seem interested in trying to use this bandwidth to offer services, a la FiOS or U-verse.

Our view of this – GOOD LUCK! The only thing going for it is it’s cheap.

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## Broadband for All USA?

A recent report from the National Telecommunications and Information Agency claims that the Administration’s

goal of “Broadband for All” has largely been achieved. Many critics disagree. The conclusion is based on the data that at least 99% of the Zip Codes in the country are served by at least one

broadband provider. However, if you live on a backcountry road in eastern Kentucky, the fact that somebody can get broadband service in the county seat does not make much difference to you.

A better measure is penetration, and we present some data on that in the charts

with this report. In terms of the world, the US has dropped from being the 4th-highest country in 2001 to being now only the 15th-highest. The slowdown due to installing the new super-high-speed accesses will only exacerbate this.

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### Why Did Ciena Buy World Wide Packets?

This purchase has had many analysts wondering why Ciena would buy a company (for a very high price) that largely builds Ethernet equipment, while most of Ciena's gear is based on passive networks. One possibility is that WWW has been selected by AT&T for a large multiyear contract for an undisclosed project. Ciena is a big and well-thought-of supplier of AT&T, while WWW is

much smaller than the type of company AT&T typically deals with. It could be that AT&T forced the merger because is planning a major change in its U-verse architecture and it needed this combination of companies to help it make the switch. See our forecast of an AT&T switch elsewhere in this newsletter.

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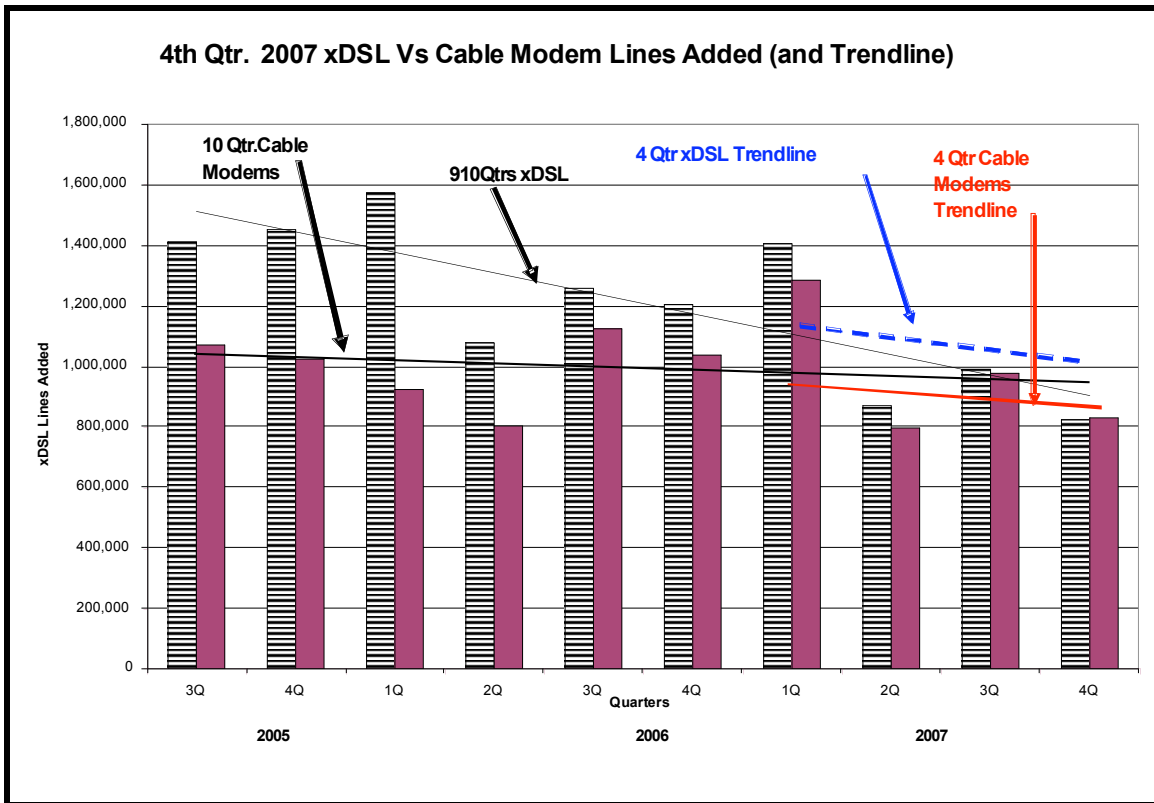
### Results for the Quarter

Now we will turn to the results for the quarter. The third quarter is a historically strong quarter (the second-best usually) with the back-to-school spending. However, there were few bright spots this quarter. With the focus seemingly lost in the two major telcos, and the cable companies in a bit of a slump, this has not been a good quarter for high-

speed additions. However, it should be noted that the cable additions remain right on our forecast.

**A major part of the slowness is the focus of Verizon on its FiOS services to the neglect of its bread-and-butter xDSL.**

Figure 4: Change in Trend lines - Last Four Quarters



In the above chart, note that the trend lines for the telcos are all negative; this is not a good situation, as they are losing potential customers that will be very hard to recapture. The telcos need to find a marketing technique that will allow them to retain a focus on their legacy xDSL business while introducing the new, higher-speed access options.

The cable companies have a negative trend the last four quarters, but an even trend for the long term. One of the reasons for the short-term negative is that they had such a great few quarters in late 2006, making the more normal 2007 quarters look negative. In total, the cable companies remain right on our forecast, while the telcos continue to fall further behind.

Perhaps what is happening is very directly hinted at in the quotation from the Verizon official noted in the opening story of this report. **The telcos are so distracted by the new programs (FiOS and U-verse) that they are not providing the needed resources to keep up their xDSL business.** This distraction has probably already caused them to lose ground to the cable companies. **A customer lost in this game is hard to recover – no one likes to go through the agony of changing ISPs and high-speed carriers.**

While it is understandable for the telcos to have a focus on the massive undertaking they have going, **they cannot afford to drop existing programs!**

It is interesting to note that Verizon has just launched an advertising campaign for its total broadband (including xDSL) products. This

author saw the first of these ads on CNBC just before this report went to press.

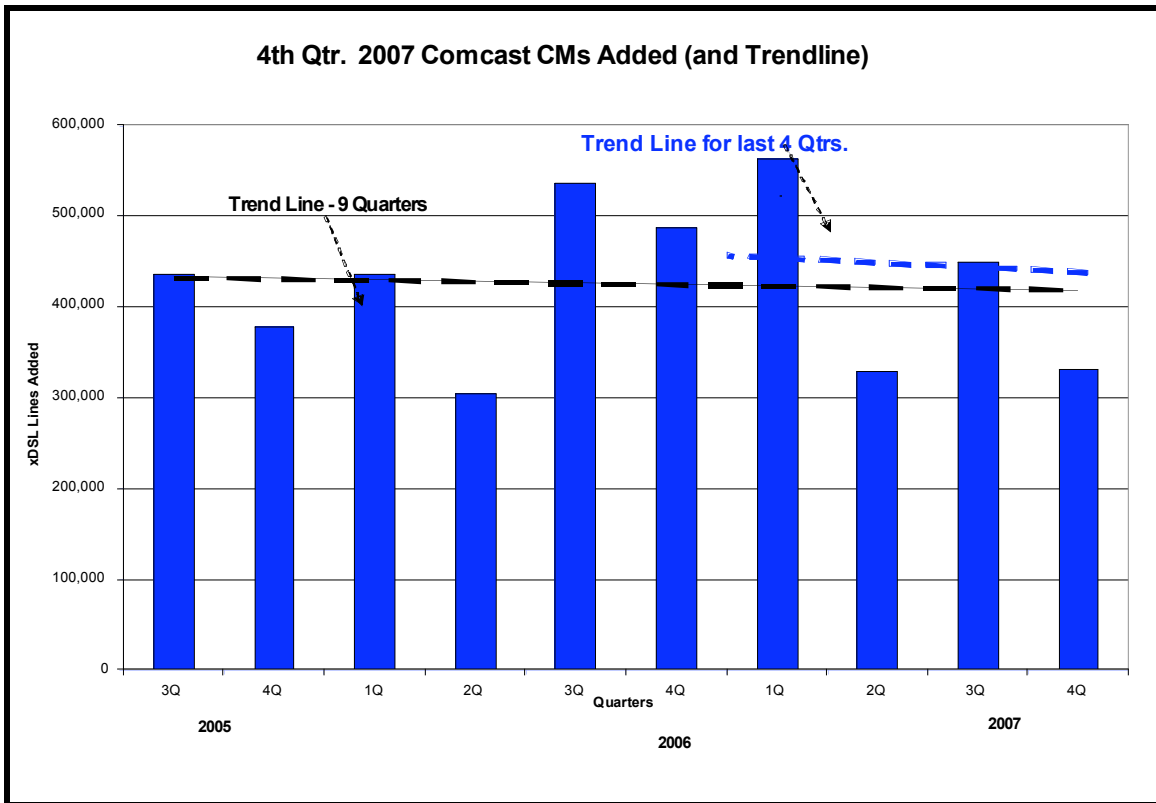
### **Comcast High-Speed Growth Weak for First Time in Many Quarters!**

The last three quarters, we reported that Comcast had great results for several quarters in a row, but not so for 4Q 2007. Comcast added 331,000 cable modem lines this quarter, a decrease from the fourth quarter of 2006 of over

150,000. Comcast had been one of the few bright spots to be seen in the HSAR.

The following chart shows Comcast's additions over the last 10 quarters.

**Figure 5: Comcast CM Additions**



The long-term trend has now turned somewhat negative, while the four-quarter trend is decidedly negative.

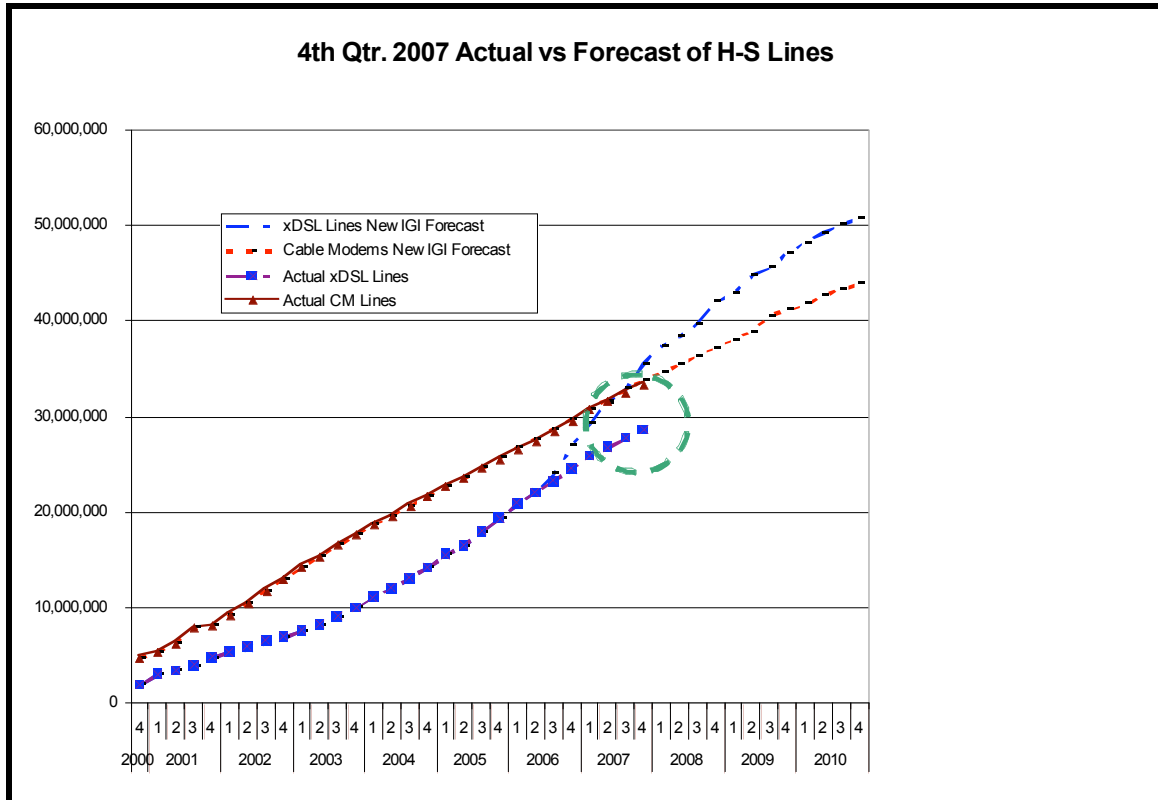
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## Telcos Continue to Fall Behind

As noted elsewhere the telcos did not have a very good quarter as a group.

The following chart shows the additions for xDSL (the RBOCs) vs. cable modems.

Figure 6: Comparison of RBOCs' 3rd Quarters 2006 vs. 2007



As can be seen, xDSL continues to fall behind the forecast and the RBOCs are failing to make significant gains on the

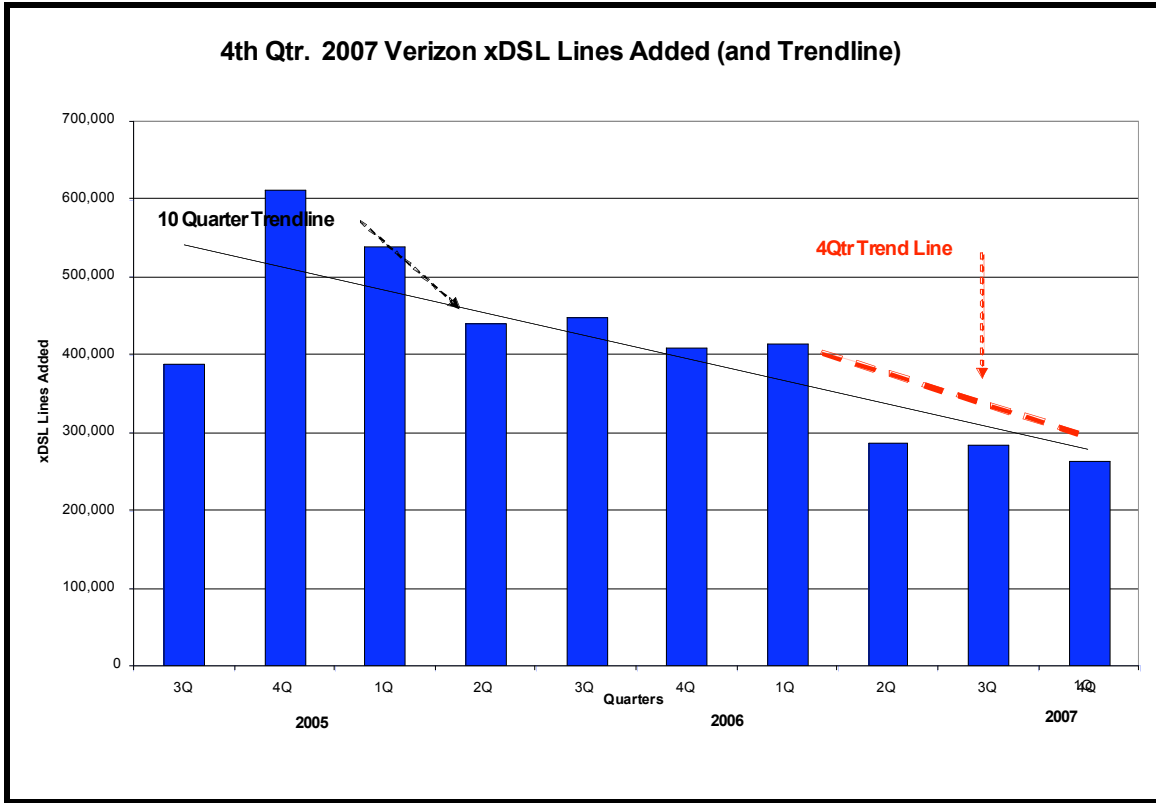
cable companies. Cable modems continue to be right on forecast.

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## Verizon Has a Lackluster Quarter

As noted in our lead story and elsewhere, Verizon had a bad quarter. The following chart illustrates this.

Figure 7: Verizon xDSL Additions – through 4Q 2007



Note that the 10-quarter trend line is decidedly negative. Also, note that the

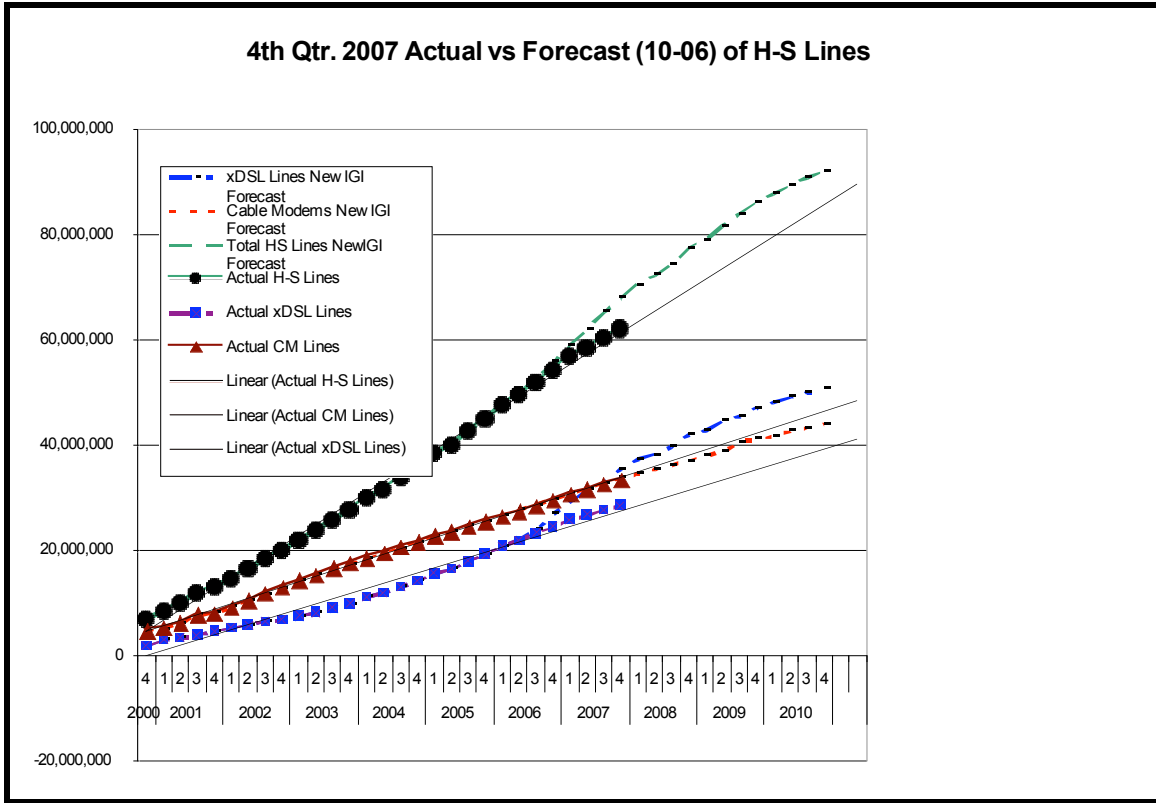
four-quarter trend line, which was already negative, is now even more so.

### Comparison of Telcos and Cable Companies

The following chart illustrates the historical relationship between the major cable companies and the major US

telcos, as well as this quarter's results. It also provides a linear trend line for both CMs and xDSL.

**Figure 8: Comparison of CMs to xDSL Additions and Comparison to Forecast**



The above chart illustrates the overall situation and provides comparison to our forecasts. To help in reading the chart, the straight black lines are linear trend line projections of (from the bottom) xDSL lines, cable modem lines, and total high-speed access lines. The dashed lines for these three quantities are our forecast for each of these (made in late 2006). The heavier symbol lines (squares for xDSL, pyramids for CMs, and circles for total) are the actuals (actual in-service quantities as of the selected date) for each of the statistics.

Cable continues to follow the trend line and our forecast (which has built-in corrections for historically bad quarters).

The telcos had been following what appears to be a somewhat parabolic curve, and were rapidly catching up to the cable linear trend. The reader can see that for the last three quarters, the telcos have fallen below the forecast, while still well above the linear trend line. This period corresponds nicely to the time that they, particularly Verizon and AT&T, have been emphasizing the new technologies.

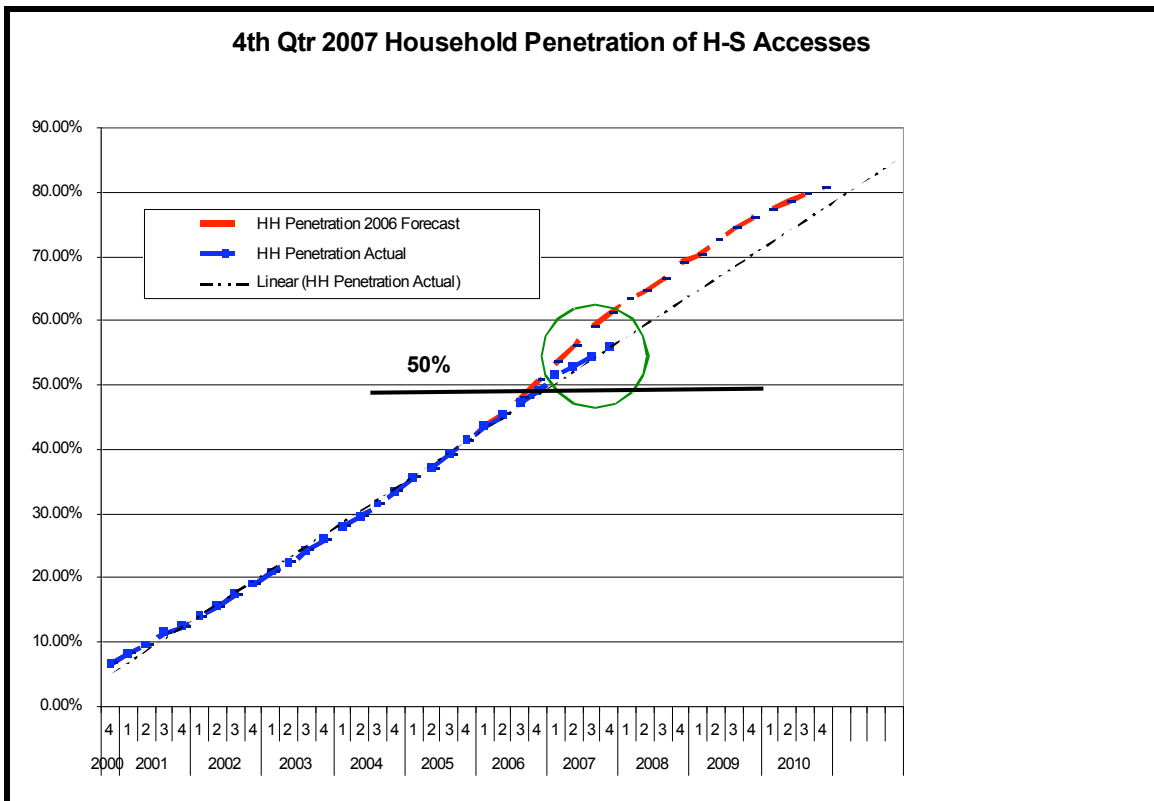
The drop for this quarter by the telcos will be much clearer on the following graph.

## Household Penetration

This heading refers to the percentage of households in the US with installed and working high-speed access service. This is a very important statistic, because it really measures how many Americans have residential access to high-speed service. It is an indication of how good a job the carriers have done in making the service available, and how well it is being accepted by the public. Beware of

other measures that suggest a much higher percentage than is included in the following graph. While we are fans of high-speed access, we feel it is irresponsible to report achievements for it based on surveys or polls, as some have done. The only way to measure household penetration is to count it, and that's what we do.

Figure 9, Household Penetration of High-Speed Access



While the penetration rate is now well over 50% (over half the US households have high-speed access installed), it is also well behind our forecast.

**We are going to publish a new forecast with the 1Q 2008 HSAR to take the new trends into account.**

Note that this forecast suggests that by 2009, high-speed accesses will be available and installed in 80% of our

households. This result requires a concomitant growth of household PCs to around 85%. (See “[Will the RBOCs Get](#)

[Googled Up?”](#) for details of the forecast.)

## Summary of High-Speed Activities for the Major Carriers

The following chart illustrates the quarterly additions for xDSL and cable

modems for the most recent quarters for the largest carriers.

Figure 10: Summary of Major Carrier Activity

### Major Cable Companies

	2006	2006	2006	2007	2007	2007	2007	2007
	3Q	4Q	Total to Date	1Q	2Q	3Q	4Q	Total
Charter	88,100	59,000	2,611,000	123,900	60,300	53,000	50,000	2,898,200
Comcast	536,000	488,000	10,269,200	563,000	330,000	450,000	331,000	11,943,200
Rogers	51,800	44,800	1,310,400	42,000	21,100	55,000	40,000	1,468,500
Cox	100,000	100,000	3,300,000	100,000	100,000	100,000	100,000	3,700,000
Time Warner	251,000	246,000	6,644,000	356,000	188,000	224,000	214,000	7,626,000
<b>Totals</b>	<b>1,026,900</b>	<b>937,800</b>	<b>24,134,600</b>	<b>1,184,900</b>	<b>699,400</b>	<b>882,000</b>	<b>735,000</b>	<b>27,635,900</b>

### Major Telcos

	2006	2006	2006	2007	2007	2007	2007	2007
	3Q	4Q	Total to Date	1Q	2Q	3Q	4Q	Total
BellSouth	176,000	183,000	3,632,000	0	0	0		3,632,000
Embarq			1,017,000	87,000	52,000	60,000	61,000	260,000
Bell Can.	90,000	59,000	2,474,000	43,000	29,000	34,000	29,000	2,609,000
Qwest	175,000	165,000	2,137,000	167,000	100,000	111,000	95,000	2,610,000
SBC	380,000	383,000	8,537,000	691,000	400,000	499,000	396,000	10,523,000
Verizon	448,000	409,000	7,062,000	416,000	288,000	285,000	264,000	8,315,000
Totals	1,269,000	1,199,000	24,859,000	1,404,000	869,000	989,000	845,000	27,949,000
<b>Total</b>	<b>2,295,900</b>	<b>2,136,800</b>	<b>48,993,600</b>	<b>2,588,900</b>	<b>1,568,400</b>	<b>1,871,000</b>	<b>1,580,000</b>	<b>55,584,900</b>

Note: The numbers for BCE (Bell Canada) are not completely consistent due to a spin-off of rural lines in Ontario and Quebec. We will correct this on a going-forward basis.

## FTTP Watch

### Verizon FiOS

Verizon added 229,000 FiOS customers this quarter. Of these, 202,000 also subscribed to FiOS TV. This is the biggest quarter yet for FiOS additions

and shows a growth trend of about 30,000 per quarter (each quarter is growing about 30,000 more than the last).

**Figure 11: FTTP Forecast from FTTP Report**

At the end of 2006, Verizon claimed to have over 6 million homes passed with the basic service. This is almost exactly the forecast contained in our latest FTTP Report “[FTTP – The New Standard and](#)

[How It Is Changing Already.](#)” The above chart from that report illustrates our forecast for Verizon FTTP. It appears that Verizon is well on target with its program.

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### AT&T Lightspeed (U-verse)

AT&T U-verse now serves 943,000 video customers. It added 226,000 in the last quarter. They now equal what Verizon is doing with FiOS in terms of serving customers. This is an important feat, since they started way behind.

AT&T had planned to deliver TV in 15 to 20 markets by year-end 2006. By November it was still in just the two cities mentioned above. In late December, AT&T announced it was up and running in nine more markets, for a total of 11.

AT&T (then SBC) started its FTTP (it’s not really to the premises – just to a node up to 4,000 feet away from a home, and then on copper to the home) in late 2005 with a trial rollout in San Antonio – the corporate home of SBC. It is now known as U-verse (or confusingly sometimes as Project Lightspeed.) It converted the San Antonio trial to a commercial deployment in 2006. It also added Houston in 2006.

By the end of this year (2008), AT&T says 18 million homes will be able to receive fiber-to-the-node.

There are still questions about the adequacy of the bandwidth provided by Lightspeed. Our report noted below covers this issue, and forecasts a big change in the AT&T plans. It is certainly open to question as to the viability of using their FTTn-based architecture to provide services that will be competitive in the near future.

The latest rumor is that AT&T is only getting 20-24Mbps from its FTTn architecture rather than the 24-28Mbps anticipated at 2,500 feet. Even this small a difference could make a very tight situation — as to available bandwidth vs. required — almost untenable.

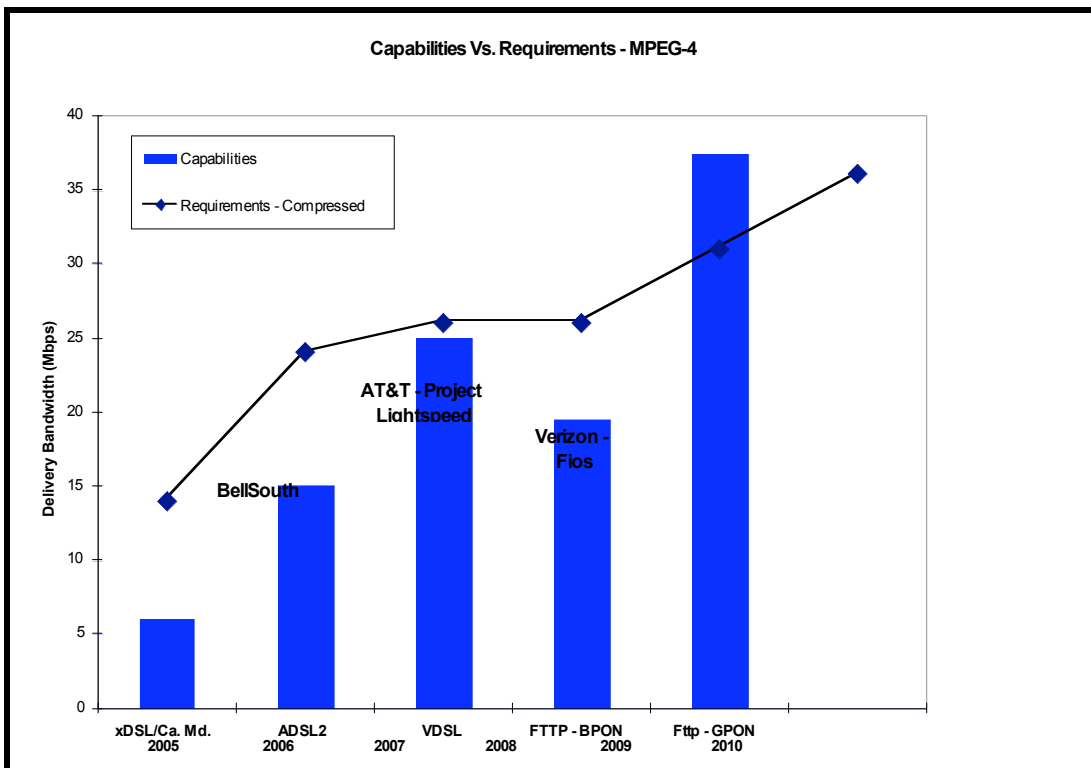
The other big question at AT&T is what to do with the FTTC (fiber-to-the-curb) legacy from the acquired BellSouth properties. This architecture is enough different from AT&T's FTTn to be very significant. FTTC is much closer to FTTP, and much more capable than FTTN. A recently passed law in South Carolina that requires only statewide (as opposed to citywide) television franchises has been the instigator for AT&T to announce that it plans to upgrade the network in this state to bring U-verse to it. (The same situation exists in Georgia.) It appears now that AT&T

will choose the FTTn architecture for South Carolina.

**We continue to forecast that AT&T will quietly convert to GPON on most of its upgrades for U-verse. This forecast is beginning to look less secure as we get more announcements of FTTn. However, the physical facts haven't changed, and we continue to believe that the consumer needs for bandwidth will drive AT&T ultimately to PON architecture.**

**Our report, "How Much Bandwidth Is Enough in the Access Network," outlines the argument for needing more bandwidth than FTTn can deliver. The following chart from that report illustrates the forecast bandwidth needs and the capabilities of the various architectures.**

**Figure 12, Bandwidth Needs and Architecture Capabilities**



Note that the capabilities of BPONs illustrated in this graph are based on very conservative assumptions, while the VDSL assumptions are very positive. This difference is what has trapped the

FTTn advocates. This chart also suggests why we continue to believe that **GPONs in a passive network** will be the standard for all telco carriers, ultimately.

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## **Qwest**

As noted above, Qwest has announced a plan to beginning a program to install FTTN to about 1.5 million of its subscribers. This is in spite of the fact that they have recently almost made light of such an idea.

**This report an earlier edition (2Q 2007) forecast correctly that Qwest**

**would move to an advanced access program.** However, we also forecast it would be GPONs with FTTP, rather than FTTN, a la AT&T. We appear to have been half-right, anyway.

Also see the above news article about Qwest's newly announced video strategy.

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## Customer's Corner

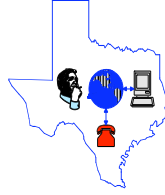
Every quarter we will offer our clients the opportunity to sound off, ask questions, and make comments on the forecasts – whatever you like. We will publish the best of the comments with or without names, as directed by you. If you send me something and don't want your name included, please say so. To submit something for our 1st Quarter 2008 report, just send email to [Clif Holliday](mailto:Clif.Holliday). The address is

[c.holliday@ieee.org](mailto:c.holliday@ieee.org). **We look forward to hearing from you!**

We have a few questions and comments from our last report, and we will include them below without names, since we had not warned that we may use the comments.

### Figure 13: Client Comments

1. **Q.** “Can I re-use the figures and material in this report for publication elsewhere.” (Repeat – FYI)  
**Answer:** Yes, you may as long as you give us proper credit.
2. **Q.** “Will FTTP begin to have an effect on High-Speed Access Lines and when will this start to show up?” (From C.D.T. in Lexington, KY, Repeated again – again because of the Verizon results this quarter.)  
**Answer:** It really showed up in the 4th Q 07 and with AT&T. We think the reason for Verizon's (and AT&T's) poor showing this quarter is the focus they are giving FiOS.
3. **Q.** “Could you include more on the Equipment Makers?” Sam D., Tacoma.  
**Answer,** See the "Other News" section above. We have included manufacturer issues where appropriate.
4. **Q.** “Why do you brag about your correct forecasts?” Rose Marie, Los Angles.  
**Answer,** If we don't brag about them, no one else will. Seriously, we need to let our readers know of the accuracy (and sometimes the inaccuracies) of our forecasts, so they can better judge how to use them.
5. **Q.** “Your report – HSAR – is most useful in our marketing business. Keep up the good work!” Sam V., Chicago. Repeat – We liked it so much.  
**Answer.** Great – tell your friends! We hope you will find it even more useful as we expand its scope.



January 2008



## Holliday's Holiday Horoscope – 2008



### Top Ten Telecommunications Forecasts for the New Year

*{This is an annual collection of predictions for the New Year by Clifford Holliday, an IGI analyst and author of the Lightwave Series. It is intended for your information and, in some cases, amusement. For the first time, we are introducing our year's forecast as a part of our [High Speed Access Report](#). Many details of these forecasts are available from the author's latest reports ("FTTP- The New Standard and How It Is Changing," - Just updated late 2007, "FTTP Equipment and Cable Requirements," "Internet Growth," "On the R-OADM to the Lightwave Network," "The Next Generation Network – Will the RBOCs Get Googled Up," and "How Much Bandwidth Is Enough in the Access Network?}" which can be obtained from the Information Gatekeepers Web site, [www.igigroup.com](http://www.igigroup.com) .}*

Could it be that another year has gone? It seems just a few days ago, no more than a week or two, that I was thinking about the likely events in 2007. Now here it is time to talk about 2008! If you want to see how I did with my 2007 forecasts, go to the Information Gatekeepers Web site – [www.igigroup.com](http://www.igigroup.com) for a review. My grading of last year was a 77.5% - If you like, go to the Web site and send us your grade.

We are somewhat late with our publication of these forecasts this year, as we wanted to see some of the carriers' fourth-quarter results before committing to forecasts for 2008. In the interests of continuity, we are still styling this the "Holiday Horoscope." You can think of it as a late Christmas present.

The following is a continuation of our series of annual forecasts for wireline telecommunications (a strange term now that almost no new stuff is wire). Before we go into our predictions for 2008, we feel compelled (if we had not done well, we probably would not feel so compelled) to cite our results for the last few years. Our Horoscope for 2003 was only slightly over half right – but batting .500 pays big money in the major leagues! In 2004 we outdid ourselves by achieving a better than 70% result. The 2005

result was even better at about 85%. For 2006, we did very well, also, achieving a 77.5% grade. As noted above we also hit 77.5% in 2007.

Let us look now at our predictions for 2008. (To help those wanting to get a quick look at the actual predictions, and not to be bothered with my reasoning or lack thereof, the actual predictions are underlined.)

**We invite you to review the forecasts and let Dr. Polishuk ([ppolishuk@igigroup.com](mailto:ppolishuk@igigroup.com)) or me ([c.holliday@ieee.org](mailto:c.holliday@ieee.org)) know what you think about the forecast. We may publish the most interesting (or amusing, or both) responses in the Reader's Corner of the HSAR.**

**1 Capital Expenditures** –The 2007 expenditure of capital exceeded our forecasts (actual of about 115.5% of last year's, compared to our estimate of 110%.) The levels of capital expenditure by the major telcos (the others are important, too, but the RBOCs spend so much more than everyone else, the others do not matter much) continue to be high with the new FTTx networks that are being installed. Also, the telcos capex had been so low for the last several years that basic asset replacement needs were not being met. Adding to the overall increase was somewhat of a surprise from Comcast, which was up about 50%. The cable companies overall were up about 27%. We are again predicting an increase, and, after being low the last two years, we are going with the flow this time. The RBOCs have started (in varying degrees) several new capital programs that will tend to require more capital expenditures and we expect the cable companies to continue upgrading.

We are therefore forecasting a 15% increase (2008 over 2007) in capital expenditures by the major telcos, cable companies, and IXC's. Most of this will be from the RBOCs. Our report "[Next Generation Network - Will the RBOCs be Googled Up?](#)" now available from Information Gatekeepers, details this forecast.

**2 High-speed Access** – We believe (and we can show the calculations to strongly support that belief, see our report "[Internet Growth](#)") that high-speed access is now the main source of traffic growth on our backbone networks. We think that high-speed access penetration (percentage of households equipped with high-speed access) has reached the part of its 'S' growth curve that goes up dramatically. Last year we had predicted that it would reach 54% to 57% and it did, at about 56.5%.

In 2008, we predict a somewhat slower growth, with the telcos held back by emphasis on advanced high-speed products (FiOS) and the attendant greater cutover requirements. In this case, we believe the demand is there, but the supply problems – the harder cutovers – will hold down actual growth. Our forecast for 2008 is for high-speed access achieving 60% - 65% penetration by year's end as measured by US households.

**3 High-speed Access, Part II** – A major battle is in progress between the cable companies and the telcos for dominance in the high-speed access arena. The cable companies achieved a two-to-one lead over the telcos that stood up through 2003. However, in 2004, (might we be permitted to say, “exactly as we forecast,”) the RBOCs began a massive effort to correct this situation, and the two-to-one lead melted to about 53.5%-46.5%, still in favor of the cable companies. Last year we predicted that the telcos would cut this led to 50%-50%, but it only reached 53.5%-46.5%.

For 2008, we predict that this trend will continue, but very slowly, with the telcos reaching 47% to 47.5% by year-end.

We also predict that before 2008 is over at least one major US MSO will be seriously working with a version of FTTP!!

**4 Network Traffic** – We have been forecasting network traffic for several years. This has been really a "gimme" forecast for several reasons. First, there is no ‘network’ in the sense that one can measure things on it. Then the question of measuring the traffic (if there were a single network) is also problematic. However, in spite of these very formidable problems, this issue is very important. Traffic growth is the source of investment need and profit growth. It is really the basis of our business. Therefore, we try to estimate the increase in traffic on the network every year. Last year we estimated that network traffic would increase by 150%. We have recently completed two reports on network traffic (“[How Much Bandwidth Is Enough in the Access Network?](#)” and “[Internet Growth](#)”). In preparing these reports, we concluded that 150% is too high a growth estimate for the backbone networks, and that it is more like 50%.

For 2008, we predict that network traffic will continue to be influenced by IPTV traffic, even though IPTV will be on its own networks. However, we think overall growth will be between 45% and 50%.

**5 Mergers** – This is the forecast that we hit out of the ballpark in 2005 and again in 2006. We correctly predicted the RBOC-IXC mergers in our [2005 Holiday Horoscope](#) and the Lucent-Alcatel merger in the 2006 version of the Horoscope! Last year, 2007, we predicted a major equipment vendor merger, and we missed that completely. For this year, we continue to feel that there are too many major telco equipment vendors in the US. We just think that the market is too small to support Lucent-Alcatel, Nortel, Siemens, Fujitsu, Ericsson, and the others.

We predict again that one or more of the large, traditional telecom vendors will be involved in a major merger, or will leave the US market.

**6 Mergers II, or “Who’s Going to be Googled Up?”**– There has arisen a new class of telecom competitor in the Googles, Yahoo!s, and MSNs of the world. These customers/competitors have found ways to profitably use the growth of data traffic in their basic businesses much more so than any of the traditional telecom companies. Last year, we predicted Google would become very active in telecommunications, which it did.

This year we are predicting that one or more of these companies will make an even more dramatic move toward direct, active participation in the telecom market place. Our report, [“The Next Generation Network – Will the RBOCs Get Googled Up?”](#) deals with this in detail.

**7 Regulation** – The 2007 trend towards lighter regulation will continue. With that in mind, we make the same prediction as last year: the network access-sharing rules will continue favoring the incumbent carriers; that the Internet will continue untaxed; and that any prospective telecom vendor merger will be allowed. What future years will hold will likely depend on the 2008 elections.

**8 Network Modernization and the NGN**– Our existing network, at almost every level, is a conglomerate of various generations and types of technologies. There has been substantial work done on the development (from a standards viewpoint) of a next-generation network (NGN.) Capital constraints have previously prevented the initiation of any real replacement program for the older technologies. In addition, while we have been in a deep freeze as to investment, technology and product advancements have continued. While capital may be loosening up a little, there is still a strong pressure for profitability, suggesting the need for expense containment.

For all of these reasons, we predict a definitive continuing movement toward an NGN in 2008. This is much the same as last year’s prediction, and we will likely carry it for several years, as it is a long-term venture. This program will be based on elements like ROADMs, next-generation DWDM, next-generation SONET, and optical switches. It will be directed at making the network more flexible, more reliable, and less labor-intensive. Our report, [“The Next Generation Network – Will the RBOCs Get Googled Up?”](#) outlines this prediction in great detail.

**9 ROADMs** – As noted under Network Modernization, we believe that the time has come for reconfigurable optical add/drop multiplexers (or, as we say in Texas, “Rode ‘ems.”) The RBOCs will begin to deploy these elements in metro networks, and the IXC and cable companies will continue to use them in long-haul networks.

We predict that there will be a continual effort towards strong deployment of ROADMs in 2008. Again, this is similar to our 2007 prediction. Our report [“On the ROADM to the Lightwave Network”](#) details this.

**10 FTTP** – Verizon continues its FTTP program vigorously, and has added video to its offering. AT&T has begun its real commercial program (although it is slightly different from Verizon's), and it appears that AT&T will continue its U-verse program in the old BellSouth territories.

For 2008, we predict that AT&T will enter the FTTP arena (changing from FTTn to FTTP – perhaps without an announcement) and will be pursuing a strong deployment of GPONs by the end of the year. As an alternative, and one with a low probability of happening, we could see AT&T drop its entry into wired video, and just concentrate on high-speed access and satellite-delivered video. Our reports [“FTTP: The New Standard and How it is Changing,”](#) and [“FTTP Equipment and Cable Requirements”](#) detail these forecasts.

**So, there are our predictions for 2008. We hope they will be useful to you, or at least have offered you a laugh or two.**

Notes to the media:

For interviews with Dr. Polishuk or Clif Holliday (author of the Lightwave Reports), please contact Dr. Polishuk at 617-782-5033 or at [marketing@igigroup.com](mailto:marketing@igigroup.com)

Charts and graphs from the latest IGI telecom reports, noted above, can be made available to media outlets as needed, as can information from our latest reports on Network Traffic, FTTP, NGNs, and R-OADM.