

Comcast's scale threat to reverse program cost increases, and (b) parry cable attempts to place limits on data transmissions.

Part II: Convergence (Finally) Is Real

Revelation at the Kitchen Counter: Christmas day at my brother and sister-in-law's place in central New Jersey seemed like many others — toys and electronics for the teenage sons, the latest digital camera for their dad, Howard; but it was their mother Linda's present that was stunning in its simplicity, and, perhaps, for what it said about convergence and the coming threat to what is becoming to be seen as an all-powerful cable industry.

There on the kitchen counter, between the Kitchen Aid mixer and the Christmas cookies, was a new screen. It was a flat screen made by ViewSonic. The computer sat over the edge of the counter in a corner on the floor. Computers in kitchens aren't all that unique these days, but this screen had a couple of buttons on the front. Push one and get the Web. Push another and there was cable television. Right there on the display unit. No separate TV. No All-in-Wonder cards jammed into the computer. Just a cable wire and a computer wire into the back of the flat screen.

Just buttons. Just like AM-FM. TV-Internet. One device regardless of band. Simple. Threatening because it reminds that the consumer doesn't care how programming gets into the home...just that it is available.

Exhibit 3 TV-Internet Converge in the Kitchen



Source: Bernstein photo

Today when you buy cable television service, it is a bundle — transport and content. The reason the top cable companies are able to get away with charging such high margins is that they are selling that transport/content bundle. We consumers are unable to separate the bundle. We analysts have a difficult time even figuring out what the parts actually cost.

Data service is different. With their move into high-speed data, cable companies have, for the first time, unbundled their service. We consumers buy the data transport service for \$40 or \$50 a month, but, unlike video, we don't buy online content from the cable company. And this may be the beginning of the demise of cable's margins, not for what they make on data, but for what they may lose in conventional bundled services. Now, this isn't going to happen right away, but it should be considered in strategic discussions.

The coming threat is most easily illustrated by the difference between cable video-on-demand and the new Movielink—Web-delivered movie downloads on demand. The economics of a video-on-demand movie purchased from and delivered by the cable company are distinctly different from the cable company from a movie purchased via the studio's Web proxy, Movielink. To keep it simple, assume that both movies cost \$4, assume that the revenue is split equally between the studio and the distributor. For the cable VOD purchase, half of the consumer's \$4 goes to the studio and half goes to the cable company. For the Movielink purchase, half the consumer's \$4 goes to the studio, and the remainder goes to Movielink. The cable company gets *nothing* above and beyond what it is already receiving for the data connection. It is providing transport just like the phone company.

Cable operators have been thinking that they will be able to make out very well in this environment if they just begin to ratchet up price for those who transfer large files. But, as we just saw, they were missing the intellectual property upside that they get from bundling transport and content. Two analogies: you and your associates work all night putting together a deal that creates \$10 million in value. The lights burn late, but the electric company only gets in additional \$0.13 cents for the extra kilowatt-hours. It doesn't get any of the value created under its lights. The same applies to a long distance phone company when you make a call on which value is created. The thought that a linear ratcheting of transport price can offset the intellectual property upside denies cable's basic bundling premise.

It is easy to deny any problem with the cable approach today. After all, Movielink is in its infancy and based on downloads of less than DVD quality for viewing on a computer screen. You can't watch it on your TV. And there is no other streaming product, much less pay-per-view streaming product, that we care about. If you're a consumer, just wait. If you're a longer-term cable investor, watch out. As the consumer electronics industry accepts the better MPEG-4 compression standard and couples it with in-home storage and these new hybrid computer-television flat panel displays, the combination could begin to threaten cable's wired monopoly.

Real Networks now claims some 800,000 customers paying for streaming video content via the Web — content which often rides the high-speed cable pipe without allowing cable to take any intellectual property upside. In the next few months, Major League Baseball games will begin to be sold by Real, and ride the cable pipe. Cable won't get an extra cent.

But the threat to cable goes much further than just the fledglings of Real and Movielink. It would have been easy to miss the small print on one of the ESPN slides at Disney's presentation to the UBS conference in December. Under the future business heading were listed "streaming video" and "pay-per-view." There was no indication that these would be provided in cooperation with the cable operator, and streaming could help give Disney its long-sought-after alternate distribution system. If Disney develops an alternative distribution system to the home, it wouldn't attack cable outright, but rather begin to offer bits and pieces of content that would steadily increase in length and quality over time.

Likewise, the troubled AOL is trying to reposition its "bring your own access" approach to delivering high-speed content. BYOA opens the door for going around the cable operators, who have had more than enough time to cut deals with AOL to control long-term streaming. Whatever the reasons — most likely "stereo hubris" from both sides — not only are there no streaming controls on AOL in the current deals with Time Warner Cable and Comcast, but even the old 10-minute limitation on streaming from the original @Home and Roadrunner contracts, seems to have gone away. While AOL made a big deal at its December analysts' meeting of planning to provide only small chunks of video by high speed, one mid-level AOL executive later told me that it wasn't whether they could stream much more than small chunks of video, but whether they had the guts to do so.

Cable companies may think they can control Movielink and Real and Disney and AOL by refusing to pass their data bits without being given a cut. This would be the old cable way. But to do so would initiate a radical change in the now well-established "open-ness" of the Internet — the ability of any consumer to get to any place in the world. Such a change by the largest cable companies likely would once again raise the profile of cable as gatekeeping monopolists. Such an attempt would pay hell in Washington and, depending on the content available, push users toward DSL or, in the future, wireless.

Cable had its chance to develop original high-speed content at the outset, but failed. The original concept for @Home lent itself to providing preferred positions to certain content providers who would make content available on an exclusive or priority basis to @Home subscribers. That potential died when @Home decided to merge with Excite, was pushed into AT&T, and subsequently became embroiled in the internecine warfare of that now dismembered company.

Part III: Hardware and Routes Benefit Content

High-Density Storage Alternative: Making this all the more complicated is the rise of in-home storage and networking. These new technologies open cable to competition from stored content as well as that streaming in real time. At this year's consumer electronics show, high-density storage was a major attraction. TiVo and Replay continued with their TV storage devices, but they were joined by the Sonys, Panasonics and Phillips' and others which were converting television storage into in-home servers for just about any type of material, including video. These devices, some of which can plug directly into the Internet, potentially provide the ability to put material on the television screen from any source, including material that has been streamed or downloaded.

Competitive Principles: Capacity to deliver video content to the consumer is determined by a combination of (a) the ability to compress the content into smaller total packages using continuing advances in digital compression, (b) the capacity in the circuit to transport that data, (c) the ability to separate a piece of content into more-easily transportable components, and (d) the capability to store and reassemble the content before or at the home display device. Different types of content require different thresholds of capacity to reach the consumer.

The highest threshold of capacity is required by something that is happening live, in real time. Of course, a live concert, sporting, or news event only happens live once. After that it is pre-recorded someplace — centrally, at the edge, or in the home. At minimum, a live transmission demands all of the bandwidth required by the currently best compression system, and direct access to the consumer without intervening storage.

Once content is reproduced or delayed, there become many more opportunities for delivery beyond a continuous stream. In theory, the content can also be transmitted (a) in short bursts for reassembly, (b) not in real time (slowly), (c) by multiple routes and reassembled, or (d) splatted at super high speed. The only end requirement is that the data all wind up on a storage device in the home and in a form that can be reassembled by that device to make a coherent program. How it gets there and how long it takes to get there is not material, so long as it is available when the consumer wants it. At this point the aggregation of data potentially becomes more important than one single path, thereby suggesting the potential for a new generation of would-be gatekeepers who try to control the servers in the home.

Routes into the Home: When considering the potential routes into the home, we began by thinking how few there were 25 to 30 years ago. Back then, there was broadcast radio and television and the telephone. And you couldn't carry content in because hardware was too expensive. Video was recorded on huge reels of two-inch wide tape that played on sofa-sized machines costing hundreds of thousands of dollars. Today the number of routes into the home have exploded and may continue to expand with wireless data. And in-home storage is coming of age not only with the high-density storage of TV devices and the new consumer electronics servers, but also with PCs and video game consoles.

It is not difficult to imagine one of these storage devices offering the option of receiving content by any combination of (a) cable modem, (b) cable, (c) satellite, (d) DSL, (e) over-the-air digital television, and (f) by wireless (WiFi) running at 2.4 GHz, another frequency, or using bits and pieces of the entire spectrum.

Part IV: Cable's Alternatives

Investing in High-Speed Content: To avoid "dumb pipe" status, the cable industry can try to return to what made it great in the video realm — the combination of transport and exclusive content.

In addition to offering high-speed Internet transport, a cable company might also elect to offer another high-speed data option that includes content not available elsewhere. Of course, this would require the cable industry, once again, to fund the development of exclusive content, as it did during the 1980s. Back then, this effort was hugely successful because there weren't any alternatives — no Discovery, no TNT, etc. It was also an effort that was successful before the alternative distribution system of satellite.

To date, cable development of a premium alternative to data has not been successful in the marketplace, to great extent because of the @Home fiasco discussed earlier. But there may be another reason. Cable operators have taken to high-speed modem service and its 50%+ margins like drugs. Of course they love it. The content is free, and the profit ramp is steep. The problem is that in selling a commodity they may be setting themselves up for a fall by selling nonexclusive content that is not only free to them — but also free to any competitor that may emerge. It should be remembered that the key to satellite's emergence in the United States was Congressional action that required cable companies to sell to the satellite companies content that had previously been exclusive to cable.

Cable vs. Programmer Leverage in Contracts: If the cable operators don't want to invest in high-speed content, and if they don't want to have their commodity-data pipe compete with the intellectual property upside of their classic cable-video bundle, then their only other alternative is to attempt to prohibit competition through contracts with programmers. On the surface, it would seem to be easy to require cable programmers to refrain from providing any digital services over the Web that might compete with the cable operator's bundled businesses. The simple deal would be, "if you want your network on our cable, you must agree not to compete on the Web." Or, at least, cut the cable operator in on any broadband content action. Certainly that is possible with the likes of Movielink, Real or independent networks with little negotiating leverage.

However, what would seem to be easy for a powerful cable company, may not be in the future when it has to deal with the big content companies. As noted earlier, the growing leverage of the programmers through both national distribution and local stations will provide significant leverage to maintain price and develop new services.

Investment Conclusion

While it is currently popular to view cable as having "won" in the leverage battle against content (if not against satellite), such a view is both momentary and premature. The growing power of the content providers in viewership across their multiple network and local platforms threatens cable's short-term abilities to gain program pricing leverage, and its longer-term ability to protect its "intellectual property" upside within its content bundle. When coupled with the possibility of price-warfare from a reconstituted satellite industry seeking market share, cable's response will likely be to improve the offering in its "bundle," probably by offering very low-cost telephone service using the scale economics of Internet Protocol telephony.

Should this occur, then we would view the revenues of video from cable and satellite, data from cable and RBOC, and phone from cable and RBOC as all sloshing around the same bathtub. If satellite removes revenues from cable, then cable will try to remove revenues from the RBOCs. In the end, the economic realities of overcapacity will prevail to the detriment of both cable and the RBOCs, with principal distribution benefit accruing to the low-cost provider for any service.

If the scenario plays out as we expect, cable operators will neither invest in high-speed content in the near term, nor succeed in blocking programmers who want their content to ride the high-speed pathways. Having failed to differentiate themselves, cable operators will likely return to the idea of developing their own content. While the cable operators may think this approach will be successful, as it was for video in the 1980s, they run a high risk because, by then, the programmers will be far down the road in establishing their own services to the detriment of cable. Simply put, cable will be too late if it waits.

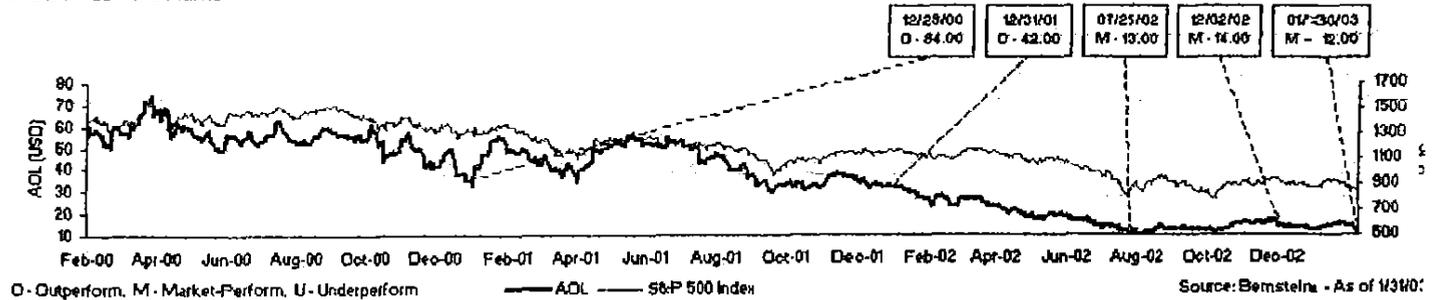
Programmers will continue to consolidate their cable networks, exploit the Internet and other distribution methods, and, barring heavy investment from the distribution players, move rapidly to strengthen what is already beginning to appear as a return to content oligopoly. Right now, the balance may appear to have tipped to cable, but over the longer term, the programmers hold the power.

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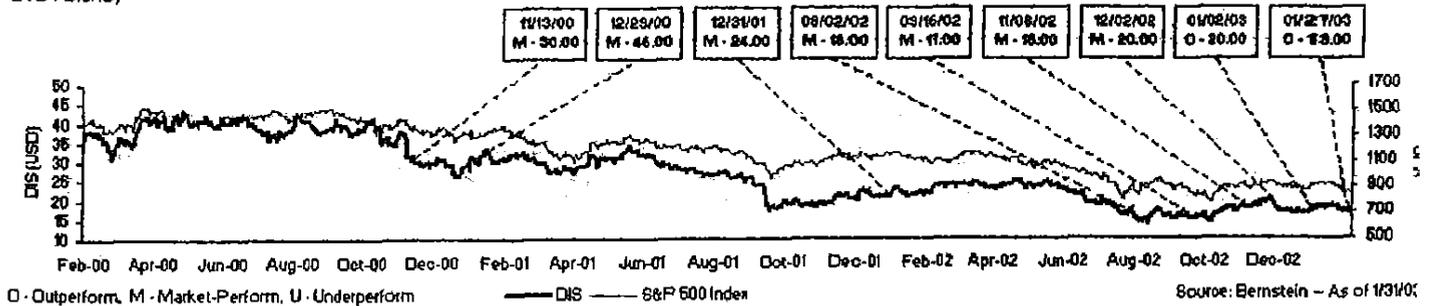
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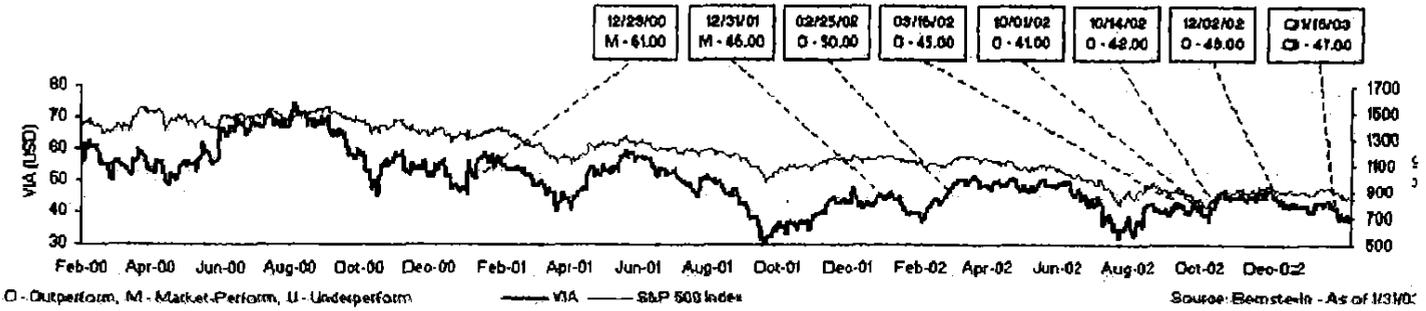
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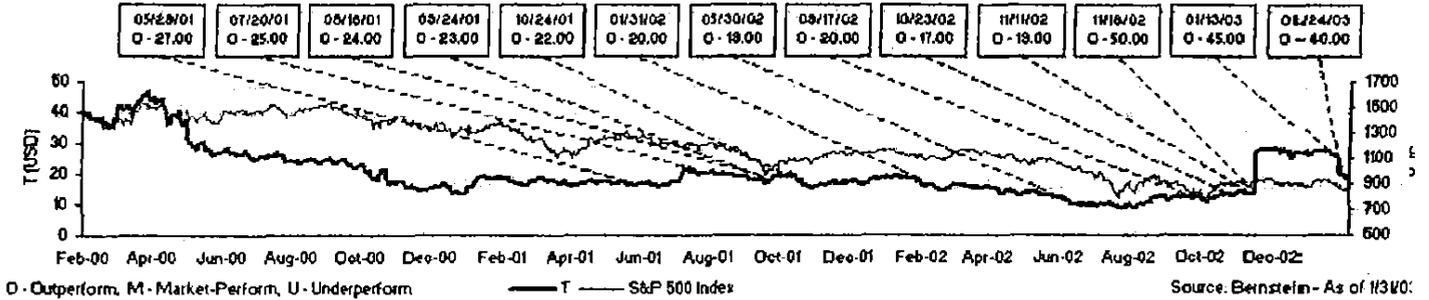
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