EXHIBIT D

Giving High Technology a Reality Check

By JOHN M. HIGGINS
& PETER LAMBERT

SAN FRANCISCO — For all the excitement over cable technology and the new revenue sources expected, the annual National Cable Television Association convention provided a reality check for many system executives.

While Time Warner Cable chairman Joseph Collins saw recent developments making cable the "on-ramp to the electronic superhighway," other executives pointed to a number of potholes facing the industry — some regulatory, some technological — before any of the biggest boasts begin to generate meaningful revenues.

"A lot of this sounds wonderful," said the CEO of one mid-sized operator. "But a lot of it is hype, and a lot of it is driven by technology, not the consumer. What's a business, what's not a business is something we can't dictate: the consumer will dictate."

Operators came into the show on something of a technology high, excited over the promise of cable's future. The show reinforced that theme with sexy videos, broad proclamations by industry leaders and such World's Fair-like displays as the "living room of the future".

The announcement of a number of deals maintained the pace. Scientific-Atlanta Inc. and Motorola Inc. linked with Kaleida Labs Inc. to develop interactive/multimedia hardware and software, competing directly with General Instrument Corp.'s much-touted venture with Intel Corp. and Microsoft Corp. Further, Time Warner Cable cut a deal to incorporate Silicon Graphics Inc.'s high-end digital multimedia and graphics technologies into its switched-video-network project in Orlando, Fla.

But a reality check could be found on the exhibition floor, where many "products" were merely software running on laser discs or high-end computers costing thousands of dollars that will never be in consumers' homes. Even services that are working carried prominent limitations, such as high consumer costs or limited flexibility.

When asked how he was separating the wheat from the chaff, one senior MSO executive responded, "I'm still looking for some wheat."

That's not to say that those products don't work and will never be a business. However, it does mean that expectations may be overheated, particularly those of industry outsiders reading all the hype in news magazines.

Viacom Inc. chairman Sumner Redstone said he couldn't say precisely what products would be great businesses and what might fail, but that no one should expect that kind of certainty. That's what projects such as Viacom Cable's tests in its Castro Valley, Calif.

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system are all about. "I will tell you that we will grow wheat in Castro Valley," Redstone said.

While acknowledging that "we're all sensory-overloaded with some rhetoric and hype," Comcast Corp. president and CEO Brian Roberts noted in the closing session that companies like U S West Inc. are betting huge sums on the future of cable. That telco has agreed to pay $2.5 billion for a quarter of Time Warner Entertainment Co. "They could have spent it upgrading U S West's phone system," Roberts said.

For many system and MSO executives, the show was their first opportunity to actually play with some of the interactive products so heavily touted by MSOs.

At TV Answer Inc.'s booth, they saw a working interactive unit costing consumers $500 that emphasized transactions — such as ordering pizzas, or receiving ads from car dealers — rather than entertainment. And the graphics are not in color, just black and white.

At a stretch of booths sponsored by the Sony Entertainment/United Video Inc. Game Show Channel, operators played games at Interactive Networks, which requires a $200 retail hand-held box plus a $10 monthly fee, or up to $30 if subscribers want to compete heavily for prizes.

At the debut of Zing, operators got to play with a spiffy-looking two-piece unit with a "receiver" that was a block of wood inside, according to one booth worker. The functioning, less slick, receiver was tucked away on the side.

At the hottest of proposed ventures, The Sega Channel, the box required for cable reception wasn't around. People played games on equipment similar to that available in toy stores.

However, Doug Glen, group vice president of business development for Sega of America, said tests have proved that Sega Channel data can be "plucked off a cable line and transferred to a Sega/Genesis machine. We're now confident all the technical challenges are soluble."

While operators acknowledged that some of the floor demonstrations were merely prototypes, not final products, they wondered how these futuristic technologies will solve their more immediate problems of replacing lost revenues.

"I don't see anything here that looks like a business for me," said an operations executive with one MSO.

At a session on video-on-demand, Tele-Communications Inc. executive officer Fred Vierra, while endorsing cable's substantial investment in the new technology, conceded advances won't happen overnight. He said it would be at least four years before 30 percent of U.S. homes had access to near VOD because of the huge capital outlays needed to put boxes into people's homes.

Some are worried not about the pace of the tech hype, but about how many more land mines re-regulation will lay.

"It's the most schizophrenic I've ever seen," said Michael Wilner, CEO of InSight Communications. "You look at the FCC and say, 'Oh, my God!' Then you look at the new technology and say, 'What a wonderful future. But how am I going to get there?'"

TCI president and CEO John Malone predicted a single device in homes and schools will serve one moment as a high-power calculations computer, the next moment as a high-definition television processor.

"That universality implies a drive toward very low cost per user, and all that cost will be in software," he said at the opening session, adding, "the cost of communications will head toward zero."

"At the very least," said Cablevision Systems Corp. chairman Charles Dolan, fiber optics and digital transmission "will provide great enhancements to what we do now, particularly in terms of capacity, reliability and quality. The subscriber will create the service for his home that he wants and can afford. The only pricing factor will be competitive discounting."■

EXHIBIT E

TELE-COMMUNICATIONS, INC.

NEWS

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FOR IMMEDIATE RELEASE:

TELE-COMMUNICATIONS, INC. (TCI) ACCELERATES ITS FOUR-YEAR

"Fiber will greatly increase the number of viewing choices available to our customers and is critical to the interactive future. It will give them more personalized control over their TV service. Fiber also increases the reliability of our systems, while reducing outages and improving picture quality in the home," Clouston said.

More Customer Choice and Potential New Services

This advanced network will be the delivery platform for a wide range of new, interactive services to come.

These new services will include interactive educational programming, multiplexed movie offerings, enhanced shop-at-home options, mass storage, data transfer and computer software delivery, cable commuting, a range of new "niche" programming services, many more sporting events and ultimately, an expanded array of on-demand television services.

Digital Compression

The company's decision to deploy digital compression (announced in December 1992) coupled with the system upgrades announced today -- which bring TCI's systems up to the 750 Megahertz (MHZ) throughput level. This will give TCI the capacity to handle virtually every advanced service customers may want well into the next century.

Today's average 450 megahertz cable system typically carries 54 channels of analog TV programming. With digital compression, this total could ultimately reach 500 channels or more -- depending upon customer demand for the new, optional services.

MORE

Advantages of Fiber Optics

"Fiber gives us the added advantage of being able to transmit undistorted TV pictures over longer distances using less transmission equipment and fewer satellite earth stations and headends," said Richard Rexroat, Vice President -- Engineering for TCI Cable Management Corporation, the company's domestic

EXHIBIT F

FCC Moves Up Cable TV Rate Rollback

By Paul Farhi
Washington Post Staff Writer

Responding to pressure from Congress, federal regulators yesterday decided to move up by one month the date on which cable television companies must start calculating rate reductions and refunds to their customers.

The Federal Communications Commission said it would start rate regulation for the nation's 57 million cable subscribers on Sept. 1. The agency, which was unable to meet the original June deadline for the law, had wanted to begin the new price regulations on Oct. 1.

The one-month change is likely to save consumers some with additional revenue from pay-per-view offerings or other services unaffected by the law.

The FCC moved the date back to Sept. 1 to comply with nonbinding instructions Democrats inserted earlier this month when Congress added $11.5 million to this year's annual appropriation for the agency. FCC interim Chairman James Quello said the agency changed its mind in part out of fear Congress would retaliate for the proposed Oct. 1 start date by cutting the FCC's future funding.

The FCC is asking Congress for an additional $16.5 million next year, beginning Oct. 1, for implementing the cable law.

Most consumers are unlikely to see much difference in

EXHIBIT G

Malone: Rules Harsh But 'Immaterial'

By JOHN M. HIGGINS

NEW YORK — Tele-Communications Inc. executives tried to have it both ways last week, attacking new rate regulations as "punitive," while asserting that any injury to the company will be limited.

MALONE

TCI president and CEO John Malone told securities analysts that the company's management has the "capability to react and respond" to any environment, emphasizing that the MSO is already investing in technology that will permit growth despite the regulations.

At a meeting closed to the press, analysts said, Malone told them that any new rate rules are "immaterial."

At the same time, TCI senior vice president of communications and policy planning Robert Thomson lashed out at the regulations, telling analysts they were "unduly harsh," and even "punitive" in some cases. Thomson said the Federal Communications Commission was testing the "outer limits" of its authority under the 1902 Cable Act.

But overall, Malone tried to minimize the new rules' effect on TCI, the analysts said.

He told the analysts that the new rules may cost perhaps $10 million in cash flow and predicted that the MSO can sustain 12 percent annual cash flow growth.

He argued that TCI has not been aggressively raising rates in the past couple of years and wasn't expecting to. In addition, the MSO's prices for converters and remotes are already below average, and the company doesn't charge for additional outlets.

Malone said he was actually grateful for the way the FCC was imposing rate regulations, calling cable's position a "government safe harbor."

Unlike utility-style rate-of-return rules, Malone noted, the rate caps have a cost inflator that allows the company to recover much of its increasing costs, including inflation, programming franchise fees and property taxes, and also offer rewards for channel expansion.

Despite the rate rules, Malone said, cable retains substantial advantages over new competitors. He said the regulated services will pay for the platform required to push ahead into businesses like telephony and massive pay-per-view. In these areas, he told analysts, cable becomes "the low-cost provider."

Malone said re-regulation was inevitable because there were "bad actors" who flipped systems, boosted rates and let customer service crumble, plus other political forces stacked up against cable.

There may also be things operators can do to blunt the rate caps, Malone said, adding that under the per-channel formula and allowances for programming costs, operators may add more shopping channels.■

EXHIBIT H

FINANCE

Study Sees Slight Damage From All Re-regulation

By JOHN M. HIGGINS

NEW YORK — Re-regulation will trim cable system revenues, but the damage is not expected to be severe, and moderate growth should resume in 1995, investment banker Veronis Suhler & Associates predicts in a new study.

The firm is also a big fan of cable systems' prospects in advertising sales — if operators can ever get their act together on such crucial elements as billing and local ratings.

Despite fears that the Federal Communications Commission's rollback of basic cable rates will seriously injure operators, Veronis Suhler's annual financial forecast of the communications industry projected that basic revenues will drop 3.3 percent this year and 4.6 percent next year.

The firm further predicted that gains in premium cable will largely offset the loss, so total subscription revenue is seen falling just 1.4 percent this year and 1 percent next year. Double-digit gains in local ad revenues could leave operators about even, the study said.

That's far from the 6-8 percent revenue growth operators generated during the past two years, but not as crippling as the 10-12 percent revenue drop depicted in the worst-case scenarios that have thus far emerged from MSOs.

Veronis Suhler president John Suhler said he expects operators to engineer their way around the rollbacks, by boosting subscriber growth and unregulated revenues. "I'd say no disaster on basic, total turnaround on pay," Suhler said.

Part of the basis for the prediction lies in the timing of regulation. Rollbacks currently will not hit until October, so nine months of revenue growth will offset that fourth-quarter decline. At the same time, only the first three quarters of 1994 would be lower than the comparable period of 1993.

It's not that Suhler sees basic rates actually rising. The report predicts that in 1997, average basic rates will stand at $18.40 per month, still 60 cents less than 1992 rates.

But with operators' ability to aggressively hike rates limited, cable will become a more attractive value and help boost penetration past 64 percent of homes passed, up from 62 percent now, he predicted. In

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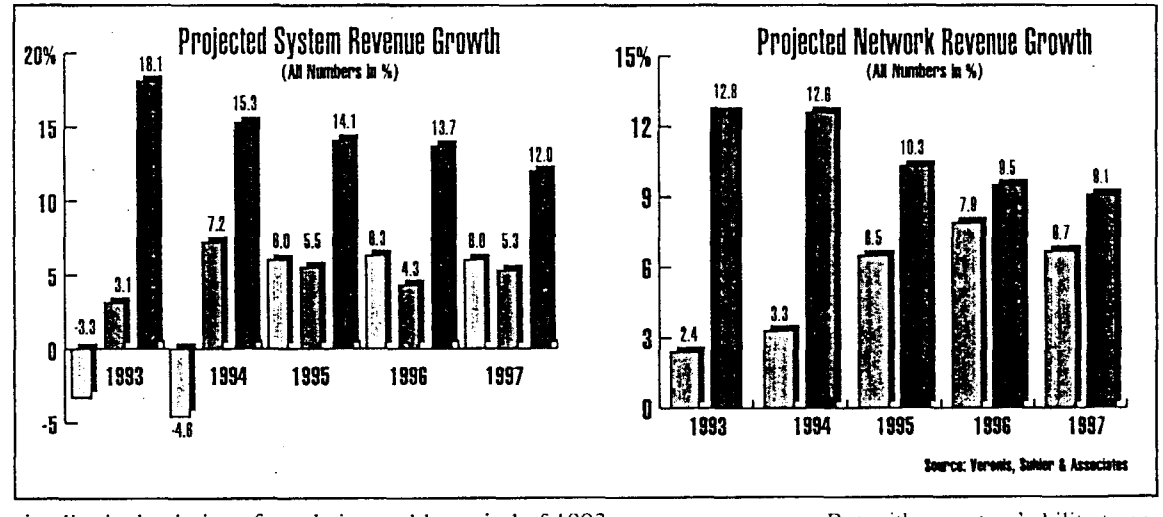

Study Sees Damage From Regulation

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addition, some of the lost dollars will go to pay cable spending, which is expected to jump 7.2 percent in 1994 before slowing to around 5 percent growth for the next few years.

That's better than pay cable's recent declines in subscriber counts and penetration.

After 1994, Veronis Suhler sees basic sales growth rebounding to around 6 percent annually through 1997, with total subscription revenue growing around 5.8 percent a year.

While Suhler criticizes operators' many missteps in local ad sales, he nevertheless sees double-digit growth. The report predicts that local and national spot revenues will increase at a 14.6 percent annualized rate through 1997, jumping 18.1 percent this year and slowing to 12 percent in 1997.

"That still assumes marginal effort," Suhler said. "We're still forecasting great growth rates for local advertising, but it's not nearly what it could be."

Suhler cited all the criticisms that operators have faced for years, notably poor ratings research, the lack of local ratings, weak interconnect operations plus poor back-office billing and verification procedures.

He noted that Spanish broadcasters Telemundo and Univision are joining to spend $35 million on new Hispanic audience research to sway advertisers with hard data. "I don't think that the cable in the aggregate has spent $5 million" in local markets, Suhler said. "Cable operators are following whatever Nielsen does, not leading."

The problem is that in the past, operators could boost revenues so easily by hiking basic rates that they never needed to invest in ad sales, the banker said.

But he is much more confident about the future because the need for unregulated revenues will force operators to invest more heavily.

If operators can perfect their ad systems, Suhler contends, the promise of a multichannel future could boost local cable sales at the expense of cable network advertising.

Suhler contends that channel capacity will expand sharply, filled by dozens of niche networks aimed at small audiences willing to pay several bucks a month for special-interest programming.

As audiences turn away from broad networks, such as USA Network, mass-market advertisers will want those eyeballs, Suhler said. But advertisers won't be very interested in reaching just a few golf, cooking or computer addicts at a time.

Still, systems could stitch together a mass audience by roadblocking ads across all of those channels, Suhler said. "Advertisers are going to look more to the cable operator locally," he predicted.■

EXHIBIT I

Cable Firms To Battle Rate Cuts

FCC to Be Flooded With Hearing Pleas

By Paul Farhi
Washington Post Staff Writer

The cable TV industry, seeking to block government-ordered rate cuts, is preparing a counterattack against the federal bureaucracy.

In an effort to thwart a law passed last fall that would roll back cable prices, the industry's most powerful executive said yesterday that cable operators will petition the Federal Communications Commission en masse in coming weeks to request individual hearings on the legally mandated price cuts.

The effect of thousands of these hearings, said John Malone, chief executive of Denver-based Tele-Communications Inc., would be to overburden the federal bureaucracy and delay implementation of the rate cuts, and provide the industry with a legal justification to charge higher, not lower, prices.

"My guess about the whole thing is that [the industry] will end up swamping the FCC with cost hearings," Malone said. "When the smoke clears, there will be higher rates in most cities."

The FCC's interim chairman, James H. Quello, rebuked the cable industry for its tactics. "They lost in Congress, they've lost in the courts, so now they're trying to take advantage of a big administrative burden," he said. "If they are seen as flaunting the intent of Congress while we are shorthanded here, that might not be the smartest move, politically."

The new cable regulations permit municipal and federal officials to roll back rates by as much as 10 percent to 15 percent in communities where a local cable operator's prices exceed a complicated "benchmark" announced by the FCC earlier this week. The agency estimates that 75 percent of the nation's 57 million cable households would see some reduction in the cost of cable by fall.

However, the cable law permits companies to request a hearing before the FCC if they can show that

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Cable Industry to Counterattack on Rate Cuts

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their costs of doing business will be higher than the benchmark allows.

Malone was joined in his comments by the industry's largest trade group, the National Cable Television Association.

"By ordering an industry-wide rate rollback without analyzing existing costs and profitability, the commission has left itself open to a huge number of cost-of-service hearings, which they are totally unequipped to handle," said Jim Mooney, the group's president. "These chickens will come home to roost."

It is unclear whether the industry can succeed in postponing the start of rate cuts. In an effort to limit bureaucratic foot-dragging, the FCC late last week denied an industry request that any price reductions be delayed until operators exhaust their appeals.

However, cable companies can still make the cost-of-service argument to local regulatory officials, who are charged with overseeing prices for the "basic" package of programs. And Quello acknowledged that the FCC faces a "mammoth" administrative task in judging the appropriateness of rates charged by nearly 11,000 operators for a package of programs known as "expanded basic."

Quello said the cable industry was creating a political climate in which Congress might retaliate by permitting the telephone industry to enter the cable business. He said the commission could extend its current freeze on cable prices to an indefinite period from 120 days, if it needs time to sort through "an avalanche" of industry filings.

CERTIFICATE OF SERVICE

I hereby certify that on this 21st day of July, 1993, I caused copies of the foregoing Request for Leave to File in Excess of Page Limitation and Opposition to Petitions for Reconsideration to be served by first class mail, postage prepaid, upon the following:

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