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SPECIAL EDITION: 2005 OVERVIEW

Bells, Cable Seek High Ground on Leveling Playing Field

- **COMPETITIVE MIGRATION THREATENS INCUMBENTS.** The telco and cable incumbents' premium position in the communications value chain is being challenged by, among other trends, the movement from sheltered single-service networks, devices, and markets to competitive multiple networks, services, devices, and markets.
- **ILECS EYE NEW ASSETS, LINE SALES.** To bolster their positions, the incumbents are eyeing various strategies and assets. As the latest SBC-AT&T reports show, again, a Bell-IXC deal is still one such option, which we see as doable though messy on antitrust/regulatory grounds. But we believe it is underappreciated that there could be separate sales of millions of ILEC lines, the value of which would depend greatly on regulatory decisions yet to be made.
- **BUNDLING OF SERVICES HELPS, BUT RIGHTS, TAX FIGHTS LOOM.** Another incumbent strategy is to repackage services over their broadband platforms in order to make their products stickier, with the efficacy depending in part on various government proceedings, including over incumbent bundling rights as well as taxes and fees.
- **CABLE HAS HEAD START AS BELLS FACE VIDEO HURDLES.** With UNE competition suffering setbacks, the cable-telco battle takes center stage. We believe cable has an initial advantage due to easier entry into telephony than Bell entry into video, in part due to questions about ILEC local franchising duties and access to programming.
- **EDGE COMPETITION AND OTHER ISSUES.** Eventually, edge vs. network competition should become more important as emerging broadband transmission networks and nascent IP-based services gain traction. Resolution of issues such as intercarrier compensation, universal service, and network neutrality will help shape the playing field.

With Core Markets Under Assault, Incumbents Look To Revisit Key Assets, Leverage Broadband/Bundles

The largest telecom and cable players — incumbent local exchange carriers (ILECs) and cable system operators — have long held highly defensible network and service assets. Last-mile dominance and other factors have enabled these incumbent telcos **(BLS, SBC, VZ, Q, others)** and cable companies **(CMCSA, TWX, CVC, CHTR, MCCC, ICCI, others)** to continue to thrive despite numerous changes in the markets over the years.

However, we believe the defensibility of those assets is diminishing. Technology and regulatory changes over the last decade are finally reaching a point where there is a critical mass of new opportunities for competition. Yet the incumbents are not standing idly by and simply allowing their value to migrate to others; rather, we expect they will continue to offer a vigorous defense by trying to create new networks, products, and services that constitute new kinds of defensible assets. Thus, we see the incumbents' search for the high ground as the key story that is emerging in 2005.

In this note, we outline some of the key trends challenging the incumbents and some of their responses. We also outline some of the key public policy issues that could affect the relative strengths of the Bells and cable companies as they compete against each other and other challengers. It is not our intent, at this time, to provide a comprehensive guide to all those issues; rather, we hope this piece, in conjunction with our semi-annual "cheat sheets" (which we plan to release next week) will pro-

ON DECK

Jan. 31: Deadline for parties to seek Supreme Court review of Third Circuit ruling that blocked and remanded most of the Commission's 2003 media ownership rules. DOJ/FCC reportedly not going to appeal.

Feb. 4: FCC due to issue full text of UNE remand order.

Feb. 7: Nextel deadline on FCC spectrum swap decision.

Feb. 10: FCC meeting, with votes possible on digital TV order, intercarrier compensation NPRM and orders, among other items.

Looming:

- FCC actions on AT&T calling cards, AT&T special-access petition (likely NPRM and order), and cable deadline for eliminating integrated set-top boxes.

All relevant disclosures and certifications appear on p. 11 of this report.

vide a road map for understanding which issues are important, how they fit into the broader competitive context, and how they can affect who will emerge from the emerging battles in the strongest position.

THE LEVELING PLAYING FIELD

Growth Outside the Core Telephone Service Market. While most Americans have enjoyed the explosion of telecom products over the last decade, the actual average household revenues devoted to traditional telephone service has remained remarkably stagnant. According to the Federal Communications Commission, in 1981, it was 2.1% of all household expenditures. It slowly rose to 2.3% in 1996. In 2002, the last year for which FCC data are available, it was at 2.4%. Since the mid-1980s, the Consumer Price Index for telecom services has traditionally lagged the CPI for all products. In 2003, for example, the general CPI rose 2.3% while the CPI for telephone services fell 1.4%. During the same years, a number of other services, including video services and Internet-related services, experienced expenditure and CPI growth significantly greater than the core telephone service's. In the video market, the cable industry, particularly since the mid-1990s regulatory relaxation, has been able to raise rates higher than inflation, though increasing competition from satellite TV has added some constraints lately.

Wireless and Data Substitution. Not only is the telephone service market not growing, but revenues are migrating from the high-margin, low-competition wired networks to the lower-margin, higher-competition wireless and data networks. A measure of this migration can be seen in FCC statistics, which show that in 1995, the allocation of the average $58 of monthly household telecom

"THE SKINNY"

Issues	Status	Likely Result/Impact	Update
		MEDIA	
Digital TV Transition	FCC, lawmakers looking to prod DTV migration and reclaim spectrum for public-safety and commercial uses.	Broadcasters forced to finalize migration and return spectrum for wireless (eventually), but may gain programming options.	FCC struggling to take steps to ease DTV transition, or at least clarify issues. FCC Chairman Powell against broadcast multicasting must-carry right.
Media Consolidation and Indecency	FCC eased media ownership rules, but stayed in court and Congress modified TV cap. Many lawmakers still want to hike FCC indecency penalties.	Related new deals unlikely for some time, given Third Circuit's decision to remand and stay several rules. Broadcasters face higher fines for indecency.	Administration decides not to ask Supreme Court to overturn Third Circuit ruling that blocked most FCC media ownership rules, lowering broadcast appellate chances greatly.
		WIRELINE	
TRO/UNE	Responding to court remand and reversal on TRO, FCC pared back Bell duties to give CLECs UNE access.	Bells gaining increased relief from UNE discounts, creating Swiss-Cheese-like patterns in CLEC wholesale rights.	FCC expects by Feb. 4 to issue text of order approved in December, which scaled back Bell obligations. Order likely to be attacked from all directions.
Broadband/VoIP Classification, Regulation	FCC cable broadband defeat under review by high court, to be argued March 29. FCC has various VoIP proceedings.	Bells may gain broadband relief at expense of ISPs, others. Cable to keep freedoms. Some VoIP faces some federal regulation.	States challenging FCC order that preempted state regulation of Vonage VoIP and like services. Some lawmakers hope to push VoIP bills.
Universal Service and Intercarrier Compensation	Subsidies and fees coming under increasing stress due to various factors, including broadband/VoIP bypass.	FCC continues to muddle through with incremental changes, as policymakers seek comprehensive reform.	FCC preparing NPRM to kick off broad intercarrier-compensation rulemaking. Agency also considering other actions, including on AT&T calling card.
		WIRELESS	
Nextel Spectrum Swap Proposal	FCC has approved modified spectrum-swap order.	Can help Nextel by clustering its spectrum, increasing its value.	Nextel faces Feb. 7 deadline to decide whether it will accept FCC spectrum swap decision.

Source: Legg Mason

expenditures had LECs receiving 51.9% ($30), IXCs receiving 36.3% ($21) and wireless carriers receiving 11.9% ($7).

By 2002, the last year for which the FCC has published statistics, the allocation was: the LECs receiving 43.5% ($36), IXCs receiving 14.8% ($12), and wireless increasing its share to 41.6% ($35). By now, wireless is no doubt receiving the highest share of the household dollar. It is difficult to calculate precisely how data services have also cut into traditional wireline revenues, but email, instant messaging, and other data applications have clearly shifted revenues away from the traditional communications providers.

Of course, the largest wireless providers are affiliates of the largest LECs, softening the revenue blow. But as wireless margins have traditionally been lower than wireline margins, the revenue migration still has an impact (though we note Verizon Wireless **(VZ-VOD)** margins have recently been reaching levels similar to Verizon wireline's).

Shift in the Network Value Chain. While the core revenue stagnation and shifts have been going on for some time, perhaps the biggest leveling trend is just beginning. We suspect that trend is the movement in how services are delivered: from protected single-service networks and devices to competitive multiple networks offering multiple services terminating in multiple devices. In the traditional value chain it was easy to determine that the premium return would be enjoyed by the entity controlling the bottleneck asset — the last mile of access. The new value chain threatens the traditional premium position of the local access ownership, creating opportunities to migrate value away from local access and also making it more difficult to determine which entity will capture the premium position over time.

New Entrants Respond to Network Re-engineering. The catalysts for change in the value chain are coming from several different directions. The incumbents themselves are being forced into new markets in reaction to threats to their traditional markets, which in turn creates additional competitive pressures. Thus, cable and the ILECs entered high-speed data, in part, to compete better against satellite television and wireless voice, respectively, but have now ended up competing with each other. If it were only incumbent-led challenges, however, the damage might be limited to mostly a market share shift which, with the growth of adjacent markets (in products such as ring tones or Video on Demand), might not be very damaging to the incumbents.

But what makes the shift so challenging is that new entrants are exploiting the re-engineering of the networks in ways that increase the competitive dynamic throughout the value chain. They are doing so in two primary ways. First, new entrants are using "edge" applications to shift revenues away from incumbent offerings that have traditionally bundled service and transmission offerings. For example, companies such as Vonage, Skype, Packet 8, and numerous others are offering a Voice over Internet Protocol (VoIP) service that utilizes the customers' pre-existing broadband service (usually offered by an ILEC or cable) to compete with the ILEC (and now cable) voice service.

Of underappreciated significance, in our view, is Microsoft's **(MSFT)** embedding of Session Initiation Protocol (SIP) into new versions of its operating system, which, over time, is creating a platform by which tens of millions of PCs could be used for voice communications that bypass the public switched telephone network (PSTN).

The same kind of assault is expected to eventually happen on the video side. While edge-based video products — in which aggregators offer service packages that are delivered over the customers' broadband service — are several years behind IP voice services, some, such as Akimbo, are starting to spring up, suggesting a broader attack on all business models that bundle services with transmission.

Second, new entrants are planning on building new transmission networks, some at a cost dramatically lower than the incumbents' costs. For example, there are now numerous trials testing such technologies such as Broadband over Power Lines (BPL), Wi-Max, and mesh Wi-Fi networks that eventually could provide significant new

Grokster Case Raises Key Questions About Copyright, Third-Party Liability

One underappreciated government proceeding is the Grokster case, to be argued before the U.S. Supreme Court on March 29. In that case, the motion-picture and recording industries are challenging a Ninth Circuit decision that Grokster, a peer-to-peer file-sharing service, did not violate copyright laws by creating software that allowed individuals to violate copyright laws. Without going into the details of the case, which we plan do at a later time, we note the case raises the question of whether third parties have some liability if their products are seen as inducing copyright infringement.

While the content companies say they do not want to stifle legitimate business, some service providers fear that a doctrine creating liability for the actions of others could lead to years of uncertainty and litigation about the extent of such liability. Dozens of high-tech firms and broadband service providers are filing with the Court in an effort to assure that decision limits any such liability. If, however, the decision opens the window for third-party liability, it may increase the costs and slow down the development and penetration of broadband networks and services.

competition on the transmission side of the value chain.

So long as only two local broadband pipes are generally available, the incumbents may be able to migrate more value to the transmission portion — i.e., the price for the voice or video service could go down in response to multi-player competition, but the price for broadband access gradually may go up. If a third pipe (or more) arrives, it will make that strategy more difficult to maintain, though we suspect that development is not going to happen in the near term, at least not in a ubiquitous and cost-effective manner.

A Key Question: How Do the Incumbents Respond? In our view, it is facile and even misleading to simply suggest that the incumbents will face more competition and, therefore, are the inevitable losers in the new value chain. Certainly, all incumbents will face more difficult challenges than they have faced in the past, and it is unlikely they will enjoy the steady, predictable profitability that characterized earlier periods.

But the incumbents enjoy a number of advantages that, at a minimum, give them competitive advantages in the near term as they face new rivals. The most important developments, in our view, in 2005, will be not just the shifts brought on by new players, but how the incumbents themselves respond to those challenges, in part through regulatory-related developments, as they seek to reassert their position at the premium links of the new electronic communication value chain.

SEEKING THE HIGHER GROUND

With a core market stagnating, new competitors taking revenues, and a change in the network value chain, incumbents have to find new ways to grow. (Of course, one way to retain margins is to cut costs, which in the short term will be a key strategy for some players, but that is not our focus here.) As the incumbents contemplate how to reassert their primary position in the value chain, we can already see them engaging in two primary tactics: rationalizing the ownership of assets, and repackaging their products, which, in part, involves re-engineering their own networks. The success of each of these strategies depends in part, on government policies.

Rationalization of Ownership. One strategy, which, in the short term, may have the biggest impact on actual market values, is the rationalization of asset ownership. For decades, government policy limited horizontal growth and vertical integration in both the telecom and media sectors. While antitrust remains a constraint on both, de facto telecom ownership restrictions are going away, and media limits are diminishing, albeit more slowly than many in the industry wished. In addition, technology is changing the value of certain assets. Thus, the companies are all re-thinking their strategy for what assets they should own.

Consolidation in telecom, cable, and local broadcast. We expect greater consolidation in the telecom, cable, and local broadcast sectors. The reports yesterday that SBC and AT&T are discussing a merger — following previous Bell-IXC talks, including between BellSouth and AT&T — demonstrate again Bell interest in acquiring long-distance companies and their assets. While we believe an SBC-AT&T deal would be doable, we believe the multiple federal and state government reviews would be protracted and would likely lead to costly demands for major divestitures in SBC's territories. A wild card is that such a deal would likely spark other major transactions, scrambling the market and policy landscapes even more.

The wireless deals (completed and planned) involving Cingular-AWE, Sprint-Nextel **(FON-NXTL)** and Alltel-Western Wireless **(AT-WWCA)** are helpful to the entire sector, in terms of increasing pricing power, though as a result, there will probably be little antitrust tolerance for any more wireless deals that remove major competitors. We also again note that once the Cingular-AWE integration is considered complete, we believe an SBC-BellSouth merger could be pursued — assuming SBC doesn't strike a deal with AT&T first.

The media deals can provide scope efficiencies in terms of advertising for local broadcasters and scope and scale efficiencies resulting from more rational cable footprints. But no deals provide anything resembling a silver bullet to stop the leveling trends discussed above — they simply put the companies in a stronger position to confront those trends.

Fate of orphaned assets could be key driver of rollercoaster values. We believe a combination of regulatory- and technology-driven changes has put some assets in play, in that they are not integrated in the right collection of assets. Such assets include aggregations of ILEC lines, certain interexchange assets (those of AT&T, MCI, Qwest), regional wireless assets, second-tier cable systems, independent programming, and small broadcast stations.

We are not, at this time, going to analyze the issues surrounding specific deals, except to offer two observations. First, speculation about the prospects for transactions affecting such orphaned assets may be the largest driver of near-term "rollercoaster values" — values that rise and fall numerous times over a short time period. This does not suggest that any particular stocks are likely to rise or fall; only that merger-related talk is a significant driver of telecom stock activity.

Second, we think that the biggest underappreciated event in the sector could be the potential sale of ILEC lines. Already this year, Verizon, Sprint, and Alltel have talked about the possibility of spinning off approximately

25 million lines in total. We note that the value of those lines will be directly affected by a number of government policies, including state PUC policies and federal government reform of universal service and intercarrier compensation. We are far from gaining certainty as to how those issues will be resolved; indeed, the spinoffs of those lines could occur before there is regulatory certainty, complicating the market's initial assessment of their value.

Repackaging the Product. The core strategy for countering the leveling trends in the market is probably the repackaging of products into bundled service offerings over broadband platforms. Of course, the most important element of this is the ability to offer a wide spectrum of voice, video, and data services. The ability of cable to offer voice services to the mass market and the ability of the ILECs to offer video over their own networks will mark a significant milestone in the development of the market. For the first time, both premier local networks will compete against the core product of the other.

In this regard, the incumbents are re-engineering their own networks, though the ILECs' financial and technical challenges, as well as certain regulatory issues affecting their video services, are considerably greater than those of the cable operators. Cable has already completed the bulk of its upgrade and faces fewer technical and regulatory challenges in offering voice services. Thus, the new ILEC offerings are certainly behind the new cable offerings in terms of launching in the market. (For a summary of the core cable-ILEC battle, see the chart "Bell-Cable Competi-

Bell-Cable Competitive Scenarios

	BELL Wins	***BELL*** Loses
CABLE **Wins**	<u>**Marketplace Dynamics**</u> •Slow rollout of cable VoIP and Bell video •Service/application competition, not price •New applications drive broadband and bundled service uptake •Limited new IP-based competition •Higher core market share (i.e., cable advertising, Bell wireless) •Efficient mergers/acquisitions <u>**Regulatory Factors**</u> •No effective near-term government stimulation of Third Pipe •No network neutrality requirement (*Brand X* ruling overturned) •No significant liability from Grokster case •No forced sale of transmission-only service (e.g., naked DSL) <u>**Probability of Win-Win**</u>: *Low*, as feature/function battle pressures cost and IP enables alternative service methods adding additional pressures on major players.	<u>**Marketplace Dynamics**</u> •Aggressive customer acceptance of cable VoIP •Video disintermediation remains a niche, 'Geek' centric trend •Bells fiber/video initiatives stumble for technical and/or market reasons •Inefficient Bell mergers/acquisitions <u>**Regulatory Factors**</u> •Difficult Bell local franchising •No government support for Bell video program access •Intercarrier-compensation, universal-service reform hurts Bells •Asymmetric network neutrality (applies to Bells, not cable) <u>**Probability that Cable Wins, Bells Lose**</u>: ***Medium***, if cable exploits near-term window of opportunity to lock down customer base with superior product offerings.
CABLE **Loses**	<u>**Marketplace Dynamics**</u> •Wireless everything drives new service offerings •Bell fiber/video initiatives succeed •Cable not aggressive on VoIP pricing, stagnating adoption rates •Cable drags feet on broadband price/value equation, leaving high umbrella for Bells to exploit <u>**Regulatory Factors**</u> •No Bell local franchising requirements •Eased Bell access to programming •Intercarrier-compensation, universal-service reform favors Bells •Timely 3G spectrum auction <u>**Probability that Bells Win, Cable Loses**</u>: *Low*, as early take rates for cable VoIP are promising and video, data offerings continue to be enriched.	<u>**Marketplace Dynamics**</u> •Bells crash broadband pricing •Cable craters voice pricing •New, VoIP enabled entrants emerge in all categories •Programming costs outpace ability to raise end user rates •Core market loss (i.e., DBS, MVNO, 3rd-party VoIP growth) <u>**Regulatory Factors**</u> •Imminent government stimulation of Third Pipe •Network neutrality obligation (Brand X upheld) •Grokster liability •Forced sale of transmission only service <u>**Probability of Lose-Lose**</u>: ***Medium/High***, if Bells respond aggressively to likely near-term VoIP success of cable, or, long term, if government succeeds in facilitating a Third Pipe.

Source: Legg Mason Telecom/Cable financial research and Telecom/Media regulatory research teams tive Scenarios" below.)

Beyond Bundles, Becoming the Service Provider. We think repackaging goes beyond merely putting together pre-existing products into a single bundle, to the creation of functionalities that depend on the customer buying the service bundle, thus locking the customer more tightly to the service providers' package. After all, as all sides are aware, if the companies simply put together symmetric bundles without sticky applications, it leaves the incumbents open to new entrants with lower cost structures cherry picking key market segments or price competition between large bundles, both of which can be destructive. Thus, one sees in Verizon's Iobi product and in SBC's U-Verse, efforts to create a unique interface to a spectrum of communications products that keeps the customer with the existing service provider.

While both cable and the ILECs want to invest so as to make their networks superior in a variety of ways, the task for both cable and the ILECs is to leverage their existing position to become the premier service provider so that, irrespective of the means of transmission (with transmission eventually becoming more competitive), consumers will want their help in organizing, retrieving, and utilizing a broad range of voice, video, and data products on multiple devices traveling over multiple networks. In this regard, they face a number of non-traditional potential competitors, from Microsoft to Google **(GOOG)** to Qualcomm **(QCOM)**. But as the incumbents enjoy existing relationships with the customers, the incumbents start with significant advantages.

Government decisions could affect bundle structure. While the impact of the repackaging is mostly dependent on consumer behavior — behavior for which we believe past performance is not a guarantee of future results — government decisions should also affect the nature of the bundles that are offered. For example, the ILECs' desire in many markets to bundle DSL with voice service, rather than selling it as a separate product, has been challenged by several states and resolution is currently pending at the FCC, though the courts may have to act too.

In addition, the parts of the bundle are all taxed and assessed, by several jurisdictions, at different rates. This creates a situation in which, in some cases similar bundles can have different prices based solely on government policy. Another example is that certain charges are classified as government charges even though they are collected and kept by the service provider. Such a service provider can advertise a lower fee than it actually charges, as it is not required to advertise the government fee (although in some states they may be required to at least note the existence of additional fees).

Finally, we note that the likely government approval of the current wireless consolidation is going to limit the number of wireless wholesale options for cable operators. To the extent that wireless becomes an essential part of the bundle, the government's treatment of the Sprint-Nextel deal could have a material impact on cable's costs in bundling wireless, if they choose to do so.

Cities' Importance Appears to Grow As State Regulatory Role Decreases

From 2001 through 2004, the states were a key driver of market-relevant policy changes. In what probably affected stocks more than any other government action, the states in those years lowered wholesale/UNE rates, without the FCC objecting. The results were profound: in December 2000 the number of UNE lines with switching (UNE-P) numbered 2.8 million and the number without switching (UNE-L) numbered 2.4 million, a ratio close to 1:1.

After the states started dropping rates, the numbers changed, with UNE-P growing to 17.1 million by June 2004 and UNE-L only growing to 4.3 million, a ratio of almost 4:1. With UNE-P blunted as a mass-market tool, and with the FCC trying to limit VoIP regulation, the states' role appears to be diminishing, though new mergers and reviews could add new life.

But the municipalities' role, in our view, is growing, as they hold the levers on two key policy determinations. First, by virtue of their franchising power, the localities will affect the parameters of Bell network upgrades for video services. This will obviously influence the outcome of the central cable vs. telco battle. Second, the municipalities will largely determine the extent of the buildout of new Wi-Fi mesh networks (though state legislatures can prohibit or condition the cities' ability to do so).

While we don't see the networks as symmetrical competitors to the Bell and cable networks, they nonetheless could help limit pricing power for broadband. As with the state price cuts, the small changes in numerous jurisdictions are not as obvious, at first, as a single FCC action. Nonetheless, the cumulative affect can be greater than that of an FCC action.

THE THREE-FRONT BATTLEFIELD

As we have written before, we believe the telecom and media landscape is essentially a three-front battlefield: competition based on *network* "unbundling" (not to be confused with *service* bundling), competition between end-to-end facilities-based competitors, and competition between edge-based providers and local network owners. The incumbents' efforts to seek higher ground will have a different impact on those fronts, each of which is affected differently by government policies. In this section, we

Network-Unbundling-Based Competition	
How:	Competition facilitated by government-regulated access to Bell/ILEC networks at wholesale discounts.
Timing:	Dominated market thinking and policy debates from 1996 until summer 2004, when AT&T, MCI, and others retrenched after UNE-P defeats.
Affected Companies:	Bells/ILECs, CLECs/IXCs.
Key Issues:	FCC, pressed by courts, scaling back UNE availability, but some implementation details and litigation questions remain, including over: • Extent of Bell duties to provide high-capacity business lines as UNEs; • "EELs" and related special-access rates and performance metrics; • New mass-market wholesale prices after 1-year transition off UNE-P; • Some possible further fine tuning of TELRIC cost decisions.
Impact of Key Trends:	Favors Bells/ILECs, as consolidation and packaging of services help them control customer base and fiber/network deployments cause further deregulation of UNEs.

Source: Legg Mason

summarize the state of play on each front and which government proceedings are most likely to affect the competitive dynamics of that front.

Network Unbundling. Government-imposed network unbundling gives new entrants in a market wholesale access to ubiquitous incumbent networks, without which many would be unable to sustain a major competitive presence. The most important example of this unbundling grew out of Sections 251 and 271 of the 1996 Telecommunications Act, which gave CLECs and IXCs access to certain unbundled network elements (UNEs) of the ILEC systems at "cost-based" rates set by regulators. This kind of competition drove the ups and downs of a great deal of market activity from the passage of the Act through the summer of 2004. That is when the most important unbundling-based competitors, AT&T and MCI, announced they were reining in their mass-market efforts after suffering litigation defeats on key rules, particularly UNE-P (the wholesale voice platform).

The significance of unbundled-based competition has been basically blunted and is likely to continue to diminish as other forms of competition become more robust. Nonetheless, unbundling rules still have some relevance for the market, as there remain a number of residential CLECs, and the rules still govern the business-market activity of the IXCs and a number of CLECs to a substantial degree. Among the most important of those rules, affecting where competitors can have access to lower-priced UNEs, are those for high-capacity business loops and transport, as well as enhanced extended loops or "EELs" (UNE loop-transport combinations called enhanced extended loops). In addition, there are still pending court challenges to the new unbundling rules, as well as further FCC proceedings, such as on the FCC's "TELRIC" forward-looking cost methodology and the performance metrics for the ILEC provisioning of special access, which IXCs/CLECs can use instead of high-cap UNEs, albeit at higher rates.

All of the trends favor the ILECs, in our opinion, as not only changes in government regulation (to some extent driven by new edge-based competition), but also consolidation and *service* bundling help the ILECs control the customer base. Nothing on the horizon suggests to us that the current trend toward diminishing unbundled-based competition is likely to change.

End-to-End Facilities Based. End-to-end facilities-based competition occurs between rivals that have all (or virtually all) the facilities they need to complete the delivery of voice, video, and data services. Such competition has existed for some time in video (between cable and satellite), in mobile (between wireless providers), and in high-speed Internet access (between cable and the ILECs). We believe this kind of competition is about to accelerate, however, between the core cable and ILEC networks. With cable now going after phone customers in a critical mass of markets, and with ILECs setting forth plans to compete in video over their own networks, this kind of competition is starting to dominate market thinking.

While we are still early in this competition, cable starts with a head start in that it can attack the ILECs' core

End-to-End Facilities-Based Competition	
How:	Competition between those networks with end-to-end facilities (ILECs, cable, wireless, satellite).
Timing:	Starting to dominate market thinking and policy debates.
Affected Companies:	ILECs, cable, wireless, satellite, some equipment.
Key Issues:	Include: • Intercarrier compensation and universal service; • Spectrum (Nextel swap, auctions, DTV transition, unlicensed); • State/local jurisdiction, taxes and fees, mandates; • Interconnection terms and conditions; • Merger policy.
Impact of Key Trends:	Consolidation and bundling help platforms with greater economies of scale and scope (cable and Bells), though third-party broadband wireless could shift direction.

Source: Legg Mason

voice market easier than the ILECs can attack cable's core video market. (The dynamics of the cable-vs.-Bell battle are diagramed in the chart "Bell-Cable Competitive Scenarios" on p. 5.) But government policy will play a strong role in determining how the battle plays out.

Of particular relevance is how the local governments treat (and will be allowed to treat) the local franchise applications of ILECs seeking to offer a video service over their own networks, or what happens if an ILEC tries to avoid the franchise process by not applying. Another issue is how the ILECs get access to programming. While they have some avenues to some programming through market-based mechanisms, it may require government intervention for them to gain broad access to programming, particularly if they wish to sell it on an à la carte basis.

Other issues affecting this form of competition could be: how universal service and intercarrier compensation are reformed; how various taxes and fees on the different services may be adjusted; how various interconnection disputes are resolved (such as the dozens of issues that arose in Cox Cable's efforts in Virginia to connect its telephony operations to ILECs); how certain spectrum issues are handled; and, of course, how merger policies unfold.

We believe that as things stand now, cable is in the stronger regulatory position, while the ILECs still want significant changes. Thus, broad changes to the status quo (such as through a comprehensive rewrite of the 1996 Act) are likely needed to tilt the playing field toward the ILECs and away from cable, and they could take awhile.

In terms of the incumbents' strategy, we believe that repackaging the product has the biggest impact, as it helps those with the greatest economies of scope (cable and the ILECs) while putting at a disadvantage those with more limited product offerings (satellite and wireless.) We note, however, that if wireless broadband takes off, particularly if driven by entities unaffiliated with incumbents, it could deprive cable and the ILECs of significant advantages gained through bundling and through new investments in their networks.

The Edge vs. the Network. Edge competition involves offering a voice or video service as a data application, without "providing" the last-mile transmission service. Instead, edge providers rely on the broadband network connectivity already purchased by the customer. Such competition is in its early phase but it will inevitably grow in importance as broadband penetration and speeds increase. While edge innovation helps the incumbent cable and ILEC networks to garner broadband revenues, edge competition can be very disruptive to the current market structure, as it could eventually lead to a bypass of the PSTN and significant changes in how consumers obtain video content.

We expect edge competition to be heavily affected by government decisions, with three sets of policies being most important: whether (and if so, when) the government is successful in stimulating a third broadband pipe to the mass market, how the government reforms intercarrier compensation and universal service (thus affecting how much edge providers have to pay for completing calls to the PSTN), and whether the government imposes any obligation of "network neutrality" on the transmissions networks. Other government proceedings affecting this competition include how broadband services are classified and government restrictions on bundling policies.

As edge competition takes off, we expect it to reduce some benefits of consolidation, but make service bundling even more important as a defensive strategy, as one advantage that cable and the ILECs have over edge providers is they offer a wider spectrum of services.

Edge-vs.-Network Competition	
How:	Competition by virtue of offering voice or video service as data application from edge of network, without providing transmission service.
Timing:	In early phase of market mind share, will increase in importance over next several years.
Affected Companies:	Facilities-based, equipment, tech, start-up ventures.
Key Issues:	Will be affected by a number of policies including: • Government stimulus of Third Pipe; • Intercarrier compensation, universal service; • Network neutrality; • Broadband/VoIP classification/jurisdiction; • Service bundling/marketing policies.
Impact of Key Trends:	Could make consolidation less valuable, bundling more important as defensive strategy. Related policy issues are the most underappreciated and the outcomes the most unpredictable.

Source: Legg Mason

Recent Legg Mason Telecom and Media Publications ...

1/27	**SBC**	SBC Comm. (H/2, $24.05)	Possible SBC-AT&T Merger Doable, But Difficult *(Levin/Zito/Wilson/Kaut/King/Arbogast)*
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	SIRI	Sirius (H/3, $5.90)	4Q04 Results Ahead of Expectations *(Butson/Corprew)*
	Industry	Telecom/Media Regulation	A Sirius-XM Deal Would Face Tough Merger Review *(Levin/Arbogast/Kaut)*
	SBC	SBC Comm. (H/2, $24.45)	Mixed Qtr, Favorable Line & Data Trends, Soft Margins; 2005 Outlook In Line *(Zito/Wilson)*
	VZ	Verizon Comm.	VZ Wireless Net Adds Approach 1.7M; Ahead of Consensus *(Zito/King/Wilson)*
1/25	**ADTN**	ADTRAN (H/2, $17.05)	Cautiously Optimistic, Still Hold Rated *(Bechter)*
	BLS	BellSouth (H/2, $26.56)	Revenue & Access Lines In Line to Ahead, Comm. Margins and EPS Light *(Zito/Wilson)*
	BLS	BellSouth (H/2, $26.56)	Rev In Line On Improving Sub Trends, Margins Light Though 1Q Rebound Expected *(Zito/Wilson)*
1/24	**SIRI**	Sirius Satellite Radio, Inc.	4Q04 Preview: Focus is on SAC *(Butson/Corprew)*
	SBC	SBC Comm. (H/2, $24.58)	Cingular bests subs and churn views reinforcing improving sentiment, ARPU weak *(Zito/Wilson)*
1/21	**NOK**	Nokia (NR, $14.10)	Dropping Coverage *(Bechter)*
	Industry	Telecom/Media Regulation	FCC's Powell Reportedly to Step Down; No Basic Shift in Policy Expected *(Levin/Arbogast/Kaut)*
1/20	**AT**	Alltel (B/2, $55.65)	Strong 4Q04 Results Driven by Wireless Operations *(King/Yuncza)*
	Industry	Telecom Regulation	Court Skeptical of Wireless Bid to Shift Balance of Power in Local Zoning Cases *(Levin/Arbogast/Kaut)*
	Industry	Telecom Regulation	Sprint-Nextel and Alltel-Western Wireless Line Up for Government Review *(Levin/Arbogast/Kaut)*
	T	AT&T (H/2, $18.51)	4Q04 Meets Revs, Tops EBITDA; 2005 Outlook Light on Top Line, Delivers Cashflow *(Zito/Wilson)*

… Recent Legg Mason Telecom and Media Publications (Cont'd)

1/21	T	AT&T (H/2, $18.51)	4Q04 Revs In Line, EBITDA Ahead; 2005 Soft Top Line, Likely Better Cashflow *(Zito/Wilson)*
1/19	LU	Lucent (H/3, $3.45)	Quarterly Results as Expected, Still Looking for a Catalyst *(Bechter)*
	JNPR	Juniper (B/2, $26.46)	Solid 4Q04 Results; Upping FY05 EPS Estimates *(Bechter)*
	Industry	Telecom Regulation	FCC Disputes AT&T Calling Card Bid, But Labors Over Course, Consequences *(Levin/Arbogast/Kaut)*
	T	AT&T Corp.	AT&T's Calling Card Dispute *(Zito/Wilson)*
1/17	Industry	Broadband Equipment	4Q04 Preview—January Reporters *(Bechter)*
1/13	TVL	LIN TV (H/2, $17.88)	LIN-TV Reaffirms 4Q04 Revenue and Cost Guidance *(Butson/Corprew)*
	Industry	Telecom/Cable	4Q04 Telecom Preview *(Zito/Wilson)*
	Q	Qwest (H/3, $4.34)	Slightly Lowering EPS on Higher Assumed Wireless Migration Costs *(Zito/Wilson)*
	T	AT&T (H/2, $18.64)	Lowering 2005 EPS on Slightly Tapered Cost Savings Assumption *(Zito/Wilson)*
	BLS	BellSouth (H/2, $27.10)	Modest EPS Revision on Higher Projected Wireless ARPU *(Zito/Wilson)*
	VZ	Verizon (H/2, $38.23)	Lowering 2005 EPS on Incremental Pension Costs *(Zito/Wilson)*
	SBC	SBC Comm. (H/2, $24.81)	Adjusting EPS to Conform with Consensus Methodology *(Zito/Wilson)*
1/12	VIA'B	Viacom (H/1, $37.66)	Initiating Coverage of Viacom with a Hold Rating *(Butson/Corprew)*
	LVLT	Level 3 (S/3, $2.90)	Layoffs to Align Costs with Slow Revenue Ramp; Backs 4Q Comm. Rev. Guidance *(Zito/Wilson)*
1/11	NXTP	Nextel Part. (H/2, $19.78)	Nextel Partners Preannounces Certain 4Q04 Operating Metrics *(King/Clarke/Yuncza)*
1/10	Industry	Media/Broadcast	CES Wrap-Up; XM Intros Embedded Chip *(Butson/Corprew)*
1/6	AT	Alltel (H/2, 58.00)	Alltel in Talks to Purchase Western Wireless According to Reports *(King/Clarke/Yuncza)*
1/5	AV	Avaya Inc. (B/2, $17.16)	Initiating Coverage of Avaya Inc. *(Bechter)*
	XMSR	XM Radio (B/3, $34.56)	XMSR Ends 2004 Ahead of Estimates With over 3.2M Subs *(Butson/Corprew)*
	Industry	Telecom/ILECs	December Rural Regulatory Review *(King/Yuncza)*
	DISH	EchoStar (H/2, 32.30)	Feb. rate increase larger than we expected; Raising estimates *(Zito/Wilson)*
1/4	SIRI	Sirius (H/3, $7.57)	Signs Ford Factory Install Deal *(Butson/Corprew)*
1/3	SIRI	Sirius (H/3, $7.62)	Ends 2004 Ahead of Estimates With 1.14M Subs *(Butson/Corprew)*
12/30	XMSR	XM Radio (B/3, $36.80)	XM Exchanges Debt for Equity *(Butson/Corprew)*
12/29	Industry	Telecom/Media	Eighth Circuit Upholds Vonage in Jurisdictional Fight With Minnesota Over VoIP *(Kaut/Arbogast/Levin)*
12/28	Industry	Telecom/Cable	Broadband Outlook: Aggressive Bell pricing should deliver net add split *(Zito/Wilson)*
12/27	XMSR	XM Radio (B/3, $39.952	Passes 3.1M Subscribers Inline with Estimates *(Butson/Corprew)*
	SIRI	Sirius (H/3, $7.95)	Passes 1M Subs Inline with Estimates *(Butson/Corprew)*
	SURW	SureWest Comm. (	Notes from Visit With SureWest Management *(King/Yuncza)*
12/23	Industry	Media/Broadcast	Sat Radio Survey Portends Robust Holiday Sales *(Butson/Corprew)*
	Industry	Telecom/Media	FCC Revises Spectrum Swap to Give Nextel Additional $452 Million Credit *(Levin/Arbogast/Kaut)*
12/22	RIMM	Research in Motion	Solid Quarter—Street Expecting More *(Bechter)*
	Industry	Telecom/Media	RIM's Options and Leverage Narrow in Patent Case; Wireless May Be Implicated *(Levin/Arbogast/Kaut)*
12/21	Industry	Broadband	Capex—2004 in Review and Forecast for 2005 *(Bechter)*
	Industry	Telecom/Media	Washington Telecom & Media Insider *(Levin/Arbogast/Kaut)*

Investment Rating: B-Buy, H-Hold, S-Sell; Risk Rating: 1-Low, 2-Average, 3-High

Please contact us if you would like a copy of any of these publications.

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