**Before the**
**FEDERAL COMMUNICATIONS COMMISSION**
**Washington, DC 20554**

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| *In re Applications of* | ) | |
| SPRINT CORPORATION, | ) | |
| Transferor, | ) | CC Docket No. 99-333 |
| and | ) | |
| MCI WORLDCOM, INC., | ) | |
| Transferee, | ) | |
| for Consent to Transfer Control of Corporations Holding Commission Licenses and Authorizations Pursuant to Section 214 and 310(d) of the Communications Act and Parts 1, 21, 24, 25, 63, 73, 78, 90, and 101 of the Commission's Rules. | ) | |

To: The Commission

## REPLY COMMENTS OF LEVEL 3 COMMUNICATIONS, INC.


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## SUMMARY

Level 3 owns and operates an Internet backbone, and sells underlying network facilities to other companies seeking to create their own Internet backbones. As such, it is well positioned to comment on the potential harm to competition arising from this merger in the Internet backbone market. In its view, competition in this market—and the attendant continued growth of the Internet industry—can only be preserved through the imposition of minimal obligations on both the merged entity and any divested entity.

In order to enter the Internet backbone market and to grow its business in a commercially reasonable manner, an entity must have a critical mass of interconnection/termination agreements with incumbent backbone providers (these agreements are often referred to as "peering"). Moreover, the dramatic growth of the Internet means that both existing providers (*i.e.*, incumbents) and newer competitors require periodic augmentation of interconnection facilities to keep pace with increasing traffic demand. Although Level 3 has secured peering with the largest incumbent providers (with the exception of Sprint), it remains concerned about the potential for anticompetitive conduct by those who can exclude new entrants because Level 3 also sells wholesale transport capacity to those entrants.

MCI WorldCom, Inc. ("MCIW"), which through its UUNet subsidiary is by far the largest player in the Internet backbone market, has the unilateral ability to establish above-cost transit prices. Because access to MCIW's network is an essential input for other incumbent providers, MCIW's market power "discourages" those providers from undercutting MCIW's above-cost prices. Above-cost transit prices, in turn, allow incumbents such as Sprint Corporation ("Sprint") to deny peering and augmentation to

new entrants, because those entrants cannot use cost-based transit as a substitute for peering. The denial of peering and augmentation raises new entrants' costs of providing competing service, forces new entrants to purchase an unnecessary service, and ultimately, degrades service to the public.

Some have suggested that the anticompetitive problems raised by this merger can be mitigated by a divestiture similar to that of InternetMCI to Cable & Wireless two years ago. Level 3 believes that, in any such divestiture, the acquirer of the divested backbone assets must not itself possess market power, but must nonetheless have the management and sales force capability to operate a backbone independent of personnel and assets that would remain with the merged entity. However, it is also important that any divestiture not entrench an anticompetitive market structure by locking above-cost transit rates into any valuation of the divested entity. If, for example, the Commission were to require divestiture of Sprintlink as a condition of approval of the merger, doing so without reducing Sprint's ability to deny peering would mean that the sale price for Sprintlink would incorporate its ability to charge above-cost transit rates. This would perpetuate Sprint's incentive to deny peering to new entrants in order to protect the revenue from those above-cost rates.

To protect post-merger competition in the Internet backbone market, the Commission must focus on the establishment of open, augmentable peering. Level 3 accordingly submits that both the merged entity and any divested entity should be required, as a condition of approval, to:

- publish their peering policies (as MCIW already has done in the context of the MCI/WorldCom merger);
- agree as part of their published policies to peer with all nationwide, facilities-based backbones that meet basic operational and technical criteria;

- agree as part of those policies to the bilateral augmentation of interconnection facilities with peers upon reasonable request (as MCIW already requires of its peers—but does not commit to do itself); and
- agree to neutral, third party arbitration of any disputes concerning qualifications for peering and augmentation.

With the imposition of these minimal competitive safeguards, the potential harm to competition from the merger will be mitigated and the public interest protected—all in a manner that relies first on self-regulation and private dispute resolution. This, in turn, will promote the long-term growth of the Internet.

TABLE OF CONTENTS

**Before the**
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| | | |
|---|---|---|
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To: The Commission

## REPLY COMMENTS OF LEVEL 3 COMMUNICATIONS, INC.

Level 3 Communications, Inc. ("Level 3") hereby submits these reply comments in the above-captioned proceeding.[1] In its view, this merger should only be approved in conjunction with the imposition of several minimal safeguards designed to help protect competition in the Internet backbone market and to enable the continued growth of the Internet.

[1] *See* Application for Consent to Transfer of Control of Sprint Corp. to MCI WorldCom, Inc. (filed Nov. 17, 1999) ("Application"); Supplemental Internet Submission of Sprint Corporation and MCI WorldCom, Inc. (filed Jan. 14, 1999) ("Supplemental Internet Submission"); *Commission Seeks Comment on Joint Applications for Consent to Transfer Control filed by MCI WorldCom, Inc. and Sprint Corporation*, CC Dkt. No. 99-333 (rel. Jan. 19, 2000) ("Public Notice").

Level 3 is an international communications and information services company that is building an international advanced Internet Protocol (IP) based network. It owns and operates an Internet backbone, and provides data and long distance telecommunications and information services. It also sells underlying network facilities to other companies for those companies' use in creating their own Internet backbones. Level 3 has secured interconnection through peering with the largest backbone providers (other than Sprint). It nonetheless remains concerned about the potential for anticompetitive conduct in the Internet backbone market—particularly when such conduct is directed toward the smaller, potentially price-disruptive entrants who will buy Level 3's transport capacity to develop their own backbone services.

As many commenters observe, by combining MCI WorldCom Inc., ("MCIW") which through its UUNet subsidiary is the largest player in the Internet backbone market, with Sprint Corporation ("Sprint"), which through its Sprintlink subsidiary is—according to MCIW and Sprint's own estimates—the second largest player in that market, this merger will eliminate one not-so-small backbone competitor.[2] Some have argued that the Commission must order the divestiture of one of the backbones in order to ameliorate the harm to competition and the public interest from the loss of this competitor.[3]

Divestiture alone will not, however, eliminate the potential for anticompetitive denial of peering and refusal to upgrade interconnection facilities. Indeed, unless divestiture is accompanied by minimal requirements on both the merged entity and the

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[2] *See* Supplemental Internet Submission at Attachment 4 (Sprint second in number of connections and market share).

[3] *See, e.g.*, Comments of Cable & Wireless, Inc. at 34-41 (filed Feb. 18, 2000) ("Cable & Wireless Comments"); Comments of Global Crossing Telecommunications, Inc. at 11 (filed Feb. 18, 2000) ("Global Crossing Comments"); Petition of AT&T Corp. to Deny Application at 12 (filed Feb. 18, 2000) ("AT&T Petition").

divested entity, divestiture will reinforce incentives to act anticompetitively by incorporating above-cost transit rates into any valuation of the divested entity.

In order to protect competition in the Internet backbone market, the Commission must also focus on the establishment of open, augmentable peering. Accordingly, as conditions of merger approval, both the merged entity and the divested entity should be required to:

- publish their peering policies;
- agree as part of their published policies to peer with all nationwide, facilities-based backbones that meet basic operational and technical criteria;
- agree as part of those policies to the bilateral augmentation of interconnection facilities with peers upon reasonable request; and
- agree to neutral, third party arbitration of any disputes concerning qualifications for peering and augmentation.

Imposing these modest but essential conditions would ameliorate the harm to competition from this merger, but would do so in a manner that relies first on self-regulation and private dispute resolution. In this way, the Commission can do its part to ensure the continued, long-term growth of the Internet—benefiting the U.S. economy and the public interest.

## I. BACKGROUND

### A. The Facilities-Based Nationwide Internet Backbone Market and its Participants

As other commenters have described, MCIW is the largest seller of facilities-based nationwide Internet backbone services. By "sellers of facilities-based nationwide backbone services," we refer to sellers of full-service Internet connectivity who use their

own nationwide facilities to carry their own traffic and traffic from other entities, including other ISPs.

Facilities-based nationwide backbone networks, as Sprint itself has acknowledged, constitute a separate product market from local or regional ISPs, and from other nationwide communications services such as long distance service.[4] These providers sell a bundle of connectivity and transport—known as "transit"—to other ISPs lacking the nationwide facilities to carry traffic and the interconnection arrangements to ensure final delivery to end-users.

Both FCC and antitrust precedent support defining nationwide, facilities-based Internet backbone services as a separate product market. Under such precedent, a product market is defined by examining the range of products which, if sold by a single seller, would allow that seller to raise prices by a small, but significant and non-transitory amount.[5] If all Internet backbone providers were merged into a single entity, they would be able to raise the price of the transit services they sell to all ISPs purchasing nationwide transit. There is no substitute for these nationwide services, because they include both physical transmission of IP traffic to the destination ISP and the arrangement for that ISP

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[4] *See* Comments of Sprint Corporation in CC Dkt. No. 97-211 at 8 (filed Mar. 13, 1998); *see also* Opposition of SBC Communications, Inc. at 39 (filed Feb. 18, 2000) ("SBC Opposition"); AT&T Petition at 3.

[5] *See* United States Dep't. of Justice & Federal Trade Comm'n, *1992 Horizontal Merger Guidelines*, 57 Fed. Reg. 41552, 41554-55 (1992) ("*1992 Horizontal Merger Guidelines*") ("A market is defined as a product or group of products and a geographic area in which it is produced or sold such that a hypothetical profit-maximizing firm, not subject to price regulation, that was the only present and future producer or seller of those products in that area likely would impose at least a 'small but significant and nontransitory' increase in price, assuming the terms of sale of all other products are held constant. A relevant market is a group of products and a geographic area that is no bigger than necessary to satisfy this test."); *see also, e.g., SmithKline Corp. v. Eli Lilly & Co.*, 575 F.2d 1056, 1063 (3d Cir. 1978) ("[D]efining a relevant product market is a process of describing those groups of producers which, because of the similarity of their products, have the ability—actual or potential—to take significant amounts of business away from each other."); *NYNEX Corp.*, 12 FCC Rcd. 19985, 12014-15 (1997) ("*Bell Atlantic/Nynex Order*").

to deliver the traffic to the specified end-user. In other words, there is no alternative route to the end-user.

Although the number of Internet backbone providers has been increasing, there are few such sellers of backbone services. The largest by far is MCIW, followed by Sprint. The other major incumbents are GTE, AT&T, and Cable & Wireless.[6] Level 3 is also an Internet backbone provider, although, as a more recent entrant, it has a smaller share of end-user customers.

### B. Barriers to Entry and to Effective Competition

In order to become a nationwide Internet backbone provider, an ISP needs both a nationwide physical network and a means of delivering traffic to the backbone provider serving the final end-user. Without either element, the ISP will not be able to provide Internet backbone service.

The creation of such a nationwide physical network of underlying facilities, while a substantial undertaking, is no longer a serious barrier to entry over the medium to long term.[7] Any company with sufficient capital and experienced management can build a long distance/Internet network, and a number of companies—including Level 3—have already done so or are doing so. In addition, newer companies can take advantage of

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[6] *See* Supplemental Internet Submission at Attachments 4-5; *see also* Internet Affidavit of Alan Pearce at 10-16, attached to Cable & Wireless Comments.

[7] *See* Letter from Andrew Lipman to Thomas Krattenmaker at 12, filed in CC Docket No. 98-184 (Apr. 2, 1999) ("[The barriers to building an Internet backbone network] are *essentially the same* as those in the traditional interexchange market, because Internet backbone service consists largely of the provision of dedicated, high-capacity, point-to-point circuits between and among Internet points of presence. As already noted, Level 3 is just one of several carriers who are, even now, constructing massive amounts of new Nation-wide and World-wide transmission capacity that can be used, among other things, to provide Internet backbone links.") (emphasis in original).

excess capacity in facilities already constructed simply by purchasing the necessary facilities from other providers, such as Level 3.

Building a high-speed network, however, is not in and of itself sufficient to allow a new entrant to provide Internet backbone services, especially when the bulk of traffic will be delivered to destinations on other backbone providers' networks. An Internet backbone provider also needs interconnection with other backbone providers in order to deliver traffic bound for customers on those other backbone providers' networks.

An Internet backbone provider can interconnect with other backbone providers in order to deliver traffic to its final destination either through peering arrangements or through paid transit arrangements. For the larger networks, and today for Level 3 (except with respect to Sprint), interconnection is done through settlement-free peering. Although an entrant backbone provider may initially provide service by purchasing interconnection through transit, it must migrate to peering in order to compete effectively in the long term. Indeed, after analyzing the MCI/WorldCom merger, the European Union concluded that reliable peering arrangements were a critical prerequisite to being a "top level network," and excluded from its competition analysis consideration of backbone providers that interconnected using transit.[8] Thus, for the new backbone provider, migrating from transit to peering as the basis for interconnection is critical to becoming an effective competitor.

[8] Commission Decision of 8 July 1998, 116 J. of the E.C. 1, 8 (rel. May 5, 1999) ("*EU MCI/WorldCom Decision*").

By contrast, as reflected by other commenters, when a new entrant seeking to compete as a national backbone provider is forced to purchase transit, it faces substantial difficulties.[9]

- *First*, a new entrant's cost of doing business is raised by the need to purchase transit, for which it must pay, rather than interconnecting through settlement-free peering arrangements. In other words, a new entrant's competitors can inflate its cost structure, hampering its ability to compete on a cost-effective basis.[10]
- *Second*, transit is a non-reciprocal interconnection compensation scheme. This means that new backbone providers who are forced to purchase transit pay the incumbent to deliver traffic, but are not themselves paid when they deliver traffic to the incumbent.
- *Third*, because new entrants often are forced to pay for connectivity that they already possess by virtue of arrangements with other backbones, they pay a premium in transit price for connectivity they will never use. This is akin to "tying" under antitrust precedent, where a party seeking an essential input (in this case, interconnection) is forced to purchase an unnecessary product (in this case, unused transport) in order to obtain the desired product.[11]
- *Fourth*, new entrants without peering arrangements are subject to a perceived marketing disadvantage associated with being a transit customer. Incumbent backbone providers have a competitive advantage when recruiting a new entrant's existing or potential customers, because many end-users are concerned that buying transit undermines the purchaser's reliability of service by adding one additional "hop" in the link, which can cause packet-loss and latency.[12]

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[9] As the European Union acknowledged, "there are instances of some of the very largest [transit] networks buying transit on a very marginal basis, such as where they have inherited a transit arrangement as part of the acquisition of an ISP." *EU MCI/WorldCom Decision* at 8. The fact that some backbone providers occasionally purchase marginal quantities of transit does not mean that those new entrants can also expand significantly if forced to purchase large quantities of transit.

[10] *See* Petition of GTE Service Corporation and GTE Internetworking to Deny Application or Condition Merger on Fully Effective Internet Backbone Divestiture at 8 (filed Feb. 18, 2000) ("GTE Petition") (quoting *EU MCI/WorldCom Decision* at ¶ 124) (new entrants are "substantially disadvantaged" by paying transit fees); Global Crossing Comments at 8 (forcing new entrants to purchase transit would "obviously" raise those new entrants' costs).

[11] *See, e.g., Eastman Kodak Co. v. Image Technical Services*, 504 U.S. 451 (1992).

[12] *See* GTE Petition at 8 (quoting *EU MCI/WorldCom Decision* at ¶ 124) (many businesses are "reluctant to become customers of a network that does not have a full set of peering arrangements"); Global Crossing Comments at 8 ("[I]t is of obvious importance for retail ISPs to have access to [incumbent backbone providers'] customers."); AT&T Petition at 6 (with the growth of new e-commerce applications, customers "are demanding the highest level quality assurance Service Level Agreements").

As several commenters also point out, even when a newer backbone provider obtains interconnection through peering agreements, incumbents' refusal to augment interconnection capacity as traffic grows can pose another significant barrier to expansion.[13] The dramatic growth of the Internet means that backbone providers must augment capacity to keep pace with traffic demand. Failure to augment facilities can create delays at peering points, which will harm the entrant's ability to compete and, ultimately, degrade service quality for the consumer.

## II. DENIAL OF PEERING AND AUGMENTATION SLOWS ENTRY AND PREVENTS THE DEPLOYMENT OF NEW INTERNET TECHNOLOGIES

MCIW's existing market power allows it unilaterally to establish above-cost transit pricing. Moreover, MCIW's ability to alter peering arrangements with other incumbents (such as Sprint) "discourages" those incumbents from undercutting MCIW's above-cost prices. Above-cost transit prices, in turn, encourage incumbents such as Sprint to deny peering and augmentation to new entrants, because those entrants cannot use cost-based transit as a substitute for peering.

Level 3 has seen these incentives at work firsthand: while Level 3 recently entered into a peering agreement with MCIW, Sprint continues to deny Level 3 peering, and has refused even to disclose its peering criteria. Unless Level 3's situation is unique,

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[13] *See* GTE Petition at 9-10 ("Moreover . . . the rapid growth of Internet traffic *facilitates*, not hinders, the ability of a dominant network to corner the backbone market. Rapid traffic growth—which compels backbone providers to upgrade constantly the quality and capacity of their peering connections—allows a dominant backbone to degrade interconnection with its rivals 'without needing to make any conscious effort.' Instead, 'it would suffice' for the merged firm 'simply to focus on the development of its own network rather than upgrading the links with its competitors.'") (citations omitted).

Sprint's actions have slowed entry in the Internet backbone market and have helped discourage deployment of new Internet technologies.

### A. Because Interconnection with MCIW is an Essential Input for Other Incumbent Backbone Providers, Those Providers Have Disincentives to Undercut Transit Prices and to Offer Peering to New Entrants

Transit prices charged by the larger incumbent providers today are above cost. When Level 3 compares the cost of providing service between its "on-net" customers with the transit prices of the larger incumbents, the incumbents' prices are far above Level 3's own costs—even allowing for the fact that the incumbents' older networks may be less efficient because they have not been engineered to take full advantage of "Silicon Economics."[14]

This result is contrary to what economics would predict in the absence of market power. If there were no market power, and remaining barriers to entry were low, the incumbent backbone providers should have been expected to bid the price of transit down to cost. After all, if one incumbent could capture a greater volume of transit revenue, even at a slightly diminished (but above-cost) price, that incumbent would nonetheless increase earnings.[15] Such price competition has not, however, occurred in the transit market.

The need to peer with MCIW (and the fact that such peering can be revoked or changed) may explain why other incumbent providers do not take advantage of opportunities to expand business by lowering transit prices and peering with newer

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[14] "Silicon Economics" refers to the constantly declining cost curve for the computing power necessary to increase network speed.

[15] The fact that peering and transit agreements are generally confidential would normally be expected to facilitate, not impede, the movement of transit prices toward cost.

entrants. MCIW, with its overwhelming share of the market, is unique among all the incumbent backbones because—standing alone—it is an essential input to all other networks. Each and every other Internet backbone provider is dependent on the ability to "sell" connectivity to MCIW. One industry participant's description of MCIW's relationship with Sprint illustrates this in practice:

> [Sprint is] the only provider with a coherent plan for sharing forward connectivity with UUNET which is the most significant player in the market place. UUNET is one third of the Internet, right? Therefore everyone has to have some sort of connectivity to UUNET's customer base . . . . Therefore, as a fact of life, we need to make sure that whomever we buy from in the future has sufficient connectivity to UUNET. . . . Doing this is somewhat tricky and the only people who have demonstrated that they really know how to do this[,] that we have had any real relationship with, is Sprint.[16]

Put another way, much of what Sprint has to offer a potential transit customer is its peering relationship with MCIW. Thus, the possibility that MCIW might modify peering with Sprint may explain why Sprint neither prices disruptively nor allows newer entrants to peer.[17]

This is similar to what Professors Krattenmaker and Salop have described as a "cartel ringmaster" scenario, in which "a firm purchasing a vertical restraint may . . . induce a number of its suppliers to deal with the purchaser's rivals only on terms disadvantageous to those rivals."[18] In this case, MCIW's market power discourages the

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[16] *Interview with Frode Greisen, Chief Internet Officer of GTS,* The COOK Report on the Internet, Jan. 2000, at 5.

[17] GTE Petition at 8 (citing *EU MCI/WorldCom Decision* at ¶ 127) (denial of peering can "plac[e] aspiring backbone entrants in an inescapable Catch-22"); Denise Caruso, *Mergers Threaten Internet's Informal System of Data Exchange*, N.Y. Times, Feb. 14, 2000 ("In the early days of the Internet, self-interest forced backbone providers into peering. . . . But that is scarcely true today.").

[18] Thomas G. Krattenmaker & Steven C. Salop, *Anticompetitive Exclusion: Raising Rivals' Costs to Achieve Power over Price*, 96 Yale L.J. 209, 238 (1986).

other incumbents from offering new entrants "advantageous" transit prices or peering arrangements. Moreover, as Professors Krattenmaker and Salop suggest, this scenario is not dependent on any additional benefits to the ringmaster. "Instead, it is possible that the suppliers themselves may gain sufficient benefits from charging a higher monopoly price for their input, irrespective of any additional benefits obtained by [the ringmaster] from competing against higher cost rivals."[19] In other words, incumbents other than MCIW can also gain from oligopolistic transit pricing.

### B. Consistent With Its Disincentives, Sprint Can Refuse to Peer and to Augment with New Entrants

Because transit prices are far above cost, Sprint has the incentive and ability both to deny peering and to impair rivals' quality of service by refusing to augment interconnecting facilities. By refusing to peer, Sprint forces its rivals to purchase above-cost transit from someone in order to reach Sprint customers. The fact that transit is above cost prevents new entrants from using cost-based transit as a substitute (albeit an imperfect substitute) for peering. New entrants are thus hindered in their ability to disrupt pricing in the transit market—further entrenching above-cost pricing.

Level 3 can attest to Sprint's incentives to deny peering firsthand. Despite repeated requests (and despite the fact that other large incumbents have done so), Sprint has refused to peer with Level 3. Indeed, Sprint has refused to even provide Level 3 with its peering criteria, so Level 3 has no way of knowing what it must do in order to obtain peering. This cannot be explained by competitive market forces.

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[19] *Id.*, 96 Yale L.J. at 240.

Concerning augmentation, Sprint's incentives with respect to new entrants are the same as MCIW's incentives. So long as Sprint's customer base is larger than a new entrant's, Sprint can potentially harm the new entrant's quality of service by "slow-rolling" augmentation. In other words, Sprint has an incentive to increase the likelihood that it, rather than the new entrant, will capture a greater share of the Internet's phenomenal growth.

### C. Barriers to Entry in the Backbone Market Prevent the Deployment of New Internet Technologies

Level 3, for its part, has publicly stated that it intends to drop its bandwidth prices, possibly as much as 30% per annum. Because bandwidth is a critical input for content providers, applications service providers, e-commerce providers and other "web-centric" entities, a less competitive bandwidth market threatens the innovation and diversity of the Internet. Bandwidth constitutes approximately 40% of a web-centric entity's costs, so the lack of new backbones with disruptive pricing strategies in turn minimizes new entry and growth by providers of web content and e-commerce. Given the importance of e-commerce and Internet applications to the country's economic growth and productivity, a less competitive backbone market—*i.e.*, one that continually sustains backbone transport prices above cost—has serious consequences for our continued economic growth.

## III. THE COMMISSION SHOULD CONDITION APPROVAL OF THIS MERGER ON THE IMPOSITION OF CERTAIN MINIMAL COMPETITIVE SAFEGUARDS

In Level 3's view, the problems posed by this merger cannot be solved through a divestiture similar to that of InternetMCI in 1998. That divestiture did little to ameliorate

the continued acquisition of market power by MCIW, and, as several commenters have pointed out, a similar divestiture here would be equally unhelpful.[20] To ensure that any divestiture promotes competition, the divested entity must, at a minimum, be divested to a party that does not possess a significant share of the Internet backbone market. At the same time, in order to avoid a repeat of the Cable & Wireless difficulties, any purchaser of the divested entity must independently possess the necessary facilities, personnel, and expertise to serve the divested entity's customers without depending on Sprint WorldCom for bandwidth, staff, and bundled services.

If the Commission were to divest Sprintlink—even assuming a suitable purchaser could be found—it would nonetheless risk reinforcing Sprint's incentives to refuse peering without explanation. Were Sprint to now provide reasonable peering arrangements with newer providers such as Level 3, it would facilitate additional transit competition—undermining its transit revenue stream consisting of rents from above-cost transit pricing. In other words, without suitable conditions, part of Sprintlink's "market value" in any divestiture would reflect its ability to charge above-cost, oligopolistic transit prices. Potential purchasers would take this component of Sprintlink's "value" into account in deciding how much to pay for it. If a buyer were to pay extra in order to obtain Sprintlink's ability to charge oligopoly rents, it, too, would have the incentive to take all steps to preserve the oligopoly in order to recoup its investment. Thus, perversely, a divestiture of Sprintlink without appropriate safeguards would allow market forces to enshrine past anticompetitive practices and above-cost transit prices.

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[20] *See, e.g.*, Cable & Wireless Comments at 34-41; Global Crossing Comments at 11; AT&T Petition at 12.

In the end, full and vibrant competition in the Internet backbone market will not be achieved through divestiture alone. Instead, the barriers to entry and expansion stemming from the lack of augmentable, open peering must be reduced. Level 3 accordingly submits that the Commission should implement, as conditions to merger approval, a number of minimal competitive safeguards.

*First*, the Commission should require both the merged entity and any divested entity to publish their peering policies. These published policies must include, as does UUNet's current peering policy, a quantification of the amount of traffic required to attain peering.[21] In Level 3's experience, the publication of UUNet's peering criteria in the context of the MCI/WorldCom merger has facilitated the negotiation of peering with MCIW. The converse is also true—when incumbents such as Sprint do not make their peering policies public, it is much more difficult for new entrants to take the steps necessary to gain peering agreements. Indeed, without public peering policies, incumbents such as Sprint can deny peering pretextually, based on shifting non-transparent "requirements," or even without any justification whatsoever.

*Second*, the Commission should require both the merged entity and any divested entity to agree in their published policies to peer with all nationwide, facilities-based backbones that meet basic operational and technical criteria. Level 3's own peering policy could serve as a guideline in this regard. Under that policy, Level 3 commits to peer (and to augment circuits as capacity fills) with ISPs meeting the following criteria:

- Peers must have active connections to 3 public exchange points in geographically dispersed areas.

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[21] *See* "UUNet's North American Peering Policy" at ¶ 3, attached to Second Joint Reply of MCI and WorldCom in CC Docket No. 97-211 (filed Apr. 1, 1998) ("UUNet Peering Policy").

- Peers must have a nationally deployed, dedicated backbone of at least DS-3 (45 Mbps) speed.
- Peers must have at least DS-3 connectivity to at least 3 exchange points where Level 3 is also connected.
- Peers must have fully staffed, 24x7x365 network operations centers with 4-hour response time.
- Peers must provide timely notification (72 hours in advance) for scheduled maintenance.
- Peers must have established policies for trouble ticket/problem escalation (Level 3 must be able to open trouble tickets directly with Peer).
- Peers must carry full routing at edge routers using BGP-4 and aggregated routes.
- Peers must not establish a route of last resort (i.e., default route) directed to Level 3.
- Peers must sell Internet access to their customer bases.

*Third*, both the merged entity and any divested entity should be required to commit as part of their peering policies to the augmentation of interconnection facilities with peers upon reasonable request. Level 3's practice is to augment as a component of peering agreements. This policy addresses the legitimate free-riding and network management concerns that national, facilities-based providers may have, particularly when interconnecting with regional ISPs who cannot carry their own traffic nationally and who are seeking to obtain the ability to deliver traffic around the country.[22] Where, however, a provider has a nationwide network with sufficient connectivity and capacity, the proper relationship is augmentable, settlement-free peering. UUNet's published

[22] This recognition follows the principle articulated by UUNet when it first began distinguishing between transit and peering: "One of the major principles of UUNet's policy is to peer with ISPs that operate a national network with dedicated, diversely routed DS-3 (or faster) backbone, and which will convert to UUNet at DS-3 or greater speeds in at least four geographically diverse locations." UUNet Press Release, May 12, 1997.

augmentation policy, modified to be bilateral rather than only an obligation favoring UUNet, would also be an excellent model of such augmentation.[23]

*Fourth*, to ensure that these augmentable peering arrangements are entered into and honored even after merger review is completed, the Commission should require both the merged entity and any divested entity to engage in binding industry arbitration of disputes concerning qualification for peering and augmentation. Only if arbitration proceedings fail would Commission enforcement ever be required. Industry self-regulation of this sort would be fully consistent with the Commission's and Administration's stated positions on Internet policy, which favor open competition and industry self-regulation to the maximum extent possible.[24]

## IV. CONCLUSION

Last spring, Level 3 was confident that anyone with a nationwide high-speed fiber optic network could compete in the Internet backbone market as easily as in the interexchange market. Indeed, it believed that a whole series of new, facilities-based Internet backbone providers would use their networks to drive down the price of bandwidth and thereby facilitate a host of new broadband applications. Level 3 has since

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[23] This policy could be suitably modified: "If a single DS-3 is insufficient bandwidth at a given location, [either peer] must have the resources and must be willing to increase bandwidth at that location." *See* UUNet Peering Policy at ¶ 1.

[24] *See, e.g.*, *Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996*, 14 FCC Rcd. 2398, 2401 (1999) ("*Section 706 Report to Congress*") ("Our role is not to pick winners and losers, or to select the best technology to meet consumer demand. We intend to rely as much as possible on free markets and private enterprise."); "The Unregulation of the Internet: Laying a Competitive Course for the Future," Remarks by Chairman William E. Kennard to the Federal Communications Bar California Chapter, San Francisco, CA (July 20, 1999), *available at* http://www.fcc.gov/commissioners/kennard/speeches.html ("The fertile fields of innovation across the communications sector and around the country are blooming because from the get-go we have taken a deregulatory, competitive approach to our communications structure—especially the Internet.").

come to the conclusion that, regardless of the quality or extent of their facilities, new entrants will face difficulties competing in the backbone market without first obtaining augmentable peering arrangements with incumbent backbone providers.

In Level 3's view, a divestiture to the wrong purchaser will not help the situation, and even a divestiture to a suitable purchaser could make things worse. Therefore, in order to mitigate the harm to competition that would be caused by approval of this merger, both the merged entity and any divested entity should be required to:

- publish their peering policies;
- agree as part of their published policies to peer with all nationwide, facilities-based backbones that meet basic operational and technical criteria;
- agree as part of those policies to the bilateral augmentation of interconnection facilities with peers upon reasonable request; and
- agree to neutral, third party arbitration of any disputes concerning qualifications for peering and augmentation.

The Commission has had substantial experience with the difficult task of ensuring fair, pro-competitive interconnection in markets that have "tipped" to monopoly: indeed, that is a core focus of the interconnection and reciprocal compensation provisions of the 1996 Telecommunications Act. The Internet backbone market has not yet reached the level of market dominance that characterizes the local exchange market, but there are warning signs that interconnection through peering can already be used to strengthen the market dominance of the largest provider. The Commission now has the unique—and possibly transitory—opportunity to take limited steps to preserve pro-competitive interconnection in the Internet backbone market, relying primarily on self-regulation and private dispute resolution. Such steps would be clearly in the public interest,

strengthening any divested entity as a competitor, strengthening competition, and advancing a truly "pro-competitive, deregulatory national policy framework."[25]

[25] H.R. Rep. No. 104-458, at 1 (Conference Report for 1996 Telecommunications Act).

Respectfully submitted,

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March 20, 2000

## CERTIFICATE OF SERVICE

I, Michael Nilsson, do hereby certify that copies of the foregoing pleading have been sent by hand delivery, on this 21st day of March, 2000, to the following:

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