Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Global Crossing Limited and Level 3 Communications, Inc., Application for Consent to Transfer Control of Authority to Provide Global Facilities-Based and Global Resale International Telecommunications Services and of Domestic Common Carrier Transmission Lines, Pursuant to Section 214 of the Communications Act, as Amended	)	IB Docket No. 11-78
	)	
Level 3 Communications, Inc., Petition for Declaratory Ruling Under Section 310(b)(4) Of the Communications Act of 1934, as Amended	)	

DECLARATION OF MARCELLUS NIXON

1. My name is Marcellus Nixon. I am the Director of IP Network Planning at XO Communications, LLC. (XO). My business address is 13865 Sunrise Valley Drive, Herndon, VA 20171.

2. I have been employed at XO since 2002, initially as an IP Network Engineer. I have been in my current position as Director of IP Network Planning since 2008. My career with IP networks began in the US Army. I have also held networking positions with the NASD and internet MCI. I hold a Bachelor of Interdisciplinary Studies from the University of Virginia.

3. In my current position, I am responsible for all strategic aspects of IP network planning, and I am the peering coordinator for XO. In that capacity, I manage relationships with other Tier 1 and lower tier Internet Backbone Providers (IBPs), including

determining where peering occurs, evaluating network architecture needs such as capacity requirements, routing requirements, and the impact of technological changes on the peering arrangement. I also am responsible for negotiating interconnection (peering) agreements. To date, I have negotiated on behalf of XO forty-seven (47) peering agreements.

4. XO operates an extensive intercity and metropolitan network across the U.S. and owns 16,000 fiber route miles of transmission facilities. Part of XO's intercity facilities is from a joint build with Level 3 that began in 1998. XO does not own any transmission facilities outside of the U.S., although it has connectivity in locations in Europe and Asia. To the extent that XO leases fiber, such leases are short-term (*i.e.*, one year or less). XO does not enter into any IRU agreements for its Internet backbone network.

5. The core of the XO IP network is a mesh of multiple 10 Gigabit per second (Gbps) circuits, connecting XO points of presence (POPs) and peering nodes globally. The XO IP backbone runs across its own intercity fiber facilities in the U.S. The XO IP network and market connections run end-to-end across XO owned and leased facilities. As a fully-peered, facilities-based backbone provider in the U.S., XO has substantial private peering arrangements in ten metropolitan areas where it exchanges traffic at speeds of up to 10 Gbps. XO has multiple and geographically redundant dedicated connections to other Tier 1 Internet backbones.

6. XO currently offers Dedicated Internet Access (DIA) and wholesale and enterprise transit connections in 75 markets in the United States, 4 markets in Europe and 1 market in Asia. The XO core node locations are: Seattle, Fremont, Los Angeles, Denver, Chicago, Dallas, Atlanta, Miami, Washington, DC and New York. The XO peering node

locations are: Seattle, Palo Alto, San Jose, Los Angeles, Denver, Chicago, Dallas, Atlanta, Miami, New York, London, Amsterdam, Frankfurt, Madrid and Hong Kong.

7. XO has a robust Internet backbone business, interconnecting its IP network with other Internet backbone providers on a settlement-free basis when such interconnection provides mutual benefit to customers of both providers. XO also provides access to its Internet backbone network through transit agreements with smaller Internet backbone networks, large ISPs, content delivery networks (CDNs), and the IP networks of large enterprise customers, such as financial institutions. For the exchange of higher volumes of traffic, XO interconnects its IP network with most other networks directly at Internet exchange points or carrier hotels instead of its POPs.

8. XO's Internet backbone business continues to be a significant growth business for the company. Revenues from XO's Internet backbone business have doubled over the same period last year. Traffic exchanged over XO's Internet backbone network has, on average, been doubling annually since 2007.

9. The Tier 1 Internet backbone market is a distinct market, where Internet global reach and connectivity are essential. A Tier 1 Internet backbone network is one that reaches every other network on the Internet without transiting through another network. In addition, a Tier 1 provider does not pay settlements to another provider except in rare instances. Peering relationships are governed via peering or settlement-free interconnection policies. To operate as a peer, IBP's must fulfill conditions regarding infrastructure and routing requirements. Among the most important requirements are comparable traffic volumes, ratios and geographic scope. If Tier 1 IBPs discontinue peering with each other, single-homed customers of each network will not be able to reach the customers of other network. This situation is only remedied

by the IPBs reaching a new peering agreement that is either settlement-free or settlement-based or entering into a transit agreement.

10. Entry into the Tier 1 Internet backbone market is difficult. First, it requires a would-be Tier 1 IBP to build its own network infrastructure with global connectivity, which is capital intensive. Further, most Tier 1 settlement-free peering arrangements require global coverage. In addition, the would-be Tier 1 IBP has to sign-up customers with enormous amounts of traffic to reach a traffic throughput comparable to that of current Tier 1 IBPs.

11. Although no single authority defines tiers of networks, based on the criteria provided above, the current Tier 1 providers include Level 3, Global Crossing, NTT Communications, Sprint, TiNet, Qwest, AT&T, Verizon, Cogent, Tata Communications, TeliaSonera, and XO.

12. Level 3 and Global Crossing are the two largest Tier 1 IBPs. They carry more traffic on the Internet backbone that is "on-net" than any of the other Tier I IBPs, and they have more unique routes. They also compete intensely with each other and other IBPs for customers.

13. Level 3 owns and operates an extensive region-to-region Internet backbone network that connects the major metropolitan areas in the United States. Level 3 also has one of the most dense metropolitan Internet backbone networks in the United States and Europe. Level 3 has the most unique routing in the United States, providing one network for VoIP and another for Internet access. Since 2003, Level 3 has grown both organically and by acquiring financially distressed networks, including Genuity, WilTel, Progress Telecom, Broadwing, Savvis Content Delivery and Servecast. These acquisitions have given Level 3 access to many valuable assets, including metro and long haul fiber and large blocks of IPv4

address space. The IPv4 space allows Level 3 to make large allocations of unique addresses which provides it an advantage in the exchange of Internet traffic.

14. Global Crossing has significant geographic scale, with access to over 100,000 global route miles. Like Level 3, Global Crossing has grown both organically and by acquiring network assets, including IMPSAT Fiber Networks, Fibernet, and Frontier. Also like Level 3, these acquisitions have enabled Global Crossing to obtain many valuable assets, including long haul fiber in the U.S., South America, and large blocks of IPv4 address space. These addresses provide the same benefit as Level 3's allocation.

15. Each of the Tier 1 IBPs identified above, with the notable exception of Level 3, has made its peering policy either publicly available or has shared it upon request. Although XO has repeatedly requested it, Level 3 has not provided its settlement-free peering policy. To the best of my knowledge, Level 3 has not made its peering policy generally available to other Tier 1 IBPs. Instead, Level 3's peering policy is implemented on an "ad hoc" basis, making it difficult to understand and meet the requirements to peer with Level 3. This lack of transparency also leads to requirements changing without notice and being imposed arbitrarily. In addition, unlike other Tier 1 IBPs and contrary to industry practice, Level 3 has not identified an established peering coordinator to handle peering requests and arrangements.

16. In the last 5 years, the Internet backbone market has changed considerably, primarily due to the growth and evolution of CDNs. CDNs are used to rapidly and cost-effectively deliver a variety of content – predominantly video – to numerous end points, whether the end points are, for example, web browsers, mobile devices, or set-top boxes. Most CDNs utilize Tier 1 IBPs to carry their traffic even in major metropolitan areas and between regional networks.

17. There also has been an increase in traffic exchange with and among secondary tier IBPs and by direct peering among ISPs. However, despite the increased amount of traffic exchanged via secondary and direct peering and the use of CDNs, Tier 1 IBPs are required and necessary to enable traffic to be exchanged with other Internet backbone networks and their customers throughout the world.

18. In the last 5 years, because it is so difficult to enter the Tier 1 backbone business, there has not been much change in the firms that are top Tier 1 players. Entities only have been able to become Tier 1 players through consolidation. In addition, there has not been much change in the rankings by size of these top Tier 1 firms.

19. There are two firms that are often mentioned as potential Tier 1 providers: Google and Comcast. Google is building a lower tier backbone network. But Google's network is not used to serve Google's customers. Instead, Google uses its network for web acceleration – for caching content that will frequently be requested by a high number of Internet users at many locations. Comcast has publicly stated that it is on its way to becoming a Tier 1 IBP. But, Comcast's network is primarily regional, and it lacks international peering nodes.

20. The single most important consideration for a potential transit customer of a Tier 1 IBP is gaining a complete understanding of the number and types of customers and peers that already are connected to the IBP's backbone network. To a potential customer, if an IBP has a large number of "brand name" customers, it is an indicator that the network has sufficient capability, can ensure quality, and will provide high-performance.

21. A growing group of transit customers, including financial entities and VoIP providers, requires low latency. This means an IBP must have substantial capacity and high-performance capabilities. It also means that these customers prefer having their traffic

routed entirely over a single network or having at most a single point where traffic is exchanged with another network.

22. Because of competition in the Tier 1 Internet backbone market, the prices for Internet transit services have dropped significantly over the last five years.

23. An IBP can dominate the Tier 1 IBP market if it controls a disproportionate amount of Tier 1 traffic, especially traffic exchanged with unique customers. When this occurs, transit and content providers who are not customers of the dominant IBP find that if they want to ensure high-quality and high-performance transmissions they need to become customers of the dominant IBP. In essence, this process feeds itself until the market tips entirely in favor of the dominant IBP. This will result in the dominant IBP dictating the relationship with other IBPs, resulting in them paying (or paying higher prices) for peering, and with non-customer transit and content providers, also resulting in them paying higher prices. Additionally, as competition in the IBP market decreases, there will be less innovation, which has been a key driver of higher performance networks and lower priced services.

I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct to the best of my information and belief.

Executed on 8 July, 2011

Marcellus Nixon

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