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**COVINGTON**

BEIJING BRUSSELS LONDON LOS ANGELES  
NEW YORK SAN FRANCISCO SEOUL  
SHANGHAI SILICON VALLEY WASHINGTON

Covington & Burling LLP  
One CityCenter  
850 Tenth Street, NW  
Washington, DC 20001-4956  
T +1 202 662 6000

April 7, 2017

*Via Hand Delivery and ECFS*

Ms. Marlene H. Dortch  
Secretary  
Federal Communications Commission  
445 Twelfth Street, SW  
Washington, D.C. 20554

*Re: CenturyLink, Inc. and Level 3 Communications, Inc. Consolidated  
Applications for Consent to the Transfer of Control of Licenses and  
Authorizations (WC Docket No. 16-403)*

Dear Ms. Dortch:

CenturyLink, Inc. (“CenturyLink”) and Level 3 Communications, Inc. (“Level 3,” and, together with CenturyLink, “Applicants”), by and through their respective counsel, hereby respectfully provide the attached joint response to Request Number 3 set forth in the Commission’s Information Request dated March 30, 2017, in the above-referenced docket.

The documents supporting Applicants’ response to Request Number 3 are Highly Confidential. Consistent with the instructions in the Protective Order in this docket, these Highly Confidential documents are being hand-filed, and copies are being provided to Commission staff pursuant to the instructions set forth in the Commission’s Information Request. Applicants’ narrative response does not contain proprietary and non-public information and is being both hand-filed and filed electronically in the Commission’s Electronic Comment Filing System.

Redacted submissions are marked “REDACTED — FOR PUBLIC INSPECTION” and are being filed electronically in the Commission’s Electronic Comment Filing System. Unredacted Highly Confidential submissions marked “HIGHLY CONFIDENTIAL INFORMATION — SUBJECT TO PROTECTIVE ORDER IN WC DOCKET NO. 16-403 BEFORE THE FEDERAL COMMUNICATIONS COMMISSION” are being delivered to the Secretary. Copies of the unredacted Highly Confidential submissions will be made available to third parties pursuant to the terms of the Protective Order.

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Any questions concerning this submission should be addressed to the undersigned and to counsel for Level 3, designated below.

Respectfully submitted,

*/s/ Yaron Dori*

Yaron Dori  
*Counsel for CenturyLink*

Attachments

cc: Thomas Jones, Willkie Farr & Gallagher LLP  
Mia Guizzetti Hayes, Willkie Farr & Gallagher LLP  
*Counsel for Level 3*

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

In the Matter of	)	
	)	
CenturyLink, Inc.	)	
	)	
and	)	WC Docket No. 16-403
	)	
Level 3 Communications, Inc.	)	
	)	
Consolidated Applications for Consent to	)	
Transfer Control of Domestic and International	)	
Authorizations Pursuant to Section 214 of the	)	
Communications Act of 1934, As Amended	)	
	)	

**INITIAL JOINT RESPONSE OF  
CENTURYLINK, INC. AND LEVEL 3 COMMUNICATIONS, INC.  
TO INFORMATION AND DOCUMENT REQUESTS**

CenturyLink, Inc. (“CenturyLink”), and Level 3 Communications, Inc. (“Level 3,” and together with CenturyLink, the “Applicants”), hereby provide this initial response to Request Number 3 of the Wireline Competition Bureau’s Information and Document Requests issued on March 30, 2017, in the above-referenced docket.<sup>1</sup>

**REQUESTS AND RESPONSES**

3. *Explain Applicants’ competitive analysis identified on pages 3-9 of their February 7, 2017 Joint Reply Comments in this proceeding regarding the provision of BDS to locations capable of being served by the Applicants’ fiber facilities both within CenturyLink’s region and outside of CenturyLink’s region (include any subsequent changes or amendments to the competitive analysis resulting from Applicants’ “continuing to investigate and refine their building assessment” as noted on page 7 and a description of the procedures used in any*

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<sup>1</sup> *Applications Filed for the Transfer of Control of Level 3 Communications, Inc. to CenturyLink, Inc.*, Letter from Madeleine Findley, Wireline Competition Bureau, to Thomas Jones *et al.*, Counsel for Level 3 Communications, Inc., and Yaron Dori *et al.*, Counsel for CenturyLink, Inc., WC Docket No. 16-403, DA 17-296 (Mar. 30, 2016) (“Request for Information” or “RFI”). Unless indicated otherwise, this Joint Response incorporates by reference the defined terms in Section I of the Appendix to the Attachment to the RFI.

*such further investigation and refinement). The explanation should include: all assumptions used to produce the analysis, including whether the definition of BDS included or excluded certain technologies and whether the definition of BDS required or considered the option of service level agreements; Applicants' definition of an overlap building (including whether the overlap determination was based on address match or distance proximity); and the underlying data and documents used for the competitive analysis, sufficient to enable the Commission to replicate the Applicants' competitive analysis. Rather than providing the underlying data for Applicants' competitive analysis, Applicants instead can provide the data requested in Templates A, B, C, and D attached hereto.*

On February 7, 2017, the Applicants submitted reply comments in this proceeding that, among other things, provided an update with respect to the methodology they used to determine the effect that the transfer of control of Level 3 and its operating subsidiaries to CenturyLink (the "Transaction") would have on competition for BDS services.<sup>2</sup>

Subsequently, on March 3, 2017, when the Applicants met with representatives of the Wireline Competition Bureau and the Office of General Counsel to summarize those findings, they noted that, once their assessment of this issue was at or near the point of completion, they would update the record with the results of that assessment to demonstrate conclusively that the Transaction will promote competition for enterprise services by creating a stronger competitor for such services without leading to a material reduction in the number of fiber-based entities that provide or are capable of providing BDS to locations to which CenturyLink and Level today each have fiber-based connections. This response, together with the supporting documents described below, supplements the analysis provided by the Applicants on pages 3-9 of their reply comments and provides information responsive to Request No. 3 of the RFI.

The principal contention raised in the record regarding BDS is that the preliminary methodology used by the Applicants to identify 2:1 locations that lack an in-location competitor or a competitor sufficiently nearby to constrain pricing to customers in those locations failed to

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<sup>2</sup> See Joint Reply Comments of CenturyLink, Inc. and Level 3 Communications, Inc., WC Docket No. 16-403, at 3-9 (filed Feb. 7, 2017) ("Reply Comments").

distinguish between fiber-based competitors and competitors that provision enterprise services over hybrid fiber-coaxial cable (“HFC”) facilities.<sup>3</sup> The Applicants explained in their reply comments that excluding HFC-based competitors from the analysis would understate the level of competition they will face post-closing (because it would disregard the significant volume and quality of BDS provisioned by cable companies over HFC facilities); they nevertheless refined their assessment of competition in the provision of BDS to focus only on fiber-based competitors.<sup>4</sup> In doing so, the Applicants tentatively concluded in their reply comments that only 80 locations in 23 metropolitan statistical areas (“MSAs”) within CenturyLink’s ILEC region would go from having two competitors (*i.e.*, CenturyLink and Level 3) to one (*i.e.*, the combined company) without a fiber-based competitor in the location or sufficiently nearby based on the “distance/demand” screens used by the Commission and the Department of Justice in prior transactions.<sup>5</sup>

The Applicants explained in their reply comments that their investigation was ongoing and that they expected that further investigation would confirm that enterprise services relevant to the Transaction are and will remain vibrantly competitive post consummation. The Applicants have undertaken such additional investigation and have further refined their location analysis methodology, which has reduced the number of 2:1 in-region locations without a competitor sufficiently nearby based on the relevant distance/demand screens from 80 to 23 (now across only eight MSAs, each of which contains six or fewer of these locations). An explanation of the details and results of the Applicants’ refined location analysis methodology is provided below.

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<sup>3</sup> See Comments of INCOMPAS, WC Docket No. 16-403, at 9-11 (filed Jan. 23, 2017).

<sup>4</sup> Reply Comments at 5-6.

<sup>5</sup> *Id.* at 7-8.

### Improvement of Geocoding Technique

In their reply comments, the Applicants explained that they had identified 3,149 locations within CenturyLink's ILEC region and 1,366 locations outside of that region into which both CenturyLink and Level 3 own or control fiber,<sup>6</sup> which resulted in a total of 4,515 overlap locations. For this analysis, the Applicants each generated a list of addresses and geocodes of U.S. commercial locations to which they connect fiber that they own or control under an indefeasible right of use.<sup>7</sup> To develop the list of overlap locations, the Applicants' on-net location addresses were matched to each other based on their standardized postal addresses using the U.S. Postal Service Coding Accuracy Support System software and MSA designation, and using each company's geocodes where CenturyLink and Level 3 had different addresses for matching buildings.<sup>8</sup> In the latter circumstance, the distance between each CenturyLink on-net location and each Level 3 on-net location was calculated using the geocodes assigned by each of the Applicants to their respective locations.

Subsequent to the filing of their reply comments, the Applicants refined their analysis by replacing the company-assigned geocodes with geocodes assigned by a common geocoder, where valid geocodes were available.<sup>9</sup> Where the geocoder failed to assign a valid geocode,

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<sup>6</sup> *Id.* at 3-4.

<sup>7</sup> These addresses are referred to as "on-net locations" even though the fiber may not currently be used to provide service to a customer in the location or the address may be the location of a cell tower.

<sup>8</sup> Consistent with Commission precedent, where addresses did not match, locations within 164 feet (50 meters) of each other were deemed to be the same location. *See Business Data Services in an Internet Protocol Environment*, Tariff Investigation Order and Further Notice of Proposed Rulemaking, 31 FCC Rcd. 4723, 4925-26, App. B, Dr. Marc Rysman, Empirics of Business Data Services (Apr. 2016).

<sup>9</sup> Geocodes were assigned using the software package Alteryx. In addition to assigning geocodes to addresses, Alteryx provides information on the quality of the geocode match, which is considered valid if the address is classified as an "actual" address, a "street" address, an "intersection," an "extrapolate," or located in a nine-digit zip code. *See About the Street*

distance was measured using a CenturyLink-assigned geocode, and where such a geocode was not available, distance was measured using a Level 3-assigned geocode. These geocodes were then used to assign an MSA designation to each of the Applicants' locations. During this process, the Applicants discovered that approximately three percent of overlap locations outside of MSAs had been excluded from their earlier analysis. The Applicants corrected this issue in their refined methodology by retaining all overlap locations, regardless of whether they were located outside of an MSA.

The improvement of the Applicants' geocoding technique and the addition of previously excluded locations had the net effect of increasing the number of out-of-region overlap locations, from 1,366 to 1,400. However, the refined methodology had no effect on the number of in-region overlap locations identified in the Applicants' reply comments, which remained at 3,149. Thus, as a result of these refinements, the total number of in-region and out-of-region overlap locations increased from 4,515 to 4,549.

#### Incorporation of GeoTel TeleTracker Data for the Second-Closest Competitors

In their reply comments, the Applicants explained that they had tentatively determined that, of the 3,149 overlap locations within CenturyLink's ILEC region, 260 lacked another fiber-based competitor in the location or within 0.1 mile of the location, and of the 1,366 overlap locations outside of CenturyLink's ILEC region, 39 lacked another fiber-based competitor in the location or within 0.1 mile of the location.<sup>10</sup>

To arrive at these figures, the Applicants relied on information regarding the presence of competitors from six data sources: (1) the GeoResults GEOLIT dataset (reflecting data reported for the third quarter of 2016); (2) fiber route and on-net location information made publicly

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*Geocoder Tool*, Alteryx, <https://help.alteryx.com/9.5/Geocoder.htm> (last visited Apr. 7, 2017).

<sup>10</sup> Reply Comments at 5-6.

available by each of Integra, Windstream, and Zayo, and on-net location information for Cogent, Lighttower, Lumos, and Unite;<sup>11</sup> (3) CenturyLink's CLEC database, which includes aggregated lists of on-net locations it receives from its CLEC vendors and other companies from which it purchases access; (4) Level 3's competitive intelligence dataset on third-party providers and their ability to provide access to locations, compiled in the ordinary course from information received from vendors and companies from which Level 3 purchases access; (5) the on-site inspections of individual locations undertaken at that time by CenturyLink and Level 3 field personnel; and (6) GeoTel TeleTracker.<sup>12</sup> In the interest of time, data from TeleTracker was used at that time only in connection with overlap locations within CenturyLink's ILEC region that were found to lack a fiber-based competitor within 0.1 mile, based upon information from the other five data sources.<sup>13</sup>

With the benefit of additional time, the Applicants refined their analysis after filing their reply comments by incorporating TeleTracker data for the second-closest competitor for 24 locations that previously were excluded from the assessment based on the Applicants' earlier conservative assumption that they might not be served by competitive fiber-based providers. This, combined with the improved geocoding described above, had the effect of reducing the total number of overlap locations that lack a fiber-based competitor in or within 0.1 mile.

Specifically, of the 3,149 in-region overlap locations, 253<sup>14</sup> (rather than 260) were found to lack

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<sup>11</sup> In their reply comments, the Applicants stated that they relied on both fiber route and on-net location information made publicly available by Cogent. *See id.* at 4. In fact, the Applicants relied only on on-net location information for this provider.

<sup>12</sup> *See id.* at 4-5.

<sup>13</sup> In some instances, at the time the Applicants filed their reply comments, providers identified in GeoTel TeleTracker were excluded from the analysis where the Applicants had not yet confirmed that they are available to serve a particular address. *Id.* at 4 n.12.

<sup>14</sup> In the Highly Confidential Building Overlap Analysis Excel spreadsheets accompanying this response [Bates Numbers CTLLVLT 000001 and CTLLVLT 000002], this figure appears in

a competitor within 0.1 mile, and of the now 1,400 (formerly 1,366) out-of-region overlap locations, 36 (rather than 39) were found to lack a competitor within 0.1 mile.

Correction of Anomalies in and Incorporation of Additional Sources of Demand Data

In their reply comments, the Applicants tentatively concluded that there were 80 locations within CenturyLink's ILEC region that would go from having two competitors to one without a fiber-based competitor within the distance specified by the screens embraced by the Department of Justice and the Commission.<sup>15</sup> To reach this conclusion, the Applicants incorporated into their analysis demand information used by the Applicants in the ordinary course — for CenturyLink, its own data on sales into each of its locations, and for Level 3, its own sales data and service proposals<sup>16</sup> and Dun & Bradstreet estimates of total location demand.<sup>17</sup> The Applicants also included FiberLocator information about additional competitor facilities in or around each of these locations.<sup>18</sup>

After submitting their reply comments, the Applicants discovered an anomaly in the CenturyLink sales data, which, when corrected, had the effect of reducing demand levels for certain locations and thus increasing the number of in-region 2:1 locations that lack a competitor sufficiently nearby after the distance/demand screens were applied. Around the same time, the Applicants also obtained additional information concerning Level 3's sales data and service

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“View 2” of the In-Region Summary Table as 243. This is because the Summary Table calculations already incorporate the refinements described below (in the “Additional Refinements and Investigation” section) pertaining to the Teletracker distance calculations. *See infra* page 8–11.

<sup>15</sup> Reply Comments at 7.

<sup>16</sup> Information from Level 3 sales data and service proposals underestimated demand for many locations because it excluded Level 3 Ethernet sales.

<sup>17</sup> *See* Reply Comments at 6-7. Where demand estimates were available from multiple sources, total location demand was estimated as the largest of the available estimates.

<sup>18</sup> *See id.* at 7.

proposals, which provided demand data for certain locations for which demand information had not previously been known. Based on these further refinements to demand estimates and competitor facilities data, the total number of in-region 2:1 locations that lacked a competitor rose from 80 to 116.

#### Additional Refinements and Investigation

At the meeting with representatives of the Wireline Competition Bureau and Office of General Counsel on March 3, the Applicants explained that they were in the process of making additional refinements to their location analysis methodology and undertaking additional steps, including site visits,<sup>19</sup> which was causing — and was expected to continue to cause — the number of in-region 2:1 locations lacking a competitor sufficiently nearby to decline further. These additional refinements and steps are described below.

First, in the course of confirming the distances between the presence of competitor fiber and overlap locations, the Applicants found that in a subset of cases pertaining to approximately 90 buildings, those distance measurements had been rounded or incorrectly recorded. The Applicants replaced these rounded and incorrectly recorded figures with more precise distance measurements. The Applicants also made additional refinements to their TeleTracker distance calculations. In certain instances, the Applicants' initial TeleTracker distance calculations were based on street path measurements, which suggested that the distance between competitive fiber and a building location was greater than it would have been if the Applicants had instead measured a straight line between the competitive fiber and the building location. The Applicants corrected this by redoing their calculations using only straight-line measurement.

Second, the Applicants undertook a mapping analysis to further identify the presence of

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<sup>19</sup> See CenturyLink, Inc., *Notification of Ex Parte Presentation*, WC Docket No. 16-403 (Mar. 7, 2017).

competitive fiber providers. To do this, the Applicants used data from a subset of the information identifying the location of fiber-based competitors on which the Applicants had relied previously<sup>20</sup> and an internal resource used by CenturyLink that includes fiber route information provided by carriers to CenturyLink in the ordinary course of business.<sup>21</sup> The Applicants then converted these data to KMZ files and overlaid these files onto Google Earth to measure the distances between competitor fiber routes and the remaining overlap locations, measuring the distance between those fiber routes to the nearest boundary of the location property.<sup>22</sup> This process provided more precise measurements between the competitor fiber routes and the property locations because the Applicants' earlier reliance on geocoordinates alone — which reference only a specific point — did not take into account the fact that certain properties extended beyond that single point and thus could be closer to competitor fiber routes than previously reported.<sup>23</sup>

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<sup>20</sup> The Applicants incorporated information from the following datasets to identify competitive fiber providers whose facilities were located within the applicable distance/demand screens: (1) the GeoResults GEOLIT dataset (reflecting data reported for the third quarter of 2016); (2) on-net location information made publicly available by each of Cogent, Integra, Lightower, Lumos, Unite, Windstream, and Zayo; (3) CenturyLink's CLEC database, which includes aggregated lists of on-net locations it receives from its CLEC vendors and other companies from which it purchases access; and (4) Level 3's competitive intelligence dataset on third-party providers and their ability to provide access to locations, compiled in the ordinary course from information received from vendors and companies from which Level 3 purchases access; and (5) GeoTel Teletracker data.

<sup>21</sup> This resource, a component of CenturyLink's CLEC data set, is used by CenturyLink's network planning team, and originated with Qwest's acquisition of OnFiber Communications in 2006. It serves as a supplemental resource for identifying the fiber routes of competitors that do not necessarily appear in current publicly available competitive fiber route information.

<sup>22</sup> When making decisions as to whether to serve a building, carriers do not consider only the precise distance between their fiber facilities and the geocoordinates of a particular building. The property boundaries of the building also are taken into account because they can affect the cost of fiber deployment due to the use of public rights-of-way when running fiber to the location.

<sup>23</sup> For example, the distance between a building situated in the middle of a large tract of land and a competitor's fiber ring would be greater than the distance between the property boundary and

Third, after further investigation, the Applicants determined that some of the buildings were being served by Level 3 through fiber leased from an entity other than CenturyLink, thereby demonstrating the presence of other fiber-based competitors capable of serving those buildings.

Fourth, the Applicants were able to identify an additional fiber provider, Nextera, not previously incorporated in their analysis. Fifth, the Applicants incorporated additional building demand information that had not previously been incorporated into their analysis. Sixth, location-specific research led to the removal of two 2:1 locations (a municipal utility facility that self-provisions fiber and a location that is served by municipality fiber). Seventh, additional site visits resulted in the identification of a competitive fiber provider in or sufficiently near a number of the remaining 2:1 locations; and eighth, the Applicants included additional information from FiberLocator.

These additional refinements had the net effect of removing 93 locations from the list of in-region 2:1 locations, causing the number of in-region 2:1 locations lacking a competitor sufficiently nearby using the Commission's and the Department of Justice's distance/demand screens to decline from 116 to 23, which are spread across eight MSAs. Highly Confidential Attachments to this submission include (1) an Excel spreadsheet identifying the 93 locations removed as a result of these additional refinements and investigation, and the reason for each location's exclusion [Bates number CTLLVLT-000003]; and (2) screenshots taken from TeleTracker that were used in connection with the above-described mapping analysis [Bates numbers CTL-00005005–CTL-00005145].

As the above makes clear, these remaining 23 2:1 locations (some of which are cell towers) are uniquely situated and *de minimis*, and thus not competitively significant. Indeed,

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that fiber ring.

they account for a mere 0.7 percent of the Applicants' in-region overlap locations. Clearly, the combined company would not have a meaningful advantage vis-à-vis other competitors, particularly given the significant competition from cable companies (whose HFC facilities are not even considered in the above-described analysis) that CenturyLink and Level 3 face today and that the combined company would face post consummation. Indeed, as noted in the Applicants' reply comments, the Applicants' conclusion with respect to the number of remaining 2:1 locations is conservative, as it excludes information available in FCC Form 477 filings or on cable company websites.<sup>24</sup> As shown in a Highly Confidential Excel spreadsheet [Bates number CTLLVLT-000002], if FCC Form 477 filings were included in the analysis, the number of in-region 2:1 locations that lack a competitor sufficiently nearby to satisfy the Commission's Distance/Demand screens would drop to a mere 12 locations.<sup>25</sup>

As is clear from the foregoing, the Transaction will not have a meaningful effect on competition for BDS. In support of this assessment, the Applicants are including with this submission three Highly Confidential Excel spreadsheets [Bates numbers CTLLVLT-000001–CTLLVLT-000003] containing the underlying data for their competitive analysis.

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<sup>24</sup> See Reply Comments at 8.

<sup>25</sup> Based on FCC Form 477 data reported for the fourth quarter of 2015 reporting maximum download speeds of 100 Mbps or greater, either via HFC or fiber to the premises.

Respectfully submitted

**LEVEL 3 COMMUNICATIONS, INC.**

**CENTURYLINK, INC.**

/s/

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Thomas Jones  
Mia Guizzetti Hayes  
WILLKIE FARR & GALLAGHER LLP  
1875 K Street, N.W.  
Washington, DC 20006  
(202) 303-1000  
tjones@willkie.com  
mhayes@willkie.com

*Its attorneys*

/s/

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Yaron Dori  
Michael Beder  
Brandon Johnson  
Ani Gevorkian  
COVINGTON & BURLING LLP  
One City Center  
850 Tenth Street, N.W.  
Washington, DC 20001  
(202) 662-6000  
ydori@cov.com  
mbeder@cov.com  
bjohnson@cov.com  
agevorkian@cov.com

*Its attorneys*

Dated: April 7, 2017

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