

**IOWA UTILITIES BOARD**

**TO:** Amy Christensen

**FROM:** Tara Ganpat-Puffett, Larry Stevens, Mary Whitman

**SUBJECT:** Summary of Call Termination Reports (FCU-2012-0019, FCU-2013-0004, FCU-2013-0005, FCU-2013-0006, and FCU-2013-0009) CenturyLink June 30, 2015 (confidential designations updated August 25, 2016)

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## **I. Complaints (Tara)**

### **A. Rehabilitation Center of Allison (FCU-2012-0019)**

On September 25, 2012, Kathy Miller, Administrator of the Rehabilitation Center of Allison (the Allison facility), Iowa, filed an informal complaint with the Iowa Utilities Board (Board) alleging that the facility was not receiving telephone calls and faxes from the Shell Rock Clinic in Shell Rock, Iowa, and the Waverly Health Center in Waverly, Iowa. Ms. Miller stated that persons calling the Allison facility from the Shell Rock Clinic and Waverly Health Center locations have reported that sometimes the Allison facility's telephone never rings, and that sometimes it rings, but no one answers. Ms. Miller also stated that, according to the facility's local telephone provider, Dumont Telephone Company (Dumont Telephone), the source of the problem is with long-distance carriers and that both the Shell Rock and Waverly facilities used the same long-distance carrier, AireSpring, Inc. (AireSpring), a reseller of Qwest Corporation, d/b/a CenturyLink (CenturyLink), services.

Board staff forwarded the complaint to Dumont Telephone, Iowa Network Services, Inc. (INS)<sup>1</sup>, CenturyLink, and AireSpring for their response. On October 12, 2012, INS submitted a response saying that according to its engineering department, there were no telephone calls from the Waverly Health Center's number to the Allison facility's number. INS stated that it tested the numbers involved and concluded that the call termination issues occurred before the calls reached its network. INS explained that it can only report on telephone calls that reach its network and the records show calls from the Waverly Health Center's number and the Shell Rock Clinic's number completing to the Allison facility's number.

CenturyLink responded on October 15, 2012, stating that after receiving the complaint, its network department conducted an investigation on telephone calls provided by CenturyLink long-distance access. CenturyLink indicates call records for the telephone numbers in question showed the telephone calls had duration with no report of any failure. CenturyLink also stated the routing records showed the calls were routed using an underlying carrier. CenturyLink stated its technician made test calls with the underlying carrier and all calls completed successfully. In addition, CenturyLink stated it attempted to place test calls with the customer, but was not able to get calls returned to schedule retesting. CenturyLink stated its own retesting showed no additional issues for completing the calls to the Numbering Plan Area Code (NPA) Central Office Exchange Code (NXX) (NPA-NXX).

On October 17, 2012, AireSpring responded, stating that it conducted a thorough search of its systems, including billing, order, and carrier databases and document management systems, for the queried information, but no information could be located. According to AireSpring, this means that the numbers, individuals, and/or businesses

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<sup>1</sup> INS provides centralized equal access services to independent telephone companies throughout the state.

are not within AireSpring's custody or control. AireSpring further stated that any telecommunication problems or malfunctions were beyond AireSpring's ability to look at, find, correct, or control in any way.

Dumont Telephone submitted a response on October 18, 2012, stating that on October 16, it conducted a series of tests in cooperation with technicians from Butler-Bremer Communications of Shell Rock, INS, and Waverly Health Center. The tests consisted of originating voice and fax calls from the Shell Rock and Waverly facilities and terminating all calls to the voice and fax numbers at the Allison facility. Dumont Telephone reported the tests resulted in all calls terminating properly on October 16, 2012. Dumont Telephone stated it is confident that all voice or fax calls originated at the Shell Rock location via the Butler-Bremer network terminate in Allison correctly because INS can monitor the entire route for that call type.

Dumont Telephone also stated that while testing showed that the network delivered calls properly on a particular date, it is not convinced the problem is resolved. Dumont Telephone noted Waverly Health Center staff reported that they have experienced this trouble for over two years and have reported it to CenturyLink multiple times. Dumont Telephone stated the trouble is fixed immediately, but then returns after several weeks or months. According to Dumont Telephone, AireSpring is the long-distance provider for the Waverly facility. Butler-Bremer Communications of Shell Rock (Butler-Bremer) is the long-distance provider for landlines at the Shell Rock facility, while AireSpring is the long-distance provider for the Shell Rock Facility. (Dumont Telephone identifies the Iowa Communications Network as the originating service provider for the Shell Rock facility.)

On October 19, 2012, staff sent a letter to AireSpring and CenturyLink asking for more information that would help the Board understand the causes of the call termination issues involved in this complaint. In the letter, staff observed that call termination problems in rural areas may relate to the practice of least cost routing of long-distance traffic to rural areas of the country. Staff noted that because rural areas traditionally have higher costs associated with the termination of long-distance traffic, providers that route long-distance calls may wish to avoid higher termination costs by routing long-distance calls in a way to minimize costs. The practice, known as least cost routing, may ultimately result in poor service quality and lost calls.

Staff also noted that because it appears that rural call termination issues may recur, staff would welcome a better way for local exchange carriers to quickly and more readily address the issues when they learn that their local exchange customers are experiencing call termination issues. To that end, staff asked CenturyLink and AireSpring to provide specific contact information for personnel who can promptly address call routing issues when contacted.

On November 2, 2012, CenturyLink provided a response explaining its reasons for using underlying carriers and the performance standards CenturyLink requires its underlying carriers to meet. CenturyLink also discussed the use of routing tables in call

processing and how changes to the routing tables can cause call routing issues to recur. CenturyLink explained it used its operations processes to address the call failure in this case. Also, CenturyLink stated that because it does not have any records of calls that did not complete, it can only investigate records of calls that did complete. CenturyLink stated that technicians made test calls with the underlying carrier and those calls completed successfully. CenturyLink explained it made a routing change for calls completing to a certain NPA-NXX and tested for call completion after the change. CenturyLink provided the contact information staff had requested.

On November 7, 2012, AireSpring provided an additional response stating that after further investigation, it agreed with Dumont Telephone's suggestion that the problems identified in the complaint were caused by poor origination service. Dumont Telephone noted it does not have access to the party that originated the calls that allegedly did not complete. AireSpring provided the requested contact information. In a separate e-mail response, AireSpring also clarified its response by stating that Waverly Health Center has a point-to-point private line connection with CenturyLink and that, as a reseller of Internet service, AireSpring does not handle any call traffic.

On November 14, 2012, Board staff participated in a telephone call with CenturyLink personnel discussing CenturyLink's responses to the complaint. CenturyLink described "call looping," which may occur at any point in the call flow process after the call leaves the originating carrier's network. CenturyLink distinguished call looping from routing tables, which determine the routes to be used to process the calls across the network. CenturyLink observed that changes in routing tables create the possibility that call routing issues can recur. CenturyLink stated that it conducts tests to make sure calls are not looped back to CenturyLink after origination. CenturyLink explained further that it was not able to find records for the calls that Ms. Miller stated are not completing and identified other possible explanations for why the calls are not completing, including the possibility that the calls are being made using other carriers by using either wireless or dial-around services.

According to CenturyLink, Dumont Telephone was incorrect in stating that AireSpring resells CenturyLink long-distance service to the Waverly Health Center. CenturyLink explained that AireSpring is not involved in providing long-distance service to the Waverly facility. CenturyLink states that the carrier information for the Waverly facility is confidential customer proprietary network information (CPNI). CenturyLink explains it did not identify its underlying carrier in its October 15, 2012, submission because it concluded that the underlying carrier was not at fault. With respect to its use of underlying carriers, CenturyLink states that the carriers must pass testing and agree to metrics and are held accountable for not meeting the standards. CenturyLink explains that its underlying carriers are not necessarily the least expensive.

On December 14, 2012, staff issued a proposed resolution. Staff reviewed the information provided by the various carriers in their responses, noting that according to CenturyLink, there were no current issues with completion of calls to the Allison facility. Based on its analysis of the complaint and the responses, staff indicated that it did not

believe that AireSpring played a role either as a reseller of CenturyLink's long-distance service or as an underlying carrier selected by CenturyLink to deliver long-distance calls. Staff also concluded that neither INS nor Dumont Telephone played a role in misrouting of calls. Staff observed that the response from INS suggests that the calls in question never crossed its network. Since Dumont Telephone is the terminating local exchange carrier, Dumont Telephone would not be responsible for any call completion issues.

Regarding CenturyLink, staff observed that it appears that CenturyLink has no records to investigate when calls do not complete. Staff noted that the company can make changes to the routing tables to correct call completion problems, but problems can recur if the tables are changed again. In staff's view, CenturyLink cannot say with certainty which of the underlying carriers is responsible for calls that did not terminate. Staff noted that CenturyLink appears to be working in good faith to address any complaints that are brought to its attention. Staff concluded that the call termination issues for the Allison facility appear to have been resolved but asked the consumer to continue to report any further call completion issues.

On December 27, 2012, the Office of Consumer Advocate (OCA), a division of the Iowa Department of Justice, filed a petition for further investigation. On March 15, 2013, the Board issued an order granting the OCA request for formal proceeding and setting a procedural schedule.

On November 7, 2013, the Allison facility changed its long-distance service provider from CenturyLink to Dumont Telephone. By e-mail dated November 13, 2014, Ms. Miller had advised OCA that the facility had experienced no recent problems and would notify OCA of further difficulties.

On December 3, 2014, Ms. Miller advised that the Allison facility was unable to complete faxes to Shell Rock and Dumont. On December 5, 2014, originating long-distance carrier Dumont Telephone advised that, according to a report prepared by INS, calls on December 3, 2014, destined for "Shell Rock/Dumont/etc.," reached INS on the originating end and reached WorldCom (Verizon) (evidently the intermediate carrier for Dumont Telephone) but were not delivered to INS on the terminating end. Dumont Telephone further advised that at 5 p.m. on December 3, 2014, it removed WorldCom and substituted Sprint, and the calls then completed properly. The OCA noted as of December 17, 2014, no call termination issue had been reported to OCA by Ms. Miller.

**B. UnityPoint Clinic Family Medicine at Huxley, f/k/a Huxley Family Physicians (FCU-2013-0004)**

Lynette Millette of UnityPoint Clinic (UnityPoint) f/k/a/ Huxley Family Physicians in Huxley, Iowa, filed an informal complaint with the Board on November 28, 2012. The complaint alleged that UnityPoint has experienced static and problems with telephone calls cutting off for about four years. The complaint also alleged that UnityPoint was not receiving telephone calls and faxes from Mary Greeley Hospital in Ames, Iowa. The

complaint stated that persons (patients, other hospital, and other clinics) trying to call UnityPoint had complained about the phone lines. Ms. Millette noted that Mary Greeley Hospital reported that it was unable to send urgent test results by fax to UnityPoint because it could not get through on the phone or fax lines. Ms. Millette also complained about calls not getting to the after-hours answering service used by UnityPoint. Ms. Millette noted concerns about the consequences if UnityPoint is not able to make or receive a telephone call.

Board staff forwarded the complaint to Huxley Communications Cooperative (Huxley Communications) (identified as the local exchange service provider for UnityPoint); CenturyLink (identified as the local and long-distance service provider for Mary Greeley Hospital); and Bluetone Communications, LLC (Bluetone), formerly known as Bluemile Networks (identified as an underlying carrier for CenturyLink) for response.

Huxley Communications stated that since 2008 it had received four complaints about static or calls being dropped for UnityPoint and that in those instances, it found the trouble to be with UnityPoint's customer-owned key system or a possible call completion issue. Huxley Communications stated it researched the latest issues identified in UnityPoint's complaint, but its system could not tell when a call did not complete. Huxley Communications stated the call completion issue should be addressed by the Board.

In its response, CenturyLink detailed the steps its technician took to investigate the issues raised by the complaint and stated that the technician performed test calls and determined the problem was related to call routing. CenturyLink stated that it removed Bluetone, the underlying carrier used to route calls, from the routing table for the telephone number in question, and is working with Bluetone to address the issue.

Bluetone responded to the complaint, indicating it is a wholesale provider of telecommunication services to CenturyLink and does not receive trouble reports directly from CenturyLink end-users. Bluetone stated it investigated the complaint regarding the trouble UnityPoint experienced on the dates specified in the complaint and found no trouble reports from CenturyLink regarding the telephone numbers in question. According to Bluetone, CenturyLink would decide whether to report issues to Bluetone. With respect to a trouble report it received from CenturyLink regarding a fax number, Bluetone stated that it was unable to determine a definitive cause for the fax failure, but proactively rerouted the destination number to another vendor in order to provide an alternate route for call completion.

Staff issued a proposed resolution on February 21, 2013. Staff determined that changing the underlying carrier resolved the matter and suggested that if Ms. Millett experiences further problems with telephone calls and faxes to UnityPoint not completing, she could ask the person originating the call or sending faxes to contact their telephone provider and to file a complaint with the Board.

On March 7, 2013, the OCA filed a petition with the Board for further investigation. On May 23, 2013, the Board issued an order granting the request for formal proceeding and assigning the matter to its Administrative Law Judge (ALJ). The OCA indicated that according to UnityPoint it had not experienced any significant call completion problems subsequent to the docketing order in these proceedings.

C. Hancock County Health Systems (FCU-2013-0005)

On January 15, 2013, Mr. Curt Gast of Hancock County Health Systems (HCHS) filed an informal complaint with the Board alleging that HCHS has experienced problems completing telephone calls made from its main health clinic campus to outlying telephone numbers within the HCHS telephone service area. The complaint described problems completing calls, including calls that do not ring and calls that are not answered. Mr. Gast noted that the problems involve calls which originate from the main health clinic campus and are intended to terminate at outlying medical clinics, noting the problems occur when calling from Britt to Kanawha, Iowa.

Board staff forwarded the complaint to CenturyLink, the local exchange service provider for HCHS, and various carriers identified in the course of the investigation as underlying carriers involved in routing the calls. In its response, CenturyLink stated it investigated the complaint, testing the numbers identified in Mr. Gast's complaint. CenturyLink noted that test calls were attempted from the main location of the HCHS to two different numbers at one of the offsite clinics, and these calls did not complete. CenturyLink detailed the steps its technician took to investigate the long-distance calling issues and call routing paths. CenturyLink stated it was able to locate calls from the calling telephone number to the called telephone number. CenturyLink stated its technician determined the problems identified in the complaint were related to call routing.

CenturyLink stated that it removed IntelPeer, the underlying carrier used to route these calls, from the routing table for the telephone number in question, and was working with IntelPeer to address the issue. Further, CenturyLink explained its technician contacted Mr. Gast to perform test calls after the routing changes were made, and the test calls completed without issue.

IntelPeer provided a response similar to CenturyLink's, describing how it investigated the complaint. IntelPeer stated it removed its underlying carrier, Impact Telecom (Impact), from the call route and conducted further test calls, which completed without issue.

In its response, Impact stated that IntelPeer requested that Impact block the relevant terminating telephone number pending investigation to allow rerouting to an alternate route. Impact stated its technician investigated the issue and researched call detail records and evaluated the call paths. According to Impact, its investigation showed that one of the calls tested was presented to its network and had duration until the call was terminated by the originating party in the route, in this case, IntelPeer. Impact described this as a "ring no answer" or "origination cancel" occurrence. Impact stated it

attempted to send the call through using another carrier, InterMetro Communications (InterMetro).

Impact also stated its records showed Internet Protocol (IP) packets in both the inbound and outbound directions. With respect to the second call investigated, Impact stated its records show one second of post-dial delay, seven seconds of ring time, and indications that the call was answered and the clock was started for billing purposes. This call showed 15 seconds of duration and IP packets in both directions and was terminated to Broadvox Communications (Broadvox). Impact stated it did not have any issues with calls that were reported to Impact by IntelPeer and which were involved in the complaint filed with the Board.

Staff issued a proposed resolution on March 14, 2013. Staff found that once CenturyLink removed IntelPeer from the routing, calls completed without issue. Staff noted it contacted Mr. Gast, who reported that since CenturyLink made changes to the routing he had not had any further problems with calls not completing. Mr. Gast indicated he would contact Board staff if problems recurred.

On March 27, 2013, the OCA filed a petition for further investigation. On June 10, 2013, the Board issued an order granting the request for formal proceeding and assigning the matter to the Board ALJ.

On January 7, 2014, Mr. Gast advised OCA that he had again been receiving more frequent complaints about calls between Britt and Kanawha, Iowa. On March 17, 2014, Mr. Gast advised OCA that on February 20, 2014, he had switched his local and long-distance telephone service from CenturyLink to a smaller local vendor, Communications 1.

OCA also noted that in July 2014, Mr. Gast reported dropped telephone calls at the Wesley Medical Clinic in Wesley, Iowa. Also, OCA noted that in November 2014, CenturyLink, the long-distance carrier for the Wesley Medical Clinic, addressed six problematic calls on five dates in August 2014. According to CenturyLink, two of the calls were routed by carriers other than CenturyLink and were beyond CenturyLink's ability to investigate, one involved a local call to a cell phone that may have dropped due to lack of cellular coverage, and two did not involve any difficulties on CenturyLink's network. On one call, CenturyLink determined that routing was the issue and removed intermediate "carriers" from the routing. The test calls completed successfully.

#### D. Helen Adolphson and Charlotte Skallerup (FCU-2013-0006)

Ms. Helen Adolphson filed an informal complaint identified as C-2013-0006 with the Board on January 17, 2013, stating that for several months she had experienced problems calling her mother, Ms. Faye Wookey, who resides in Emerson, Iowa. Ms. Adolphson explained that her local and long-distance service is provided out of Red Oak, Iowa, by CenturyLink, and Ms. Wookey's service provider is Interstate 35 Telephone Company, Inc. (I35). As described by Ms. Adolphson, the problems she encountered when attempting to call her mother's telephone number include instances

where the telephone rang on Ms. Adolphson's end of the call, but Ms. Wookey later reported that her telephone did not ring; after a call would ring once or twice, Ms. Adolphson would hear a busy tone; calls would be dropped; or calls would go through, but with a poor connection. Ms. Adolphson explained she was concerned about these problems because her mother is 97 years old and if she does not answer the telephone, Ms. Adolphson must drive to her home to ensure her welfare. Ms. Adolphson explained that her mother's service provider, I35, had been contacted several times about the problems, but was not able to find any problems with its systems.

Ms. Charlotte Skallerup, Ms. Adolphson's sister and a resident of Glenwood, Iowa, filed a complaint identified at C-2013-0011, with the Board on January 22, 2013, stating that she had experienced problems calling her mother, Ms. Wookey. Ms. Skallerup's local and long-distance service provider is CenturyLink. Ms. Skallerup noted that I35, Ms. Wookey's service provider, had visited Ms. Wookey's home several times to investigate the calling problems. Ms. Skallerup noted that neither she nor her sister had problems with other long-distance calls. Ms. Skallerup described the problems calling her mother's number as follows: sometimes the telephone call would go through without difficulty; other times the call would ring once or twice and then go dead; other times the ring sounded fine initially but then sounded garbled and if her mother answered, they could not hear or understand each other. In some cases, Ms. Skallerup has had to call as many as eight to ten times before the call would connect. Ms. Skallerup stated she was concerned about the reliability of her telephone service because if her mother does not answer the telephone, Ms. Skallerup must drive 30 miles to check on her mother. Noting that her mother has a medical alert device from the Red Oak, Iowa, hospital, Ms. Skallerup questioned whether that service would work properly if Ms. Wookey's telephone does not always work.

Board staff commenced an investigation of the complaint, forwarding the complaint to CenturyLink and InterMetro, identified in the course of the investigation as an underlying carrier used by CenturyLink to route the calls. On February 7, 2013, CenturyLink responded to Ms. Adolphson's complaint, stating that tests of its equipment (Ms. Adolphson's line, cable, and central office connections) revealed no problems and test calls completed successfully. According to CenturyLink, Ms. Adolphson indicated that the problem was not persisting at that time. In a response dated March 21, 2013, CenturyLink addressed Ms. Adolphson's and Ms. Skallerup's complaints, stating that CenturyLink followed its standard process for long-distance call completion inquiries and opened a trouble report ticket for Ms. Adolphson's telephone number and for Ms. Skallerup's number. CenturyLink explained that it searched its call records for those telephone numbers for calls that corresponded to the information provided in the complaints. According to CenturyLink, not all of the calls were found, but testing was done on the calls that were located and CenturyLink's technician determined that routing caused the problem for "the three calls" for which records were found. CenturyLink stated that its technician removed InterMetro, the underlying carrier CenturyLink used to route the calls, as an intrastate routing option for the numbers in question, and opened a trouble report ticket with InterMetro. According to CenturyLink,

its technician contacted Ms. Adolphson and Ms. Skallerup to verify that telephone calls were completing to their mother's telephone number.

On April 29, 2013, staff issued proposed resolutions recommending that the Board, on its own motion pursuant to Iowa Code § 476.3(1), docket the complaints for further investigation.

On May 8, 2013, the OCA joined in staff's request for a formal proceeding. The Board agreed with its staff and OCA that further investigation of these two complaints was warranted. On June 24, 2013, the Board issued an order docketing the complaint for formal proceeding and assigning the matter to the Board's ALJ.

On December 31, 2013, Ms. Skallerup sent a letter to the Board (filed with the Board on January 6, 2014), advising of new difficulties. The specific concern expressed in the letter was a series of failed attempted telephone calls from England on December 31, 2013. The caller could reach Ms. Skallerup in Red Oak but not Ms. Wookey in Emerson. On January 8, 2014, CenturyLink advised that the difficulties on the calls from England would need to be investigated by the calling party's long-distance carrier.

CenturyLink also advised that Ms. Adolphson had reported a few failed or garbled telephone calls to her mother over the previous three weeks. On February 6, 2014, OCA advised that, while Ms. Adolphson and Ms. Skallerup were both aware of several difficulties regarding calls to their mother in late December 2013 and early January 2014, they had not experienced more recent difficulties. Both customers reported as of January 6, 2015, no further difficulties with call completion issues.

#### E. Douglas Pals (FCU-2013-0009)

Douglas Pals filed an informal complaint with the Board on March 14, 2013, stating that on February 12, 2013, at 2 p.m., he attempted to place a telephone call from his home in Clive, Iowa, to a telephone number in West Liberty, Iowa. Mr. Pals stated that the called party did not answer because the caller identification device (caller ID) on the called party's telephone did not display his name or telephone number. Mr. Pals left a message on the called party's answering machine and when she returned his call, she explained that the caller ID showed the name "BIDAXIS" and a number which was not Mr. Pals' telephone number. Mr. Pals stated that he then performed some test calls and one call went through and others had connection problems. Mr. Pals explained he has had his telephone number, served by CenturyLink, since 1999 and only recently started using his landline phone to make long-distance calls after changing his calling plan to unlimited nationwide long-distance calling. Mr. Pals reported the problem to CenturyLink. According to Mr. Pals, CenturyLink's technician was familiar with the problem and the name that had displayed on the caller ID. Mr. Pals stated he was not sure if his new calling plan was the cause of the problem and whether CenturyLink or a carrier it used was routing the calls so as to avoid paying for them to be completed. Mr. Pals stated the situation seemed suspect and he would like to see the call completion

problems resolved and for the responsible companies to pay appropriate fines and be barred from conducting business.

Board staff commenced an investigation of the complaint, forwarding the complaint to CenturyLink. CenturyLink responded on April 3, 2013, stating that it investigated the problem based on the information provided in the complaint and followed its standard investigation process. CenturyLink explained that its technician created a trouble ticket to investigate the problems, worked to troubleshoot the issue, and determined that routing of the calls was the issue. CenturyLink's technician removed Bluetone, the underlying carrier involved in the routing path to the called number, and opened a trouble ticket with Bluetone. CenturyLink stated that its technician called Mr. Pals to make a test call to the called number, but was not able to reach him. Based on its own testing, CenturyLink stated the issue was resolved.

Bluetone responded on April 24, 2013, stating that the called number was blocked to allow CenturyLink to reroute the calls to another provider while Bluetone's technicians worked to troubleshoot the problem. According to Bluetone, it reviewed call records and confirmed that the correct calling party's number was received from CenturyLink and forwarded to Bluetone's downstream provider. Bluetone stated further that test calls were completed over Bluetone's network, but testing did not duplicate the problem with the caller ID showing the wrong number and name. Bluetone stated that, as a precautionary measure, it removed its downstream provider from the routing and that adjustment remained in place to allow CenturyLink to route the calls to an alternate provider. In response to staff's request that Bluetone identify its downstream provider, Bluetone provided the name of the provider in an e-mail and asked for confidential treatment of that information, asserting that it maintains confidentiality agreements with its customers and vendors.

In the proposed resolution, staff found that once CenturyLink removed Bluetone from the call routing, test calls completed without issue. Staff also observed that Bluetone's response indicated that its test calls did not duplicate the information reported by Mr. Pals. Staff observed that customer reports of calls not reflecting the calling party's name and number on caller ID devices is one variation in the growing number of call completion problems being reported to the Board. Staff also noted that some rural carriers believe that telephone call completion problems may relate to the use of least cost routers as intermediate or underlying carriers in the call path. Staff observed that Bluetone's request that the Board treat the identity of Bluetone's underlying carrier as confidential did not comply with the Board's requirements in its rules at 199 IAC 1.9. Staff stated it would recommend that the Board initiate a formal proceeding, in part to establish a docket in which Bluetone could file a proper request for confidential treatment of the identity of its vendor, allowing the investigation to proceed.

On May 24, 2013, OCA joined in staff's request for a formal proceeding. OCA agreed with staff that there was a reasonable ground for further investigation. On July 1, 2013, the Board issued an order docketing the complaint for formal proceeding and assigning the matter to the Board's ALJ.

On November 22, 2013, Mr. Pals advised OCA that on November 19, 2013, at 10:11 a.m., he placed a telephone call from his home in Clive, Iowa, to USA Communications, in Shellsburg, Iowa, NPA-NXX 319-436. He advised that according to his notes "it rang three times and then went to dead air and, after waiting about 30-45 seconds to see if anything else would happen, the call disconnected." He advised he hit the redial button on his phone right away and the call connected without any issues. He noted he has not otherwise experienced call completion difficulties at that time.

## **II. Federal Communications Commission (FCC) Efforts to Address Rural Call Completion Problems (Mary)**

As background, staff includes the following summary of the Federal Communications Commission's (FCC) proceedings addressing rural call completion problems. To date, the FCC has engaged in several enforcement proceedings against individual carriers and has adopted rules requiring data collection and reporting. The federal effort has included the following measures:

### **A. FCC Rural Call Completion Task Force, Declaratory Ruling**

In 2011, the FCC created a Rural Call Completion Task Force to investigate and address the problem of calls to rural telephone customers which are delayed or fail to connect. The Task Force held a workshop on this issue in October 2011, and in February 2012, the FCC issued a Declaratory Ruling responding to the issues.<sup>2</sup>

In the Declaratory Ruling, the FCC:

- clarified that the prohibition against blocking, choking, reducing, or restricting telephone traffic extends to routing practices that have the effect of blocking, choking, etc.;
- clarified that such practices may constitute unjust and unreasonable practices in violation of section 201 of the Communications Act of 1934, as amended (the Act), and/or may violate a carrier's duty to refrain from unjust or unreasonable discrimination in practices, facilities, or services; and
- emphasized that carriers are responsible for the actions of their agents or other persons acting for or employed by the carriers, i.e., underlying providers.

The FCC explained that it could take appropriate enforcement action pursuant to its statutory authority, including cease-and-desist orders, forfeitures, and license revocations against carriers engaging in the prohibited activities discussed in the Declaratory Ruling.

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<sup>2</sup> *In the Matter of Developing a Unified Inter-carrier Compensation Regime*, CC Docket No. 01-92; *Establishing Just and Reasonable Rates for Local Exchange Carriers*, WC Docket No. 07-135 (rel. Feb. 6, 2012); (*Declaratory Ruling*), 27 FCC Rcd. 1351.

## B. FCC Rules

On February 7, 2013, the FCC released a Notice of Proposed Rulemaking seeking comment on rules to help address problems in completion of long-distance calls to rural customers.<sup>3</sup>

The FCC mentioned evidence that retail long-distance providers may not be adequately examining the rural call completion performance that results from use of wholesale call delivery services by intermediate providers employed by the long-distance providers. The FCC explained it intended to "consider measures to improve the Commission's ability to monitor the delivery of long-distance calls to rural areas and aid enforcement action." (*Call Completion NPRM*, ¶ 3.)

Noting that a lack of data impedes investigations (*Call Completion NPRM*, ¶ 17), the FCC sought comment on reporting and data retention requirements that would give the Commission information about a long-distance provider's performance to certain areas. The FCC proposed to adopt rules that would require originating long-distance voice service providers to collect and retain basic information on call attempts and to periodically analyze and summarize call completion and report the results to the Commission. (*Call Completion NPRM*, ¶ 17.)

In the *Call Completion NPRM*, the FCC reviewed the steps it had taken so far in response to the call completion problem. The FCC stated it was conducting ongoing investigations of several long-distance providers and addressing daily operational problems reported by rural customers. (*Call Completion NPRM*, ¶ 11.) The FCC described its Web-based complaint intake process which allows rural customers and carriers to alert the Commission about call completion problems and instructs them on how to file complaints.

On October 28, 2013, in the *Rural Call Completion Order*,<sup>4</sup> the FCC adopted rules addressing concerns about completion of long-distance calls to rural areas. The FCC noted that the record in its proceeding leaves no doubt that completion rates for long-distance calls to rural areas are frequently poor—whether the call is delayed, the called party's phone never rings, the caller hears false busy signals, or there are other problems. These failures have significant and immediate public interest ramifications, causing rural businesses to lose customers, cutting families off from their relatives in

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<sup>3</sup> *In Re: Rural Call Completion*, Notice of Proposed Rulemaking, WC Docket No. 13-39, 28 FCC Rcd. 1569 (rel. Feb. 7, 2013) (*Call Completion NPRM*).

<sup>4</sup> *In Re: Rural Call Completion*, WC Docket No. 13-39, Report and Order and Further Notice of Proposed Rulemaking, FCC 13-135 (rel. Nov. 8, 2013) (*Rural Call Completion Order*).

rural areas, and creating potential for dangerous delays in public safety communications in rural areas. The FCC adopted definitions, recordkeeping (call answer and completion data),<sup>5</sup> retention, and reporting rules at 47 C.F.R. Part 64 intended to improve the FCC's ability to monitor the delivery of long-distance calls to rural areas, aiding enforcement action in connection with providers' call completion practices as necessary, as well as aiding consumers and the industry by adopting a rule prohibiting false ring signaling.<sup>6</sup>

In the *Rural Call Completion Order*, the FCC adopted rules requiring long-distance providers that make the initial call path choice for more than 100,000 domestic retail lines, including local exchange carriers, interexchange carriers, wireless providers and voice over Internet protocol (VoIP) providers, to collect, retain and report specified data elements, with respect to interstate and intrastate calls, for each rural destination, identified by operating company number (OCN), and for non-rural OCNs in the aggregate. 47 C.F.R. § 64.2101, 64.2103, 64.2105. These data elements include number of calls attempted, number of calls answered, and number of calls not answered (reported separately for call attempts signaled as busy, ring no answer or unassigned number). *Id.* A "safe harbor" provision found at 47 C.F.R. § 65.2107 establishes reduced data retention and reporting requirements for qualifying carriers.

Initially, the FCC proposed two safe harbors: (1) the "Managing Intermediate Provider Safe Harbor," under which a provider uses no more than two intermediate providers in a call path and (2) the "Monitoring Performance Safe Harbor," which would have provided some relief from the rules to providers meeting certain performance standards. (*Call Completion NPRM*, ¶ 33.) Ultimately, the FCC adopted only one safe harbor, the "Managing Intermediate Provider Safe Harbor" ("Safe Harbor") pursuant to which a provider gets some relief from the reporting and data retention obligations by certifying that the provider either uses no intermediate providers or that its contracts with intermediate providers allow for a total of no more than two intermediate providers in the call path, among other requirements. The FCC also provided a way for providers that have already addressed the call completion problem by taking steps to ensure calls to rural areas are being completed to seek a waiver of the data reporting and retention requirements.

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<sup>5</sup> The rules adopted in the *Rural Call Completion Order* require covered providers to record, retain, and report data about whether calls are "answered," or signal as "busy," "ring no answer" or "unassigned number." The terms are defined in the *Rural Call Completion Order* and were clarified in the FCC's February 13, 2015, *Declaratory Ruling*. See *In re: Rural Call Completion*, Declaratory Ruling, WC Docket No. 13-39, DA 15-217 (Rel. Feb. 13, 2015). The *Rural Call Completion Order* applies to "covered providers," defined at 47 C.F.R. § 64.2101 as providers of long-distance voice service that make the initial long-distance call path choice for more than 100,000 domestic retail subscriber lines, including local exchange carriers, interexchange carriers (IXCs), commercial mobile radio services (CMRS) providers, i.e., wireless providers, and VoIP service providers. The rules do not apply to intermediate providers.

<sup>6</sup> The rule specifying ringing indication requirements took effect on January 31, 2014. The effective date for other rules was delayed until further notice due to requirements of the Paperwork Reduction Act. On March 4, 2015, the FCC issued a Public Notice announcing that April 1, 2015, would be the date that long-distance voice providers must begin to record and retain data required by the *Rural Call Completion Order*, with the first reports due on August 1, 2015. See *In re: Rural Call Completion*, Public Notice, WC Docket No. 13-39, DA 15-291 (Rel. Mar. 4, 2015).

Under the Safe Harbor, a qualifying provider's data retention and reporting obligations are reduced. A qualifying covered provider must comply with the reporting requirements for one year and must retain the required call records for only three months. To qualify for the Safe Harbor, a provider must:

- (1) certify that it uses no intermediate providers or that its contracts with directly connected intermediate providers allow those providers to pass a call to no more than one additional intermediate provider;
- (2) certify that any nondisclosure agreement with an intermediate provider allows the covered provider to reveal the identity of the directly connected intermediate provider and any other intermediate provider to the FCC and to the rural carrier whose incoming calls have been affected by the performance of the intermediate carriers; and
- (3) certify that if it uses intermediate providers, it has a process to monitor the performance of those intermediate providers. The FCC did not require qualifying providers to use any particular process, requiring instead that providers describe the process they use.

Providers can invoke the Safe Harbor by filing a certification on any of the four quarterly filing dates throughout the year, with subsequent filings due annually thereafter.

In the Further Notice of Proposed Rulemaking which was issued with the *Rural Call Completion Order*, the FCC sought comments on additional measures that may help the Commission ensure a reasonable and nondiscriminatory level of service for completing long-distance calls to rural areas. Also, the FCC sought to improve the Commission's ability to monitor problems with completing calls to rural areas, and enhance the FCC's ability to enforce restrictions against blocking, choking, reducing, or restricting calls. The FCC sought comments on additional measures intended to further ensure reasonable and nondiscriminatory service to rural areas, including additional reforms pertaining to auto dialer traffic, intermediate providers, and other Safe Harbor options and reporting requirements.

The FCC received five petitions for reconsideration of the October 28, 2013, *Rural Call Completion Order*. In November 2014, the FCC denied four of the petitions and granted one to modify the rules to exempt a narrow set of calls from the data retention and reporting requirements.<sup>7</sup>

### C. Relevant Iowa Statutes and Regulation

The informal proceedings in which Board staff investigated the complaints in these cases were conducted pursuant to the Board's authority in Iowa Code § 476.3(1) to investigate the reasonableness of the actions of the telephone service providers

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<sup>7</sup> See *In re: Rural Call Completion*, Order on Reconsideration, WC Docket No. 13-39, 29 FCC Rcd. 14026 (rel. Nov. 13, 2014).

involved in the alleged call failures and pursuant to the Board's complaint procedures in chapter 6 of the Board's administrative rules, 199 IAC 6.

In the rural call completion cases before the Board, the Board either initiated the formal proceeding on its own motion pursuant to § 476.3(1) or granted OCA's request for further investigation pursuant to § 476.3(1), which provides that when Consumer Advocate files a petition for formal proceeding with the Board, the Board shall grant the petition if the Board determines that "there is any reasonable ground for investigating the complaint." In this and the other call completion cases presently before the Board, the Board found reasonable grounds for investigating the precise circumstances of the call completion complaints.

In docketing the cases for further investigation, the Board explained it was appropriate to take steps at the state level to respond to problems that appeared to be disrupting intrastate long-distance calls to rural consumers in Iowa. See, for example, *In Re: Hancock County Health Systems*, Docket No. FCU-2013-0005, "Order Granting Request for Formal Proceeding and Assigning to Administrative Law Judge," issued June 10, 2013.

In its May 26, 2015, reply to the long-term solutions offered by Windstream and Airus, OCA cites to Iowa Code § 476.3 and the Board's rule at 199 IAC 22.5 (1). That rule provides:

Requirement for good engineering practice. The telephone plant of the utility shall be designed, constructed, installed, maintained and operated subject to the provisions of the Iowa electrical safety code as defined in 199 IAC Chapter 25 and in accordance with accepted good engineering practice in the communication industry to ensure, as far as reasonably possible, continuity of service, uniformity in the quality of service furnished, and the safety of persons and property.

#### D. FCC Enforcement Proceedings

Since 2013, the FCC has resolved four rural call completion investigations. On March 12, 2013, the FCC announced that it had reached a settlement with Level 3 Communications, LLC, resolving an investigation into the company's rural call completion practices. The settlement established call completion standards and required a voluntary contribution to the U.S. Treasury in the amount of \$975,000.

On February 20, 2014, the FCC announced that it reached a settlement with Windstream regarding Windstream's rural call completion practices. Windstream agreed to pay \$2.5 million to resolve an investigation by the FCC's Enforcement Bureau and Windstream agreed to implement a three-year plan to ensure compliance with FCC requirements designed to combat the problem of long-distance calls failing to complete in rural areas. Windstream agreed to:

- Designate a senior corporate officer to serve as a compliance officer focusing on rural call completion issues.
- Cooperate with the FCC and rural LECs to establish a testing program to evaluate rural call completion performance whenever complaints or data indicate problems.
- Notify intermediate providers (companies that Windstream uses to deliver calls) that may be causing call completion problems and analyze and resolve such problems as soon as practicable.
- Cease using intermediate providers that fail to improve their performance.
- Institute a comprehensive plan to ensure future compliance with FCC rules.
- Report to the FCC any noncompliance with rural call completion rules within 15 days.
- File an initial compliance report in 90 days and annual reports for three years.

On June 4, 2014, the FCC announced that Matrix Telecom, Inc., a company headquartered in Texas, would pay \$875,000 to resolve an FCC investigation into whether the company failed to complete long-distance calls to rural areas on a just, reasonable, and non-discriminatory basis. The consent decree between the FCC and Matrix is similar to the one described above between the Commission and Windstream.

On January 26, 2015, the FCC announced that Verizon agreed to a \$5 million settlement to resolve an FCC inquiry into Verizon's failure to investigate whether customers in rural areas could receive long-distance or wireless calls to landline phones. The terms of Verizon's settlement require the company to pay a fine of \$2 million; spend an additional \$3 million over the next three years to address the rural call completion problem; appoint a Rural Call Completion Ombudsman; develop a system to identify customer complaints that may be related to rural call completion problems; limit its use of intermediate providers; monitor call answer rates; and host workshops<sup>8</sup> and sponsor an academic study on the issue; among other commitments.

### **III. Reports/Responses**

#### **A. Summary of Witness Testimonies (Filed in FCU-2012-0019, Rehabilitation Center of Allison)**

##### **1. Kathy Miller (OCA - Filed in FCU-2012-0019 on October 30, 2013) (Tara)**

Ms. Miller testified that in 2011 the Allison facility began experiencing problems with telephone calls and faxes and she filed complaints with the FCC. Ms. Miller stated she repeatedly did not receive long-distance calls and faxes from the Waverly Health Center

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<sup>8</sup> Staff understands that Verizon held a rural call completion workshop on April 22, 2015, in Washington, D.C., and posted a recording of the workshop on its website.

in Waverly, Iowa, and the Shell Rock Clinic in Shell Rock, Iowa, as well as from other in-state callers, including the facility's corporate office in Hampton and one of its care liaisons. Ms. Miller testified that sometimes the telephone did not ring and sometimes it rang but no one was on the line. Ms. Miller stated sometimes the reception on an incoming call was broken, but if the parties to the call hung up and the Allison facility placed an outgoing call, the reception was fine. Area clinics and families also complained their calls could not be received at the Allison facility. At times, facility personnel would drive about 18 miles from Allison to Waverly or 13 miles to Shell Rock from Allison to pick up faxes that would not go through. The difficulties were frequent and they occurred in spurts, with many missed calls over the course of a few days, followed by several weeks without a known recurrence, then another spurt of difficulties. Ms. Miller testified that the facility did not know when it missed calls. It lost confidence in the reliability of the telephone system.

2. Michael Berstler, M.D. (OCA - Filed in FCU-2012-0019 on October 30, 2013) (Tara)

Michael Berstler, M.D., reported two occasions on which he tried without success to place telephone calls to the Allison facility, probably from the Waverly Health Center.

3. Lori Sharp, RN (OCA - Filed in FCU-2012-0019 on October 30, 2013) (Tara)

Lori Sharp, a nurse at the Shell Rock Clinic, reported several occasions on which she used her personal cellphone to call Karen Souhrada at the Allison facility because calls and faxes from the Shell Rock Clinic to the Allison facility would not complete. After ten seconds, the phone might ring, but then it went dead.

4. Melissa Rewerts-Johnson RN (OCA - Filed in FCU-2012-0019 on October 30, 2013) (Tara)

Melissa Rewerts-Johnson, a nurse at the Shell Rock Clinic, reported repeated difficulties with the faxing of medical records, particularly progress notes, to the Allison facility. On her end, it appeared the faxes had completed. When she arrived at the Allison facility, the records were not there. Ms. Rewerts-Johnson stated the problem continued for about six months and the Shell Rock Clinic then started mailing the records.

Ms. Rewerts-Johnson also testified that she experienced difficulties completing phone telephone calls to the Allison facility. She testified that there were a long periods of silence, perhaps 15-30 seconds. The calls would eventually go through to the Allison facility if she waited long enough.

5. Amy Hylton (OCA - Filed in FCU-2012-0019 on October 30, 2013) (Tara)

Amy Hylton, a care liaison employed by the Allison facility's corporate parent, testified that she recalled at least five occasions on which faxes would not transmit. She drove the documents from Waverly to Allison since they would not go through. Ms. Hylton testified that she recalled perhaps 35 occasions when she could not reach the Allison facility from her cellphone. The telephone would ring once, or the call would be answered, but then the call would terminate.

6. Tony Campbell (OCA - Filed in FCU-2012-0019 on October 30, 2013) (Tara)

Tony Campbell, a maintenance mechanic at the Waverly Health Center, reported at least five occasions on which he received telephone calls from the Shell Rock Clinic regarding faxes that would not go through to the Allison facility. Mr. Campbell testified that he placed test calls to the Allison facility and he heard twenty seconds of silence or nothing at all. He then reported the difficulties to CenturyLink.

7. Mary Retka (CenturyLink - Filed in FCU-2012-0019 on December 13, 2013) (Larry)

Direct Testimony was filed by CenturyLink for Ms. Mary Retka, Director Public Policy – Network Policy Issues.

CenturyLink notes that the vast majority of long-distance calls are carried and terminated without any issues. The Nation's long-distance network is complex and is comprised of many interconnecting networks with a variety of evolving technologies (e.g., Time Division Multiplexing (TDM), Internet Protocol (IP), wireline, and wireless) of different vintages. CenturyLink continues by saying there are potentially thousands of interconnecting service providers and thousands of points of interconnection across the United States. Since the long-distance market was opened to competition, it has always been the case that a relatively small number of long-distance calls fail to satisfactorily reach the called party. Traditional long-distance providers strive to have all calls satisfactorily complete but, the reality of the current operating environment is that a zero long-distance call failure rate is not achievable.

The cause of call completion issues is complex and there is no one single cause of call termination issues. Termination issues can, and do occur for a myriad of technical reasons. Many rural carriers and the FCC have focused on the use of underlying carriers to deliver calls to the end-user's local exchange carrier for termination as the cause of call termination issues. Underlying carriers have been used to expand the reach of long-distance networks, provide back-up facilities in the event of network outages, and handle overflow traffic during high call volume periods. CenturyLink says that there may only be a single Interexchange Carrier (IXC) in the industry with a ubiquitous self-provisioned, long-distance network. CenturyLink continues by saying that some of the underlying carriers' practices and lack of monitoring by a few of the long-distance carriers can contribute to call termination problems. The use of underlying carriers is not a direct cause of the problem.

CenturyLink says that there are a lot of elements involved in a long-distance call and any single element can cause a problem. Some of the elements can include network equipment, equipment components, transport facilities and customer owned and controlled equipment, and signaling components. Problems can be intermittent such as wet or weather-impacted cable. Routing cables are one of the functions in long-distance call processing and CenturyLink says it has not seen any data, or a pattern of customer complaints, that support a conclusion that the tables or particular routes in Iowa are problematic.

CenturyLink says that the FCC has taken a number of steps in its 2011 USF/Transformation Order<sup>9</sup> that will have an impact on call termination issues. The Order reiterated the FCC's prohibition on call blocking and clarified that the rules also apply to VoIP-to-PSTN. The FCC's Order prohibits call blocking by providers of interconnected VoIP services as well as providers of "one-way" VoIP services. The Order also mandated a transition to a bill and keep regime for the termination of long-distance call, thus eliminating high cost terminating switched access rates in rural call areas.

In its November 8, 2013, Report and Order and Notice of Further Proposed Rulemaking, the FCC released additional rules related to rural call completion. The rules do not set forth performance standards but impose detailed recording, reporting, and data retention requirements on carriers that provide long-distance service to 100,000 or more customers. The rules also prohibit any carrier from providing audible ringing before the terminating carrier signals that the line is free and the called party is being notified. The FCC also announced an additional rulemaking to address various additional possible rule changes. The following provides a brief summary of the rules and additional areas of rulemaking.

#### Recording and Retention Requirements

- Recording requirements apply to calls made to rural telephone companies as identified by Official Company Number ("OCN") and include significant call detail information.
- Companies may exclude calls handed back to the originator and calls to toll free numbers.
- Data must be retained for six months for rural OCNs.

#### Reporting Requirements

- Each carrier must file quarterly reports for each rural OCN that provide information sufficient to calculate call answer rates (percent calls answered) and "Network Effectiveness Ratio" (percent calls answered or signaled as "busy," "ring no answer" or "unassigned number").

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<sup>9</sup> In the Matter of Connect America Fund, "Report and Order and Further Notice of Proposed Rulemaking," FCC 11-161 (released November 18, 2011).

- Each carrier must file quarterly reports providing the same information on an aggregate basis to all other OCNs.

### Safe Harbor Provisions

- A Safe Harbor is available that reduces the retention requirements to 3 months and reporting requirements after one year.

The Safe Harbor applies to carriers that:

- Certify they use two or fewer intermediate providers (underlying carriers) to reach the terminating provider or tandem; or
- Do not use intermediate providers (underlying carriers).

### False Ringing

- A long-distance provider shall not convey a ringing indication to the calling party until the called party has been alerted to the presence of an incoming call.

### Further Proposed Rulemaking to Address

- Autodialer traffic.
- Intermediate provider (underlying carrier) requirements.
- Modifications to safe harbor.
- Rural incumbent reporting.
- Prohibitions on blocking, chocking, or restricting traffic.

CenturyLink says that it continues to work with regulators as they gather information necessary to assess the extent of the rural call completion issue, identify the cause(s) of the issue and fashion appropriate responses to the issue. CenturyLink is a member of the Association of Telecommunications Industry Standards (“ATIS”) and has worked at the direction of the FCC with ATIS in the August 2011 workshop, developing, documenting, presenting, and updating the Handbook titled: Intercarrier Call Completion/Call Termination Handbook.

CenturyLink says that it is in their interest for their long-distance customers to have their calls satisfactorily terminate and that its local exchange customers, both rural and non-rural, satisfactorily receive the calls that others place to them. Any problems experienced by their customers can inevitably result in those customers choosing another provider for their communications services.

In order to promptly identify and address rural call completion issues, CenturyLink has established an investigation and resolution process that can be initiated via contact from its customers and Rural Local Exchange Carriers (“RLECs”), including a 24-hours-a-

day, 7-days-a-week provider to provider toll free contact line. RLECs have been provided with a dedicated point of contact within CenturyLink to address issues with failed calls to their local service customers. The RLEC can call 866-874-6790, option 1, option 6 to initiate the process. CenturyLink customers experiencing call completion issues can contact repair at the telephone number on their bill.

If a CenturyLink long-distance customer contacts CenturyLink about an issue completing a long-distance call, CenturyLink opens a trouble report ticket for the customer, and an investigation into the cause of the issue is conducted and documented. Once the issue is identified, it is resolved, and the service is tested to ensure the issue has been satisfactorily addressed. If the trouble is related to the routing of the call, the route path is reviewed, any issues are identified, and the route path may be changed and tested. Where an underlying carrier was used to route the call and it is identified as the source of the routing trouble, it is removed from the route path, and an investigation of the matter is initiated within the underlying carrier company. Before the underlying carrier is returned to the call path, it must demonstrate to CenturyLink that it has identified the trouble and addressed the source of the trouble through testing. With the routing fix in place and tested, CenturyLink closes the issue with the customer.

CenturyLink says that underlying carriers must meet CenturyLink's contract terms and conditions to engage in and successfully complete extensive testing with CenturyLink prior to being introduced to CenturyLink call routes. The performance of underlying carriers is monitored on an on-going basis and CenturyLink meets with its underlying carriers as needed on a regular basis to focus primarily on quality. CenturyLink reviews trouble tickets, monitor trouble tickets per million minutes of use, review connect rate and answer seizure ratios. In the meetings CenturyLink may also discuss operational issues like trunk group augments, contract amendments, new products, etc.

CenturyLink says the Rehabilitation Center of Allison, Iowa, complaint was filed in September of 2012, and did not provide any specificity on the issues, only indicating they had trouble with calls and faxes. CenturyLink investigated and found the calls between the numbers went through and had duration. They found that trouble reports were not opened with CenturyLink by the CenturyLink customer about those calls. CenturyLink said it reviewed the routing of the calls and performed test calls that completed successfully. Out of an abundance of caution, CenturyLink made a routing change for the calls completing to NPA NXX 319 267, removing the underlying carrier and successfully tested for call completion with the change. CenturyLink indicated that Allison issues may have been related to equipment issues or process issues in the use of their fax equipment.

During a June 18, 2013, prehearing conference on the Allison complaint, OCA reported that the Rehabilitation Center was encountering additional call completion issues. CenturyLink was told that the center was unable to complete faxes to the Shell Rock Clinic (██████████) on June 15, 16, and 17 from a Dumont Telephone local number (██████████). CenturyLink investigated the identified calls following its standard

process for investigation. A trouble ticket was opened, calls were investigated and it was determined the routing of the calls was the issue. The calls were routed using an underlying carrier who was removed from the routing for NPA NXX 319-885. There were no further fax issues to the Shell Rock Clinic.

CenturyLink believes the Board does not need to take any further action as the problems are not continuing to occur and are being addressed as they do occur. The processes put in place by CenturyLink and the new call completion rules adopted by the FCC should help limit future call completion issues.

8. Thomas J. G. Eltringham (AireSpring - Filed in FCU-2012-0019 on January 22, 2015) (Larry)

Direct Testimony was filed by Airespring for Mr. Thomas J.G. Eltringham, VP Quality Assurance for Airespring, Inc. In the filed testimony it was stated that Airespring has never had the Rehabilitation Center of Allison or the Shell Rock Clinic as customers for local, long-distance or facsimile telecommunications services. Additionally, Airespring says it has never provided any voice services to Waverly Health Center.

Airespring did indicate that it has been providing a dedicated line from their facilities in Waverly, Iowa that allows them to access the public Internet. Airespring continues by saying they are not the Internet service provider (ISP) and only provide the physical line. Airespring says it is possible for Waverly Health Center to place VoIP calls over the data line without Airesprings knowledge. However, the current contact between Waverly Health Center and Airespring states that the service will not be used for VoIP and that VoIP calls are not supported on the Direct Internet Access Service being purchased from Airespring.

On February 3, 2014, Airespring filed a motion with the Board to withdraw from the case. The motion was granted in a February 5, 2014, Board order.

9. Roger Kregel (Dumont Telephone - Filed in FCU-2012-0019 on January 23, 2015) (Larry)

Direct Testimony was filed by Dumont Telephone for Mr. Roger Kregel, General Manager of Dumont Telephone Company. Mr. Kregel says that Dumont Telephone is an incumbent local exchange carrier (ILEC) that provides facility based telephone, broadband, video, and wireless voice services to the communities and rural areas of Dumont and Allison, Iowa. Dumont Telephone also provides wireless voice services to the Iowa communities of Aplington, Parkersburg, New Hartford and video services to Geneva.

Dumont Telephone notes that the Board staff's proposed resolution indicated that Dumont Telephone did not cause the call completion problems or play a role in the misrouting of calls in this complaint. However, Dumont Telephone's customer suffered

rural call completion issues and Dumont Telephone may have information that could help with the Board's understanding as to the cause for calls not completing.

Dumont Telephone is the terminating local exchange carrier for the Rehabilitation Center of Allison. Dumont Telephone has provided facilities based landline voice service to the facility since 1997, which is the time that Dumont Telephone acquired the exchange from US West. Dumont Telephone says that Internet was added in 1997 and Video in 2000. Dumont Telephone says that it is also the sales and service provider of the telephone system and wiring at the facility. As a result of Dumont Telephone's customer relationship with the Rehabilitation Center, it was easy for them to test and eliminate the local network and customer-owned equipment as being a contributing cause of any rural call completion problems.

Dumont Telephone says that the rural call completion problems experienced by the Allison facility are accurately reflected in the prefiled written direct testimony of Kathy Miller and is consistent with Dumont Telephone's understanding of the call completion problems experienced by the facility. Dumont Telephone says it does not have independent knowledge of the identity of the long-distance provider for these facilities at the time the calls addressed in the complaint occurred. Dumont Telephone also says it has not been able to identify with certainty the cause of the problems. Dumont Telephone continues by noting in its opinion, based on investigations by the FCC and numerous industry informational meetings, the call completion issues experienced by the Allison facility are a direct result of poor origination service which may be caused by several reasons, including but not limited to Voice over Internet Protocol (VoIP) trunks and/or Least Cost Routing (LCR) facilities.

Dumont Telephone continues by saying it has been well documented by the FCC and National Exchange Carrier Association (NECA) that issues like false dial tone, dead air and/or post dial delay occur when LCR equipment becomes congested or the VoIP trunks do not have sufficient bandwidth and as a result do not perform properly. A simple reboot or reset of the LCR equipment eliminates the congestion and allows calls to flow and be delivered normally until such time that the LCR is congested again which could take days, weeks, or months. If VoIP trunks are congested, traffic can be rerouted which will alleviate the congestion. Dumont Telephone says the use of LCR and/or VoIP trunks is not confined to CenturyLink.

Dumont Telephone says CenturyLink indicated the local telecommunications provider was in the process of upgrading copper facilities in the area to fiber and this could have impacted faxes attempting to be sent at that time. Dumont Telephone says it is the local provider and they were upgrading copper facilities to fiber in the entire Allison exchange in September of 2013. Dumont Telephone says that they did experience a brief issue in September 2013 when performing switch translations in preparation for fiber cutovers when two cards failed in its DMS10 Nortel Switch. Dumont Telephone says all calls were affected, not just faxes. This situation had nothing to do with the previous call termination issues the Allison facility experienced and complained to CenturyLink about.

Dumont Telephone has an initial concern that the cause of the Allison's rural call completion problems have not been identified by CenturyLink, nor has CenturyLink provided responses to data requests revealing the extent of all call completion problems in Iowa. CenturyLink's response to this discovery may help establish a pattern and timeline on a state-wide basis for how widespread and continuing rural call completion problems are on CenturyLink's network.

10. Frank Hilton (INS - Filed in FCU-2012-0019 on December 22, 2013) (Larry)

Direct testimony was filed by INS for Mr. Frank Hilton, Vice President Information Management for INS. Mr. Hilton describes the operation and function INS serves by saying 127 Iowa Independent Telecommunications Companies came together in 1988 to form Iowa Network Services to provide "centralized equal access" (CEA) services throughout the state. The centralized solution allowed for local telephone companies to connect their communities to long-distance carriers that gave rural Iowans access to affordable long-distance service. Today, INS is an end-to-end communications technology solutions provider.

Mr. Hilton says his understanding of the complaint is the failure of calls and faxes to complete from the Waverly Health Center and the Shell Rock Clinic to the Rehabilitation Center of Allison. Butler Bremer Communications is the local telephone carrier for the Shell Rock Clinic and Dumont Telephone Company is the local telephone carrier for the Rehabilitation Center of Allison. CenturyLink is the prescribed long-distance carrier for both the Waverly Health Center and the Shell Rock Clinic.

Mr. Hilton continues by saying that INS is the CEA provider for both Dumont Telephone Company and Butler Bremer Communications. This means that traditional long-distance traffic should pass through INS' tandem as it originates from or terminates to companies with INS' CEA service. CenturyLink has network connections with INS for the exchange of both transit and toll traffic. Mr. Hilton continues by saying part of the service is to record all of the calls in their call record database.

INS says they investigated the calls in question and provided their findings with OCA. In the case of Dumont Telephone, it was determined that some of CenturyLink originated calls never made it to INS' network. All calls reaching the INS network were processed appropriately. INS says that it is generally aware of the call completion issues and believes none of the problems have been attributed to them.

- B. General Summary of OCA's Reports. What does OCA identify as the causes and the solutions? (Filed in FCU-2012-0019 on December 19, 2014; FCU-2013-0004 filed on January 9, 2015; FCU-2013-0005 filed on January 16, 2015; FCU-2013-0006 filed on January 20, 2015; FCU-2013-0009 on January 23, 2015) (Tara)

OCA observed that none of the parties was able to pinpoint the causes of the difficulties reported in the Allison facility's complaint. OCA stated that based on the evidence it appears the source of the difficulty lies with the intermediate carriers. OCA stated there are potentially thousands of interconnecting service providers, utilizing a variety of evolving technologies, and thousands of points of interconnection across the United States. OCA noted that according to CenturyLink's witness, Mary Retka, the Iowa intrastate calls might be routed anywhere. OCA also noted the sheer complexity of the network, absent adequate accountability and safeguards, all but ensures that difficulties will occur with unacceptable frequency, particularly in rural areas.

OCA stated that its investigations have pinpointed two recurrent explanations for the difficulties: (1) capacity limitations in an intermediate carrier's physical infrastructure including limited bandwidth that will not support transmission of packets with sufficient speed for effective voice communications, particularly at peak times, and (2) intermediate carrier's physical outages often due to software malfunctions, particularly with Internet-protocols infrastructures.

OCA summarizes that it believes the causes of the call completion problems coincided with 1) the proliferation of intermediate carriers, 2) intermediary carriers are not always financially sound, 3) inadequate monitoring of their performance, 4) inadequate coordination between and among the carriers, 5) inadequate record-keeping, and 6) inadequate physical facilities reaching the rural destination. OCA found no direct evidence of any deliberate cause for the call completion problems.

1. OCA Findings (Tara)

a. FCU-2012-0019 Rehabilitation Center of Allison - Filed on December 19, 2014:

- OCA found that CenturyLink has two long-distance networks: the legacy Qwest network and the legacy CenturyLink network.
- Long-distance telephone calls from the Waverly Health Center and Shell Rock Clinic were routed by CenturyLink using the legacy Qwest network.
- OCA found that in 2011, prior to filing the complaint with the Board, CenturyLink had opened a number of trouble tickets based on difficulties reported by the Waverly Health Center.
- OCA found that three trouble tickets involved reported failures on telephone calls attempted to the Allison facility and two additional trouble tickets opened on June 8 and 23, 2011. [REDACTED]

[REDACTED]  
[REDACTED] The two tickets in June 2011 address [REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

- OCA found that the intermediate carrier, [REDACTED], was not providing ring back and CenturyLink removed [REDACTED] from the routing to the NPA-NXX after the second ticket.
- Two trouble tickets were opened on July 5 and 6, 2011, for PDD/Dead Air. On the second of these tickets, the Waverly Health Center reported “15-20 seconds of post-dial delay or simply no ringback” and also reported call quality issues. The second ticket indicates that legacy CenturyLink was unable to process the call. On each of these tickets, legacy CenturyLink did not provide ringback and was removed from the routing.
- Trouble ticket was opened July 24, 2012. This trouble ticket addressed “PDD/Dead Air” on an attempted call to the Allison facility. Legacy CenturyLink was unable to process the call and was removed from the route. The issue was isolated to intermediate carrier [REDACTED] which was also removed from the route.
- OCA found that the trouble reported by the Waverly Health Center, as described in the tickets summarized above, had not been the only trouble reported to CenturyLink on calls to the 319-267 NPA-NXX. Nor had [REDACTED] legacy CenturyLink and InterMetro been the only carriers removed from the routing to the 319-267 NPA-NXX.
- Also, OCA found that in order to move the traffic “on net,” CenturyLink activated a permanent change in the routing tables in its switches so that all intrastate calls to the 319-267 NPA-NXX would route over its own “Feature Group” network, [REDACTED]. OCA found the permanent change was made by CenturyLink in October 2012.
- OCA found that in the weeks and months following October 1, 2012, for intrastate calls to the 319-267 NPA-NXX, CenturyLink [REDACTED].
- OCA found that CenturyLink uses automated tools to determine the routing, based on the NPA-NXX of the terminating number, on whether the call is intrastate or interstate, on availability, and on technical requirements. If an intermediate carrier is used, the intermediate carrier is responsible to CenturyLink to complete the call or to signal back to CenturyLink that it cannot complete the call.
- OCA found that the financial consequences of the routing change, for CenturyLink [REDACTED].
- OCA found that CenturyLink cited its own need when carrying the traffic to pay a tariffed terminating charge to local exchange carrier Dumont Telephone and a tariffed tandem charge to INS. These charges at times material were \$0.047157 and \$0.044989 per minute, respectively, or

\$0.092146 per minute in sum. Prior to the routing change, CenturyLink had paid InterMetro at [REDACTED] per minute.

- OCA pointed out that Dumont Telephone noted that it was economically advantageous for CenturyLink to use facilities other than its own to complete the calls. This advantage has since lessened, however, and will continue to lessen, due to the reduction in intrastate access rates required by the FCC's Transformation Order.
- OCA found that its investigations in other Iowa dockets have pinpointed two recurrent explanations for the difficulties, both of which appear to be consistent with learning elsewhere. The first is capacity limitations in an intermediate carrier's physical infrastructure, including limited bandwidth that will not support transmission of packets with sufficient speed for effective voice communication, particularly at peak times. The second established cause of call completion failures is intermediate carrier outages due to software malfunctions.
- OCA also found that CenturyLink had contracts with [REDACTED] intermediate carriers that carried or may have carried traffic to Allison.
- OCA found that CenturyLink refers to the intermediate carriers as "partner carriers" or "inter-connect partners" (ICPs).
- OCA found that the CenturyLink routing tables for calls to Allison (NPA-NXX 319-297) for each week from January 2011 through August 2013 show the routing sequence at times changes from week to week.
- OCA found that the changes at times reflect pricing.
- OCA found that the intermediate carriers used by CenturyLink generally use a combination of time division multiplexing (TDM)<sup>10</sup> and packet technology.
- OCA found that when CenturyLink receives a long-distance call, CenturyLink uses automated tools to determine the routing, based on the NPA-NXX of the terminating number, on whether the call is intrastate or interstate, on availability, and on technical requirements. If an intermediate carrier is used, the intermediate carrier is responsible to CenturyLink to complete the call or to signal back to CenturyLink that it cannot complete the call.
- OCA found that an intermediate carrier under contract to carry calls for CenturyLink could use additional downstream intermediate carriers and CenturyLink does not know the identity of these additional intermediate carriers.

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<sup>10</sup> Newton's Telecom Dictionary, 25<sup>th</sup> edition (2009), defines TDM as a "technique for transmitting a number of separate data, voice and/or video signals simultaneously over one communications medium by interleaving a piece of each signal one after another."

- OCA found that CenturyLink has been aware for some time of call failure rates and concerned with the potential impact on consumers of voice service.
- OCA noted that in order to move the traffic “on net”<sup>11</sup> CenturyLink activated a permanent change in the routing tables in its switches so that all intrastate calls to the 319-267 NPA-NXX would route over its own [REDACTED]
- OCA found that charges at times were \$0.047157 and \$0.044989 per minute, respectively, or \$0.092146 per minute.
- OCA found that CenturyLink had paid InterMetro at [REDACTED] per minute.
- OCA found that CenturyLink does not maintain call completion statistics for intrastate long-distance calls in Iowa.
- OCA found that CenturyLink [REDACTED]

b. FCU-2013-0004 UnityPoint Clinic Family Medicine at Huxley, f/k/a Huxley Family Physicians - Filed on January 9, 2015:

- OCA found that telephone calls from other callers to UnityPoint’s fax number on December 17 and 19, 2012, showed “attempt” status.<sup>12</sup>
- OCA found that correspondence between CenturyLink and Bluetone noted “an ongoing issue with [Bluetone] (same NPA-NXX)”.
- OCA found that CenturyLink had previously removed both Bluetone and [REDACTED] from routing on calls to the 515-597 NPA-NXX after duplicating the intermittent dead air reported by another customer.
- OCA found that the trouble ticket on this earlier complaint indicated the technician found more than ten seconds (14 seconds in one instance) of post-dial delay on both the Bluetone and [REDACTED] networks.
- According to OCA, in its investigation, it found CenturyLink showed ten occasions in 2011 and 2012 on which eight different carriers were removed from the intrastate routing to the 515-597 NPA-NXX based on trouble tickets addressing call completion related concerns.
- OCA found that on December 21, 2012, CenturyLink moved “Bluetone down the routing list for this NPA-NXX 515-597, to ensure that calls could process appropriately to all customers in that area.” The traffic to that destination was moved to [REDACTED]

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<sup>11</sup> Telephone calls which stay on a customer’s private network, traveling by private line from beginning to end, are said to be on-net.

<sup>12</sup> CenturyLink interpreted “attempt” status as a potentially failed call because the call was not marked completed and other errors were not noted in the call detail records.

- OCA found that intermediate carriers, including Bluetone, remained in the routing tables for redundancy in case of a need for backup or overflow.
- OCA found no call completion problems occurred with UnityPoint's service since this change was made.
- In its investigation, OCA found that prior to the change CenturyLink was paying [REDACTED] per minute charges of [REDACTED] intrastate and [REDACTED] interstate.
- OCA found that after the change, CenturyLink paid a tariffed terminating charge to Huxley Communications and a tariffed tandem charge to INS. These tariffed charges totaled \$.09773 per minute intrastate and \$.06003 per minute interstate.
- OCA found that the resulting cost impact of the change to CenturyLink, for both intrastate and interstate calls, was [REDACTED] monthly.
- OCA found that CenturyLink produced a testing plan and testing results for Bluetone. OCA noted that [REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED] OCA found that [REDACTED]  
[REDACTED]
- OCA found that CenturyLink produced both a template contract for intermediate carriers and the actual contract between CenturyLink and Bluetone, [REDACTED]. Both contracts include exhibits [REDACTED]  
[REDACTED].
- OCA found that according to Bluetone, the Huxley clinic's problems were related to the local equipment and not attributable to the intermediate long-distance carriers or the routing. OCA noted this argument was undercut by the history of call completion difficulties in the 515-597 NPA-NXX as reported by CenturyLink.
- OCA found that Bluetone has a standing policy that provides for the "force-routing"<sup>13</sup> of calls "anytime a fax issue is reported on an Internet protocol (IP) enabled path to a TDM path instead."
- Bluetone stopped routing calls through intermediate carrier JTRK Enterprises and began force-routing them through Verizon. This routing change applied only to telephone number [REDACTED]. OCA found that

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<sup>13</sup> "Force-routing" means "rout[ing] a call directly to a specific vendor" and thus "by-pass[ing] the vendor selection in the standard routing tables."

this change was the only change made by Bluetone in connection with this docket.

- OCA found that an e-mail from Bluetone to CenturyLink, stated the re-routing to a “Tier 1 TDM vendor” was intended “to provide the best opportunity for call completion.”
- OCA found that Bluetone reported there was negligible to no financial impact to Bluetone.
- OCA found that that Bluetone could not be certain of the financial impact if it were to use only tier 1 carriers on all calls completed to a particular NPA-NXX in Iowa since pricing changes frequently in the wholesale space.
- OCA further found that since Bluetone completes few calls to Iowa, any financial consequences would be negligible.
- OCA found that that Bluetone indicated there is nothing to test unless and until a problem occurs.
- OCA found that Bluetone indicated it imposes the following metrics on underlying carriers:
  - Answer Seizure Ratio – 70 percent
  - Network Effectiveness Ratio – 90 percent
  - Trouble Tickets per Million Minutes – one maximum
  - Post Dial Delay – less than two seconds
- OCA found that Bluetone does not have records that track the vendors against the guidelines.
- OCA questioned whether the metrics imposed above by Bluetone establish an acceptable level of performance on the part of the downstream carrier.
- OCA found that Bluetone indicated that it has the ability to send less traffic and remove vendors from routing for failing to meet the metrics or standards, but Bluetone has indicated it has not had a vendor that failed to meet the standards or failed to cure concerns in Iowa.
- OCA noted that the Board has seen at least three additional complaints alleging call completion difficulties on routes carried by Bluetone.
- OCA found that [REDACTED]  
[REDACTED] Bluetone [REDACTED]  
[REDACTED]  
[REDACTED]

c. FCU-2013-0005 Hancock County Health Systems - Filed on January 16, 2015:

- OCA found that on January 30, 2013, CenturyLink removed IntelPeer from the routing to all telephone calls in the 641-762 NPA-NXX.
- OCA found that the technician manually changed the [REDACTED] routing table.
- OCA found that prior to the change, CenturyLink's intrastate routing sequence was: [REDACTED]
- OCA also found that following the change, the sequence was: [REDACTED]
- OCA found that [REDACTED]
- OCA found that CenturyLink reported the financial consequences of removing IntelPeer from the routing are: (i) another carrier was ahead of IntelPeer in the routing table sequence, (ii) the difference in pricing between IntelPeer and the next carrier down in the sequence was small, and (iii) the financial impact of the change to CenturyLink was small.
- OCA found that CenturyLink showed only one other complaint to CenturyLink, on February 6, 2012, regarding call completion difficulties on calls to the 641-762 NPA-NXX during 2011, 2012, and 2013. The difficulties on that complaint were not described.
- In its investigation OCA found that IntelPeer's process for addressing trouble tickets included: [REDACTED]
- OCA found no documentation that [REDACTED] shows that IntelPeer [REDACTED]

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<sup>14</sup> Routing table software vendor name/software tool.

- [REDACTED]
- OCA found that [REDACTED]
  - OCA found that [REDACTED]
  - OCA found that [REDACTED]
  - OCA found that [REDACTED] OCA found that if [REDACTED] OCA found that [REDACTED]
  - OCA noted that none of the correspondence produced by IntelPeer shed any light on the cause of the problem. When asked to explain the cause of the problem, IntelPeer responded [REDACTED] the issue at that time.”
  - OCA found that prior to HCHS filing the complaint, IntelPeer had not conducted any testing to assure IntelPeer that Impact was able to complete calls since [REDACTED]
  - OCA found that with respect to [REDACTED]
  - OCA found that Impact was contacted by IntelPeer on January 30, 2013, in reference to two calls made on January 15, 2013, the first at 14:37:53 and the second at 14:39:17 Greenwich Mean Time (GMT).
  - OCA found that Impact’s analysis indicated that the call could have failed, because Impact, as an intermediate carrier, cannot see the final outcome of the call after it delivers the call to its upstream carrier.

<sup>15</sup> SIP 503 code “no circuit available.”

- OCA found that Impact indicated in order to know what happened, and, if a call failed, and the reason it failed, one would need to construct a “call ladder” with the call detail records of all of the carriers in the call path.
- OCA found that Impact produced a spreadsheet that shows that Impact processed 11 calls on January 15, 2013, from the Britt facility to the Kanawa, Iowa, facility during a fifteen-minute period and while there is no record for one of the calls, of the ten total attempts on the four calls, it appears that two succeeded and eight failed. Of the eight that failed, four had notation “NoCirAvail – Group Term CPS” with synopsis “no vendor capacity” or “vendor capacity full.” Two had notation “service unavailable.” One had notation “no ring timeout,” which is dead air. One said “call was in the ring phase prior to answer and IPeer requested the call be canceled.”
- OCA found that the spreadsheet shows an “answer time” for the first and tenth calls, probably indicating that answer supervision was received from the terminating local exchange carrier in Kanawha and hence (absent incorrect or falsified signaling) that the call was completed. OCA found that the first call was 41 seconds from “start” to answer and 23 seconds from answer to release. The tenth call was 8 seconds from “start” to answer and 15 seconds from answer to release.
- Also OCA stated it found that according to the spreadsheet there was [REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]
- OCA found that on each of the other four calls (the first, second, eighth, and tenth), including the two that completed, Impact needed to try more than one downstream carrier, because the carrier in the first position in its sequencing was unable to complete the call. On two of the calls (the second and tenth), the carrier in the second position in Impact’s sequencing was also unable to complete the call, so Impact proceeded to try the carrier in its third position.
- OCA found that [REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

- OCA found that that lack of physical capacity was a major cause of the difficulties reported by HCHS. This finding is consistent with findings in other cases.
- OCA found that Impact's record indicates that one call completion complaint was received since January 1, 2011. The trouble ticket on that complaint was opened by IntelePeer in relation to a call dated January 16, 2013. Impact tested the call, confirmed the presence of "dead air," and removed the downstream carrier (Broadvox) from the route. Calls then completed successfully.
- In response to IP switching technology, OCA noted that Impact cannot say with certainty whether this type of technology at some point in a call path may have any effect on call completion.
- OCA noted that [REDACTED]  
[REDACTED]  
[REDACTED]
- OCA found that the term "tier 1" carrier, is "top tier or best." OCA found that according to Impact, these carriers typically own the copper and other facilities and require fewer intermediaries. Incumbent local exchange carriers (ILECs) such as AT&T and Verizon are generally regarded as tier 1 carriers. However not every ILEC is necessarily a tier 1 provider or a tier 1 provider for every location. Nor do tier 1 providers necessarily own the copper. They may be resellers that possess routes that are able more successfully to complete and maintain calls.

d. FCU-2013-0006 Helen Adolphson and Charlotte Skallerup  
Filed on January 20, 2015:

- OCA found that the routing change was made on a temporary basis on March 11, 2013.

OCA found that before the routing change, the first five positions in CenturyLink's intrastate routing sequence were: [REDACTED]

[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

- OCA found that after the routing changed [REDACTED]  
[REDACTED]  
[REDACTED] OCA found that [REDACTED]  
[REDACTED]  
[REDACTED]

- OCA found that the financial consequences to CenturyLink of removing InterMetro from the routing on intrastate calls to the 712-824 NPA-NXX was, [REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]
- OCA found that [REDACTED]  
[REDACTED]  
[REDACTED]  
concern.
- [REDACTED]  
[REDACTED]
- OCA found no other complaints to CenturyLink, other than Adolphson's and Skallerup's, regarding call completion related difficulties on telephone calls to the 712-824 NPA-NXX during 2011, 2012 or 2013.
- OCA found that CenturyLink described each component of the physical facilities that are used to carry a long-distance call from Adolphson's or Skallerup's telephone to Wookey's, using [REDACTED]  
[REDACTED] which is described in this footnote.<sup>16</sup>
- OCA found that [REDACTED]  
[REDACTED]  
[REDACTED]
- OCA found that in addressing the difficulties Ms. Adolphson experienced on January 8, 2014, CenturyLink removed IntelePeer from the routing and calls completed successfully.
- OCA found that CenturyLink changed the routing made on January 8, 2014, to the [REDACTED] routing table so that telephone calls to the 712-824 NPA-NXX would [REDACTED]  
[REDACTED]
- OCA found that before the routing change, the first five positions in CenturyLink's intrastate routing sequence were: [REDACTED]

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<sup>16</sup> The call originates from the local end office switch and is delivered to the SS-7 TDM Feature Group D (FG-D) access circuits CenturyLink Long Distance has installed into the end office. The TDM FG-D circuits are connected to the [REDACTED], where it queried for routing instructions, and was then transported via SIP-1 IP inter-machine trunk groups across CenturyLink's national fiber network [REDACTED] (this is one of three potential gateways it may have hit [REDACTED]). At the [REDACTED] Long Distance switch, the call was delivered to SS-7 TDM trunk groups installed with InterMetro. Once the call was handed to InterMetro, they were to deliver the call via their terminating network to the terminating LEC.

- [REDACTED] OCA remarked that [REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]
- OCA found that after the routing changed, the first five positions in CenturyLink's intrastate routing sequence were: [REDACTED]  
[REDACTED]
  - OCA found that once [REDACTED]  
[REDACTED]
  - OCA found that the financial consequences to CenturyLink of removing IntelePeer<sup>17</sup> from the routing on telephone calls to the 712-824 NPA-NXX, was [REDACTED] monthly for interstate traffic and [REDACTED] monthly for intrastate traffic.
  - In discovery, OCA found that InterMetro's downstream provider was I.T. Source Corporation d/b/a Massive Telecom (I.T.S).
  - OCA found that InterMetro summarized the problem as follows: I.T.S. had expressly represented to InterMetro that the I.T.S. product would be directly connected exclusively to "Tier 1" providers. In early 2013, InterMetro was concerned about the quality of the services provided by I.T.S. and I.T.S. stated the difficulties were temporary. It attributed them to "hardware" and "capacity" problems. InterMetro initially removed I.T.S. from several rural routes. While investigating the issues in this and other cases, InterMetro learned that I.T.S. had not been providing "Tier 1 only" service. In mid-March 2013, InterMetro ended the relationship.
  - OCA found that according to InterMetro, a Tier-1 carrier product provides direct connections to only other Tier-1 carriers, with the topmost level of network quality and connectivity. Only the largest telecommunications carriers qualify as Tier-1 carriers. A Tier-1 network carrier is also one that participates in the internet solely via settlement-free interconnection,<sup>18</sup> further providing the greatest reliability and quality. Tier-2 and Tier-3 networks typically resell services from the larger Tier-1 network providers combined with other Tier-2, Tier-3, and other lesser tiered providers. These lower tier networks offer a lower quality level of connectivity and reliability, typically at a lower price.
  - OCA found that the contract terms provide that usage charges are based on actual usage of I.T.S.'s services and begin when the called party answers, as determined by answer supervision. The contract then provides: If answer supervision does not detect an answer or a disconnection within fifty-four (54) seconds, I.T.S. may disconnect the call

<sup>17</sup> Correction filed by OCA on January 27, 2015.

<sup>18</sup> Network providers don't pay any other networks for transit and can still reach all networks connected to the Internet.

and bill the call for (1) minute. OCA found that the latter provision appears to provide a financial incentive for failure to complete.

e. FCU-2013-0009 Douglas Pals Filed on January 23, 2015:

- OCA noted this docket focuses on “caller ID spoofing”<sup>19</sup>, which involves the altering or manipulating of caller identification information.
- OCA found that Mr. Pals also reported a telephone call completion difficulty in November 2013.
- OCA found that Mr. Pals reported that he has had no further telephone call completion difficulties.
- OCA found that CenturyLink confirmed that its records show that it gave the correct caller ID information to Bluetone.
- OCA noted that on March 26, 2013, CenturyLink wrote Bluetone regarding the apparent spoofing in this and two other instances (neither instance originated or terminated in Iowa) and requesting a root cause analysis within five business days.
- OCA found that on April 4, 2013, Bluetone responded to CenturyLink that both it and its supplier had confirmed receipt of the correct calling party number from CenturyLink and presented the correct calling party number to its downstream provider. OCA noted that neither the supplier nor the downstream provider was identified. OCA also noted that according to the response, test calls did not duplicate “BIDAXIS” and the area code 347 number. One test call “received no name or number as confirmed by the term (terminating) party.” Subsequent test calls completed correctly. OCA found that Bluetone removed its downstream carrier from the routing.
- OCA found that CenturyLink permanently removed Bluetone from the routing to the 319-627 NPA-NXX, intrastate and interstate, on March 21, 2013.
- OCA found that prior to the change, the first five carriers in CenturyLink’s routing sequence were: [REDACTED]
- OCA found that [REDACTED]

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<sup>19</sup> The FCC has adopted rules at 47 C.F.R. §§ 64.1600 and 64.1604 implementing the Truth in Caller ID Act of 2009, Pub. L. No. 111-331, codified at 47 U.S.C. § 227(e). The statute and rules prohibit the practice of caller ID “spoofing,” which involves manipulating called ID information to make calls appear to come from phone numbers which are different from the actual originating number. The Truth in Caller ID Act and the FCC’s rules prohibit any person or entity from knowingly spoofing caller identification information with the intent to defraud, cause harm, or wrongfully obtain anything of value. Violations are subject to a penalty of up to \$10,000 for each violation or three times that amount for continuing violations.

- OCA found that after the change, the first five carriers in CenturyLink's sequence were: [REDACTED]
- OCA also found that the financial consequences to CenturyLink of removing Bluetone from the routing on calls to 319-627 NPA-NXX were estimated at [REDACTED] monthly for interstate traffic and [REDACTED] monthly for intrastate traffic.
- OCA found that a retest on September 10, 2013, by CenturyLink for Bluetone showed [REDACTED]
- OCA found that there were [REDACTED]
- OCA found that Bluetone identified its downstream provider as JTRK Enterprises. Subsequently, Bluetone removed JTRK from the routing to the 319-627 destination number on March 21, 2013.
- OCA found that correspondence from Bluetone to JTRK on March 21, 2013 states: "{t}hese Caller ID issues are occurring too frequently over this route. Somewhere along the route to the end user, someone is changing the caller ID. I hate to make assumptions, but it looks like some carrier along the way is changing the calling party's caller ID # [number] to an out of state number, most likely in an effort to avoid intrastate CABS [Carrier Access Billing System] billing."
- OCA found that [REDACTED]
- Concerning the call connection issue that occurred on November 22, 2013, from Mr. Pals' home in Clive, Iowa to Shellsburg, Iowa, the telephone rang three times and then went to dead air for 30 to 45 seconds and the call disconnected. The telephone call was redialed and completed without any issues.
- OCA found that CenturyLink opened a trouble ticket and it determined the routing was the issue, removed intermediate carrier TouchTone Communications, Inc., permanently from the routing on calls to NPA-NXX 319-436, and opened a trouble ticket with TouchTone.
- OCA found that prior to the change the first five positions in CenturyLink's intrastate routing sequence were [REDACTED]
- OCA found that after the change, the first five positions in CenturyLink's intrastate routing sequence were: [REDACTED]

- OCA found that the telephone call duration for the failed call on the November 19, 2013, shows ten seconds of set up time.
  - OCA found that [REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]
  - OCA found that capacity constraints/overloads to TouchTone’s switch can cause a slowdown in processes. OCA noted that this includes call setup features resulting in delays if attempted during this period over a path that might be overburdened.
  - OCA found that TouchTone stated that it was undergoing both software and hardware updates, had expanded its services to allow for greater traffic flow, and was in the process of implementing further augments before they were removed from the route.
2. OCA’s Summary of CenturyLink’s Iowa Trouble Tickets Addressing Call Completion. (Filed in FCU-2012-0019 on December 19, 2014; FCU-2013-0004 filed on January 9, 2015; FCU-2013-0005 filed on January 16, 2015; FCU-2013-0006 filed on January 20, 2015; FCU-2013-0009 on January 23, 2015) (Tara)

OCA summarized CenturyLink spreadsheets listing each Iowa trouble ticket addressing call completion concerns during 2011, 2012, and 2013 for both its legacy Qwest and legacy CenturyLink long-distance networks. The information on the spreadsheets identified:

- Each carrier that CenturyLink removed from intrastate routing to a designated Iowa NPA-NXX based on the trouble ticket.
- [REDACTED] carriers removed from one or more intrastate routes to an Iowa NPA-NXX during 2011, 2012, and 2013.
- The intermediate carriers most frequently removed by CenturyLink from an intrastate route in Iowa related to call completion concerns.
- The number of times the following intermediate carriers were removed:





- For [REDACTED] Iowa NPA-NXX's, there were multiple occasions over the three years on which intermediate carriers were removed from the intrastate routing to the NPA-NXX.

- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]

OCA noted that CenturyLink provided the FCC with an Excel workbook containing spreadsheets with requested call completion data in formats specified by the FCC. [REDACTED]

[REDACTED]

- [REDACTED]
- [REDACTED]

OCA noted these metrics appear to be similar to the “call answer rate” (CAR) and “network efficiency ratio” (NER) that will soon be the subject of industry-wide data reporting pursuant to FCC rule.

OCA noted that in the FCC order adopted in November 2013 (47 C.F.R. § 64.2101, 64.2103, 64.2105), the FCC required long-distance providers that make the initial call path choice for more than 100,000 domestic retail lines, including local exchange carriers, interexchange carriers, wireless providers and voice over Internet protocol (VoIP) providers, to collect, retain and report specified data elements, with respect to interstate and intrastate calls, for each rural destination, identified by operating company number (OCN), and for non-rural OCNs in the aggregate. These data elements include number of calls attempted, number of calls answered, and number of calls not answered (reported separately for call attempts signaled as busy, ring no answer or unassigned number).

The rules do not apply to intermediate carriers. When the rules are implemented, they are intended to increase the FCC's ability to identify and redress problems associated with completing calls to rural areas and to assist the FCC in comparing performance across providers to uncover the source of rural call completion problems.

OCA stated the required data will enable the FCC to calculate the CAR and NER. The NER reflects the exclusion of calls that are signaled as busy, ring no answer, or unassigned number.

The OCA noted that [REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

OCA also noted that [REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

OCA stated that the FCC hopes that analysis of data such as these will assist in identifying rural call completion problems and in achieving solutions. OCA stated that it is not clear at this point why any particular CAR or NER represents an acceptable level of performance on the part of an intermediate carrier or even an appropriate trigger for investigation. Nor is OCA aware of any regulatory or industry standard in that respect.

In [REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

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<sup>20</sup> Telephone calls which stay on a customer's private network traveling by private line from beginning to end are said to be on-net.

<sup>21</sup> Off-net telephone call which is carried in part on a network but is destined for a phone not on the network. Some part of the call is over the PTSN or over someone else's network.

3. OCA Discussion of CenturyLink's New Draft Template Contract for Intermediate Carriers. (Filed in FCU-2012-0019, Rehabilitation Center of Allison on December 19, 2014) (Tara)

OCA stated that on November 6, 2014, CenturyLink produced a confidential new draft template contract to be used in conjunction with CenturyLink's announced intention to invoke the "safe harbor" provisions in the FCC's data recording, retention and reporting rules. CenturyLink advises that [REDACTED]

[REDACTED] OCA stated the new draft template contract contains requirements under which an intermediate carrier must:

- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED] and
- [REDACTED]

Also, the new draft template contract [REDACTED]

- [REDACTED]
- [REDACTED]
- Blocking rate not to exceed P.01<sup>23</sup> (1 in 100 calls) to all end offices;

<sup>22</sup> Signaling System No. 7 – Set of telephony signaling protocols developed in 1975, which is used to set up and tear down most of the world's public switched telephone network (PTSN) telephone calls.

<sup>23</sup> P01 or P.01 refers to the grade of service for a telephone system. The digits follow the P, i.e. nn, indicate the number of calls per hundred that are or can be blocked by the system. It is a goal or a measure of an event. In this example P.01 means one call in a hundred can be blocked, so the system is designed to meet this criterion. (Newton's Telecom Dictionary 27<sup>th</sup> Updated & Expanded Edition). (In other words, P.01 implies blocking of potentially up to 1 percent of calls during peak busy hour.)

- [REDACTED]
- [REDACTED]

In the next section of the contract template CenturyLink proposed that the intermediate carrier [REDACTED].

In addition the new draft contract [REDACTED].

OCA noted that the contract provisions regarding grade of service and post dial delay are worth discussion. OCA cited the Board rules at 199 IAC 22.5(3), which require local exchange carriers to complete dialing of called numbers on at least 97 percent of calls without encountering an all-trunks busy condition, during average busy-season busy-hour (P.03).

OCA stated while it generally supports the new draft template, there are inconsistencies with the contract language which [REDACTED].

OCA asked CenturyLink to identify and explain the industry standards for post-dial delay. CenturyLink responded stating that its public switched telephone network (PSTN) has set-up<sup>24</sup> timers in the network. The timer parameter is set to 25 seconds, meaning that the switch will wait 25 seconds to receive a message from the far end to connect the call. According to OCA, SS7 industry standards allow for a range from 20-30 seconds. During the timer set up, the customer may experience a pause until the calls connect. As an example, a single ring-back one is six seconds, so a post dial delay of 20 seconds would be equivalent to approximately four ring cycles.

OCA noted that the FCC defines excessive call setup delay to include a delay before the called party hears ringing that is in excess of eight seconds, which OCA believes is too long. OCA argues that nearly twenty years ago, the FCC required local exchange carriers to complete the set-up of all toll-free calls within five seconds, with a mean set-up time for such calls of 2.5 seconds or less.

OCA stated when it asked CenturyLink [REDACTED].

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<sup>24</sup> Set-up” means that a call has reached the called party’s local exchange carrier, enabling that carrier to signal the calling party’s local exchange carrier that ringback (or a busy signal) may be provided to the calling party.

[REDACTED]

Referring to CenturyLink's response, OCA stated that [REDACTED] the need to reduce failed attempts and instead to complete calls more frequently using the first attempted intermediate provider.

C. Summary of CenturyLink's Response to OCA's Report. What does CenturyLink identify as the causes and the fixes? (Filed on February 26, 2015) (Larry)

1. FCU-2012-0019, Rehabilitation Center of Allison

CenturyLink says OCA's report does an adequate job of summarizing the data and information provided pertaining to the problems experienced by the rehabilitation center as well as the larger and more complex problem of call routing. CenturyLink does not see any obvious discrepancies between the information provided by CenturyLink and the OCA's factual statements in its report.

CenturyLink notes OCA's conclusions drawn from limited anecdotal evidence are far-reaching and assume that the cause for every call that fails to complete lies at the feet of intermediate carriers terminating calls to rural destinations. CenturyLink has concerns with OCA's suggestions and whether any of the steps proposed would provide "concrete" long-term solutions to call completion issues. CenturyLink continues by saying the solutions proposed by OCA would be better suited for industry-wide discussions in the context of workshops or rulemakings.

CenturyLink says it has adopted the FCC's Safe Harbor option in its provision and routing of long-distance calls and it appears that OCA has not taken into account any considerations for those who take the burden of this option.

CenturyLink says that in its July 28, 2014, Petition for Waiver, they notified the FCC of its intention to adopt the Safe Harbor policies. In the petition CenturyLink notes that they process over 3.8 billion minutes of long-distance calls every month which are routed through 52 long-distance switches and 3,675 local switches. CenturyLink continues by saying the implementation of Safe Harbor requires complex changes to call routing and switch programming, revisions to intercarrier contracts, updates to routing tables, and necessary quality assurance testing.

CenturyLink also says it has one of this country's largest networks, but it cannot complete all calls on its own network and must use some intermediate carriers. CenturyLink says that it will qualify under the FCC's Safe Harbor second option allowing the use of up to two intermediate providers in a call path. CenturyLink says it has made significant progress in completing all necessary steps to be in a position to certify to the FCC each of the elements necessary to demonstrate it meets the Safe Harbor requirements. These steps include:

- Identifying one intermediate provider to carry traffic on each call path;
- Modifying its contracts with intermediate providers to ensure that each intermediate provider is aligned with the requirements of the Order and that it delivers calls to the terminating tandem or returns the call to CenturyLink for completion;
- To the extent necessary, modifying contracts to explicitly permit CenturyLink to continue its existing practice of identifying the intermediate carriers in a call path to the Commission and the relevant rural ILEC;
- Modifying its call routing practices to comply with Safe Harbor requirements;
- Reviewing its existing processes to monitor the performance of intermediate providers and making necessary changes to ensure that it is able to monitor their performance consistent with FCC rules;
- Ensuring that it is capable of demonstrating that CenturyLink has processes in place to ensure that call attempts to rural ILECS successfully reach their destinations, by adopting industry best practices. CenturyLink is actively involved in developing and implementing industry best practices through its participation with ATIS.

CenturyLink believes that the adoption of the Safe Harbor under the Rural Call Completion Order will benefit all consumers and result in the reduction of potential call completion issues in rural areas. CenturyLink says it is incurring significant costs to implement these policies and will incur higher operating costs for long-distance traffic because of the policies. CenturyLink expects to file its annual certification on the first quarterly filing date and annually thereafter. CenturyLink says that it will also comply with all Safe Harbor data retention and reporting requirements for the first year of its implementation of Safe Harbor as required by the FCC's rules.

2. FCU-2013-0004, UnityPoint Clinic Family Medicine at Huxley, f/k/a Huxley Family Physicians

CenturyLink says OCA's report does an adequate job of summarizing the data and information provided pertaining to the problems experienced by Unity Point. CenturyLink does not see any obvious discrepancies between the information provided by CenturyLink and the OCA's factual statements in its report.

CenturyLink notes OCA's conclusions drawn from limited anecdotal evidence are far-reaching and assume that the cause for every call that fails to complete lies at the feet of intermediate carriers terminating calls to rural destinations. CenturyLink has concerns with OCA's suggestions and whether any of the steps proposed would provide "concrete" long-term solutions to call completion issues. CenturyLink continues by saying the solutions proposed by OCA would be better suited for industry-wide discussions in the context of workshops or rulemakings.

CenturyLink says it has adopted the FCC's Safe Harbor option in its provision and routing of long-distance calls and it appears that OCA has not taken into account any considerations for those who take the burden of this option.

### 3. FCU-2013-0005, Hancock County Health Systems

CenturyLink says OCA's report does an adequate job of summarizing the data and information provided pertaining to the problems experienced by Hancock County Health Systems. CenturyLink does not see any obvious discrepancies between the information provided by CenturyLink and the OCA's factual statements in its report.

CenturyLink notes OCA's conclusions drawn from limited anecdotal evidence are far-reaching and assume that the cause for every call that fails to complete lies at the feet of intermediate carriers terminating calls to rural destinations. CenturyLink has concerns with OCA's suggestions and whether any of the steps proposed would provide "concrete" long-term solutions to call completion issues. CenturyLink continues by saying the solutions proposed by OCA would be better suited for industry-wide discussions in the context of workshops or rulemakings.

CenturyLink says it has adopted the FCC's Safe Harbor option in its provision and routing of long-distance calls and it appears that OCA has not taken into account any considerations for those who take the burden of this option.

### 4. FCU-2013-0006, Helen Adolphson and Charlotte Skallerup

CenturyLink says OCA's report does an adequate job of summarizing the data and information provided pertaining to the problems experienced by Ms. Helen Adolphson and Ms. Charlotte Skallerup. CenturyLink does not see any obvious discrepancies between the information provided by CenturyLink and the OCA's factual statements in its report.

CenturyLink notes OCA's conclusions drawn from limited anecdotal evidence are far-reaching and assume that the cause for every call that fails to complete lies at the feet

of intermediate carriers terminating calls to rural destinations. CenturyLink has concerns with OCA's suggestions and whether any of the steps proposed would provide "concrete" long term solutions to call completion issues. CenturyLink continues by saying the solutions proposed by OCA would be better suited for industry-wide discussions in the context of workshops or rulemakings.

CenturyLink says it has adopted the FCC's Safe Harbor option in its provision and routing of long-distance calls and it appears that OCA has not taken into account any considerations for those who take the burden of this option.

#### 5. FCU-2013-0009, Douglas Pals

CenturyLink says OCA's report does an adequate job of summarizing the data and information provided pertaining to the problems experienced by Mr. Douglas Pals. CenturyLink does not see any obvious discrepancies between the information provided by CenturyLink and the OCA's factual statements in its report.

CenturyLink notes OCA's conclusions drawn from limited anecdotal evidence are far-reaching and assume that the cause for every call that fails to complete lies at the feet of intermediate carriers terminating calls to rural destinations. CenturyLink has concerns with OCA's suggestions and whether any of the steps proposed would provide "concrete" long-term solutions to call completion issues. CenturyLink continues by saying the solutions proposed by OCA would be better suited for industry-wide discussions in the context of workshops or rulemakings.

CenturyLink says it has adopted the FCC's Safe Harbor option in its provision and routing of long-distance calls and it appears that OCA has not taken into account any considerations for those who take the burden of this option.

#### D. Summary of Dumont Telephone's Response to OCA's Report. (Filed in FCU-2012-0019, Rehabilitation Center of Allison on February 26, 2015) (Larry)

Dumont Telephone notes it is in general agreement with the information contained in the "Investigation and Discovery" section of the OCA's report. Dumont Telephone continues by saying the OCA's report briefly touches upon, but does not fully address the financial implications that drive the proliferation of intermediate carriers. Dumont Telephone says OCA noted as part of the discovery in this case CenturyLink produced a new draft template contract for use with its intermediate carriers and to be used in conjunction with CenturyLink's announced intention to invoke the "safe harbor" provisions in the FCC's retention and reporting rules. Dumont Telephone acknowledges the provisions in CenturyLink's new draft template are constructive steps toward helping to solve completion problems only if the provisions are routinely and frequently monitored by CenturyLink. It is equally important that enforcement mechanisms be instituted against originating carriers who do not enforce their contracts with downstream carriers.

Dumont Telephone also notes that it appreciates CenturyLink's willingness to limit its use of a single intermediate carrier in a downstream call path which should help minimize call looping. However limiting a downstream carrier to one entity does not necessarily address call completion problems of post-dial delay, dead air, echo, hearing, etc.

E. Summary of INS Response to OCA's Report. (Filed in FCU-2012-0019, Rehabilitation Center of Allison on February 26, 2015) (Larry)

INS says they serve as the Centralized Equal Access (CEA) provider for Dumont Telephone and Butler Bremer Communications. This means that traditional long-distance traffic should pass through INS's tandem as it originates from or terminates to companies with INS's CEA service. INS continues by stating the OCA's report says CenturyLink pays a tariffed tandem charge to INS at a rate of \$0.044989 per minute. INS notes that the applicable CEA service rate is \$0.011400 per minute-of-use and its tariffed switched transport rate is \$0.000103 per-minute-mile. INS says that no two INS POI locations are in use by any carrier that are sufficiently far apart to produce the alleged charges contained in the OCA report and the said charges may significantly overstate the cost implications of CEA service as provided by INS. Other than this rate discrepancy, INS does not have any basis to contest other factual allegations contained in the OCA report.

F. Summary of Airus Response to OCA's Report. (Filed in FCU-2013-0005, Hancock County Health Systems on February 26, 2015) (Larry)

Airus believes the OCA's report does a commendable job summarizing the information provided by Airus and grappling with complex data and information pertaining to call routing. Airus says it doesn't see any glaring inconsistencies between the information Airus provided in discovery and the way the information was described in the OCA report.

G. Summary of Impact's Response to OCA's Report. (Filed in FCU-2013-0005, Hancock County Health Systems on March 12, 2015) (Larry)

On June 4, 2014, the FCC issued an Order and Consent Decree between Matrix Telecom, Inc. (Matrix), and the FCC Enforcement Bureau. This Consent Decree ensures compliance with 47 U.S.C. §§ 201(b) and 202(a) as interpreted by the Rural Call Completion Declaratory Ruling (DA12-154) and supplemented by the rules adopted in the Rural Call Completion Order (FCC 13-135, 78 FR 76218) (collectively, "the Rural Call Completion Requirements").

Impact Telecom, Inc., is a holding company for Matrix. Both Impact and Matrix are separate carriers with individual 214 licenses (FCC authorization to provide U.S. – international common carrier service). The Consent Decree was negotiated by the FCC Enforcement Bureau and by Matrix, and by its terms, only applies to Matrix traffic.

Impact has chosen to apply the requirements of the Consent Decree to Impact's traffic as well.

Impact says the rural call completion requirements go well beyond OCA's proposed nine steps. Impact believes it is voluntarily compliant with the operating processes and procedures covering all rural areas as defined by National Exchange Carrier Association. Impact says it will outline its processes and procedures in its proposed solutions filing scheduled for April 27, 2015.

H. Summary of I35 Telephone Company's Response to OCA's Report.  
(Filed in FCU-2013-0006, Helen Adolphson and Charlotte Skallerup on  
February 26, 2015) (Larry)

I35 says they are in general agreement with the sections of the OCA report describing the specific complaints in this case and CenturyLink and InterMetro's responses to the data requests. I35 continues by saying the OCA's report briefly touches upon, but does not fully address the financial implications that drive the proliferation of intermediate carriers.

I35 says OCA noted as part of the discovery in this case that CenturyLink produced a new draft template contract for use with its intermediate carriers and to be used in conjunction with CenturyLink's announced intention to invoke the "Safe Harbor" provisions in the FCC's retention and reporting rules. I35 acknowledges the provisions in CenturyLink's new draft template are constructive steps toward helping to solve completion problems only if the provisions are routinely and frequently monitored by CenturyLink. It is equally important that enforcement mechanisms be instituted against originating carriers who do not enforce their contracts with downstream carriers.

I35 also notes that it appreciates CenturyLink's willingness to limit its use of a single intermediate carrier in a downstream call path which should help minimize call looping. However limiting a downstream carrier to one entity does not necessarily address call completion problems of post-dial delay, dead air, echo, hearing, etc.

I. No Reports

Reports were not filed by:

- Intermediate carrier Bluetone (FCU-2013-004, UnityPoint Clinic Family Medicine at Huxley, f/k/a Huxley Family Physicians and FCU-2013-009, Douglas Pals);
- Intermediate carrier InterMetro (FCU-2013,0006, Helen Adolphson and Charlotte Skallerup);
- Local exchange carrier Huxley Communications Cooperative (FCU-2013-0004, UnityPoint Clinic Family Medicine at Huxley, f/k/a Huxley Family Physicians);

- Local exchange carrier West Liberty Telephone Co. d/b/a Liberty Communications (FCU-2013-0009, Douglas Pals).
- J. Detailed Summary of OCA's Proposed Nine "Concrete Steps Toward a Long-Term Solution." (Filed in FCU-2012-0019 on December 19, 2014, FCU-2013-0004 filed on January 9, 2015, FCU-2013-0005 filed on January 16, 2015, FCU-2013-0006 filed on January 20, 2015, FCU-2013-0009, filed on January 23, 2015) (Tara)
1. OCA Proposes that Carriers Acknowledge Responsibility for Performance of Downstream Carriers. (Tara)

Originating and upstream intermediate carriers should acknowledge responsibility for the performance of the downstream intermediate carriers they engage to complete the calls.

CenturyLink's response to OCA's proposed steps (Filed in all dockets on February 26, 2015) (Larry)

CenturyLink notes that a company making the routing decision should take into account the performance of downstream providers overall, but this may not equate to responsibility for a particular call failure. OCA fails to explain how this will prevent calls from failing to complete to rural Iowa LECs.

OCA's reply to CenturyLink's response (Filed March 19, 2015) (Tara)

In this response, OCA replied to CenturyLink's response on steps one and six. OCA stated that CenturyLink's response is argumentative and uninformative, even to point of becoming disengaged from the specific problems that are identified in these cases. OCA stated that although at first CenturyLink acknowledged that carriers making routing decisions are "clearly" responsible for those decisions, CenturyLink renders the acknowledgement largely meaningless by stating it "may not equate to responsibility for a particular call." OCA stated that CenturyLink offers no suggestion when carriers do need to be responsible for routing decisions. OCA stated that CenturyLink denies an ability to manage the business and operations of its downstream carriers, thus apparently denying responsibility for their performance.

OCA stated that two of the elements it suggested (the third and fifth) are capacity limitations in the physical facilities of the downstream carriers. According to CenturyLink, it "must rely on contract provisions that an intermediate carrier maintains a network sufficient to complete calls." OCA argues that is precisely what upstream companies must not do. OCA further stated that a great deal of evidence shows that face value acceptance of representations of downstream carriers that they have sufficient capacity to complete calls is a primary cause of call failures. OCA stated its solution is that upstream carriers must verify that downstream carriers have the capacity

to do the job, including at peak times. OCA argues that such verification is a core part of network management and therefore provides reliable telephone service.

OCA stated that five of the elements it suggested (the seventh, ninth, tenth, twelfth and thirteenth) are taken from the ATIS Handbook. According to CenturyLink, it is committed to following ATIS “best practices.” OCA noted that CenturyLink has thus in fact concluded that these five elements are not unduly burdensome or costly. OCA pointed out that the contradiction casts doubt on the credibility of CenturyLink’s argument that the measures suggested by OCA are unduly burdensome or costly.

Dumont Telephone’s response to OCA’s proposed steps (Filed in FCU-2012-0019, Rehabilitation Center of Allison on February 26, 2015) (Larry)

Dumont Telephone approves the idea of end-to-end carrier responsibility, but acknowledges it may prove challenging for an originating provider when there is no business relationship between the originating provider and the carrier network downstream that is creating the problem.

OCA’s reply to Dumont Telephone’s response (Filed on March 19, 2015) (Tara)

OCA acknowledged that Dumont Telephone generally agrees with OCA.

INS’ response to OCA’s proposed steps (Filed in FCU-2012-0019, Rehabilitation Center of Allison on February 26, 2015) (Larry)

INS does not provide a response on OCA’s proposed steps.

Airus’ response to OCA’s proposed steps (Filed in FCU-2013-0005, Hancock County Health Systems on February 26, 2015) (Larry)

OCA’s proposed step one is for originating and upstream carriers to acknowledge responsibility for the performance of intermediate downstream carriers they engage to complete calls. Airus says that end-to-end responsibility and accountability is a laudable goal, but it is not practical in all circumstances. Airus has control only over the portion of the call that it handles, and to a lesser degree over the downstream carrier to which it hands off a call. An upstream carrier may not even know the identities of the downstream carriers, much less be able to be responsible for their performance. Airus says that it is unclear what OCA means when it says that originating and upstream intermediate carriers should “acknowledge responsibility” for the performance of downstream intermediate carriers. Airus does not understand what OCA is proposing in this step.

OCA’s reply to Airus’ response (Filed March 19, 2015) (Tara)

OCA stated both Airus and Impact raised the same argument and its response is the same. The seventh and eighth elements of responsible downstream management it proposed [REDACTED]

OCA clarified that it is not suggesting that companies assume responsibility for upstream transmission only that they do for downstream transmission. OCA stated that the fact that downstream carriers may be “independent operators” does not relieve upstream carriers of responsibility.

OCA noted that Airus referenced the analysis of burdens undertaken by the FCC in conjunction with its new data rules. OCA maintained it is one thing to address the burdens associated with recording, retaining and reporting data and another to address the burden associated with completing telephone calls. OCA indicated that the latter burdens are the burdens that companies are paid to carry. OCA stated if certain actions are necessary to complete the calls reliably, the fact that there may be burdens or expenses associated with implementing them, is insufficient reason for failing to do so. OCA believes that there are certain actions that must be taken in order to provide reliable telephone service.

Impact’s response to OCA’s proposed steps (Filed in FCU-2013-0005 Hancock County Health Systems on March 12, 2015) (Larry)

Impact says that the FCC’s Rural Call Completion Order has ruled that call completion is the responsibility of the “covered provider” which is defined as the provider of long-distance voice service that makes the initial long-distance call path choice for the end user customer. Covered providers strive for call completion for its end user customers. There are limitations in place that do not allow for end-to-end control of a call. As an intermediate carrier in this complaint, Impact had control only over the portion of the call it directly handled. Impact had little to no control over the originating portion of the call, nor any downstream carrier in the call path.

OCA’s reply to Impact’s response (Filed on March 19, 2015). (Tara)

OCA stated both Airus and Impact raised the same argument and its response is the same. The seventh and eighth elements of responsible downstream management it proposed [REDACTED]

OCA stated that it is not suggesting that companies assume responsibility for upstream transmission. OCA clarified that companies assume responsibility for downstream transmission. OCA stated the fact that downstream carriers may be “independent operators” does not relieve upstream carriers of responsibility.

I35 Telephone Company’s response to OCA’s proposed steps (Filed in FCU-2013-0006, Helen Adolphson and Charlotte Skallerup on February 26, 2015) (Larry)

I35 approves the idea of end-to-end carrier responsibility, but acknowledges it may prove challenging for an originating provider when there is no business relationship between the originating provider and the carrier network downstream that is creating the problem.

OCA's reply to I35's response (Filed March 19, 2015) (Tara)

OCA acknowledged that I35 generally agrees with OCA.

2. OCA Proposes Maintaining a List of Downstream Carriers on File with the Board (Tara)

OCA suggested that the carriers provide contact information for the downstream carriers to the Board, and update the information when changes are made.

CenturyLink's response to OCA's proposed steps (Filed in all dockets on February 26, 2015) (Larry)

CenturyLink notes that OCA says the purpose of this provision is to keep the Board apprised of the identity of companies that carry traffic in Iowa. Nothing in OCA's suggestion explains how such a list would contribute to a long-term solution to rural call completion problems in Iowa or could help prevent such problems before they occur. The list of intermediate providers under contract with CenturyLink is highly proprietary and public disclosure would hurt the competitive marketplace and make negotiation of favorable terms more difficult. This requirement could potentially cost the company and customers more for long-distance service. CenturyLink continues by saying the FCC's Safe Harbor provision requires them to identify the intermediate carriers involved in the call path to the Board and the rural LEC in a call completion complaint filed with the Board.

OCA's reply to CenturyLink's response (Filed on March 19, 2015) (Tara)

OCA stated that companies could establish routines for reporting the changes and incur almost no expense. OCA stated that originating carriers would not be required to maintain a list of second and third-tier downstream carriers.

OCA questioned CenturyLink's rationale and noted that CenturyLink offers no supporting evidence or explanation for its conclusion that providing a list of intermediate carriers would hamper negotiations with these carriers. OCA noted that the secret negotiation of contracts with shadowed "least cost routers" has come at the expense of network reliability, even to the point of threatening public health and safety. OCA argues there is nothing in its proposals that suggests a public disclosure of the negotiated economic terms of the contracts. OCA contends there is a public interest in the reliability of the network and hence in the identity of the carriers transporting the calls.

Dumont Telephone's response to OCA's proposed steps (Filed in FCU-2012-0019, Rehabilitation Center of Allison on February 26, 2015) (Larry)

Dumont agrees that the Board should have on file a list of all downstream carriers that carry Iowa traffic. This information should include contact information with telephone number and e-mail address for a point person with each carrier.

OCA's reply to Dumont Telephone's response (Filed March 19, 2015) (Tara)

OCA acknowledged that Dumont Telephone generally agrees with OCA.

INS' Response to OCA's proposed steps (Filed in FCU-2012-0019, Rehabilitation Center of Allison on February 26, 2015) (Larry)

INS does not provide a response on OCA's proposed steps.

Airus' response to OCA's proposed steps (Filed in FCU-2013-0005, Hancock County Health Systems on February 26, 2015) (Larry)

OCA's proposed step two involves requiring carriers to maintain on file with the Board a list of downstream carriers (and contact information) they use to carry Iowa traffic. Airus states that it is unclear how maintaining a list on file with the Board would contribute to a long-term solution and OCA fails to explain how this will avoid rural call completion problems before they occur or provide any useful information after it happens. The list of intermediate carriers change over time and this means all companies using intermediate carriers would need to constantly update the list on file with the Board. The costs of compliance with this requirement certainly outweigh any benefit OCA may perceive. This requirement is an undue burden.

A similar requirement to maintain an updated list was proposed by the Minnesota Department of Commerce, but was not adopted by the Minnesota Public Utilities Commission.

OCA's Reply to Airus' response (Filed on March 19, 2015) (Tara)

OCA maintains that requiring intermediate carriers to maintain a list of downstream carriers used to carry Iowa traffic would not impose an undue burden. OCA stated that companies could establish routines for reporting the changes and incur almost no expense. OCA stated that each downstream carrier would maintain a list of the downstream carriers to which it hands calls.

Impact Telecom's response to OCA's proposed steps (Filed in FCU-2013-0005, Hancock County Health Systems on March 12, 2015) (Larry)

Impact says it is unclear how a list of downstream carriers would alleviate rural call completion problems. Identification of a downstream carrier does not guarantee the completion of the call, nor does it address the primary cause of rural call completion problems. Impact believes the FCC's guideline for covered carriers is specific and already exists in the Rural Call Completion Order. Completion telemetry is a real-time information gathering process and changes are managed daily. A general list of carriers can change frequently based on many elements in daily call routing.

OCA's reply to Impact's response (Filed on March 19, 2015) (Tara)

OCA stated having the list of downstream carriers would assist the Board in maintaining an awareness of circumstances and trends that affect network reliability and taking action when needed.

I35's response to OCA's steps (Filed in FCU-2013-0006, Helen Adolphson and Charlotte Skallerup on February 26, 2015) (Larry)

I35 agrees that the Board should have on file a list of all downstream carriers that carry Iowa traffic. This information should include contact information with telephone number and e-mail address for a point person with each carrier.

OCA's reply to I35's response (Filed March 19, 2015) (Tara)

OCA acknowledged that I35 generally agrees with OCA.

3. OCA Proposed a Reduction in the Number of Intermediate Providers in the Call Paths. (Tara)

In general, OCA stated that if a provider can implement the "Safe Harbor" by limiting the number of intermediate carriers to two or fewer it would help in the call completion. If that cannot be accomplished OCA suggests that carriers reduce the number of intermediate providers in the call path so they could be better able to manage performance to rural areas. OCA acknowledged CenturyLink is proposing to limit the number of intermediate providers in a call path. Also, limiting the number of intermediate providers would limit the potential for lengthy setup delay and looping.

OCA stated the reductions can be accomplished either through new interconnection agreements or through new construction.

CenturyLink's response to OCA's proposed steps (Filed in all dockets on February 26, 2015) (Larry)

CenturyLink says that by adopting the FCC's Safe Harbor provisions they have already agreed to reduce the number of intermediate carriers in the call path of a long-distance on a nationwide basis. CenturyLink notes that they cannot rely solely on their own network to complete every call and has committed to identifying its one intermediate provider to carry traffic on each call path.

OCA's reply to CenturyLink's response (Filed on March 19, 2015) (Tara)

OCA continues to support CenturyLink's stated intention to invoke the Safe Harbor provisions in the FCC's new data rules and in particular its stated intention to reduce the number of intermediate carriers in its call paths.

Dumont Telephone's response to OCA's proposed steps (Filed in FCU-2012-0019, Rehabilitation Center of Allison on February 26, 2015) (Larry)

Dumont Telephone agrees that limiting the number of intermediate providers is a positive step to minimize certain call completion problems such as call looping. However, limiting the number of intermediate providers will not necessarily fix other call completion problems such as post-dial delay, echo, hearing, voice distortion, cross talk, etc.

OCA's reply to Dumont Telephone's response (Filed March 19, 2015) (Tara)

OCA acknowledged that Dumont Telephone generally agrees with OCA.

INS' Response to OCA's proposed steps (Filed in FCU-2012-0019, Rehabilitation Center of Allison on February 26, 2015) (Larry)

INS questions OCA's suggestion to reduce the number of intermediate carriers in the call path to perhaps two or fewer. OCA suggests that this can be accomplished either through new interconnection agreements or through new construction. OCA does not indicate that it is encouraging the CEA provider to be bypassed; this would be one way to reduce the number of providers who handle a call. INS would object to such a solution, as there has been no evidence in this docket or the other call completion dockets that are pending that indicates INS' CEA service has had any implications on the call completion rates. INS continues by saying there have been no studies to determine the ramifications of elimination of CEA, both in terms of the cost of required new construction and the reduction of carrier choice options available to customers in rural Iowa.

OCA's reply to INS' response (Filed on March 19, 2015) (Tara)

OCA stated that INS opposes any reduction in the number of carriers that would involve bypassing INS. OCA clarifies that the reduction it is proposing is a reduction in the number of intermediate carriers. OCA further stated it is not suggesting a bypass of INS.

Airus' response to OCA's proposed steps (Filed in FCU-2013-0005, Hancock County Health Systems on February 26, 2015) (Larry)

OCA's proposed step three is to reduce the number of intermediate carriers in the call path. Airus states that it has already engaged in the effort to reduce the number of intermediate carriers involved in calls within Iowa by attempting to enter into new agreements and attempting to establish new direct interconnects with rural LECs in Iowa. Airus will continue to seek out opportunities to reduce the number of intermediate carriers because it believes this is the best way to address rural call completion problems. Airus has tried to enter into discussions for direct interconnections with a number of rural carriers and its requests have been rejected. Airus believes that rural carriers lack the proper incentives to establish direct interconnects with carriers terminating telecommunications traffic to their rural service territories because doing so could reduce their level of intercarrier compensation. Airus continues by saying it is important that a rigid requirement requiring the maximum number of intermediate carriers in the call path not be dictated to carriers in Iowa. Airus believes that an important part of the incentive structure for reducing the number of intermediate carriers in a call path is for rural carriers to offer nondiscriminatory rates, terms, and conditions for establishing direct interconnects for the purpose of carriers terminating traffic.

OCA's reply to Airus' response (Filed on March 19, 2015) (Tara)

OCA stated that Airus appears to agree with OCA's proposal to limit the number of intermediate carriers and noted that Airus has attempted to reduce the number of intermediate carriers. OCA explained it is not suggesting limiting the intermediate carriers to a rigid maximum number and it is not suggesting a reduction to a point where it would exacerbate the rural call completion problem rather than solving it. OCA maintains that its suggestion is that carriers take responsible action to reduce the number of intermediate carriers that would help restore network reliability.

Impact's response to OCA's proposed steps (Filed in FCU-2013-0005, Hancock County Health Systems on March 12, 2015) (Larry)

Impact says that reducing the number of providers in a route could have unintended consequence of increasing call completion issues. Impact believes multiple paths and diversity in the delivery of a call can/has increased an originating carrier's ability to complete more calls for end users, especially during forecasted traffic increases, natural disasters, and other network infrastructure impairments.

Impact says they have attempted to enter into discussions and directly interconnect with rural ILECs on multiple occasions without success. This may be possibly due to the lack of rural ILEC requirements regarding diversification and direct interconnection with their end offices.

OCA's reply to Impact's response (Filed on March 19, 2015) (Tara)

OCA observed that Impact has reduced the number of intermediate carriers and, as a result, its call completion performance has substantially improved. OCA explained it is not suggesting limiting the intermediate carriers to a rigid maximum number and it is not suggesting a reduction to a point where it would exacerbate the rural call completion problem rather than solving it. OCA maintains that its suggestion is that carriers take responsible action to reduce the number of intermediate carriers that would help restore network reliability.

I35's response to OCA's proposed steps (Filed in FCU-2013-0006, Helen Adolphson and Charlotte Skallerup on February 26, 2015) (Larry)

I35 agrees that limiting the number of intermediate providers is a positive step to minimize certain call completion problems such as call looping. However limiting the number of intermediate providers will not necessarily fix other call completion problems such as post-dial delay, echo, hearing, voice distortion, cross talk, etc.

OCA's reply to I35's response (Filed on March 19, 2015) (Tara)

OCA acknowledged that I35 generally agrees with OCA.

4. Promote Transparency in the Use of Downstream Carriers. (Tara)

OCA believes a long-term solution should include a commitment from carriers to certify that any nondisclosure agreement permits disclosure to the Board. This would allow both the identity of any intermediate providers and the relevant contract to be transparent to the Board.

CenturyLink response to OCA's steps (Filed in all dockets on February 26, 2015) (Larry)

CenturyLink says the OCA's proposal to promote transparency in the use of downstream carriers requires them to certify to the Board that any nondisclosure agreement permits disclosure to the Board of both the identity of any intermediate provider and the contract.

CenturyLink says that it will be making a certification to the FCC on an annual basis for the disclosure of the intermediate carrier in the call path as part of the response to complaints on rural call completion issues.

Contracts with intermediate providers are highly proprietary and public disclosure would hurt the competitive marketplace and the ability to negotiate favorable terms with intermediate providers. The content of contracts may become available to the Board in a complaint case and CenturyLink is provided with an opportunity in these individual cases to request confidential protection under the Board's authority to protect company trade secrets. Filing a contract with the Board in any informal complaint setting does not provide the same protection. The unprotected disclosure of contract terms to the Board is unduly burdensome and provides no real solution to rural call completion issues in Iowa.

OCA's reply to CenturyLink's response (Filed on March 19, 2015) (Tara)

OCA is not proposing that contracts with intermediate carriers be filed with the Board as a public record without regard to the need to protect trade secrets. OCA clarified that it is proposing that companies remove contractual impediments on disclosure to the Board.

Dumont Telephone's response to OCA's proposed steps (Filed in FCU-2012-0019, Rehabilitation Center of Allison on February 26, 2015) (Larry)

Dumont agrees that information related to the identity of intermediate carriers and their contracts with originating providers should be available to regulators regardless of any non-disclosure or confidentiality agreements.

OCA's reply to Dumont Telephone's response (Filed on March 19, 2015) (Tara)

OCA acknowledged that Dumont Telephone generally agrees with OCA.

INS' response to OCA's proposed steps (FCU-2012-0019 Rehabilitation Center of Allison) (Larry)

INS does not provide a response on Step 4 of OCA's proposed steps.

Airus' response to OCA's proposed steps (Filed in FCU-2013-0005, Hancock County Health Systems on February 26, 2015) (Larry)

OCA's proposed step four is to promote transparency in the use of downstream carriers by certifying that any nondisclosure agreement permits the disclosure to the Board of both the identity of any intermediate providers as well as the relevant contract. Airus states that it is reasonable to expect that when a rural call completion problem is reported involving intermediate carriers, the Board will have access to the information it needs, including the identity of the intermediate carriers. Airus says that it has limited ability to force disclosure language into a vendor's contract and it is not reasonable to require a commitment to certify that any nondisclosure agreement permit disclosure to the Board of the contract between a carrier and an intermediate carrier. OCA has not

identified any information that would be included in a contract between a carrier and an intermediate provider that would help the Board address rural call completion problems or how such a requirement would contribute to a long term solution.

Airus notes the OCA's discussion of step four making a reference to the FCC's rules (47 C.F.R. § 64.2107) which as a condition for safe harbor requires an officer or director of a covered carrier seeking safe harbor to certify that:

Any nondisclosure agreement with an intermediate provider permits \_\_\_\_\_ (entity) to reveal the identity of the intermediate provider and any additional intermediate provider to the Commission and to the rural incumbent local exchange carrier(s) whose incoming long-distance calls are affected by the intermediate provider's performance.

OCA's proposed step goes beyond the requirement in FCC rule 64.2107 by requiring the disclosure of the contract with the intermediate provider rather than only requiring the carrier to identify the intermediate provider. Additionally, the OCA's proposed disclosure requirement applies to all carriers regardless of whether the carrier seeks the federal safe harbor or the carrier is subject to the FCC's rural call completion reporting rules.

Airus says that OCA has not explained how information in a contract that would be required to be disclosed in this step helps the Board address call completion problems or how such a "transparency" requirement contributes to a long-term solution.

OCA's reply to Airus' response (Filed on March 19, 2015) (Tara)

OCA acknowledged that Airus supports contractual provisions that promote transparency in the use of intermediate carriers but advises they cannot force other contracting parties to accept such provisions. OCA stated that in Airus' discussions with the other parties, they should stress that contractual restrictions on disclosures to regulatory bodies will only delay and will not prevent such disclosures and hence that they serve no useful purpose.

OCA explained that transparency increases understanding and accountability. OCA stated that greater transparency can reasonably be expected to give all of the companies involved in the routing of attempted calls an incentive to comply with their obligations to complete the calls.

OCA argues that greater transparency than that required the Safe Harbor provision of the FCC rules is in the public interest.

Impact's response to OCA's proposed steps (Filed in FCU-2013-0005, Hancock County Health Systems on March 12, 2015) (Larry)

Impact notes that the existence of transparency relies heavily on the contracts between the carriers. If a confidentiality provision exists in an agreement between vendors and carriers, then the carrier is legally bound by such non-disclosure laws, except where required by law to disclose. Impact says it will work to ensure transparency in its vendor contracts, but cannot guarantee that a vendor will also choose to agree to this level of transparency.

OCA's reply to Impact's response (Filed on March 19, 2015) (Tara)

OCA acknowledged that Impact supports contractual provisions that promote transparency in the use of intermediate carriers but advises they cannot force other contracting parties to accept such provisions. OCA stated that in Impact's discussions with the other parties, they should stress that contractual restrictions on disclosures to regulatory bodies will only delay and will not prevent such disclosures and hence that they serve no useful purpose.

I35's response to OCA's proposed steps (Filed in FCU-2013-0006, Helen Adolphson and Charlotte Skallerup on February 26, 2015) (Larry)

I35 agrees that information related to the identity of intermediate carriers and their contracts with originating providers should be available to regulators regardless of any non-disclosure or confidentiality agreements.

OCA's reply to I35's response (Filed on March 19, 2015) (Tara)

OCA acknowledged that I35 generally agrees with OCA.

5. Actively Participate in the Standard-Setting Work of the Alliance for Telecommunications Industry Solutions (ATIS). (Tara)

OCA stated that at this time the development of industry standards for call completion has not been completed and therefore industry participation by all carriers in the ATIS efforts would be helpful. OCA noted that CenturyLink is actively participating in the work at ATIS. OCA proposed when and as new standards are developed, companies should report them to the Board. OCA recommends that once the standards are more fully developed for all technologies, the Board should consider giving these standards the force and effect of law.

CenturyLink's response to OCA's proposed steps (Filed in all dockets on February 26, 2015) (Larry)

CenturyLink is already an active participant in the efforts by ATIS to establish best practices for the telecommunications industry to address rural call completion issues.

CenturyLink has no plans to discontinue that participation. CenturyLink continues by saying that ATIS prefers that its members do not provide separate copies of the ATIS documents to other entities. ATIS allows state regulators the ability to directly access the long-distance call completion standards documents on the ATIS website. Any updates to the ATIS standards can be accessed by the Board and requiring the carriers to submit changes is unnecessary and unduly burdensome. Also, if all carriers were required to submit ATIS information, the Board would receive multiple copies of the same information.

CenturyLink suggests caution on OCA's suggested adoption of ATIS standards as rules. CenturyLink says that the Board would be unable to quickly respond to changes in standards in response to changes in technology. A better approach may be for the Board to require companies to adopt ATIS best practice standards in their provisioning of long-distance service to rural Iowa.

OCA reply to CenturyLink's response (Filed on March 19, 2015) (Tara)

OCA stated that it continues to support CenturyLink's continued participation in the work at ATIS. OCA noted that it suggested that the companies are reasonably asked to commit to advising the Board when new industry standards relevant to reliable call completion are developed. OCA stated it could be as simple as a link to a website, or in a progress report.

OCA concluded that CenturyLink appears to oppose any future rulemaking proceeding on the subject of rural call completion or network reliability and suggests instead that the Board consider requiring companies to adopt ATIS best practices.

OCA suggests that the Board adopt future rules, perhaps along the lines of the current rules which contain specific standards that local exchange carriers must meet, since there is no consumer participation in the development of the ATIS standards and because the ATIS standards lack enforcement capabilities. OCA further stated that rules, when needed, should be written to apply regardless of the technology used.

Dumont Telephone's response to OCA's proposed steps (Filed in FCU-2012-0019, Rehabilitation Center of Allison on February 26, 2015) (Larry)

Dumont Telephone says that if ATIS creates a list of industry standards that will resolve call completion issues they should be adopted and implemented by the Board and FCC with the force and effect of law. ATIS is currently a voluntary system of standards that allows non-participants to violate the standards without repercussions.

OCA's reply to Dumont Telephone's response (Filed on March 19, 2015) (Tara)

OCA acknowledged that Dumont Telephone generally agrees with OCA.

INS' response to OCA's proposed steps (Filed in FCU-2012-0019, Rehabilitation Center of Allison on February 26, 2015) (Larry)

INS does not provide a response on step five of OCA's proposed steps.

Airus' reply to OCA's proposed steps (Filed in FCU-2013-0005, Hancock County Health Systems on February 26, 2015) (Larry)

OCA's proposed step five is for Airus to "actively participate" in the development of industry standards by the ATIS. OCA also wants the companies to report new standards to the Board when they are developed. Airus believes that the industry-standards work being performed by ATIS is important and that carriers should be familiar with those standards. Airus does not believe it should be required to become an "active participant" (whatever that means) with ATIS, but it will commit to monitoring the work done by ATIS and incorporate standards as necessary. Carriers should not be subject to an ongoing requirement to report to the Board new ATIS standards as they are developed as any updates to ATIS call completion and call termination standards can be down loaded at no cost from the ATIS website.

ATIS already has standards associated with intercarrier call completion/call termination that serve as the basis for some of OCA's proposed solutions. The standards were adopted without active participation by Airus and there is nothing to suggest that the standards would have been better or different if Airus or any other non-member carrier would have actively participated in the process.

OCA's reply to Airus' response (Filed on March 19, 2015) (Tara)

OCA noted that Airus resists active participation in the work at ATIS in favor of monitoring work done by ATIS and incorporating standards as necessary. OCA further noted that with only such passive participation, both Airus and ATIS would lose the benefit of discussing what the standards should be, including the need for, and means of achieving, compatibility among systems. The Airus resistance suggests that Airus has not and may not adopt the standards voluntarily.

Impact Telecom's response to OCA's proposed steps (Filed in FCU-2013-0005, Hancock County Health Systems on March 12, 2015) (Larry)

Impact says they are committed to and continue to adopt best practices and incorporate industry standards.

OCA's reply to Impact Telecom's response (Filed on March 19, 2015) (Tara)

OCA did not reply further on Impact.

I35's response to OCA's proposed steps (Filed in FCU-2013-0006, Helen Adolphson and Charlotte Skallerup on February 26, 2015) (Larry)

I35 says that if ATIS creates a list of industry standards that will resolve call completion issues they should be adopted and implemented by the Board and FCC with the force and effect of law. ATIS is currently a voluntary system of standards that allows non-participants to violate the standards without repercussions.

OCA's reply to I35's response (Filed on March 19, 2015) (Tara)

OCA acknowledged that I35 generally agrees with OCA.

6. Exercise Responsibility Over the Use of Downstream Intermediate Carriers. (Tara)

OCA offers that the each originating and any intermediate carriers that uses other intermediate carriers should have sound policies addressing the following 13 elements:

- Establish and conduct standardized testing routines;
- Investigate whether downstream carriers have properly designed and functioning equipment and software;
- Investigate whether downstream carriers have sufficient capacity in their switches and call paths to carry the traffic to the intended destinations;
- Require each downstream carrier to provide specific information regarding its system and the limitations, including any difficulties its system may have interoperating with other systems using a different technology;
- Require each downstream carrier to provide specific information regarding any bandwidth or other capacity constraints that would prevent its system from completing calls to particular destinations at busy times;
- Require each downstream carrier to have properly designed and properly functioning alarms to ensure immediate notice of any outages on its system;
- Require each downstream carrier to have properly designed and properly functioning mechanisms in place to ensure that the downstream carrier, if unable to complete a call, timely releases the call back to the upstream carrier;
- Require each downstream carrier to have properly designed and properly functioning mechanisms in place to ensure that the downstream carrier, if making successive attempts to route the call through different lower-tiered downstream carriers, timely passes the call to a second (or third or fourth) lower-tiered downstream carrier if a first (or second or third) lower-tiered downstream carrier cannot complete it;
- Require each downstream carrier to have properly designed and properly functioning mechanisms in place to detect and control looping, including

the use of hop counters<sup>25</sup> or other equivalent mechanisms that alert a carrier to the presence of a loop;

- Establish direct measures of quality and require downstream carriers to meet them;
- Establish and implement appropriate sanctions for intermediate carriers that fail to meet standards;
- Require downstream carriers to manage lower-tiered downstream carriers and to hold lower-tiered downstream carriers to the same standards to which they themselves are held; and
- Define the responsibilities of downstream carriers in an agreement.

CenturyLink's response to OCA's proposed steps (Filed in all dockets on February 26, 2015) (Larry)

OCA's proposed step six is for each originating and intermediate carrier that uses downstream intermediate carriers to have sound policies in place to address 13 individual elements covering: testing; properly functioning systems; equipment; software; alarms and mechanisms; sufficient capacity; service quality measures; and sanctions for substandard performance. This proposal would essentially require CenturyLink to start managing the business and operations of its chosen intermediate carriers. With this approach, conducting business begins to look like the Board would be micro-managing how CenturyLink conducts business in the state of Iowa. These conditions may make it virtually impossible to find an intermediate provider in Iowa that would agree to allow CenturyLink to meddle in their operations, leaving CenturyLink unable to complete calls to rural Iowa where it does not have direct interconnection with rural LEC or the terminating tandem.

CenturyLink is working to set up Safe Harbor testing and add provisions to its contracts to ensure that any intermediate carrier has the ability and capacity to complete calls to end-user customers in Iowa. By limiting the number of intermediate carriers pursuant to the FCC's Safe Harbor provisions, CenturyLink has no need to address a number of the OCA's 13 steps. CenturyLink requires intermediate carriers to hand back calls promptly.

OCA's response to CenturyLink's reply (Filed on March 19, 2015) (Tara)

CenturyLink argues that in light of CenturyLink's stated intention to invoke the federal Safe Harbor for reduced data reporting it will "have no need to . . . address a number of OCA's 13 steps." OCA stated that CenturyLink does not identify which of the steps it claims it would have no need to address. Nor does it update the skeletal information provided in its petition for limited waiver to federal authorities last July regarding its plans to invoke the federal Safe Harbor provisions. OCA asked CenturyLink to provide

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<sup>25</sup> The number of hops it will take for a packet to make it from a source to a destination (the number of nodes (routers or other devices) between a source and a destination).

its progress in implementing the safe harbor policies and CenturyLink noted “ ”<sup>26</sup>

OCA stated that a company invoking the Safe Harbor must certify it has a process in place to monitor the performance of its intermediate providers. OCA argues that the elements of effective downstream carrier management are responsive to the problems identified in the Iowa investigations. OCA believes either they or effective alternatives should be included in the federal monitoring process.

OCA stated the possibility that CenturyLink will be able to identify all carriers in a call path that fails is a step in the right direction. However, OCA argues that is not enough; the companies must 1) address complaints about problems that have already occurred and 2) adopt practices and processes that prevent rural call completion problems from occurring in the first place. OCA maintains the elements it suggested are designed to do that.

OCA contends that it is not proposing “micro-management” of any company’s operations. The 13 elements set forth in its step six are broadly stated. Not one contains prescriptive requirements.

OCA noted that its proposed step five suggests that the technical challenges be addressed initially at ATIS.

Dumont Telephone’s response to OCA’s proposed steps (Filed in FCU-2013-0005, Hancock County Health Systems on February 26, 2015)  
(Larry)

Dumont Telephone agrees that all originating and intermediate providers should have policies in place to address all 13 elements identified by OCA. Dumont Telephone also suggests that the contracts between originating and downstream carriers should include specific prohibitions on VoIP, post-dial delay, call alterations, routing outside the United States, echo, cross talk and distortion, as well as require fax delivery and a network that is 99.999 percent free of errors. Contract language needs to include routine and frequent monitoring of downstream carriers, with enforcement mechanisms for downstream carriers who violate the contractual terms.

OCA’s reply to Dumont Telephone’s response (Filed on March 19, 2015)  
(Tara)

OCA acknowledged that Dumont Telephone generally agrees with OCA.

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<sup>26</sup> OCA Exhibit CL-65, filed March 19, 2015.

INS' response to OCA's proposed steps (Filed in FCU-2012-0019, Rehabilitation Center of Allison on February 26, 2015) (Larry)

INS does not provide a response on step six of OCA's proposed steps.

Airus' response to OCA's proposed steps (Filed in FCU-2013-0005 Hancock County Health Systems, on February 26, 2015) (Larry)

OCA's proposed step six is for each originating and intermediate carrier that uses downstream intermediate carriers to have sound policies in place to address 13 individual elements covering: testing; properly functioning systems; equipment; software; alarms and mechanisms; sufficient capacity; service quality measures; and sanctions for substandard performance. Airus says that this request is unduly burdensome and unworkable because they would be required to monitor and manage the networks of downstream carriers. Airus continues by stating the costs of adhering to such onerous requirements outweigh whatever contribution to the long-term solution they may produce. No other regulatory body that has analyzed the rural call completion issue has put into place requirements as onerous as those proposed by the OCA in this step. A better solution would be to remove the barriers that may be blocking attempts to establish direct interconnects with rural LECs in Iowa. Airus states that they have no control on the downstream carriers' design and function of their networks.

OCA's reply to Airus' response (Filed on March 19, 2015) (Tara)

OCA stated that the seventh and eighth elements of responsible downstream management it proposed [REDACTED]

OCA noted that Airus referenced the analysis of burdens undertaken by the FCC in conjunction with its new data rules. OCA stated it is one thing to address the burdens associated with recording, retaining and reporting data and another to address the burden associated with completing telephone calls. OCA stated the latter burdens are the burdens that companies are paid to carry. OCA stated if certain actions are necessary in order to complete the calls reliably, the fact that there may be burdens or expenses associated with implementing them are insufficient reason for failing to do so. There are certain actions that must be taken in order to provide reliable telephone service.

Impact Telecom's response to OCA's proposed steps (Filed in FCU-2013-0005, Hancock County Health Systems on March 12, 2015) (Larry)

Impact says that they agree with much of the information referenced by the OCA for the covered provider as defined by the FCC's Rural Call Completion Order and also recommends that it is the responsibility of individual carriers to ensure compliance with each of these points. Impact believes it substantially complies with each of these points and continues to develop best practices to adhere to call completion requirements.

OCA's reply to Impact Telecom's response (Filed on March 19, 2015) (Tara)

OCA stated both Airus and Impact raised the same argument and its response is the same. The seventh and eighth elements of responsible downstream management it proposed [REDACTED]

I35's response to OCA's proposed steps (Filed in FCU-2013-0006, Helen Adolphson and Charlotte Skallerup on February 26, 2015) (Larry)

I35 agrees that all originating and intermediate providers should have policies in place to address all 13 elements identified by OCA. I35 also suggests that the contracts between originating and downstream carriers should include specific prohibitions on VoIP, post-dial delay, call alterations, routing outside the United States, echo, cross talk and distortion, as well as require fax delivery and a network that is 99.999 percent free of errors. Contract language needs to include routine and frequent monitoring of downstream carriers, with enforcement mechanisms for downstream carriers who violate the contractual terms.

OCA's reply to I35's response (Filed on March 19, 2015) (Tara)

OCA did not reply.

7. Provide Copies of the Iowa Portion of the Federal Data and the FCC's Analysis of the Iowa Data to the Board and OCA. (Tara)

OCA suggests that companies reporting to the FCC should provide copies of their Iowa-specific data and the FCC's analysis of the Iowa data to the Board and OCA to evaluate problems and implement solutions.

CenturyLink's response to OCA's proposed steps (Filed in all dockets on February 26, 2015) (Larry)

CenturyLink says that providing copies of this information is unnecessary as the Board has the ability to request the information directly from the FCC. CenturyLink notes that the FCC does not make its "analysis" of specific state data available to CenturyLink or any other carrier.

OCA's reply to CenturyLink's response (Filed on March 19, 2015) (Tara)

OCA disagrees. OCA stated its proposal for the Board to receive the Iowa-specific data is not only more efficient but will also be more effective in terms of assisting the Board in restoring reliable telephone service to rural Iowa.

On the question of jurisdiction, OCA noted that the Board is the appropriate body to address the concerns with the intrastate calls.

OCA stated that the FCC's Form 480 Filing Interface User Guide explains that reporting of call completion data to rural destinations is broken down by rural "Operating Company Number" (OCN) and by state. OCA argues that the reporting is structured to permit the ready extraction of state-specific rural data, and a reporting company can extract Iowa's rural data and transmit that data to Iowa at the same time it transmits 50-state rural data to the FCC. OCA noted that routines can be established for simultaneous transmission at little cost and the best time to establish such routines is now, when the process is beginning.

OCA summarized that its approach would: (i) increase efficiency by eliminating the need for requests from the state; (ii) further increase efficiency by relieving the FCC of the need to extract the state-specific data and send it to the state; (iii) improve effectiveness by accelerating the state's receipt of the data; (iv) improve effectiveness by increasing the state's familiarity with the data; (v) improve effectiveness by relieving the FCC of the sole responsibility to review and analyze the data; and (vi) generally enhance the effectiveness of the federal-state partnership.

OCA also stated that under its proposal, the state would not have to wait for the FCC to identify a problem or depend on the FCC to identify the problem. In addition, the data retention periods in the federal rules are short and it is conceivable that providers may have an incentive to purge data quickly to avoid having relevant information available for any possible investigation.

In response to OCA's further proposal that the companies commit to sharing with the Board and OCA any FCC analysis of the Iowa data, CenturyLink states that the FCC does not make its analysis of specific state data available to CenturyLink or any other carrier. OCA noted that the basis for this statement was not provided. Nor has the data collection yet begun. OCA further noted that it is not clear what value the FCC's analysis will have if the analysis is not shared with the company.

Dumont Telephone's response to OCA's proposed steps (Filed in FCU-2012-0019, Rehabilitation Center of Allison on February 26, 2015) (Larry)

Dumont Telephone says it is reasonable for Iowa regulators to have access to call completion data about Iowa that is reported to the FCC.

OCA's reply to Dumont Telephone's response (Filed on March 19, 2015) (Tara)

OCA acknowledged agreement and noted its approach is precisely the approach recently suggested by the Washington Utilities and Transportation Commission.

INS' response to OCA's proposed steps (Filed in FCU-2012-0019, Rehabilitation Center of Allison on February 26, 2015) (Larry)

INS does not provide a response on step seven of OCA's proposed steps.

Airus' response to OCA's proposed steps (Filed in FCU-2013-0005, Hancock County Health Systems, on February 26, 2015) (Larry)

OCA's proposed step seven is for a carrier subject to the FCC's reporting requirements to, on an ongoing basis, provide copies of its Iowa data submitted to the FCC as well as the FCC's analysis of the Iowa data to the Board and OCA. Airus states that this requirement appears to be unnecessary as the FCC has indicated they will release the information to states upon request, if those states are able to maintain confidentiality of this information. Airus continues by stating it is reasonable for the Board to have access to call completion data and that it is reasonable for carriers to submit their data about Iowa if the Board will not otherwise have access to this information from another source.

OCA's reply to Airus' response (Filed on March 19, 2015) (Tara)

The OCA stated that the FCC has not included intermediate carriers in its proposed rules. OCA noted that this step would not apply to Airus.

Impact Telecom's response to OCA's proposed steps (Filed in FCU-2013-0005, Hancock County Health Systems on March 12, 2015) (Larry)

Impact says that if each state where they do business required narrowly tailored reports for each of their individual states, it would be an overwhelming administrative burden on Impact. Impact suggests that once the information is provided to the FCC, the OCA can then collect the data from the FCC, making this process much more efficient and a less burdensome use of time and resources.

OCA's reply to Impact's response (Filed on March 19, 2015) (Tara)

OCA stated that Impact's subsidiary Matrix has agreed as part of its consent decree, for the three-year life of the consent decree, to comply with the data rules, regardless of whether it would otherwise fall with their scope. (In the Matter of Matrix Telecom, 29 F.C.C.R. 5709 (2014) ¶ 17(d)). OCA noted that Impact states it has chosen to apply the requirements of the consent decree to its own traffic. OCA questioned whether this means that Impact as well as Matrix will be recording, retaining and reporting the data. OCA reiterated that Impact's data recording and retention processes have been excellent.

I35's response to OCA's proposed steps (Filed in FCU-2013-0006, Helen Adolphson and Charlotte Skallerup on February 26, 2015) (Larry)

I35 says it is reasonable for Iowa regulators to have access to call completion data about Iowa that is reported to the FCC.

OCA's reply to I35's response (Filed on March 19, 2015) (Tara)

OCA did not reply.

8. Keep Routing Tables Up-To-Date. (Tara)

Since routing tables are constantly changing OCA suggests that the tables be updated through the Local Exchange Routing Guide (LERG) of the Traffic Routing Administration.

CenturyLink's response to OCA's proposed steps (Filed in all dockets on February 26, 2015) (Larry)

CenturyLink states that this is standard practice for CenturyLink.

OCA's reply to CenturyLink's response (Filed on March 19, 2015) (Tara)

OCA noted that CenturyLink appears to support its proposal that companies update their routing tables using the LERG of the Traffic Routing Administration. CenturyLink's comment that "ported numbers also require that the local routing number (LRN) be obtained via the dip of the database" is confusing and extraneous.

Dumont Telephone's response to OCA's proposed steps (Filed in FCU-2012-0019, Rehabilitation Center of Allison on February 26, 2015) (Larry)

Dumont Telephone believes it is imperative that carriers maintain current and accurate routing tables.

OCA's reply to Dumont Telephone's response (Filed on March 19, 2015) (Tara)

OCA acknowledged that Dumont Telephone generally agrees with OCA.

INS' response to OCA's proposed steps (Filed in FCU-2012-0019, Rehabilitation Center of Allison on February 26, 2015) (Larry)

INS does not provide a response on Step 8 of OCA's proposed steps.

Airus' response to OCA's proposed steps (Filed in FCU-2013-0005, Hancock County Health Systems on February 26, 2015) (Larry)

OCA's proposed step eight is to keep routing tables up-to-date through the LERG of the Telecom Routing Administration. Airus agrees that accurate routing tables are essential to successful call completion and already takes steps to ensure accurate and up-to-date routing tables.

OCA's reply to Airus' response (Filed on March 19, 2015) (Tara)

OCA noted that Airus agrees that the LERG should be properly updated in the routing tables.

Impact Telecom's response to OCA's proposed steps (Filed in FCU-2013-0005, Hancock County Health Systems on March 12, 2015) (Larry)

Impact says it keeps routing tables up-to-date as a regular part of its business practices.

OCA's reply to Impact response (Filed on March 19, 2015) (Tara)

OCA acknowledged that Impact agrees that companies should properly update their routing tables.

I35's response to OCA's proposed steps Filed in FCU-2012-0019, Rehabilitation Center of Allison on February 26, 2015) (Larry)

I35 believes it is imperative that carriers maintain current and accurate routing tables.

OCA's reply to I35's response (Filed on March 19, 2015) (Tara)

OCA acknowledged that I35 generally agrees with OCA.

9. Provide Periodic Progress Reports to the Board on Implementation. (Tara)

OCA suggests that companies provide periodic reports to the Board regarding progress in fulfilling any commitments they make.

CenturyLink's response to OCA's proposed steps (Filed in all dockets on February 26, 2015) (Larry)

CenturyLink believes this requirement should be waived for companies that opt into the FCC's Safe Harbor provision. This could be an incentive for companies to adopt the FCC's Safe Harbor provision.

OCA's reply to CenturyLink's response (Filed on March 19, 2015) (Tara)

OCA believes that this argument assumes that companies invoking the federal Safe Harbor will by virtue of that fact provide reliable connections to rural destinations. OCA stated that is not what the federal safe harbor is. OCA further stated the federal Safe Harbor is a safe harbor from some but not all federal reporting requirements. It is an aid in solving the problem.

Dumont Telephone's response OCA's proposed steps (Filed in FCU-2012-0019 Rehabilitation Center of Allison on February 26, 2015) (Larry)

Dumont Telephone agrees that periodic reports by IXCs to the Board regarding progress made on implementation of commitments is reasonable and advisable. Dumont Telephone also notes that they support a rule-making proceeding in the IUB to address call completion issues in Iowa and adoption of appropriate regulations with the force and effect of law.

OCA's reply to Dumont Telephone's response (Filed on March 19, 2015) (Tara)

OCA acknowledged that Dumont Telephone generally agrees with OCA.

INS' response to OCA's proposed steps (Filed in FCU-2012-0019 Rehabilitation Center of Allison on February 26, 2015) (Larry)

INS does not provide a response on Step 9 of OCA's proposed steps.

Airus' response to OCA's proposed steps (Filed in FCU-2013-0005 Hancock County Health Systems on February 26, 2015) (Larry)

OCA's proposed step nine is for each company to provide periodic reports to the Board regarding the progress it makes in fulfilling the commitments it makes.

Airus also thinks this is a reasonable recommendation and suggests that the reporting not be required more frequently than quarterly. Airus also states that the reporting should focus squarely on the company's commitments to the Board regarding call completion and not be expanded to address other extraneous issues.

In conclusion Airus states its interest to assist with developing a long-term solution. Airus recommends the Board address the issues in a manner that will afford all interested and necessary parties an opportunity to participate. Airus continues by stating that OCA's recommendations do not account for either the financial incentives that drive the proliferation of intermediary carriers. Airus also says that the OCA recommendations do not sufficiently address the barriers carriers face when attempting to reduce the number of intermediary carriers by establishing direct interconnects with rural LECs in Iowa.

OCA's reply to Airus' response (Filed on March 19, 2015) (Tara)

OCA acknowledged Airus' support for companies to provide progress reports to the Board on implementing solutions.

Impact Telecom's response to OCA's proposed steps (Filed in FCU-2013-0005, Hancock County Health Systems on March 12, 2015) (Larry)

Impact notes that there is no definition for "periodic progress reports" and such information would be an administrative burden especially if the content of such reports is already provided to the FCC.

OCA's reply to Impact's response (Filed on March 19, 2015) (Tara)

OCA noted Impact's argument that progress reports to the Board might duplicate reports to the FCC is referring to reports under the consent decree of subsidiary Matrix. To the extent Iowa solutions for intrastate calls may parallel federal solutions for interstate calls OCA argues it is not unduly burdensome for a company to submit periodic reports to both jurisdictions.

I35's response to OCA's proposed steps (Filed in FCU-2013-0006, Helen Adolphson and Charlotte Skallerup on February 26, 2015) (Larry)

I35 agrees that periodic reports by IXCs to the Board regarding progress made on implementation of commitments is reasonable and advisable. Dumont Telephone also notes that they support a rule-making proceeding in the IUB to address call completion issues in Iowa and adoption of appropriate regulations with the force and effect of law.

OCA's reply to I35's response (Filed on March 19, 2015) (Tara)

OCA acknowledged that I35 generally agrees with OCA.

K. Updates. (Filed March 19, 2015 in all dockets) (Tara)

1. FCU-2012-0019 - Rehabilitation Center of Allison

OCA reported that on January 12, 2015, a physician assistant at the Shell Rock Clinic attempted to call the Allison facility for the purpose of giving a patient order to a nurse. Ms. Miller answered the telephone call but could not hear him. He called back on his cellphone successfully. OCA stated that according to long-distance carrier CenturyLink, the failed call was transported from the originating tandem to the terminating tandem without the use of an intermediate carrier and with no indication of trouble on CenturyLink's network. OCA stated that according to CenturyLink, test calls were later completed successfully. OCA has not investigated the cause of the difficulty beyond the initial inquiry to CenturyLink.

OCA stated that on January 17, 2015, a resident's son called the Allison facility and asked whether they were having telephone problems. He said he had been trying for three days to call and would get either a sound like a fax machine or no sound at all. The facility, meanwhile, had answered ringing telephones three times, but no one was there. According to long-distance carrier Dumont Telephone, test calls with the son

were completed successfully on January 20, 2015. OCA stated that it has not investigated the cause of the difficulties beyond the initial inquiry to Dumont Telephone.

OCA also reported that on March 3, 2015, the Allison facility's co-director of nursing was unable to reach the Shell Rock Clinic using any of the facility's three telephone lines. According to long-distance carrier Dumont Telephone, they purchase the service from INS. According to INS, the routing on the calls included Level 3, which experienced a large scale optical outage on an OC-48 (optical carrier) system at 7:48 a.m. on March 3, 2015. In order to restore service as quickly as possible, INS re-routed the traffic to another provider. The re-routing was completed and telephone service restored at approximately 11:50 a.m. on March 3, 2015. OCA stated the Level 3 network impairment was not verified as restored until the following morning at 6:34 a.m. As of March 10, 2015, INS anticipated moving the traffic back to the Level 3 route during the week of March 16, 2015.

2. FCU-2013-0004 - UnityPoint Clinic Family Medicine at Huxley, f/k/a Huxley Family Physicians

OCA stated that on February 11 and 12, 2015, the Huxley clinic experienced serious difficulties with both outgoing and incoming telephone calls. On about every other call, one party could not hear the other. The clinic identified specific times and destinations on six such calls on February 12, 2015. OCA stated that on five of the calls, the called party (a patient in two instances) could not hear the calling party. On the sixth, the telephone line began to echo after several minutes to the point the patient could no longer hear, then the problem resolved after 30 seconds or so. According to Huxley Communications Cooperative (HCC), the HCC equipment at the facility was functioning properly. According to an INS service ticket provided by HCC, a technician from Windstream, which owns and maintains some of the equipment at the facility, had visited the facility and determined the Windstream equipment was functioning properly. OCA stated that it has not sought to add Windstream as a party to these proceedings. OCA stated that the long-distance carrier CenturyLink indicated that five of the six telephone calls were successfully transported from one CenturyLink tandem to another, without the use of an intermediate carrier. According to CenturyLink, test calls completed correctly and CenturyLink could find no record of the sixth call. According to CenturyLink, the destination numbers on all six calls were wireless numbers. The clinic had no specific information on the failed incoming calls because the persons attempting the calls did not contact the clinic to identify themselves. OCA stated that it requested additional information from CenturyLink for inclusion in this reply regarding the types of facilities used to transport the calls and the dates and times of testing. As of the close of business on March 17, 2015, the additional information had not been provided despite repeated requests. On March 10, 2015, the clinic advised the difficulties had not recurred.

### 3. FCU-2013-0005 - Hancock County Health Systems

On February 20, 2014, HCHS, advised OCA that it had been receiving more frequent complaints about telephone calls between Britt and Kanawha so it had switched the local and long-distance telephone service away from CenturyLink. HCHS reported subsequent call completion difficulties with telephone calls from Wesley Medical Clinic in Wesley, Iowa, which is a CenturyLink long-distance customer.

OCA reported that on January 22, 2015, according to the Hancock facility, an apparent scammer broadcast or “spoofed” one of the hospital’s telephone numbers as the scammer’s caller ID number, while robocalling<sup>27</sup> thousands of people about lowering their credit card rates. Hundreds of those who missed the robocall placed a return telephone call to the hospital. The nonstop flood of return calls repeatedly locked, thus severely compromising, the hospital’s phone system, for about an hour. Both incoming and outgoing calls were disabled. According to the hospital, efforts to identify the perpetrator failed.

OCA also noted that the compliance plan submitted September 3, 2014, by Impact subsidiary Matrix to the FCC pursuant to the consent decree between Matrix and the FCC included the following statement:

Where the Company does hire intermediate vendors to deliver calls on their way to the terminating LEC, it is increasingly hiring Tier 1 providers with proven records of successfully routing and handling calls, even if this means the Company pays more to the intermediate vendor. Further, the Company is increasingly giving Tier 1 providers priority in the routing scheme (i.e. handing more calls to higher cost Tier 1 vendor on the first attempt to complete the call, as opposed to handing calls to a higher cost Tier 1 vendor for a second or subsequent attempt if a lower-cost vendor is unable to complete the call on the first attempt.

### 4. FCU-2013-0006 - Helen Adolphson and Charlotte Skallerup

OCA reported that on March 10, 2015, Helen Adolphson and Charlotte Skallerup both advised that they have not experienced recent difficulties with telephone calls completing.

OCA also updated that on March 6, 2015, InterMetro responded in part as follows to an inquiry asking for its long-term solutions to the call completion problems:

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<sup>27</sup> Robocalls are unsolicited prerecorded telemarketing calls to landline home telephones, and all autodialed or prerecorded calls or text messages to wireless numbers, emergency numbers, and patient rooms at health care facilities. ([www.fcc.gov](http://www.fcc.gov))

InterMetro has increased its investigation into the veracity of claims of new partners. Moreover, InterMetro is only contracting with Tier 1 or Direct class carriers (e.g. Verizon, AT&T). InterMetro is working with larger carriers on Safe Harbor compliance under the FCC rules, and both within and beyond Safe Harbor traffic, InterMetro is limiting the number of intermediate carriers it uses, and is moving an increasing amount of traffic to carriers directly connected to the terminating LEC. InterMetro is continuing to tighten up its process to better confirm that carriers it uses as vendors are providing only Tier 1 or directly connected services, and to make sure any new agreements are clear as to the terminating carrier a provider is using.

5. FCU-2013-0009 - Douglas Pals

OCA reported that on March 10, 2015, Douglas Pals advised that he has not experienced recent difficulties with caller ID or telephone calls completing.

L. Other Proposed Solutions and Responses. (Larry)

1. CenturyLink's Proposed Solutions. (Filed in all dockets on February 26, 2015) (Larry)

CenturyLink says that on July 28, 2014, in its petition for waiver it notified the FCC of its intention to adopt the FCC's Safe Harbor policies. Century Link has one of this country's largest networks, but it cannot complete all calls on its own network, and must use some intermediate providers. CenturyLink will qualify under the FCC's Safe Harbor second option allowing up to two intermediate providers in a call path. To meet the FCC's Safe Harbor requirements CenturyLink is:

- Identifying one intermediate provider to carry traffic on each call path;
- Modifying its contracts with intermediate providers to ensure that each intermediate provider is aligned with the requirements of the Order and that it delivers calls to the terminating tandem or returns the call to CenturyLink for completion;
- To the extent necessary, modifying contracts to explicitly permit CenturyLink to continue its existing practice of identifying the intermediate providers in a call path to the Commission and relevant rural ILEC;
- Modifying its call routing practices to comply with the Safe Harbor requirements;
- Reviewing its existing processes to monitor the performance of intermediate providers and make necessary changes to ensure that it is able to monitor their performance consistent with FCC rules; and
- Ensuring that it is capable of demonstrating that CenturyLink has processes in place to ensure that call attempts to rural ILECs successfully reach their destinations, by adopting industry best practices. CenturyLink

is actively involved in developing and implementing industry best practices through its participation with ATIS.

CenturyLink is confident that these policies will benefit all consumers and will result in the reduction of potential call completion issues in rural areas. CenturyLink is incurring significant costs to implement these policies and will incur higher operating costs for long-distance traffic because of this.

OCA's response to CenturyLink's proposed solution (Filed on March 19, 2015, in all dockets) (Tara)

OCA supports CenturyLink's expressed intent to invoke the federal Safe Harbor. OCA stated that successful invocation of the safe harbor is likely to address some of the difficulties identified in the call termination dockets. OCA noted that CenturyLink has not provided information concerning its plans to invoke the Safe Harbor beyond that provided in the federal waiver filing last July and its draft template contract.

OCA commented that the effectiveness of the draft template contract depends whether CenturyLink's provisions have been in fact adopted or will be adopted and whether CenturyLink will be properly and routinely monitored and if there are adequately enforced against intermediate providers that violate contract terms.

OCA argues that it is inaccurate for CenturyLink to state or imply that a company's invoking the Safe Harbor gives its customers the "highest" confidence in the company's abilities to complete the telephone calls. OCA stated the Safe Harbor is intended as an aid in solving a problem, not as a final solution. OCA contends that the reporting requirements are reduced, not eliminated.

OCA stated that CenturyLink recognized that the FCC also determined that there are additional significant steps beyond those required by the safe harbor that providers can take to ensure telephone calls to rural areas are completed.

OCA asserts that the safe harbor does not relieve CenturyLink of its responsibility to address the problems identified in these dockets. OCA stated that reducing the number of intermediate carriers on its call routes will not, for example, dispense with the need to ensure that the carriers chosen to complete the calls have sufficient capacity to complete the calls at busy times or that they have appropriate alarms in place that can be activated in cases of outage.

OCA stated it questioned whether or to what extent CenturyLink plans to invoke the Safe Harbor and the elements it (OCA) proposed. OCA also stated that there are many questions concerning the processes by which the data will be recorded and reported and the nature of the conclusions from the data. OCA stated there are many commenters who are skeptical about the safe harbor from the beginning.

OCA noted that given the extent, seriousness and complexity of the problems, the transitioning technology, the interoperability challenges, the incomplete state of development of relevant standards at ATIS, and CenturyLink's resistance to its suggested elements of responsible intermediate carrier management with which other companies have said they substantially comply, one can reasonably question CenturyLink's ability and resolve to address the difficulties satisfactorily in the course of the safe harbor's single year, especially absent substantially more information regarding CenturyLink's plans and actions to date. Effective long-term solutions may well require a longer period of development and implementation, and not just for CenturyLink. OCA summarized that the data recording, retention and reporting is about to begin. OCA stated that there is no track record. The role of the states in the federal-state partnership has yet to be addressed in any significant detail. OCA is reluctant to conclude that the safe harbor will address all the issues and while the safe harbor is not designed to replace the data requirements it is designed to reduce them. OCA noted that if and when invoked, it will not by itself ensure that calls complete. To the extent CenturyLink will be making commitments to the FCC that address these difficulties, the OCA believes CenturyLink should be willing to make the same commitments to the Board.

CenturyLink's response to OCA's reply on CenturyLink's proposed solution (Filed in all dockets on April 2, 2015) (Larry)

CenturyLink noted that there were no provisions in the dockets to file a response to OCA's reply. CenturyLink believes it is necessary to respond with facts addressing its adoption of the FCC's Safe Harbor Provisions under the FCC's Rural Call Completion docket.<sup>28</sup>

CenturyLink says OCA's claims the adoption of Safe Harbor is, in large part, simply to gain relief from long-term reporting requirements. CenturyLink believes it is far more of a long-term solution to the issues specifically occurring in the complaint proceedings before the Board. CenturyLink notes that it has been a difficult and expensive process implementing Safe Harbor.

CenturyLink provides an outline as to what it had to complete in its efforts to implement Safe Harbor requirements and to address the concerns raised by the cases before the Board.

Contracting– CenturyLink has taken a number of steps to address its contracts with intermediate carriers to ensure the carriers can provide the reliable service necessary to complete calls to rural OCNs.

- CenturyLink says it has worked to augment and re-contract with intermediate carriers who can meet the Safe Harbor criteria CenturyLink has set to directly connect to the terminating OCN, achieving

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<sup>28</sup> *In the Matter of Rural Call Completion*, WC Docket No. 13-39, Report and Order and Further Notice of Proposed Rulemaking, 28 FCC Rcd 16154, ¶¶ 85-100(2013) ("Rural Call Completion Order").

CenturyLink's goal of one-hop completion. CenturyLink notes that the Safe Harbor provision allows up to two intermediate carriers.

- CenturyLink has cancelled contracts of those intermediate carriers who cannot meet their specific criteria and removed them from routing.
- The intermediate carriers remaining in routing have contractually agreed that CenturyLink can disclose their identity when required.
- Intermediate carriers that remain in route will also be traced for their performance by the processes that CenturyLink has in place to monitor the network.

#### Routing of Traffic:

- CenturyLink has augmented routes with the intermediate carriers who meet its Safe Harbor criteria, and tested the routing.
- CenturyLink has augmented its own routing systems and revised its routing tables.
- CenturyLink has augmented its own routes by using its own facilities wherever possible.

#### Systems:

- CenturyLink has established systems to provide ongoing (Monday through Friday) monitoring and testing of near real-time data to determine rural OCNs with ASR/NER<sup>29</sup> issues and negative spikes, for analysis and testing.
- CenturyLink has repurposed equipment for use in future manual testing.

#### Processes:

- CenturyLink has revised its trouble-ticketing process to more robustly analyze the issues, carefully analyze routing, and will work to address the issues in order to fix any problem for its customers appropriately while maintaining its ability to route calls in the Safe Harbor one-hop mode.
- CenturyLink has revised its processes for tracking network issues in order to accomplish their ongoing (Monday through Friday) monitoring and testing of near real-time data to determine rural OCNs with ASR/NER issues and negative spikes.
- CenturyLink has developed a detailed process for the gathering of the data needed for the FCC Form 480 report, population of the data, review and analysis of the results and preparation for sign off and filing of the report.

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<sup>29</sup> ASR or Answer-Seizure Ratio is a measurement of network quality and call-success rates. It is the percentage of answered telephone calls with respect to the total call volume. NER or Network Effectiveness Ratio measures the ability of a network to deliver the call to the called terminus. Busy signals and other call failure due to user behavior are counted as successful call delivery for the purposes of the NER calculation.

- CenturyLink has revised its process for meetings to discuss the performance of intermediate carriers at scheduled monthly meetings.

Tracking:

- CenturyLink established processes to track the data in preparation for the start of data gathering for the required quarterly reporting.
- The same data that is used for reporting will also be used for tracking the performance of the intermediate carriers for the monthly meetings.

CenturyLink says it has invested a lot of time and expense to implement Safe Harbor. The OCA's blanket imposition of its nine-step solution on all long-distance carriers involved in these dockets fails to recognize CenturyLink's commitment to addressing rural call completion issues.

2. Dumont Telephone's Proposed Solutions. (Filed in all dockets on February 26, 2015) (Larry)

Dumont Telephone adds two additional items to consider as part of the solution for call completion problems. These two items are the imposition of financial penalties for repeat offenders of call completion problems and to require all originating interexchange carriers doing business in Iowa to report each call completion complaint to the Board on a quarterly basis for a period of time.

Dumont Telephone notes that financial implications drive the proliferation of intermediate carriers in a call path and financial penalties may help curb problems arising from the use of intermediate carriers. A reasonable financial penalty imposed on carriers that first receive a written warning but thereafter continue to cause call completion problems is appropriate, with progressively increasing penalties if repeat violations occur. A monetary penalty would provide a financial incentive to ensure that calls complete properly and encourage providers to adopt practices and processes that will prevent rural call completion problems from occurring.

Dumont Telephone says that all originating interexchange carriers doing business in Iowa should be required to report each call completion complaint to the Board on a quarterly basis for a period of time. The information in the report would include:

- Root cause analysis on any call completion complaints for any intrastate call completion problem regardless of who reports the incident to the carrier;
- If an intermediate provider in the call path was responsible for the call failure, the name of the intermediate provider and whether the intermediate provider was removed as a routing alternative;
- Any past performance or call failure problems that the interexchange carrier has had with the intermediate provider (if not already reported via this process);

- An explanation of what steps the interexchange carrier has taken with the intermediate provider to ensure call completion problems do not occur in the future; and
- Whether test lines were requested by the incumbent local exchange company in the exchange where the call failed, and if they were requested, the testing process used by the interexchange carrier.

OCA's response to Dumont Telephone's proposed solutions. (Filed on March 19, 2015) (Tara)

OCA agrees with Dumont Telephone that enforcement proceedings and financial penalties against repeat offenders may be needed to restore network reliability to rural Iowa. Developing a strong federal-state partnership with respect to the promising data initiative would be more productive than requiring carriers to make reports to the Board regarding each complaint they receive. OCA contends that companies will commonly deny responsibility for the difficulties and may purge records if not required to retain them. It is only through studied effort that meaningful conclusions are possible. The resources are limited; the Board and OCA have become accustomed to relying on the ability and good sense of the Iowa consuming public to begin the process of sifting through the inevitable difficulties and separating the excusable annoyances from the real problems that the companies are unwilling or unable to correct and that threaten network reliability and hence public health, safety and economic well-being. OCA stated that the current complaint processes work well.

3. INS' Proposed Solutions. (Filed in FCU-2012-0019, Rehabilitation Center of Allison on February 26, 2015) (Larry)

INS does not provide a proposed solution.

4. Airus Proposed Solutions. (Filed in FCU-2013-0005, Hancock County Health Systems on February 26, 2015) (Larry)

Airus says that OCA's steps do not address the root cause of the proliferation of Intermediate carriers. OCA does not discuss nor do the proposed nine steps address the reason behind the "proliferation of intermediate carriers." The root cause is financial incentives brought about by high termination rates in rural areas. It is common knowledge that the cost of terminating traffic in rural areas is higher than the cost to terminate in more urban non-rural areas. It is not uncommon to cost 5 cents or more per minute to terminate long-distance traffic in rural Iowa, which is exponentially higher than the \$0.001917 per minute rate for terminating long-distance traffic in more urban areas served by CenturyLink QC.

Airus continues by saying that some of the rural Iowa local exchange carriers have stimulated large amounts of inbound traffic through free conference calling and chat-line services. In an effort to mitigate and adapt to the high call termination costs, interexchange carriers have used least cost routing (LCR). LCR is the practice of

selecting the path for communications traffic based on the carrier that provides the lowest cost to route and terminate the traffic from the originating carrier to the terminating carrier. The lowest cost path typically involves one or more intermediate carriers and is driven by the incentive to find the cheapest route to terminate traffic to rural areas.

Rates involved in terminating long-distance traffic to Iowa rural LECs who subtend the INS tandem switch leads to the proliferation of intermediate carriers. Direct end office interconnections could allow long-distance carriers to avoid paying the rural LEC for tandem switching and transport. Direct end office interconnection would help to eliminate an intermediate carrier. Rural companies have rebuffed requests of carriers like Airus to establish direct interconnection. Airus contends that some of the rural LECs pick and choose those given direct connections. Airus notes that OCA's statement of INS's tandem switching and transport costs remaining in place following intercarrier compensation reform only highlights the importance of direct interconnections with rural Iowa LECs.

In late 2011, the FCC released its *Connect America Fund Order* which involves reforms to the intercarrier compensation regime for both non-local and local traffic. The reforms will reduce terminating switched access rates and reciprocal compensation rates to a bill-and-keep arrangement. Terminating end office switched access rates and reciprocal compensation rates will be reduced to \$0.0007 for price cap carriers and LEC carriers that mirror price cap rates on July 1, 2016, and for rate-of-return carriers on July 1, 2019. Bill-and-keep arrangements will be effective for price cap carriers and LEC carriers that mirror price cap rates on July 1, 2017, and for rate-of-return carriers on July 1, 2020. When these changes are incorporated, the financial incentives to find cheap call routes will be virtually eliminated. Ongoing transition to bill and keep should be recognized as a major part of the solution to rural call completion problems and the periodical review of regulatory requirements on call terminations should occur.

Airus states that the piecemeal process being used in Iowa to address rural call completion complaints stands in stark contrast to the comprehensive, industry-wide approaches used by other regulatory bodies to address rural call completion issues. The industry-wide approach is not included in OCA's proposed nine steps. Addressing rural call completion issues should be a consolidated, comprehensive and collaborative industry-wide approach.

Additionally, the Board should consider establishing an online portal to be used by consumers to submit rural call completion complaints and for companies to respond to the complaints. The FCC has established an online system that seems to work well in tracking down and addressing the cause of rural call completion complaints in a matter of days as compared to the 17 months this proceeding has already been open.

Airus provides seven specific guidelines that should be used for evaluating OCA's proposed steps for a long-term solution.

1. Steps should reasonably contribute to the long term solution: the overarching goal is to implement a long-term solution to the call completion problems and every step should serve a specific purpose in achieving that long-term solution. Any steps that do not have a direct connection to this goal are unnecessary and should not be adopted.
2. Concrete steps should be just that – “concrete”: steps must be clear and precise so that the carrier, the Board, and OCA know what to expect. Any steps that are nebulous or vague can create confusion and should not be adopted.
3. Steps should produce benefits that outweigh the costs of compliance: for the steps to work they must be practical as well as economically feasible. If a step is relatively onerous for a carrier, it should at least produce tangible benefits that justify the burdens associated with compliance. Any steps that are unduly burdensome, are costly and impractical, should not be adopted.
4. Steps should take into account rural call completion work performed in other jurisdictions: rural call completion issues have been investigated by numerous regulatory bodies including the FCC, MPUC, ORPUC, California Public Utilities Commission (CPUC) and others. It is reasonable for the long-term solution ultimately adopted for Iowa to at least consider the solutions to rural call completion issues adopted by other regulatory bodies, as well as the process used to arrive at their solutions.
5. Steps should take into account all root cause(s) of the rural call completion problem: for steps to be effective they must address the root causes of rural call completion problems. OCA has identified the proliferation of intermediate carriers as the primary cause of rural call completion problems, which coincides with the findings by other regulatory bodies such as the FCC. The OCA does not discuss, nor do its proposed steps take into account, the factor(s) causing a proliferation of intermediate carriers.
6. Steps to a long-term solution should comprehensively and effectively address rural call completion problems: the piecemeal approach addressing rural call completion problems creates unnecessary duplication of effort and wastes valuable time and resources. A more holistic approach needs to be implemented to streamline the process and resolve these problems quicker and with less manual intervention.
7. Steps should provide appropriate incentives rather than engage in micro-managing: the most effective regulatory requirements are those which provide incentives to carriers to achieve a certain objective, rather than to micro-manage the inter-workings of a company.

Airus is confident that using the guidelines for evaluating steps to a long-term solution will assist the parties in arriving at a long-term solution that strikes the appropriate balance.

OCA's reply to Airus' proposed solutions (Filed March 19, 2015) (Tara)

OCA noted that Airus has indicated that rural local exchange carriers have declined to discuss direct interconnections with Airus, and proposes that they be required to offer direct interconnections on a non-discriminatory basis. OCA stated it is willing to discuss this proposal with Airus and other affected parties. However, OCA stated the proposal does not appear to offer a solution to the rural call completion problem.

OCA also stated that the Board already has a complaint mechanism in place that includes the ability to file complaints online and to respond to complaints electronically and notes that the mechanism functions well.

5. Impact Telecom's Proposed Solutions. (Filed in FCU-2013-0005, Hancock County Health Systems on March 12, 2015) (Larry)

Impact says that it will outline its processes and procedures in its proposed solutions filing currently scheduled to be filed with the Board on April 27, 2015.

OCA's reply to Impact's proposed solution (Filed on March 19, 2015) (Tara)

OCA stated while Impact claimed to have processes and procedures in place that go beyond the nine steps proposed by OCA, Impact has not yet described those processes and procedures.

6. I35's Proposed Solutions. (Filed in FCU-2013-0006, Helen Adolphson and Charlotte Skallerup on February 26, 2015) (Larry)

I35 adds two additional items to consider as part of the solution for call completion problems. These two items are the imposition of financial penalties for repeat offenders of call completion problems and to require all originating interexchange carriers doing business in Iowa to report each call completion complaint to the Board on a quarterly basis for a period of time.

I35 notes that financial implications drive the proliferation of intermediate carriers in a call path and financial penalties may help curb problems arising from the use of intermediate carriers. A reasonable financial penalty imposed on carriers that first receive a written warning but thereafter continue to cause call completion problems is appropriate, with progressively increasing penalties if repeat violations occur. A monetary penalty would provide a financial incentive to ensure that calls complete properly and encourage providers to adopt practices and processes that will prevent rural call completion problems from occurring.

I35 says that all originating interexchange carriers doing business in Iowa should be required to report each call completion complaint to the Board on a quarterly basis for a period of time. The information in the report would include:

- Root cause analysis on any call completion complaints for any intrastate call completion problem regardless of who reports the incident to the carrier;
- If an intermediate provider in the call path was responsible for the call failure, the name of the intermediate provider and whether the intermediate provider was removed as a routing alternative;
- Any past performance or call failure problems that the interexchange carrier has had with the intermediate provider (if not already reported via this process);
- An explanation of what steps the interexchange carrier has taken with the intermediate provider to ensure call completion problems do not occur in the future; and
- Whether test lines were requested by the incumbent local exchange company in the exchange where the call failed, and if they were requested, the testing process used by the interexchange carrier.

OCA's reply to I35's proposed solutions. (Filed on March 19, 2015) (Tara)

OCA agrees with I35 that enforcement proceedings and financial penalties against repeat offenders may be needed to restore network reliability to rural Iowa. Developing a strong federal-state partnership with respect to the promising data initiative would be more productive than requiring carriers to make reports to the Board regarding each complaint they receive. OCA contends that companies will commonly deny responsibility for the difficulties and may purge records if not required to retain them. It is only through studied effort that meaningful conclusions are possible. The resources are limited; the Board and OCA have become accustomed to relying on the ability and good sense of the Iowa consuming public to begin the process of sifting through the inevitable difficulties and separating the excusable annoyances from the real problems that the companies are unwilling or unable to correct and that threaten network reliability and hence public health, safety and economic well-being. OCA stated that the current complaint processes work well.

#### **IV. Proposed Long-Term Solutions and Responses**

- A. CenturyLink's Proposed Solutions to the Rural Call Completion Issues. (Filed in all dockets on April 27, 2015) (Larry)

CenturyLink says that as of April 1, 2015, they have put into place the contracting, routing, systems, processes, and tracking to meet the Safe Harbor requirements adopted by the FCC and they are currently in compliance. CenturyLink says that they are using a "one-hop" rather than the "two-hop" minimum call routing set in the FCC's Safe Harbor requirements.

CenturyLink notes that underlying issues in each case relate to the performance of an underlying carrier. CenturyLink provides a single proposal that is appropriate in each case to address the Board's concerns. The steps for implementing the Safe Harbor call routing policies are discussed below.

- Assessing network capability

CenturyLink notes that it has assessed their network capabilities to meet the FCC's Safe Harbor requirements. CenturyLink says it has looked at where it makes sense to make augmentations or adjustments and where it was more efficient to negotiate commitments with other carriers to supplement the network. CenturyLink says where it can it will use its own network to complete long-distance calls.

- Updating Carrier Contracts and adjusting long-distance capacity

CenturyLink says it has worked to augment capacity to reduce reliance on multiple carriers. Contracts have been revised so that CenturyLink sends calls to intermediate carriers who are required and have contractually confirmed that they meet Safe Harbor criteria including CenturyLink's more stringent requirements. CenturyLink's Safe Harbor criteria require those long-distance carriers receiving CenturyLink's calls to directly connect to the terminating OCN. Doing so achieves the goal of a "one-hop" completion exceeding the FCC's Safe Harbor requirement of no more than two intermediate carriers in any call routing of long-distance calls.

CenturyLink says it has cancelled its contracts with those intermediate carriers that cannot meet the criteria and removed them from routing of calls. Carriers that remain in routing will be closely monitored and tracked for their call completion performance, both in at least monthly meetings and by the processes put in place to monitor the network on a near real-time basis.

- Augmenting and testing the call routes

CenturyLink says that it has performed rigorous testing of the augmented routes to ensure ample capacity to meet CenturyLink's demands. CenturyLink says that it has also augmented its preliminary testing of intermediate carriers before turning up routes with the carriers. Testing is performed for long-distance voice calls and facsimile calls. CenturyLink continues by saying not all networks are the same and their required testing process, which is proprietary, may vary from one intermediate carrier to another.

- Creating an ongoing monitoring and testing program

CenturyLink has established systems to provide proactive, ongoing (Monday through Friday), monitoring and testing of near real-time data from the day before to determine rural OCNs with ASR/NER<sup>30</sup> issues and negative spikes, for analysis and testing. Call detail records (CDR), routing tables, and daily traffic information provide a baseline on which CenturyLink built automated algorithms, and internal analysis tools to determine OCNs and routes from the day before, that could have cause for investigation. This is done by applying specific system coding, designed for selecting components of call paths where network performance could be impacted due to network traffic, and could have effects on NER and ASR-the FCC-designated primary statistics. CenturyLink's internal analysis tool can then filter trouble tickets into the normal trouble-ticketing system for normal trouble-ticket process to be applied against. Technicians then have the CDR details, routing information, timing of the issues and information to trouble shoot and test in order to determine the cause of the issue. Specific manual testing can be done using established milliwatt test line numbers to call route destinations.

It has been shown that doing this daily over a month's period of time resulted in several OCNs being tested, including areas with negative spikes. This approach to daily, routing, automated analysis and testing provides a reliable and controlled process, and delivers targeted, statistically correct, fixed testing using established processes in a near real time approach to address the network performance. CenturyLink says that it uses this approach as a key component of preventing call-completion issues.

- Upgrading trouble ticketing

CenturyLink has revised its trouble-ticketing process to better analyze issues, carefully analyze routing, and work to address any issues in order to fix any problem for the long-distance customer appropriately, while remaining able to route calls in the Safe Harbor, one-hop mode.

- Developing data gathering and reporting processes

CenturyLink has developed a detailed process for gathering the data needed for the FCC form 480 report, population of the data, review and analysis of the results, and preparation for sign off and filing of the report. The first report is due to the FCC in August of 2015.

CenturyLink is willing to provide the Board with the Iowa-specific data included in the quarterly reports on the condition that the Board pre-designate the filing as confidential

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<sup>30</sup> ASR or Answer-Seizure Ratio is a measurement of network quality and call success rates. It is the percentage of answered telephone calls with respect to the total call volume. NER or Network Effectiveness Ratio measures the ability of a network to deliver a call to the called terminus. Busy signals and other call failure due to user behavior are counted as successful call delivery for purposes of the NER calculation.

due to the fact that it will contain Customer Proprietary Network Information as well as CenturyLink's own proprietary data.

- Updating the intermediate carrier meeting process

CenturyLink says it has revised its process for meetings with intermediate carriers to discuss the performance of each intermediate carrier on at least a monthly basis. The meetings will be used to ensure that the intermediate carriers are meeting the performance requirements and that appropriate actions are taken to remedy any of CenturyLink's concerns. The contracts with intermediate carriers have criteria for meeting metrics established by the contract in completing calls placed on their routes.

- Adoption of Safe Harbor

CenturyLink says they have invested a lot of time and expense to implement Safe Harbor, to ensure it is a leader in routing quality, and to address issues raised in the rural call completion dockets at the FCC and in a number of states. CenturyLink says that the OCA minimizes and does not recognize the enormous endeavor that Safe Harbor requires of any company adopting the requirements. CenturyLink continues by stating that OCA attempts to justify the imposition of unduly burdensome and unnecessary requirements on CenturyLink.

CenturyLink believes that its adoption of the FCC's Safe Harbor requirements with the addition of the one-hop routing requirement is the best solution to solving call completion concerns in Iowa. CenturyLink commits to maintain its leadership role at ATIS and adopting best practices in the industry as they are relevant to CenturyLink's network.

- B. Airus' Proposed Long-Term Solutions to the Rural Call Completion Issues. (Filed in FCU-2013-0005, Hancock County Health Systems on April 27, 2015) (Larry)

Airus notes that it has been working with the OCA via conference calls and emails to work towards a resolution and the proposed solutions may be modified. Airus continues to believe that call completion problems are an industry problem that should be addressed via industry-wide solutions.

When evaluating Airus' proposed solutions, it is important to review them in the context of Airus-specific circumstances.

- First, the calls that are the subject of these complaints occurred prior to Peerless Network, Inc., acquiring IntelePeer on November 30, 2013. The company's name was changed to Airus. Airus is not aware of any call completion problems with Airus in the call path being reported since the

acquisition. Airus believes the successful track record for the past 16+ months shows improvement in this area.

- Second, IntelPeer (n/k/a Airus) did not “drop” the calls that are subject of these complaint proceedings. The causes of the call completion failure did not reside with IntelPeer’s network, but failed at some point after the calls were handed off to a downstream carrier.
- Third, the complainants (Hancock and Frahm cases) have not experienced call completion problems in over two years. In both cases, IntelPeer was informed of the problems with downstream carriers and took measures to correct the issue and the problem was solved.
- Fourth, Airus has made a good-faith effort to cooperate in these proceedings and develop solutions that will address rural call completion issues. Airus has: (1) responded to discovery with as much information as it could reasonably provide given the passage of time and change in control of IntelPeer, (2) diligently investigated and considered the proposed “Nine Steps” proposed by the OCA, (3) proposed specific guidelines for evaluating solutions and commitments, (4) initiated meeting with OCA to refine and try to come to agreement with OCA on Airus’ solutions and commitments, and (5) attended the recent Verizon-sponsored workshop on rural call completion problems that was held in Washington D.C.

Airus’ proposed effective long term solutions to call completion problems are based, in part, on OCA’s proposed “Nine Concrete Steps Toward A Long-Term Solution.” Airus says it is in good faith that they are making these commitments even though it did not drop the call and knowing not all carriers involved in the call path are being asked to do the same. Airus could not agree to all of OCA’s proposed nine steps for various reasons. Airus says OCA’s solutions would make them responsible and accountable for the actions of other carriers and some of the solutions would have no benefit to resolving rural call completion problems.

Airus says the high cost of terminating telecommunications traffic to rural areas in Iowa and elsewhere has led to the proliferation of intermediate carriers. Airus continues by saying the high rural termination rates provide incentives for the rural local exchange carriers to decline the establishment of direct interconnections for exchange of toll traffic with companies like Airus and thereby diminishing the ability to reduce the number of intermediate carriers in the call path.

Airus continues by saying the use of intermediate carriers provide benefits to the industry as they are used for overflow/capacity issues, provide for network redundancy, and help where there might be gaps in coverage. The goal should not be to eliminate the use of intermediate carriers, but to help the industry work together to develop a

quality, redundant network and to foster better inter-company communications as to prevent network failures.

The proposed solutions and commitments are Airus-specific and they do not address industry-wide issues such as intercarrier compensation and the rural local exchange carriers' refusals to establish direct interconnection. The solutions and commitments provided by Airus are divided into three categories.

- Communications/Reporting

Airus says it has proven procedures that it believes will help resolve and quickly address rural call completion problems. These include Airus providing contact information for trouble reporting on the Airus website, responding to the OCA and Board on a timely basis when information is requested, and taking action such as removing downstream carriers from routing when a problem arises.

Airus says that it will within 30 days of a final order in the proceedings commit to developing and implementing a "call completion action plan". The plan at a minimum will include a rural call completion response team that will be assigned to quickly and efficiently investigate and resolve reported rural call completion problems. A compliance officer will be responsible for directing the response team and responding to the complainant in a timely fashion. Specific deadlines will be set to ensure that the response team resolves the problem as quickly as possible. The plan will include specific guidelines on how to respond to reported problems and a record retention policy to ensure that relevant information is kept in the normal course of business should information be requested by a regulatory/governmental body. Airus says that it will do upgrades to its website to streamline reporting of rural call completion complaints.

Airus commits to submitting quarterly reports on a confidential basis that at a minimum will contain a description of the progress being made to fulfill its commitments, the details of any rural call completion problems in Iowa reported to Airus since the last report and the steps taken to resolve any such reported problems. Airus says that it will provide the reports for a one-year period, after which time the progress reporting requirement will sunset unless the Board affirmatively renews the requirement for good cause.

Airus commits to continue to cooperate with and provide timely information to the Board and OCA when investigating a rural call completion complaint along with assisting in root cause analysis and identification of carriers in the call path.

- Network Management

Airus makes commitments to ensure a properly-functioning network and to help minimize the chance that Airus' network is not the cause of the dropped call. Airus says it will have a properly-designed and properly-functioning network and mechanisms to

ensure that all calls it receives are timely completed or released back to the upstream carrier. Airus says it will have properly-designed and properly-functioning mechanisms in place to detect and control looping. Airus says it will continue to conduct standardized testing routines and continue to hold vendor performance meetings. Routing tables will be kept up-to-date through the Local Exchange Routing Guide (LERG). Airus says it will monitor ATIS standards and implement those standards when consistent with Airus' network policies. Airus will continue to seek direct end office interconnection with rural local exchange carriers in Iowa for the purposes of limiting the number of intermediate carriers in call paths.

- Downstream carrier management

Airus makes commitments to manage the performance of downstream carriers by using interoperability testing at turn-up to minimize system limitations and interoperability issues. Airus will continue to use internal "report cards" for vendors in order to assist in identifying downstream carriers that may need to improve performance. Airus will continue to take quick action to temporarily remove downstream carriers out of the call route for poor performance until the problem is resolved if taking that carrier out of route would enhance performance.

Within 90 days of a final order in these proceedings, Airus will develop an addendum to vendor contracts that define commitments to standards, including commitments from downstream carriers that they will release calls back on a timely basis as envisioned by ATIS § 5.3.

Airus will include confidentiality agreements with vendors' provisions that state that Airus is permitted to provide the identity of the vendor to the Board in response to a Board inquiry involving a complaint.

Airus says that it makes these commitments based on the premise that OCA will not seek nor will the Board impose financial penalties on Airus for rural call completion problems that have occurred in relation to these complaint proceedings or call problems that may occur in the future when Airus is abiding by these commitments. Airus continues by saying the commitments should go a long way in minimizing rural call completion problems as well as quickly resolving such a problem should it arise. Airus also says that it is impossible to guarantee that calls will complete 100 percent of the time.

C. Impact Telecom's Proposed Long-Term Solutions to the Rural Call Completion Issues. (Filed in FCU-2013-0005, Hancock County Health Systems on April 27, 2015) (Larry)

Hancock County Health Systems submitted a complaint to the Board on January 15, 2013, alleging that its medical facilities were having difficulties with call completion from its main campus to outlying numbers within its service area as well as to the Hancock County Memorial Hospital in Brit, Iowa, to medical clinics in Kanawaha. Hancock

County subsequently reported call completion issues on June 10, 2013. Since June of 2013, Hancock County has not reported call completion problems that they can attribute to hard wired service with certainty with the exception of the isolated spamming incident described in OCA's reply filing on March 19, 2015.

During the investigation of this complaint, CenturyLink was found to be the long-distance carrier for Hancock County with Impact and Intelpeer, Inc. (n/k/a Airus, Inc.), being identified as intermediate carriers along the call path for the calls in question. To date, no definitive cause of the call completion issues experienced by Hancock County has been identified.

Impact is committed to improving call completion in rural areas. Impact has voluntarily chosen to apply the processes and procedures agreed to in a consent decree between its subsidiary, Matrix Telecom, Inc., and the FCC in settlement of FCC allegations that Matrix had violated federal laws by failing to complete long-distance calls to rural areas. The processes are intended to improve rural call completion issues and to assist in compliance with the new FCC rules adopted in the *Rural Call Completion Order*. The rules in the FCC's *Rural Call Completion Order* do not apply to intermediate carriers, which was Impact's role in this particular call path. Impact does provide long-distance services to end user subscribers in Iowa and in those instances they would be considered a "Covered Provider."

Impact believes the proposed long term solutions listed after this paragraph will be effective in addressing rural call completion issues while improving quality of services. The solutions summarized are largely based on the Consent Decree and have either already been implemented or are in the process of being implemented.

- (a) Appointment of a compliance officer who is responsible for developing and implementing a compliance plan. The officer will need specific knowledge of rural call completion problems, Sections 201(b) and 202(a) of the Communications Act of 1934, as amended, 47 U.S.C. § 151 et seq. (the "Act"), as interpreted in the *Rural Call Completion Declaratory Ruling*, 27 FCC Rcd 1351 (2012) (the "*Rural Call Completion Declaratory Ruling*"), as well as the rules adopted in the *Rural Call Completion Order*.
- (b) Adoption of a compliance plan and manual designed to ensure compliance with Sections 201(b) and 202(a) of the Act, as interpreted in the *Rural Call Completion Declaratory Ruling*, with the rules adopted in the *Rural Call Completion Order*. The compliance plan is composed of various operating procedures targeting rural call completion issues and the development of a compliance manual with steps and training materials that all employees supervising, performing, or managing call completion performance and network functionality (covered employees) must follow.
- (c) Implementation of an annual compliance training program, as well as providing the training within thirty days of hire of covered employee. The training program

will cover compliance with Sections 201(b) and 202(a) of the Act, as interpreted in the Rural Call Completion Declaratory Ruling, with the rules adopted in the Rural Call Completion Order. Impact will also cover any additional state-specific processes and procedures required by the states in which they operate related to rural call completion.

- (d) Cooperation with state commissions, the FCC and rural local exchange carriers to take commercially reasonable steps for the establishment of test points and uniform testing criteria to evaluate complaints or data indicating rural call completion problems.
- (e) Notification to other intermediate carriers that Impact has reason to believe are causing call completion problems and cooperation with such carriers to analyze and resolve such problems as soon practical. If the performance of the intermediate carrier remains inadequate, Impact will cease using that carrier provided that other commercially reasonable options are available for routing to a particular location.
- (f) Increased contracting of Tier 1 providers with proven records of successfully routing and handling calls, even if this means that Impact pays more for such intermediate carrier. Impact says that it is increasingly giving Tier 1 providers priority in the routing scheme.
- (g) Reduce the number of intermediate providers in the call paths. Impact cautions that imposing a hard limit could affect the ability of carriers to perform its obligations. A hard limit could have the unintended consequence of increasing call completion issues as call completion requires the ability to make immediate changes in intermediate carriers when necessary.
- (h) Prioritize complaints to rural codes and intermediate carriers suffering higher connection issues are being dropped from routing altogether. Impact states they keep their routing tables up-to-date as part of its business practices.
- (i) Insure transparency in its vendor contracts by resisting restrictive confidentiality provisions. Impact says that they may not be able to guarantee that a vendor will agree to the same level of transparency.
- (j) Participating in a voluntary National Call Testing Project jointly sponsored by the National Exchange Carrier Association (NECA) and the Alliance for Telecommunications Industry Solutions (ATIS). Impact is committed to and continues to adopt best practices and incorporate industry standards.

Impact believes the proposed long-term solutions will greatly reduce the number and frequency of rural call completion issues with many of them going beyond those proposed by OCA in their January 16, 2015, report.

Impact does not believe that maintaining a list with the Board of all downstream carriers currently being used to carry Iowa traffic would alleviate rural call completion problems. Impact believes that it would be an ineffective exercise as carriers used in a particular call path changes and are managed daily.

Impact also states that they do not believe requiring them or other carriers to provide copies of the Iowa portion of the federal data and the FCC's analysis of the Iowa data and or periodic reports to the Board and OCA would be fruitful. Impact says that this would be an incredibly onerous obligation on them and other carriers, as well as the Board, in gathering and storing such information. Impact suggests that the Board or OCA request such relevant information from the FCC when a specific call completion problem with a specific carrier is identified through the complaint process already in place. Once a complaint is filed, the OCA also has discovery methods available to it to request information from the relevant carriers.

- D. Dumont Telephone Response to CenturyLink's Proposed Long-Term Solutions. (Filed in FCU-2012-0019, Rehabilitation Center of Allison on May 26, 2015) (Larry)

Dumont Telephone Company (Dumont) filed a response to the proposed solutions filed by CenturyLink on April 27, 2015, and are summarized below.

- CenturyLink's One-Hop Routing Requirement.

Dumont appreciates CenturyLink's adoption of a one-hop routing completion requirement and the implementation since March 1, 2015, proves it is a viable model for call completion in Iowa. Dumont Telephone encourages a single-hop routing requirement be adopted as an industry best practice applicable to all Interexchange Carriers (IXCs) that carry traffic in Iowa.

Limiting the number of intermediate providers to a single entity in the call path is a positive step to minimizing certain call completion problems such as looping. Reducing the number of intermediate providers to a single hop will not necessarily fix other call completion problems such as post-dial delay, dead air, echo, hearing, voice distortion, cross talk, etc. CenturyLink's proposed solutions do not proffer solutions to these types of problems.

- CenturyLink's Updated Carrier Contact for Use with Intermediate Carriers.

Dumont Telephone notes CenturyLink represents that it has revised its contracts with intermediate carriers to require confirmation for the intermediate carriers to meet the FCC Safe Harbor criteria and CenturyLink's one-hop requirement. Dumont Telephone also says that CenturyLink claims to have revised its process for meeting with intermediate carriers to discuss performance on at least a monthly basis and that appropriate actions will be taken by CenturyLink to remedy performance concerns. Dumont Telephone says the new contract provisions are constructive steps toward

helping to solve call completion problems, but emphasizes the importance and need for routine and frequent monitoring by CenturyLink, as well as enforcement against intermediate carriers who violate contractual terms. It is also important that enforcement mechanisms be instituted against CenturyLink if it does not enforce its contracts with downstream carriers.

- CenturyLink's Ongoing Monitoring and Testing Program.

Dumont Telephone says CenturyLink's internal analysis tools developed to assess network performance using a near real-time approach to identify rural OCNs with ASR/NER issues and negative spikes appears to be a positive step in the monitoring and testing process at the surface level. Dumont Telephone continues by saying there is no indication of monitoring system parameters or threshold levels for determining when a call completion issue exists to generate the creation of a trouble ticket. Based on the information provided by CenturyLink, Dumont Telephone says it is impossible to tell how many calls must fail before a trouble ticket is created. Without additional details of the threshold parameters it is difficult to determine the effectiveness of the monitoring and testing system. Dumont Telephone says an effective monitoring and testing program for call completion requires more than just monitoring ASR/NER.

- Procedures for Responding to Call Completion Problems.

Dumont Telephone says that CenturyLink was ordered to include the establishment of better procedures in its proposed solutions for providing information to customers on how to most effectively report call completion problems so they could be addressed more quickly and effectively than in the past. No procedures were proposed.

Dumont Telephone continues by saying CenturyLink should be required to provide single point of contact to local exchange carriers providers in addition to its providing this information to their customers. Contact information should be provided through public postings (company website, etc.) and private communications (monthly phone bills, customer mailings, etc.).

- Imposition of Financial Penalties for Repeat Offenders of Call Completion.

Dumont Telephone continues by saying financial penalties may help curb problems arising from the use of intermediate carriers and that CenturyLink's proposal does not address this subject. Dumont Telephone believes that a reasonable financial penalty imposed on carriers who first receive a written warning but thereafter continues to cause call completion problems is appropriate, with progressively increasing penalties if repeat violations occur. A monetary penalty would provide a financial incentive to ensure that calls complete properly and encourage providers to adopt practices and processes that will prevent rural call completion problems from occurring. Dumont Telephone says the OCA agrees with Dumont Telephone that enforcement proceedings and financial penalties against repeat offenders may well be needed to restore network reliability to rural Iowa.

- Maintain on File with the Board a List of Downstream Carriers Currently Being Used to Carry Iowa Traffic.

Dumont Telephone reiterates the OCA's previously stated suggestion that the Board should have on file a list of all downstream carriers, including specific contact information, that carry Iowa traffic. Dumont Telephone says that requiring the identity and contact information for downstream carriers to be on file with the Board should help improve the communications process and response time for resolving call completion problems.

E. OCA's Reply to CenturyLink's and Impact's Proposed Long-Term Solutions. (Filed in all dockets on May 26, 2015) (Tara)

In its response OCA stated that its focus is on CenturyLink's and Impact's proposed solutions, with particular focus on the need to correct the poor management of downstream carriers that resulted in the call failures. OCA noted that the identification of poor management of downstream carriers as the source of the call failures was recently highlighted in the workshop hosted by Verizon pursuant to its consent decree with the FCC. (Rural Call Completion Industry Workshop AT&T, <http://publicpolicy.verizon.com/tag/Rural+Call+Completion>, first panel 1:11:45-1:24:12.)

In its response, OCA compares the solutions proposed by the companies with the solutions proposed by OCA, and evaluates the extent to which the companies are willing to consider and implement the solutions proposed by OCA.

OCA noted that the companies' filings dated April 27, 2015, exhibit considerable agreement with OCA that solutions are needed and what those solutions must be. OCA also noted that it has had productive discussions with Dumont Telephone and Impact has also reached out to OCA. OCA stated it is willing to continue these discussions. OCA further noted that although the parties are having discussions this does not justify a delay in the proceedings as rural call completion issues can be life-threatening and need to be addressed sooner rather than later.

If the Board determines a rule-making proceeding is appropriate, OCA opposes any delays on commitments from the companies in the meantime. OCA understands that each of the companies (or its predecessor) has failed to provide adequate quality of service as required by Iowa Code § 476.3 (2015) and 199 IAC 22.5(1). Furthermore, OCA stated that the public interest requires appropriate corrective action at this time. OCA stated that it may be appropriate in these dockets for the presiding officer to issue notices that the companies have violated their obligations under Iowa Code § 476.3 (2015) and 199 IAC 22.5(1), thus permitting consideration of civil penalties in future dockets should violations of these same provisions recur. (Iowa Code § 476.51 (2015)). According to OCA, the possibility that other companies not before the Board in these dockets may also have failed to provide service of adequate quality is no reason for delay. OCA supports a rule-making proceeding.

In Docket No. FCU-2012-0019, OCA files with this response an update to CenturyLink's earlier responses to OCA data request no. 18, identified as OCA Exhibit CL-18S4, and three new CenturyLink discovery response exhibits, identified as OCA Exhibits CL-66, CL-67 and CL-68. Exhibit CL-18S4 states, as of May 15, 2015, that no changes have been made to CenturyLink's template contract with downstream intermediate carriers since it previously provided the template language. Exhibit CL-66 addresses the discrepancy between CenturyLink and INS regarding the latter's tariffed charges. Exhibit CL-67 states that CenturyLink will file its safe harbor certification with the FCC pursuant to 47 C.F.R. § 64.2107(a)(1) when it files its first data report on August 1, 2015. Exhibit CL-68 responds to a question asking for a description of the monitoring process CenturyLink has in place pursuant to the FCC's safe harbor requirements.

OCA noted that each of the companies has either implemented or offered to implement at least some of the elements. The following is a list of the elements each of the companies has thus far implemented or offered to implement:

1. Managing Downstream Carriers.

OCA combined Steps 1 and 6 which are discussed below.

2. Maintain a List of Downstream Carriers Currently Being Used to Carry Iowa Traffic.

OCA stated its proposed step two is the one step on which the companies have to date exhibited little willingness to agree. OCA observed none of the companies offers a persuasive response to OCA's observation that the call failures have largely been attributable to the shadowy existence of intermediate carriers that did not and could not carry the calls, but that nevertheless were engaged to do so. OCA also noted none of the companies offers a persuasive response to its observation that compliance with proposed step two would cost virtually nothing. OCA clarified that it does not propose that upstream carriers maintain on file with the Board a list of call paths. OCA suggested that upstream carriers maintain on file with the Board a list of the downstream carriers with which they have contracts. This list should not be changing daily. OCA explained that if the list is changing daily then the Board may reasonably question whether the upstream carrier is performing adequate due diligence and testing in the engagement of downstream carriers.

OCA believes that its proposed oversight would potentially go a long way toward ensuring that upstream carriers choose their downstream carriers carefully.

OCA continues to urge that the carriers' information for the downstream carriers be public.

3. Reduce the Number of Intermediate Carriers in the Call Paths.

OCA noted that there is consensus that reducing the number of intermediate providers in the call paths prevents call failures. OCA noted that CenturyLink is limiting the number of intermediate carriers in its call paths to one.

OCA stated that Impact [REDACTED]

[REDACTED] OCA noted that Impact is also increasingly handing calls to higher cost but more reliable intermediate carriers on the first attempt.

4. Promote Transparency in the Use of Downstream Carriers.

OCA stated that the companies are agreeable to seeking to remove from their contracts with intermediate carriers provisions that intend to limit their ability to disclose the contracts to the Board. OCA noted that any trade secrets and other legitimately confidential information in the contracts would be protected.

OCA stated that CenturyLink indicated that contractual restrictions on disclosures to regulatory bodies only delay and do not prevent such disclosures and hence serve no useful purpose.

OCA noted that Impact is working to ensure transparency in its vendor contracts by resisting restrictive confidentiality provisions.

5. Actively Participate in the Standard-Setting Work of the ATIS.

OCA noted that Verizon will be making a written submission to the Next Generation Interconnection Interoperability Forum (NGIIF) of the Alliance for Telecommunications Industry Solutions (ATIS) recommending updates to the NGIIF Call Termination Handbook. These recommended updates are intended to document ideas, best practices and recommendations discussed at the workshop Verizon hosted. The written materials provided by the moderator invite all others to reach out to NGIIF to obtain information on how they, too, can participate in the process of updating the Call Termination Handbook.

OCA noted that CenturyLink commits to maintaining a leadership role at ATIS and participate in the Verizon Workshop.

OCA noted that Impact indicated that it is participating in a voluntary National Call Testing Project jointly sponsored by the National Exchange Carriers Association and ATIS. OCA stated Impact also participated in the Verizon workshop.

OCA maintains that widespread active participation in the standard-setting work at ATIS can contribute substantially to restoring the reliability of the network.

6. Exercise Responsibility over Downstream Carriers.

OCA explains in its May 26, 2015, filing that it has combined steps one and six of its proposed solutions in order to meet objections that a general acknowledgement of responsibility for the performance of downstream carriers is not sufficiently concrete. OCA noted that the 13 elements of step six (listed in this document) are specific enough to target what has been causing the problems, yet general enough to leave with each company the responsibility to work out the details of implementation. OCA noted that if a company has gone beyond a particular element, it has, of course, met it.

OCA stated that after reviewing the filings and discussing the matter with CenturyLink and Impact, OCA understands that not all of the companies are in a position to commit at this time to implementing all of the elements it proposed. However, each of the companies has either implemented or offered to implement at least some of the elements. OCA provided the following list of the elements each of the companies has thus far implemented or offered to implement:

*Element 1. Establish and conduct standardized testing routines.*

CenturyLink:

- OCA noted that CenturyLink recognized that [REDACTED]  
[REDACTED]  
[REDACTED]
- OCA stated that according to CenturyLink [REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]
- OCA noted that CenturyLink's [REDACTED]  
[REDACTED]  
[REDACTED]
- Also, OCA noted that CenturyLink's testing of long-distance call completion to Rural OCNs includes utilizing existing data sets and call review processes as well as internal testing resources.

Impact:

- OCA indicated that Impact believes it substantially complies with each of the OCA's points.
- OCA stated that Impact indicated its proposed solutions go far beyond those proposed by the OCA.
- OCA noted that according to Impact, [REDACTED]  
[REDACTED]

*Element 2. Investigate on an ongoing basis whether downstream carriers have properly designed and properly functioning equipment, including properly designed and properly functioning software.*

CenturyLink:

- OCA stated that CenturyLink indicated that [REDACTED]  
[REDACTED]  
[REDACTED]
- OCA noted that CenturyLink's [REDACTED]  
[REDACTED]
- Also, OCA noted that CenturyLink's [REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

Impact:

- OCA noted that Impact believes it substantially complies with each of OCA's points.
- OCA stated that Impact indicated its proposed solutions go far beyond those proposed by the OCA.

*Element 3. Investigate on an ongoing basis whether downstream carriers have sufficient capacity in their switches and call paths to carry the traffic to the intended destinations.*

CenturyLink:

- OCA noted that CenturyLink recognized that [REDACTED]  
[REDACTED]  
[REDACTED]
- OCA stated that according to CenturyLink [REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]
- OCA indicated that [REDACTED]  
[REDACTED]

Impact:

- OCA noted that Impact believes it substantially complies with each of OCA's points.
- OCA stated that Impact indicated its proposed solutions go far beyond those proposed by the OCA.

*Element 4. Require each downstream carrier on an ongoing basis to provide specific information regarding its system and the limitations of its system, including information regarding any difficulties its system may have interoperating with other systems using a different technology.*

CenturyLink:

- OCA observed that CenturyLink's [REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

Impact:

- OCA noted that Impact believes it substantially complies with each of OCA's points.
- OCA stated that Impact indicated its proposed solutions go far beyond those proposed by the OCA.

*Element 5. Require each downstream carrier on an ongoing basis to provide specific information regarding any bandwidth or other capacity constraints that would prevent its system from completing calls to particular destinations at busy times.*

CenturyLink:

- OCA noted that CenturyLink recognized that [REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

Impact:

- OCA noted that Impact believes it substantially complies with each of OCA's points.
- OCA stated that Impact indicated its proposed solutions go far beyond those proposed by the OCA.

*Element 6. Require each downstream carrier to have properly designed and properly functioning alarms in its system so as to ensure immediate notice of any outages on its system.*

Impact:

- OCA noted that Impact believes it substantially complies with each of OCA's points.
- OCA stated that Impact indicated its proposed solutions go far beyond those proposed by the OCA.

*Element 7. Require each downstream carrier to have properly designed and properly functioning mechanisms in place to ensure that the downstream carrier, if unable to complete a call, timely releases the call back to the upstream carrier (ATIS Handbook § 5.3).*

CenturyLink:

- OCA stated that CenturyLink indicated that [REDACTED]

Impact:

- OCA noted that Impact believes it substantially complies with each of OCA's points.
- OCA stated that Impact indicated its proposed solutions go far beyond those proposed by the OCA.

*Element 8. Require each downstream carrier to have properly designed and properly functioning mechanisms in place to ensure that the downstream carrier, if making successive attempts to route the call through different lower-tiered downstream carriers, timely passes the call to a second (or third or fourth) lower-tiered downstream carrier if a first (or second or third) lower-tiered downstream carrier cannot complete it.*

Impact:

- OCA noted that Impact believes it substantially complies with each of OCA's points.
- OCA stated that Impact indicated its proposed solutions go far beyond those proposed by the OCA.
- OCA observed that Impact is increasing giving Tier 1 providers priority in the routing scheme (i.e. handing more calls to higher cost Tier 1 vendor on

the first attempt to complete the call, as opposed to handing calls to a higher cost Tier 1 vendor for a second or subsequent attempt if a lower-cost vendor is unable to complete the call on the first attempt.

*Element 9. Require each downstream carrier to have properly designed and properly functioning mechanisms in place to detect and control looping, including the use of hop counters or other equivalent mechanisms that alert a carrier to the presence of a loop (ATIS Handbook § 4.1.3).*

Impact:

- OCA noted that Impact believes it substantially complies with each of OCA's points.
- OCA stated that Impact indicated its proposed solutions go far beyond those proposed by the OCA.

*Element 10. Establish direct measures of quality and require downstream carriers to meet them (ATIS Handbook, § 5.6 and Table 2).*

CenturyLink:

- OCA observed that CenturyLink's [REDACTED]
- OCA also noted that [REDACTED]
- OCA noted CenturyLink's [REDACTED]
- OCA stated that CenturyLink's [REDACTED]

Impact:

- OCA noted that Impact believes it substantially complies with each of OCA's points.
- OCA stated that Impact indicated its proposed solutions go far beyond those proposed by the OCA.

*Element 11. Establish and implement appropriate sanctions for intermediate carriers that fail to meet standards.*

Impact:

- OCA noted that Impact believes it substantially complies with each of OCA's points.

- OCA stated that Impact indicated that its proposed solutions go far beyond those proposed by the OCA.
- OCA observed that Impacted noted if the performance of an intermediate carrier remains inadequate, Impact will cease using that carrier provided that other commercially reasonable options are available for routing to a particular location.
- Also, OCA observed that Impact has indicated intermediate carriers suffering higher connection issues are being dropped by Impact.
- Additionally, OCA noted that [REDACTED]

*Element 12. Require downstream carriers to manage lower-tiered downstream carriers and to hold lower-tiered downstream carriers to the same standards to which they themselves are held (ATIS Handbook § 5.8).*

Impact:

- OCA noted that Impact believes it substantially complies with each of OCA's points.
- OCA stated that Impact indicated that its proposed solutions go far beyond those proposed by the OCA.

*Element 13. Define the responsibilities of downstream carriers in an agreement (ATIS Handbook § 5 introduction).*

CenturyLink:

- OCA referenced its exhibit filed in FCU-2012-0019, OCA Exhibit CL-18S3, filed on December 19, 2014.

Impact:

- OCA noted that Impact believes it substantially complies with each of OCA's points.
- OCA stated that Impact indicated that many of its proposed solutions go far beyond those proposed by the OCA. Impact stated [REDACTED]

OCA stated that each company, as a part of its commitments, should be willing to agree to certify annually which of the elements it has implemented. OCA indicated that over time, companies will hopefully be able to supply a complete certification. Also, OCA stated that commitments should remain in effect until such time as the Board determines they are no longer needed, or until such time as the Board implements a rule with similar requirements of general applicability. OCA noted that a similar process

was recently adopted at 47 C.F.R. § 12.4 with respect to the reliability of the services of 911 providers. OCA stated that if a company has implemented an alternative mechanism that accomplishes the objective of a particular element, the company should describe the mechanism it has implemented and explain how the mechanism meets the objective. OCA also stated that if a particular element does not apply to a particular company, the company should explain why.

OCA believes that its 13 proposed elements are proactive in the sense that they are designed to restore network reliability to its former state, in which the facilities carrying the calls were engineered and maintained in such a way as to prevent the call completion failures from occurring in the first place. OCA also indicated that these elements are designed to work in tandem with the data collection and analysis now occurring pursuant to FCC rules.

Companies participating in the Verizon workshop described their processes for review and analysis of network performance data, including network effectiveness ratio (NER) and answer service ratio (ASR) or call answer rate (CAR), and for identification of negative spikes at particular operating company numbers (OCNs) that may require investigation. OCA noted that Windstream looks for an NER of 90 percent and an ASR or CAR of 60 percent.

7. *Provide Copies of the Iowa Portion of the Federal Data and the FCC's Analysis of the Iowa Data to the Board and OCA.*

OCA noted that CenturyLink is willing to provide the Board with the Iowa-specific data included in the FCC reports, subject to confidentiality concerns.

OCA stated that Impact has declined to offer a commitment for step seven.

OCA stated that, in order for the Board to be able to understand what the data represent, the companies will need to provide the Board not only with the raw data but also with the explanations of the data also required by the FCC.

OCA also reiterates that companies should provide the aggregated national non-rural data.

8. *Keep Routing Tables Up-To-Date.*

OCA noted that there is consensus that routing tables must be kept up to date. OCA indicated that CenturyLink agrees that updating, including use of the LERG, is standard practice. OCA observed that CenturyLink indicated that it has revised its routing tables for thousands of routes nationwide.

Also, OCA noted that Impact states that it keeps routing tables up to date as a regular part of its business practices.

9. *Provide Periodic Progress Reports to the Board on Implementation.*

OCA stated that CenturyLink believes that the Board should waive any reports from CenturyLink due to its implementation of the federal safe harbor.

OCA stated that Impact declined to offer a commitment in step nine.

OCA continues to urge that each company provide appropriate progress reports on each of the commitments it makes.

/tgp