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July 23, 2013

Marlene H. Dortch, Secretary
Federal Communications Commission
Washington, D.C. 20554

Re: *In the Matter of Rural Call Completion*
WC Docket No. 13-39
Notice of *Ex Parte* Meeting - *Erratum*

Dear Ms. Dortch:

Attached please find a corrected copy of a Notice of *Ex Parte* Meeting filed yesterday. The revision corrects a typographical error in the meeting date but makes no substantive changes in the text of the Notice.

Very truly yours,

Helen E. Disenhaus

Helen E. Disenhaus

Counsel for
HyperCube Telecom, LLC

Cc w/encl:

Henning Schulzrinne, Chief Technologist
Jamie Susskind, Legal Advisor, WCB
William Dever, Division Chief, WCB-CPD
Carol Simpson, Deputy Division Chief, WCB-CPD
Richard Hovey, Telecommunications Policy & Technology Specialist, WCB-CPD
Jean Ann Collins, Attorney-Advisor, WCB-CPD
Gregory Kwan, Attorney-Advisor, WCB-CPD
Steven Rowings, Attorney-Advisor, WCB-CPD
Margaret Dailey, Attorney-Advisor, EB
Theodore Marcus, Attorney-Advisor, EB

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July 22, 2013

Marlene H. Dortch, Secretary
Federal Communications Commission
Washington, D.C. 20554

Re: *In the Matter of Rural Call Completion*
WC Docket No. 13-39
Notice of *Ex Parte* Meeting

Dear Ms. Dortch:

On July 18, 2013, representatives of HyperCube Telecom, LLC ("HyperCube"), met with members of the Commission's staff to address rural call completion issues. The HyperCube representatives were: Doug Davis, CTO of HyperCube; Robert W. McCausland, Vice President, Regulatory and Government Affairs of HyperCube; Lynn A. Stang, Vice President, Deputy General Counsel, Regulatory & Government Affairs, West Corporation (the parent company of HyperCube); Helen E. Disenhaus, Lampert O'Connor & Johnston, P.C.; and Sam Sedaei, Lampert, O'Connor & Johnston, P.C. The Commission staff members present at the meeting were: Henning Schulzrinne, Chief Technologist; Jamie Susskind, Legal Advisor, Wireline Competition Bureau ("WCB"); William Dever, Division Chief, WCB - Competition Policy Division ("WCB-CPD"); Carol Simpson, Deputy Division Chief, WCB-CPD; Richard Hovey, Telecommunications Policy & Technology Specialist, WCB-CPD; Jean Ann Collins, Attorney-Advisor, WC; Gregory Kwan, Attorney-Advisor, WCB-CPD; Steven Rowings, Attorney-Advisor, WCB-CPD; Margaret Dailey, Attorney-Advisor, Enforcement Bureau ("EB"); and Theodore Marcus, Attorney-Advisor, EB.

Following a brief description of HyperCube and its operations, HyperCube's representatives discussed the attached handout and the methodology used to derive the information presented in the handout. The presentation focused on HyperCube's investigation of the possible explanations for below-normal call completion rates on routes serving rural areas (including one scenario involving terminations on a wireless network). HyperCube's representatives noted that the level of understanding of the relevant circumstances in each situation was dependent on the level of attention and cooperation provided by the parties on whose networks the calls traversed. Only in those instances in which providers dedicated attention to the issues that HyperCube's study identified were causes identified and remedies put in place. As reflected in the attachment, unconventional or unauthorized termination routings or improperly documented and deficient routing arrangements were key causes of the identified problems. In some cases, network facility limitations at some point in the calls' routing were partly responsible.

HyperCube concluded from its analysis that causes for call-completion problems vary significantly, that terminating providers play an important role in identifying and remedying key types of call-completion problems, and that call-completion problems cannot be eliminated without the attention of, and action by, every provider in the segments of call routing in which call-completion problems are identified.

Very truly yours,

Helen E. Disenhaus

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Counsel for
HyperCube Telecom, LLC

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Theodore Marcus, Attorney-Advisor, EB

HyperCube

Call-Completion Study

July 2013

Doug Davis CTO HyperCube

west Hypercube, LLC is a subsidiary of West Corporation

Study Context and Initial Findings

Following a mid-April meeting with Pennsylvania RLECs that revealed a significant discrepancy between wholesale rates for toll termination into the RLECs' networks (as updated and provided by various vendors in their "rate decks") and the tariffed access rates of the RLECs, HyperCube began a multi-month study. Some of the results were startling.

In one instance, the study's results revealed two non-traditional toll-termination routes into an RLEC's network, both of which utilize end-user consumer service offerings to bypass switched access interconnections. The subsequent closing of those "back doors" resulted in numerous call-completion issues over several days until industry processes were able to reset routing across all carriers.

The Effect

Pricing pressure in toll-termination services is immense. Vendor rates vary and change often. Even the slightest change can, almost instantaneously, swing millions of minutes from one provider to another and an ever-moving flow of thousands of dollars results.

Least-Cost Routers ("LCRs") are efficient tools that providers everywhere use to route calls based on each call's cost. HyperCube's study reveals that LCRs themselves do not necessarily contribute to call-completion and call-quality problems.

Rather, HyperCube's study reveals that consumer interests are sometimes taking the back seat to the cost of terminating a call as some particularly-creative toll-termination vendors utilize non-conventional arrangements in their efforts to win the call from providers that they serve. And HyperCube's study reveals that even the RLEC (or any other LEC or wireless carrier) whose network is being used to terminate toll traffic through non-conventional arrangements may not be aware of such arrangements without extraordinary and ongoing identification efforts.

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Case Study #1
Indiana RLEC

Vendor Rate (average): $0.0032
RLEC Tariff Rate (access composite): $0.011

Low-Cost Vendor Call-Completion Ratio ("CCR") at Busy Hour: 19% Network Efficiency Ratio ("NER")
Mid-Cost Vendor CCR at Busy Hour: 21% NER
High-Cost Vendor CCR at Busy Hour: 62% NER

CCR at Quiet Hour: 99% NER for all vendors

Tentative Conclusion: Inadequate facilities exist at or near the RLEC tandem; alternative (unconventional termination) routes exist and are in use.

Disposition: Contact with the RLEC has resulted in no action to date.

Case Study #2
Texas RLEC

Vendor Rate (average): $0.0044
RLEC Tariff Rate (access composite): $0.009

Low-Cost Vendor CCR at Busy Hour: 9% NER
Mid-Cost Vendor CCR at Busy Hour: 69% NER
High-Cost Vendor CCR at Busy Hour: 100% NER

CCR at Quiet Hour: 100% NER for all vendors

Conclusion: Sufficient facilities exist at or near the RLEC tandem; alternative (unconventional termination) routes existed and were in use.

Disposition: Contact with the RLEC resulted in the identification and closure of an IP vendor that had established a cable-modem system for call completion within the RLEC's network. Current vendor rates now align with the RLEC's tariff rates. Call completion is now meeting the P.01 quality objective.

HyperCube

Case Study #3
North Dakota Tribal Reservation (RLEC)

Vendor Rate (average): $0.012
RLEC Tariff Rate (access composite): $0.015

Low-Cost Vendor CCR at Busy Hour: 11% NER
Mid-Cost Vendor CCR at Busy Hour: 95% NER
High-Cost Vendor CCR at Busy Hour: 100% NER

CCR at Quiet Hour: 100% NER for all vendors

Conclusion: Adequate facilities existed at or near the RLEC tandem; bad routing existed in the network.

Disposition: Contact with the RLEC resulted in the identification of an intermediate carrier whose LCR set-up was deficient with routing against another LEC's LRN. That other LEC was rejecting many calls due to capacity limitations. Once the intermediate carrier's LCR and routing were fixed, vendor rates aligned with the RLEC's tariff rates and call completion began meeting the P.01 quality objective.

Case Study #4
South Carolina RLEC

Vendor Rate (average): $0.0011
RLEC Tariff Rate (access composite): $0.0083

Low-Cost Vendor CCR at Busy Hour: 18% NER
Mid-Cost Vendor CCR at Busy Hour: 20% NER
High-Cost Vendor CCR at Busy Hour: 99% NER

CCR at Quiet Hour: 95% NER for all vendors

Tentative Conclusion: Sufficient facilities exist at or near the RLEC tandem; split-fill routing taking place with underlying vendors.

Disposition: Contact with the RLEC has not, to date, resulted in a resolution.

HyperCube

Case Study #5
Tier 1 Wireless Carrier – Rural Market

Vendor Rate (average): $0.0023
Tariff Rate (RLEC tandem, access composite): $0.0043

Low-Cost Vendor CCR at Busy Hour: 44% NER
Mid-Cost Vendor CCR at Busy Hour: 82% NER
High-Cost Vendor CCR at Busy Hour: 82% NER

CCR at Quiet Hour: 99% NER for all vendors

Conclusion: Sufficient facilities exist at or near the RLEC tandem; illicit Subscriber Identity Module ("SIM box") in use via alternative vendor.

Disposition: Contact with the wireless carrier unearthed the use of a SIM box having a capacity of over 200 channels and enabling an alternative vendor to provide termination services into the wireless carrier's network. The SIM box was removed, vendor rates aligned with the tariff rates associated with the regional RLEC tandem, and call completion began meeting the P.01 quality objective.