

BEFORE THE NEBRASKA PUBLIC SERVICE COMMISSION

In the Matter of the Nebraska Public Service)
Commission, on its own motion, seeking to)
administer the Nebraska Universal Service)
Fund's Broadband Program: Application)
to the Nebraska Broadband Program)
Received from Raicom, Inc.)

Application No. NUSF-92.13

1 **REPLY TESTIMONY OF BRIAN THOMPSON IN OPPOSITION TO APPLICATION**

2 **Q. Please state your name.**

3 A. My name is Brian Thompson.

4 **Q. Please state your position with and the name of your current employer and provide**
5 **a summary of your duties.**

6 A. I am the Vice President of External Relations for Consolidated Telco, Inc.
7 ("Consolidated"). My duties include maintaining Consolidated's relationships with
8 regulatory agencies, including providing information regarding the operation and
9 deployment of Consolidated's communication network. Further, I participate in the
10 development and implementation of long range and short range plans to provide internet
11 access services to customers located in our service area in Western Nebraska.

12 **Q. Did you file Direct Testimony in opposition to this Application?**

13 A. Yes, I did.

14 **Q. Have you reviewed the pre-filed direct testimony of Randall J. Raile filed on behalf**
15 **of the Applicant, Raicom, Inc. in this proceeding?**

16 A. Yes, I have.

17 **Q. What is the purpose of your testimony?**



1 A. My reply testimony is provided to rebut a number of points set forth in the Direct
2 Testimony of Mr. Raile, and to reaffirm the opposition of Consolidated to Project 1 of
3 Raicom's Amended Application for which the Commission Staff has recommended
4 funding from the NEBP in the amount of \$125,326.

5 **Q. Does Project 1 of Raicom's Amended Application overlap and duplicate currently**
6 **existing or under construction fixed point broadband that Consolidated provides or**
7 **will, in the near future provide?**

8 A. Within the area that Raicom proposes to serve through its Project 1, I have identified 173
9 square miles of area currently served with broadband by Consolidated that Raicom
10 proposes to overbuild. This area is shown in the light green-shaded census blocks of the
11 attached map that has been marked as Exhibit A. In addition, I have identified 189
12 Square miles of area that has been funded by the Commission-approved NEBP grant to
13 Consolidated in 2013 Application NUSF 77.23 and this overbuild area is shown in the
14 yellow-shaded census blocks of the attached map. **That is a total of 362 square miles of**
15 **Consolidated's service area that is receiving or will shortly receive broadband**
16 **service that Raicom's Project 1 would overbuild if granted by the Commission. I**
17 would add that Mr. Raile acknowledges in his Direct Testimony that approximately 75%
18 of the area covered by Project 1, as amended, currently receives broadband through
19 Consolidated's fiber facilities. (Raile Testimony, 5:8-12)

20 **Q. What is Consolidated's position regarding the use of NEBP support to overbuild**
21 **areas that are receiving or will shortly receive broadband service?**

22 A. It is Consolidated's position that scarce NEBP broadband grant support should not be
23 used to facilitate overbuilding of 172 Nebraska census blocks with a customer density

1 of approximately .39 occupied households per square mile that are already served or will
2 be served with broadband upon completion of the broadband project that the Commission
3 approved in NUSF 77.23.

4 **Q. Do you have further observations based upon your review of Raicom's Amended**
5 **Application?**

6 A. Yes, a couple points. First, while Raicom did reduce its proposed coverage area for
7 Project 1 through its Amended Application, although it could have done so, it failed to
8 eliminate the proposed overbuild area that will be funded by the Commission's grant of
9 NEBP funding to Consolidated in Application NUSF-77.23. Second, of the three service
10 packages proposed by Raicom, one is at the speeds of 2 Mbps downstream and 500 Kbps
11 upstream, neither of which speeds are compliant with the Commission's definition of
12 "Broadband Service," and thus, this offering is ineligible for NEBP support.

13 **Q. Are you familiar with the eligibility requirements of applications for NEBP support,**
14 **particularly the requirement that an applicant offers voice service in connection**
15 **with its proposed service offering?**

16 A. Yes. In the Commission's Progression Order No. 4 entered in NUSF-77 on September
17 27, 2011, at page 11, eligibility condition 2 requires that the applicant "[c]ommit to offer
18 voice grade service to customers within the service area of the broadband deployment."

19 **Q. Mr. Raile states in his testimony that Raicom will provide mobile wireless**
20 **broadband services by virtue of "handheld pocket routers and PC dongles for**
21 **laptop computers." (Raile Testimony, 3:17-20) Are these devices capable of**
22 **providing voice service?**

1 A. The service that Mr. Raile describes as a “mobile wireless broadband service” is mobile
2 broadband only to the extent that the dongles and handheld routers can be served by the
3 Raicom tower site unless roaming arrangements have been completed with third party
4 wireless providers, and all of the necessary signaling equipment and third-party services
5 to support it have been put in place. This is a major undertaking. Without it, Raicom’s
6 customers cannot roam on US Cellular, Verizon, Sprint, ATT, Blaze Wireless and Viaero
7 networks.

8 Further, 4G LTE is a data-only technology. Voice is not supported natively by 4G LTE
9 as was the case in earlier generations of wireless technology. Indeed, true mobile carriers
10 utilize these earlier generation (3G) technologies to provide mobile voice service today,
11 typically on separate spectrum, which Raicom does not have. Thus, in order to create
12 even a best-efforts voice service via these dongles or handheld routers it will be necessary
13 for Raicom’s customer to activate a computer or separate phone device connected to a
14 computer or router, and then to have the proper Voice over Internet Protocol (VoIP)
15 software application to route the call through a third party, IP based service. And this
16 capability ends when the device leaves the service area without roaming functionality.

17 Such a service cannot be considered voice grade or equivalent to traditional voice
18 telephone service. Even if it was managed by Raicom instead of a third party, so that the
19 necessary end-to-end voice prioritization could at least be possible, the mobile devices
20 described by Mr. Raile lack the ability to prioritize the voice traffic above all other
21 wireless broadband traffic, or to command the transport network to do likewise. Thus,
22 the arrangement that would be required to support even a best efforts voice service on the
23 proposed Raicom system is not at all comparable to wireless networks that support

1 smartphones that are and always have been truly voice capable, and that consumers
2 associate with true mobile broadband service.

3 **Q. Has the Commission created an additional eligibility requirement of applications for**
4 **NEBP support to offer access to emergency services?**

5 A. Yes. In the Commission's Progression Order No. 4 entered in NUSF-77 on September
6 27, 2011, at page 11, eligibility condition 3 requires that the applicant "[c]ommit to offer
7 access to emergency services." To provide emergency services in a mobile system, the
8 current E911 method utilized for fixed VoIP service is inadequate. In fixed VoIP
9 systems, subscribers (or providers on their behalf) enter VoIP subscriber equipment
10 locations into static databases utilized by public safety agencies. This system is not
11 intended to support subscriber equipment that moves, except perhaps in a nomadic
12 situation where the subscriber moves his equipment from one fixed location to a new
13 fixed location, and whereupon the static database must be updated for public safety
14 agencies to be able to locate the subscriber.

15 For E911 emergency calls in a mobile voice service environment, public safety agencies
16 need to know the mobile subscriber's position in real-time, and within the accuracy
17 parameters prescribed by the FCC for all truly CMRS carriers. The dongles and
18 handheld routers that Raicom proposes for provision of its mobile broadband service
19 simply cannot provide this information. Location accuracy requires either embedded
20 GPS-assist on the part of the user device, which capability dongles and handheld routers
21 do not have, or alternatively, a system in which multiple base stations attempt to
22 triangulate on the mobile subscriber's position. It is not possible to triangulate with any
23 accuracy from a single serving cell site such as is proposed by Raicom.

1 Q. In his testimony, Mr. Raile seeks to rely on the Commission's decision in
2 Application NUSF-77.06 to support his conclusion that "[b]ecause of the mobile
3 element, funding is appropriate." (Raile Testimony, 6:8-9) Are you generally
4 familiar with the facts involved in Application No. NUSF-77.06 in which Viaero
5 sought NEBP funding for a Western Nebraska wireless mobile broadband project?

6 A. Yes, and I have reviewed the content of the Commission's June 26, 2012 Progression
7 Order No. 5 that approved in part Viaero's request for NEBP funding in order to re-
8 acquaint myself with that decision.

9 Q. In your view, were the facts of NUSF-77.06 analogous to those presented by the
10 Raicom application and was the decision in NUSF-77.06 precedent to support a
11 grant of Raicom's application for Project 1?

12 A. The facts are not analogous. Viaero presented a request for funding of a purely wireless
13 mobile broadband service in NUSF-77.06. In contrast, Section 2 of Raicom's Amended
14 Application states: "The LTE system proposed provides voice/data units *for fixed*
15 *wireless broadband services*, as well as hand held pocket routers and PC dongles for
16 laptop computers for mobile wireless broadband services." (emphasis added) Viaero, a
17 truly CMRS and voice-capable wireless carrier, proposed a purely mobile broadband
18 service in an area unserved by existing mobile broadband. Raicom proposes a service
19 that it states is primarily to provide fixed broadband services in an area that it admits is
20 approximately 75% served today. (Raile Testimony, 5:10-12)

21 The sentence from NUSF-77.06 quoted by Mr. Raile in his testimony (Raile Testimony,
22 6:10-12) was a clarification by the Commission of its "all or nothing" rule. That
23 principle is not at issue with regard to Raicom's Project 1. The relevant language of the

1 NUSF-77.06 Order is: “The Commission finds in this particular instance that providing
2 wireless broadband support to Viaero for this project *will promote greater broadband*
3 *availability to Nebraskans using mobile broadband services.*” (emphasis added) This
4 statement that the Commission would provide NEBP support for both fixed point and
5 mobile broadband services in a given area was expressly confirmed to be Commission
6 policy in NUSF-77, Progression Order No. 7, page 11, entered seven months later in
7 which the Commission stated: “We clarify that comparable access could mean universal
8 service access to one fixed and one mobile broadband provider.” Raicom is trying to
9 bootstrap its application for Project 1 into this policy statement. However, it cannot do so
10 because Raicom is proposing a service that is primarily fixed point in an area the vast
11 majority of which is admittedly already served with fixed point broadband service. Any
12 mobile broadband element of Raicom’s Project 1 proposal is ancillary, does not meet the
13 NEBP eligibility requirements and is thus inconsistent with the Commission’s decision in
14 NUSF-77.06.

15 **Q. Have you or personnel under your direction conducted actual measurements of the**
16 **availability of mobile broadband service in Raicom’s Project 1 area?**

17 **A.** Yes. On May 27 Consolidated’s staff conducted several speed tests across a wide variety
18 of census blocks that are included in the area of Raicom’s Project 1. These speed tests
19 were on the Verizon network and were made by using wireless handheld 4G
20 devices. Verizon purchases 100 Mbps at its Curtis, NE cell site and 100 Mbps at its
21 Maywood, NE cell site from our deregulated affiliate to provide 4G wireless services to
22 its customers. The speeds observed during this testing were between 12-16 Mbps
23 download, and 2.5 Mbps upload speed was commonly observed during the testing. I

1 believe that significant portions of the area included in Raicom's Project 1 are currently
2 served with mobile broadband service (as defined by the Commission),and as discussed
3 below, will become even better served with mobile broadband service later this year.
4 Therefore, NEBP support should not be provided for Raicom's Project 1.

5 **Q. Do you have any further information that causes you to conclude that the area**
6 **covered by Raicom's Project 1 will in the near future be served with mobile**
7 **broadband service offered by one or more other carriers?**

8 A. Consolidated, through its deregulated affiliate has constructed and turned up two 50Mbps
9 backbone circuits to wireless towers that are a part of another carrier's network that
10 serves substantially all of the census blocks covered by Raicom's Project 1. These
11 circuits will facilitate 4G upgrades to this carrier's network that will be completed this
12 summer. I believe that the area that is subject to Raicom's Project 1 will have 4G
13 wireless broadband service to be provided by this wireless carrier before the end of the
14 August. This upgrade was completed *without* the aid of NEBP grants and not only does
15 Raicom's Project 1 represent an overbuild of Consolidated's fixed point broadband
16 network as Raicom admits, but further, Raicom's Project 1 represents an overbuild of an
17 existing as well as a soon to be completed 4G LTE mobile broadband network in the
18 Project 1 area. Thus, and for the reasons stated above and in my Direct Testimony,
19 Consolidated respectfully requests that the Commission deny Raicom's request for NEBP
20 support for its Project 1.

21 **Q. Does this conclude your testimony?**

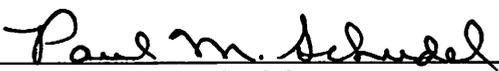
22 A. Yes

CERTIFICATE OF SERVICE

The undersigned hereby certifies that on this 28th day of May, 2014, the original, five copies, and an electronic copy of the foregoing pleading was delivered to:

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Paul M. Schudel

EXHIBIT A

Color-coded Map of Raicom's Project 1 Area

[See attachment]

LEGEND

92.13 Raicom - Census Blocks served with Broadband by Consolidated Telco & Curtis Telephone Co.



Census Blocks awarded 2013 Grant Funds



Raicom Project 1 within Consolidated's 2013 NEBP Grant Application



Raicom Project 1 outside of Consolidated Telco & Curtis Telephone Co. Service Area



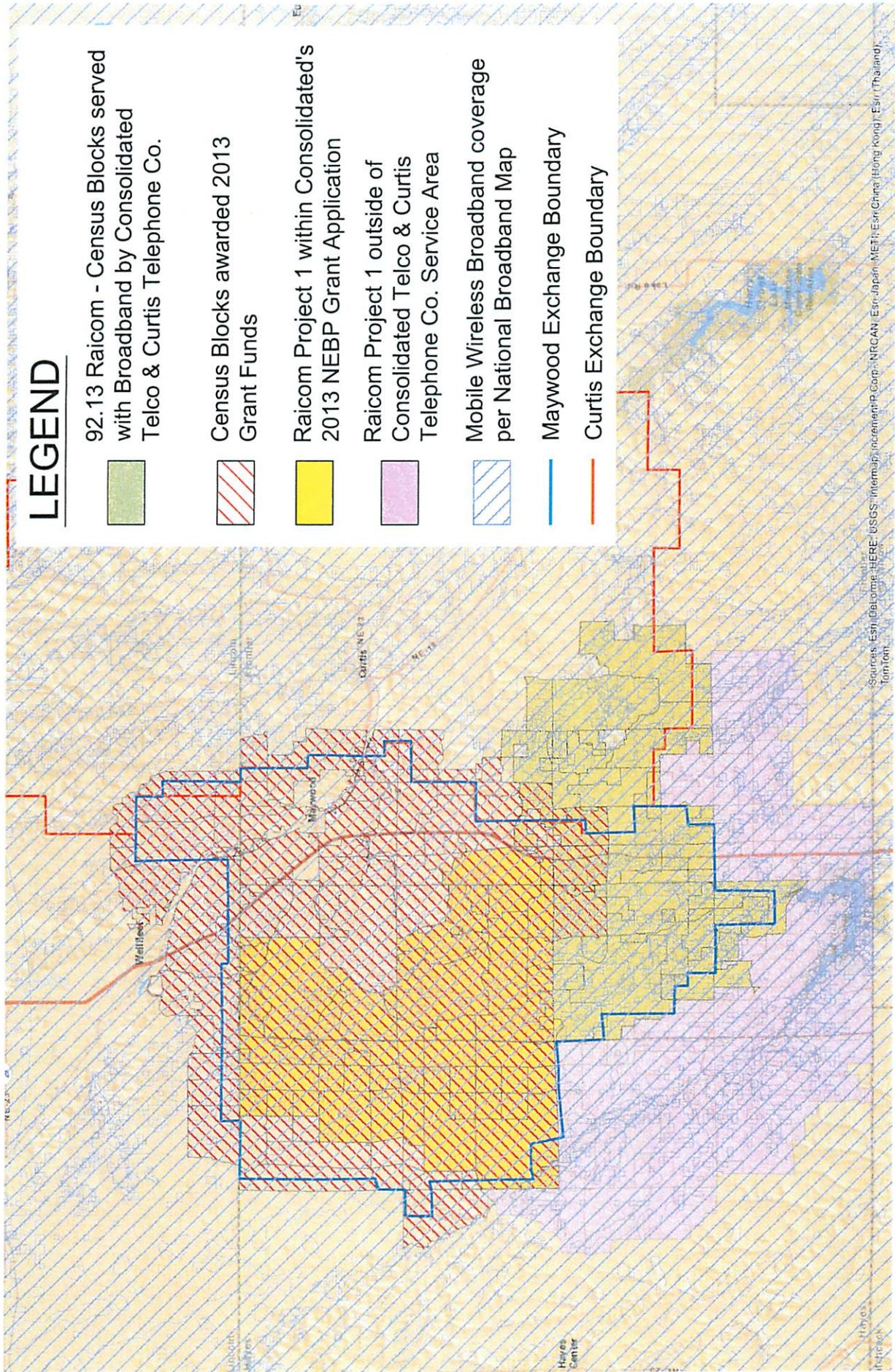
Mobile Wireless Broadband coverage per National Broadband Map



Maywood Exchange Boundary



Curtis Exchange Boundary



Sources: Esri, DeLorme, HERE, USGS, Intermap, increment P Corp., GEBCO, Esri, Japan, METI, Esri, China, Hong Kong, Esri, Thailand, TomTom