

*Exhibit No.:* 6.0  
*Issue:* Application for Designation as an Eligible  
Telecommunications Carrier  
*Witness:* Michael K. Kurtis  
*Sponsoring Party:* Illinois Valley Cellular RSA 2-I, 2-II and 2-III  
Partnerships  
*Type of Exhibit:* Pre-filed Rebuttal Testimony  
*Docket Nos.:* 04-0454, 04-0455, 04-0456  
*Date Testimony Prepared:* June 17, 2005

**ILLINOIS VALLEY CELLULAR RSA 2-I, 2-II  
AND 2-III PARTNERSHIPS**

**ICC DOCKET NO. 04-0454**

**ICC DOCKET NO. 04-0455**

**ICC DOCKET NO. 04-0456**

**PRE-FILED REBUTTEL TESTIMONY**

**OF**

**MICHAEL K. KURTIS**

**(Public Version)**

*June 17, 2005*

**PRE-FILED REBUTTAL TESTIMONY**

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**APPLICATION OF ILLINOIS VALLEY CELLULAR RSA 2-I, 2-II AND 2-III  
PARTNERSHIPS  
d/b/a/ ILLINOIS VALLEY CELLULAR**

**DOCKET NO. 04-0454**

**DOCKET NO. 04-0455**

**DOCKET NO. 04-0456**

1 **Q. Please state your name.**

2 A. My name is Michael K. Kurtis.

3 **Q. Are you the same Michael K. Kurtis that previously submitted pre-filed**  
4 **Direct Testimony in this docket on or about October 27, 2004 and pre-filed**  
5 **Supplemental Direct Testimony on or about April 6, 2005?**

6 A. Yes. I am the same person who previously submitted those pre-filed testimonies  
7 on those dates.

8 **Q. Has anything changed as far as your employment, your educational**  
9 **background and experience or your professional associations since those**  
10 **testimonies were filed?**

11 A. My employment, educational background and experience and my  
12 professional associations are the same, with one exception. At the time I  
13 submitted by Direct and Supplemental Direct Testimonies, I was Of Counsel to  
14 the law firm of Bennet & Bennet, PLLC. At this time I am no longer Of Counsel  
15 to that firm. I am now employed as Of Counsel to the law firm of Kurtis &  
16 Associates, PLC. However, I still provide the same types of regulatory services in

17 my present employment as I did with Bennet & Bennet. As I have previously  
18 testified, I do hold a degree in electrical engineering, as well as being a licensed  
19 attorney; I provide regulatory services before the FCC and am very familiar with  
20 all current proceedings affecting the wireless industry; and I have designed  
21 numerous wireless networks.

22 **Q. From a substantive standpoint, is there anything that has changed since the**  
23 **time you Direct Testimony and Supplemental Direct Testimony were filed?**

24 A. Yes. Since it is now June of 2005, there are a number of things that have  
25 changed. First, each of the three IVC Partnerships (collectively "IVC") has  
26 recently brought an additional cell site on line. Each of those sites were listed in  
27 the 5 year plan which IVC had submitted under Table 1 which identified a series  
28 of new cell sites that IVC envisioned constructing whether or not USF support  
29 was provided. Specifically, the IVC 2-I Partnership has activated Location No.  
30 19 - Seneca, Illinois; the 2-II Partnership has activated its Location No. 8 – Long  
31 Point, Illinois; and the 2-III Partnership has activated its Location No. 14 –  
32 Clifton, Illinois cell site.

33 Appended hereto as Attachments 1A, 2A and 3A are maps which show the  
34 coverage that was added from the activation of each of these cell sites. Later in  
35 my testimony I will fully discuss the technical parameters and other  
36 considerations relating to those maps. All of the maps attached to this testimony  
37 were prepared under my direction and supervision.

38 **Q. Are there any other changes to your previous testimony?**

39 A. No.

40 **Q. What is the purpose of your Rebuttal Testimony?**

41 A. The purpose of my Rebuttal Testimony is to respond in part to the pre-filed  
42 Direct Testimony by the Illinois Independent Telephone Association (“IITA”) and  
43 certain of its members who sponsored a joint witness, as well as to respond to the  
44 pre-filed Direct Testimonies of the Illinois Commerce Commission Staff.

45 **Q. Have you had an opportunity to review the Direct Testimony of Mr. Robert**  
46 **C. Schoonmaker presented on behalf of the IITA, McNabb Telephone**  
47 **Company (“McNabb”) and Tonica Telephone Company (“Tonica”) (in**  
48 **Docket 04-0454 regarding the Application for ETC Designation of IVC RSA**  
49 **2-I); C-R Telephone Company (“C-R”), McNabb, Mid-Century Telephone**  
50 **Cooperative (“Mid-Century”), Tonica and Stelle Telephone Company**  
51 **(“Stelle”) (in Docket 04-0455 regarding the Application for ETC Designation**  
52 **of IVC RSA 2-II); and C-R and Stelle (in Docket 04-0456 regarding the**  
53 **Application for ETC Designation of IVC RSA 2-III) (collectively the**  
54 **“Intervenors”)?**

55 A. Yes. I have.

56 **Q. Have you likewise had an opportunity to review the Direct Testimony of Mr.**  
57 **Jeffrey H. Hoagg, Principal Policy Advisor Telecommunications Division of**  
58 **the Illinois Commerce Commission (“ICC”), Mr. James Zolnierrek, Policy**  
59 **Department Telecommunications Division of the ICC, Mr. Samuel S.**  
60 **McClerren, Engineering Department Telecommunications Division of the**  
61 **ICC, Mark A. Hanson, Telecommunications Division of the ICC and Ms.**

62 **Marci Schroll, 9-1-1 Program Manager Telecommunications Division of the**  
63 **ICC ?**

64 A. Yes. I have.

65 **Q. Before delving into the specifics of the testimony identified above, do you**  
66 **have any general observations about the testimony of these witnesses?**

67 A. Yes I do. The general theme of the testimony of the witness for the Intervenor is  
68 a grant of ETC status to IVC would jeopardize the long-term sustainability of the  
69 Universal Service Fund (USF). That simply is not the case. This type of  
70 testimony is directed toward the whole concept of granting ETC status to wireless  
71 carriers and not the merits of the IVC proposal. Indeed, Mr. Walsh has made it  
72 clear that Mr. Schoonmaker's testimony appears to be, in large part, directed  
73 toward sensationalizing the issues as opposed to focusing on the facts of the IVC  
74 filing. The simple truth is that the Congress of the United States has made it  
75 abundantly clear that wireless carriers *are* eligible for ETC status. The FCC and  
76 most other state commissions have granted and continue to grant ETC status to  
77 wireless carriers. The fund in question is the Federal USF fund and the simple  
78 fact remains that whether or not the ICC grants ETC status to IVC, wireless  
79 carriers nationwide *will* continue to draw support from the USF. The only issue  
80 to be decided by the ICC is whether any of those USF funds are used to enhance  
81 wireless service within the state of Illinois or whether access to those funds by  
82 rural wireless carriers will be available for the benefit of the citizens of all states  
83 *other than* Illinois.

84 **Q. But the USF is not a limitless pool of money. Mr. Schoonmaker has testified**  
85 **that there has been a substantial growth in the amount of money being paid**  
86 **to wireless ETCs and that there has been a corresponding growth in the USF**  
87 **contribution factor since the time that your direct testimony was filed.**  
88 **Doesn't that argue against continuing to designate wireless ETC's**

89 A. There is no question that the integrity of the USF is essential. And while I will  
90 specifically respond to the issues raised by Mr. Schoonmaker, I will again state  
91 that the ICC should not look to address "national" USF issues in the context of the  
92 IVC ETC application. Neither other states nor the FCC are denying their rural  
93 citizens access to needed USF support for rural wireless carriers in the interim.

94 Just prior to filing this testimony, the FCC issued its first wireless ETC  
95 order since releasing its recommended guidelines.<sup>1</sup> In granting that wireless ETC  
96 designation, the FCC confirmed that it was in the public interest to continue  
97 granting wireless ETC designations while broader issues relating to the USF are  
98 fully explored in the context of specific proceedings designed to address those  
99 policy issues. In granting the NTELOS ETC designation, the FCC explained

100 We reject Verizon's request that we delay ruling on any pending  
101 ETC petitions until the Commission addresses issues raised in the  
102 high cost proceeding pending before the Joint Board. According to  
103 Verizon, the number of outstanding potential ETC designations  
104 could overwhelm the universal service fund. [Footnote omitted].  
105 In February 2005, the Commission adopted an order setting forth  
106 requirements for a carrier seeking ETC designation from the  
107 Commission. [Footnote omitted]. Although the Commission  
108 recognized that the proceeding before the Joint Board might have  
109 an impact on determining support for ETCs, the Commission did  
110 not find that it should delay acting on ETC petitions pending

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<sup>1</sup> *Federal-State Joint Board on Universal Service, Virginia PCS Alliance, L.C. and Richmond 20 MHz LLC d/b/a NTELOS, Petition for Designation as an Eligible Telecommunications Carrier in the Commonwealth of Virginia, Order DA 05-1663 (released June 14, 2005). ("NTELOS Order")*

111 conclusion of the Joint Board proceeding. [Footnote omitted] The  
112 *ETC Designation Order* set forth the framework for designating  
113 ETCs and indicated an intent to move forward with petitions for  
114 ETC designation. Moreover, in the *ETC Designation Order*  
115 proceeding, the Commission declined to adopt a specific test  
116 concerning whether the designation of an ETC would affect the  
117 size and sustainability of the high cost fund. [Footnote Omitted]  
118 Therefore, we decline to delay ruling on pending ETC petitions.

119 So the issue before the ICC is very much whether the rural citizens of the state of  
120 Illinois will enjoy the same benefits from allowing USF support to rural wireless  
121 carriers as the rural citizens of other states, pending any long-term adjustments in  
122 the USF funding and support mechanisms. The FCC has correctly recognized  
123 that proceeding with wireless ETC designations would not have a dramatic impact  
124 on the USF in the interim.

125 Turning now to Mr. Schoonmaker's testimony while Mr. Schoonmaker  
126 has not provided incorrect information, he has made a series of statements which,  
127 while individually correct, taken as a whole could lead to an incorrect inference  
128 and thus the wrong conclusion. Specifically, Mr. Schoonmaker has provided  
129 testimony as to the "alarming" growth in the amount of absolute dollars being  
130 paid to wireless ETCs and cites a "jump of almost 25%" in the USF contribution  
131 factor. While one might therefore conclude that the wireless ETC designations  
132 have led to the growth in the need for increased USF funding, in reality there is  
133 little correlation between these two facts.

134 The USF is more than just the program used to fund rural  
135 telecommunications services such as those at issue here. The USF actually  
136 consists of four programs, each administered by the Universal Service  
137 Administrative Company ("USAC"). These programs are: (1) the universal

138 service mechanism for high cost areas, providing financial support to carriers  
139 serving high cost areas; (2) the universal service mechanism for schools and  
140 libraries (also known as the E-rate program), providing for discounted services  
141 (local and long distance telephone service, Internet access, and internal  
142 connections) to eligible schools and libraries; (3) the universal service mechanism  
143 for low income consumers, assisting low income consumers with discounted  
144 installation and monthly telephone services; and (4) the universal service  
145 mechanism for rural health care, providing discounted services to rural health care  
146 providers. Each quarter, USAC reports on the projected needs to fund each of  
147 these four programs and the FCC establishes a “contribution factor” used to  
148 collect the funds needed to meet those projected costs on a collective basis. The  
149 factor is set so that, when multiplied times the revenues associated with the types  
150 of interstate services from which the USF fees are collected, the amounts needed  
151 to fund these four programs for the next quarter are collected.

152 As a result, the USF is structured so that the amount distributed under the  
153 fund is directly tied to the amount collected by the fund. Where the amount being  
154 distributed grows but the contribution factor remains relatively constant, the fund  
155 may be “growing” in terms of absolute dollars but remains stable because the  
156 fund is, in effect, distributing a pool of money that is growing “in step” with the  
157 amounts being disbursed. Where expenditures increase beyond a corresponding  
158 growth in revenues, the contribution factor is increased. So under its present  
159 structure and funding mechanism, the USF continues to be self sustaining.

160           While Mr. Schoonmaker is correct that the contribution factor has  
161 increased since 8 months ago when I filed my direct testimony, that increase is  
162 not attributable to the growth in wireless ETC designations as he suggests.  
163 Perhaps the best way to explain this is to independently examine the wireless  
164 impact in the USF in the context of both the wireless contributions to the fund and  
165 the amounts that wireless ETCs are drawing from the fund.

166           First, from the standpoint of wireless contributions to the funds, the FCC  
167 has already made adjustments in the way that wireless carriers calculate their  
168 contributions. As I previously, explained, the contribution factor is multiplied by  
169 a carrier's interstate revenues. In the wireless context, it is not always easy to  
170 delineate interstate versus intrastate revenues. As a result, the FCC collected  
171 traffic data from wireless carriers and determined the average portion of revenues  
172 that were derived from interstate traffic. Where the wireless carrier cannot easily  
173 track its interstate versus intrastate revenues, the wireless carrier may use a "safe  
174 harbor" assumption that its traffic is in line with that national average. While that  
175 safe harbor was originally set at 15%, with the bundling of toll, the FCC updated  
176 its information and nearly doubled that safe harbor to its current level of 28% of a  
177 carrier's revenues. As a result, the level of contribution to the USF by the  
178 combined group of wireline and wireless carriers actually declined during 2003.  
179 Specifically, the contribution factor declined from 9.5% (third quarter 2003), to  
180 9.2% (fourth quarter 2003) to 8.7% (first quarter 2004). Second quarter 2004  
181 USF factor remained at 8.7 percent, the same factor as for the first quarter of  
182 2004. The third and fourth quarter 2004 contribution factor was 8.9 percent, still

183 well below the contribution factors for the prior year. While, as Mr.  
184 Schoonmaker testified the contribution factors increased for 2005 (10.7% for first  
185 quarter and 11.1% for the second quarter), the majority of those increases related  
186 to increased projected support for the Schools and Library Program and the Rural  
187 Health Care Program.<sup>2</sup> Those portions of the fund are not at issue here and are  
188 not affected by wireless ETC designations. Comparing the Program Support  
189 levels from the 4<sup>th</sup> quarter 2004 to those projected for the second quarter of 2005,  
190 the Schools and Libraries Projected Program Support increased 36.33% as  
191 compared to an increase of 5.21% in the High-Cost program.

192 The FCC just released the projected USF contribution factor for the third  
193 quarter of 2005, on June 14, 2005, wherein it has proposed a reduction in the  
194 contribution factor from 11.1% for the second quarter to 10.2%. So, from a  
195 contribution standpoint, the USF fund remains relatively stable (even with the  
196 significant increased needs of the Schools and Library Program and the Rural  
197 Health Care Program). Again to the extent the size of the fund has grown in  
198 recent quarters, those increases in the costs are associated with programs not at  
199 issue here, not with the designation of wireless ETCs, and it is those programs  
200 that have accounted for the vast majority of increased costs over the past few  
201 quarters.

202 **Q. But Mr. Schoonmaker points out that the level of wireless support has grown**  
203 **from \$11 million annually in 2001 to \$736 million dollars annually in 2005.**

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<sup>2</sup> Copies of all FCC quarterly contribution factor public notices are available on the  
FCC's web page at the following link:

[http://www.fcc.gov/wcb/universal\\_service/quarter.html](http://www.fcc.gov/wcb/universal_service/quarter.html)

204 **Doesn't that demonstrate a significant strain being placed on the fund by**  
205 **wireless carriers?**

206 A. Not at all. From the standpoint of the amount of USF support being paid out to  
207 wireless carriers, Mr. Schoonmaker has presented numbers to suggest "alarming"  
208 growth in wireless USF support payments. In actuality, these numbers  
209 demonstrate that wireless carriers continue to receive far less than their pro rata  
210 level of support when compared to dollars wireless carriers pay into the fund.

211 Attachment 5 to my rebuttal testimony is a chart that graphically depicts  
212 the contributions to the USF categorized by the type of entity, over the past 8  
213 years. As shown in that chart, in 1997 wireless carriers contributed 3.3% of the  
214 monies in the USF as compared to 14.3% of the fund contributions which came  
215 from ILECs for that same year. By 2005, the level of ILEC contributions had  
216 grown to 26.6%, representing a 1.86 fold increase in the level of ILEC  
217 contributions. In sharp contrast, the monies contributed to the USF by wireless  
218 carriers has grown to 34.1% of all monies contributed to the USF, representing a  
219 more than 10 fold increase in the level of wireless carrier contributions. Stated  
220 another way, for 2005, the wireless carrier USF contributions to the fund, in real  
221 dollars, is more than 28% greater than the funds contributed to USF by the ILECs.

222 Now looking at the level of monies that wireless carriers "draw" from the  
223 fund, based upon annualizing the USF support projections for the second quarter  
224 of 2005, USF funding for 2005 is expected to be approximately \$7.224 billion.  
225 Taking Mr. Schoonmaker's number of \$736 million in support now being paid to  
226 wireless ETCs for 2005, USF payments to wireless carriers will represent 10.19%

227 of the total funds distributed. This amount represents about 30% of the monies  
228 paid *into* the fund by wireless carriers. Despite the fact that wireless ETC support  
229 is clearly allowed, and despite the fact that monies paid *out* to wireless ETCs is  
230 less than 1/3 of the monies paid *into* the fund by wireless carriers, the ILECs  
231 express alarm that wireless ETCs are being allowed to actually access a *portion* of  
232 the monies that wireless carriers contribute to the USF. So “collectively” the  
233 burden placed on the USF by wireless carriers does not even approach the monies  
234 paid into the USF by wireless carriers. While this information fully responds to  
235 the issue raised by Mr. Schoonmaker, it is important for the ICC to remember that  
236 Mr. Schoonmaker’s policy issue is *not* applicable to the disposition of the IVC  
237 ETC application.

238 As previously testified, the level of support that the three IVC partnerships  
239 would expect to draw from the fund is *de minimis*; representing only a fraction of  
240 a percent of the high cost support paid out of the fund. And while Mr.  
241 Schoonmaker is not an attorney he demonstrates a remarkable understanding of  
242 the FCC’s position with respect to USF issues, where he wants to. However, not  
243 being an attorney, Mr. Schoonmaker apparently feels no obligation to advise the  
244 ICC when the FCC holdings are clearly against his position. This is one such  
245 instance.

246 The FCC has held that a potential high cost support of 1.88% of the total  
247 level of high-cost support, or approximately forty-seven (47) times the burden of  
248 the proposed IVC designation, did not represent a significant increased burden on  
249 the USF. *See, In the Matter of Federal-State Joint Board on Universal Service,*

250 *NPCR, Inc. dba Nextel Partners Application for Designation as an Eligible*  
251 *Telecommunications Carrier In the states of Alabama, Florida, Georgia, New*  
252 *York, Pennsylvania, Tennessee and the Commonwealth of Virginia, Memorandum*  
253 *Opinion and Order*, CC Docket No. 96-45, DA 04-2667 (rel. August 25, 2004)  
254 (“*Nextel Order*”), at paragraph 21. In point of fact, the *FCC Guidelines Report &*  
255 *Order*, acknowledges that “...given the size of the total high cost fund –  
256 approximately \$3.8 billion a year – it is unlikely that any individual ETC  
257 designation would have a substantial impact on the overall size of the fund.”<sup>3/</sup>

258 High cost support levels will increase under the current funding structure  
259 by the designation of additional ETCs. However, with the continued growth in  
260 the number of wireless subscribers, so will the amount of monies paid into the  
261 fund by wireless carriers. *If*, at some point in the future the fund truly cannot be  
262 sustained, it will be incumbent upon the Federal regulators, in conjunction with  
263 the Joint Federal and State Board on Universal Service, to implement the changes  
264 needed to retain a stabilized fund. In the meantime, Mr. Schoonmaker’s position  
265 that the ICC should block the use of USF funds for the benefit of the citizens of  
266 rural Illinois for the continued benefit of the rural citizens of other states where  
267 these funds are currently flowing, is clearly not in the public interest.

268 It is perhaps most telling to note that the *FCC Guidelines Order*, only  
269 cited by Mr. Schoonmaker when supportive of his position, do *not* indicate that  
270 the FCC will cease authorizing wireless ETCs. Instead, they merely codify the

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<sup>3/</sup> Federal-State Joint Board on Universal Service, CC Docket No. 96-45, Report and Order, FCC-05-46 (Rel. March 17, 2005) (“*FCC Guidelines Report & Order*”) at ¶ 53. (footnote omitted).

271 position which the FCC has largely taken over the past 15 months when  
272 designating ETCs. Significantly, the FCC has never denied a wireless ETC  
273 application nor are there indications in the *FCC Guidelines Order* of any future  
274 intent to do so. The only “denials” of designation to wireless carriers has been in  
275 individual wirecenters where cream skimming was an issue. That is not an issue  
276 in the IVC case. Indeed, if the ICC had declined to assert jurisdiction over ETC  
277 applications, the FCC would ignore the policy issues raised by Mr. Schoonmaker  
278 and decide to evaluate the IVC application on its merits. Since the IVC  
279 application is wholly consistent with all applicable FCC precedent, and since  
280 there is no cream skimming issue involved, there is no doubt that the requested  
281 designation would be granted.

282 Finally, the ICC should keep in mind that the sole purpose behind issuing  
283 the *FCC Guidelines Order* is to provide state commissions with suggested  
284 guidelines to be used as they too continue to authorize additional wireless ETCs.

285 **Q. Are there specific examples of other issues where Mr. Schoonmaker has**  
286 **“failed to mention” that the FCC position is at odds with the position he**  
287 **advances?**

288 A. There are several examples. Mr. Schoonmaker questions whether a wireless  
289 carrier should be able to receive USF where the carrier is not providing service or  
290 where “dead spots” exist. Applicable FCC precedent expressly deals with both of  
291 these issues and holds that it would be unreasonable to require any ETC applicant

292 to be providing the service for which ETC support is required, as a precondition  
293 to receiving ETC designation.<sup>4/</sup>

294 Mr. Schoonmaker takes similar liberties with the equal access issue. The  
295 FCC has expressly held that equal access is not a condition to ETC designation<sup>5/</sup>  
296 and in the *FCC Guidelines Order* sought only an acknowledgement that equal  
297 access might apply in the future but only in the context of a wireline carrier  
298 relinquishing its ETC designation and the wireless carrier thereby undertaking a  
299 carrier of last resort obligation. Mr. Schoonmaker, in providing the ICC with the  
300 benefit of his analysis of the “present legal framework” for USF, neglected to  
301 point this out when telling the ICC that he does not feel it is in the “public  
302 interest” to allow USF support where the wireless carrier does not offer equal  
303 access. (Schoonmaker 2-I Direct Testimony at p. 21, lines 540-542, 2-II Direct  
304 Testimony at p. 21, lines 546-548, 2-III Direct Testimony at p. 21, lines 540-541).  
305 Mr. Walsh includes a detailed analysis as to why equal access has not been  
306 applicable in the context of wireless service offerings where the subscriber does  
307 not even incur toll charges, including the instances where IVC has committed to  
308 offer equal access. Suffice it to state that IVC has more than met all equal access  
309 obligations set forth in the *FCC Guidelines Order*, and equal access should not be  
310 an issue in this proceeding.

311 **Q. Are there any other examples where Mr. Schoonmaker has elected to not**  
312 **provide the ICC with an accurate view of current FCC holdings?**

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<sup>4/</sup> See, e.g., *Virginia Cellular* at ¶23.

<sup>5/</sup> See, e.g., *Virginia Cellular* at ¶21.

313 A. Yes. In discussing IVC's adoption of the CTIA Consumer Code, Mr.  
314 Schoonmaker explains that this "voluntary code" is insufficient because there is  
315 no enforcement mechanism. Mr. Schoonmaker does not address the fact that in  
316 virtually *every* ETC order issued by the FCC since the *Virginia Cellular* case, the  
317 FCC has found adoption of the CTIA Code sufficient to ensure consumer  
318 protection. Indeed, the FCC again confirms this position in the *FCC Guidelines*  
319 *Order*. Yet Mr. Schoonmaker asserts that this code is not enough since you only  
320 have IVC's "word" that it will comply with that code.

321           Aside from the fact that Mr. Schoonmaker is far too anxious to impugn  
322 IVC (while not even attempting to advance any reason for the ICC to assume that  
323 the IVC witnesses are not testifying truthfully), Mr. Schoonmaker is, again,  
324 absolutely wrong from a legal standpoint. Stated quite simply, in granting the  
325 IVC ETC designation, the ICC will rely upon representations and commitments  
326 made by IVC. The ICC will retain both the oversight of the actual use of USF  
327 funds by IVC as well as the power to revoke the ETC designation; a power it has  
328 with respect to any ETC designation in Illinois (even that of an ILEC).

329           Cutting through the verbiage, it appears as though Mr. Schoonmaker is  
330 attempting to use the IVC proceeding as a platform to argue why certain current  
331 ICC ILEC regulatory practices should be relaxed if they are not applied evenly to  
332 IVC. He makes this argument in the name of "competitive neutrality." Aside  
333 from the fact that the IVC application is not the forum for debate and resolution of  
334 such issues, the ICC can most certainly retain oversight of certain ILEC consumer  
335 protections required in a monopolistic environment, without applying identical

336 “protections” to the competitive wireless provider. If Mr. Schoonmaker were  
337 correct that “competitive neutrality” meant absolute equal regulation, then IVC  
338 would suggest that the ICC might want to adopt some of the consumer protections  
339 that IVC presently offers (without regulatory requirement) as far more consumer  
340 “friendly” than required of the ILEC by current regulation. For example, in Mr.  
341 Walsh’s direct testimony, he advises that IVC provides free loaners for customer-  
342 owned handsets that fail, provides service for customer-owned equipment that  
343 fails, offers dozens of locations where the customer can obtain a free loaner,  
344 offers evening and weekend access at convenient shopping mall locations,  
345 provides customer service activation in a matter of minutes (as opposed to the  
346 regulated requirement of 5 days), and so on. I am not aware of any ILEC in the  
347 IVC proposed ETC service area offering anywhere near this level of customer  
348 service despite being “regulated” to meet certain minimum obligations.

349 **Q. Are there other areas where Mr. Schoonmaker has “confused” regulatory**  
350 **issues?**

351 A. In attempting to dismiss the undeniable advantage of mobility offered by a  
352 wireless ETC, Mr. Schoonmaker refers to this as a premium feature not subject to  
353 USF support (Schoonmaker 2-I Direct at p. 59, lines 1381-1383, 2-II Direct at p.  
354 60, lines 1423-1425, 2-III Direct at p. 60, lines 1413-1416). However, Congress  
355 has determined that wireless services, with their inherent mobility functionality  
356 are indeed eligible for USF support. Moreover the FCC has repeatedly and  
357 consistently found wireless mobility to be a significant public interest advantage  
358 in evaluating wireless ETC applications.

359 **Q. I now direct your attention to the fact that Mr. Schoonmaker “implies” that**  
360 **the IVC “stockholders” may be the primary beneficiaries of ETC**  
361 **designation. Is this correct?**

362 A. No. In fact, Mr. Schoonmaker’s *innuendo*, intended to give a false appearance of  
363 impropriety on IVC’s part, could not be further from the truth and is actually at  
364 odds with the basic USF structure under which the ILECs draw USF support. Mr.  
365 Schoonmaker has made the point that the ILEC level of USF support is based  
366 upon the ILEC’s “cost” of providing service. While Mr. Schoonmaker made that  
367 point in the context of attempting to show some sort of inappropriate “windfall”  
368 for a wireless carrier receiving USF support, it is helpful to take a moment and  
369 consider what goes into the ILEC “costs” for federal USF purposes. Included in  
370 those “costs” is an all but guaranteed rate of return for the ILEC “shareholders.”  
371 Presumably, this is the type of return Mr. Schoonmaker would refer to as the  
372 ILEC “stockholders” being the primary beneficiaries of ETC designation. Yet, as  
373 sensationalistic as this type of statement might sound, there is actually a sound,  
374 well-reasoned basis for allowing the ILECs to include a rate of return in their cost  
375 analysis. Stated quite simply, the offering of telecommunications service is an  
376 expensive, capital-intensive business. Including a rate of return in the ILEC  
377 “cost” is essential to providing the incentive for the stockholders and investors to  
378 place capital into the ILEC as opposed to a bank certificate of deposit or another  
379 investment vehicle. If the ILEC stockholders could not make a reasonable return  
380 on their investment, they would invest their monies elsewhere. Stated another  
381 way, without stockholders making a reasonable return on their investment in

382 telecommunications in rural areas, there would be no telecommunications in rural  
383 areas. And extending these services to rural areas is what Universal Service has  
384 been all about. In the IVC context, IVC is seeking USF support because, from a  
385 business standpoint, the investment needed to construct and operate the cell sites  
386 required to extend service to the rural-most portions of its market cannot be  
387 justified absent USF support.

388 What is most ironic with Mr. Schoonmaker's statement, however, is that  
389 by wireless carriers *not* being able to base their level of USF support on their own  
390 costs (which, using the ILEC model would include a return on investment) the  
391 wireless ETC is actually far *less* likely to "profit" from USF than the ILEC  
392 currently does. Federal law and FCC regulations strictly limit how USF funds can  
393 be used. In addition, assuming IVC is designated as an ETC, the ICC will be  
394 required to annually certify to the FCC that IVC is using the USF funds as  
395 permitted by law. IVC has submitted a 5 year network enhancement plan,  
396 including projected costs, that, when including allowable operating expenses  
397 would far exceed the level of USF that IVC is expected to receive. So, in reality,  
398 while the ILEC USF support *does* include a direct financial benefit for the ILEC  
399 shareholders, IVC has demonstrated the intent to use its entire USF support to  
400 enhance its network.

401 In his rebuttal testimony, Mr. Walsh has included an analysis that shows  
402 the "per subscriber" level of USF support that IVC would receive, on a  
403 consolidated basis. Clearly, IVC would much rather be able to obtain support on  
404 the basis of its "cost" of providing service, especially if that "cost", as with the

405 ILEC, included a rate of return on investment. Unfortunately, current federal law  
406 and regulation limits IVC's USF support to the level based upon each underlying  
407 ILEC's "per subscriber" level of support. The IVC proposed ETC service area  
408 includes far more ILEC wire centers at the 0 to \$3.00 per subscriber level of  
409 support than the higher cost wire centers. However, it is in the higher cost, more  
410 rural areas where the USF support is needed most to enable the expansion of the  
411 IVC network to serve more of those areas. Accordingly, fully analyzing Mr.  
412 Schoonmaker's single derogatory comment against IVC actually makes a very  
413 strong case as to why IVC needs the USF support from the rural-most portions of  
414 its proposed ETC service area.

415 When considering the level of USF support that IVC would draw, it might  
416 be helpful to compare the proposed service area and the number of subscribers of  
417 IVC with those of the ILECs in IVC's proposed ETC service area. Unfortunately,  
418 IVC only has publicly available data to perform that analysis in the context of  
419 those ILECs whose study areas lie wholly within the proposed ETC service area.  
420 If granted ETC designation, IVC would receive approximately \$1.3million dollars  
421 in support of serving approximately **\*\*\*confidential \_\_\_\_\_\*\*\*** subscribers  
422 in approximately 70 ILEC wirecenters. Collectively, the Intervenor ILECs whose  
423 study areas are wholly within the IVC proposed ETC service area receive almost  
424 \$800,000 to serve 6 wirecenters with a collective total of approximately 2200  
425 subscribers. If we added the ILEC support received by Marseilles Telephone  
426 Company, Frontier Communications of DePue, Frontier Communications of  
427 Prairie and Leonore Telephone Company collectively the ILECs would receive in

428 excess of \$1.93M to serve 10 wire centers and little more than 8,100 total  
429 subscribers.

430 **Q. Mr. Schoonmaker also explains that IVC has the “burden of proof” with**  
431 **respect to this application. Do you agree with that position?**

432 A. I would agree with the statement that it is IVC’s burden to present its case and  
433 demonstrate why the grant of ETC designation to IVC would be in the public  
434 interest. However, Mr. Schoonmaker apparently does not fully understand this  
435 legal concept. Once IVC has presented its case, the burden shifts to one of  
436 rebuttal by the opposing party. The opposing party cannot, as Mr. Schoonmaker  
437 does throughout his testimony, make unsupported assertions and then claim that  
438 the burden is on IVC to disprove those assertions.

439 **Q. In addition to the regulatory and policy issues previously discussed, Mr.**  
440 **Schoonmaker, also provides testimony with respect to “engineering” issues in**  
441 **the context of IVC’s radio coverage. Before we delve into the specifics of that**  
442 **testimony, do you have any preliminary observations with respect to that**  
443 **analysis?**

444 A. Yes, I do. I note that the Intervenors utilized the services of an engineering firm  
445 to prepare certain coverage maps. Yet for some reason, they do not utilize an  
446 engineer to either introduce these maps into evidence or to discuss engineering  
447 issues with respect to IVC’s network. While Mr. Schoonmaker indicates that  
448 maps were prepared under his “supervision and direction”, the fact that Mr.  
449 Schoonmaker does not hold a degree in electrical engineering or provide any  
450 foundation for any other technical expertise, it is surprising that the engineering

451 firm that prepared the maps upon which the “engineering issues” are based, does  
452 not provide expert testimony in support of the conclusions and assertions made by  
453 Mr. Schoonmaker. However, just as Mr. Schoonmaker in providing his “legal  
454 analysis” was not hindered by the need to accurately characterize the law when  
455 precedent was at odds with the position he wanted to advance, by not being an  
456 engineer, he appears to feel quite free to make assertions that are neither  
457 technically correct nor based in sound engineering practice.

458 **Q. Can you expand on this providing specific analysis?**

459 A. Yes. First, I highlight the fact that the engineering maps appended to Mr.  
460 Schoonmaker’s testimony were prepared based upon “publicly available data” for  
461 IVC cell sites (Schoonmaker RSA 2-I Direct at p. 51, lines 1207-1208, 2-II Direct  
462 at p. 51, lines 1210-1211, 2-III Direct at p. 51, lines 1206-1207). Examination of  
463 the maps themselves shows that the data was apparently that on file in the FCC’s  
464 Universal Licensing System (“ULS”) database. (See, e.g. the reference to “ULS”  
465 on Attachments 1.11.2, 1.12). The ULS database does not list all operating carrier  
466 cells sites for cellular carriers. Those carriers, such as IVC, are not licensed on a  
467 cell site basis. Rather, they hold geographic licenses and the ULS database  
468 includes data on cell sites used to define a carrier’s Cellular Geographic Service  
469 Area.” Virtually all cellular carriers, including IVC, operate more cell sites than  
470 those listed in the ULS database. In response to a data request, IVC had provided  
471 a map depicting each of its tower locations to the Intervenors. Curiously, the  
472 coverage from some of those towers is missing from the coverage maps provided  
473 by Mr. Schoonmaker. Attachment 4 to this testimony is a map providing the

474 coverage for the consolidated IVC system, using all presently operating cell sites,  
475 including the 3 new cell sites I mentioned above. Attachment 4A shows the  
476 composite coverage to a level of -95 dBm while Attachment 4B includes the -75  
477 dBm and -100 dBm levels included in Mr. Schoonmaker's testimony.

478 **Q. Why have you provided coverage at a signal level of -95 dBm and not just the**  
479 **-75 and -100 dBm signal levels provided by Mr. Schoonmaker?**

480 A. I have provided the -95 dBm signal level map because I believe that that is more  
481 indicative of reliable rural service coverage than the levels provided by Mr.  
482 Schoonmaker.

483 **Q. But Mr. Schoonmaker testifies that a signal level of -100 dBm is the**  
484 **minimum operating signal strength and a -75 dBm is "urban quality" for a**  
485 **0.6 watt handheld unit. Is that correct?**

486 A. The statement includes a number of basically accurate statements that are applied  
487 in a manner to arrive at an inaccurate conclusion. First, the reference to the 0.6  
488 watt handheld unit is meaningless for a number of reasons, probably not the least  
489 of which is there are no CDMA handheld units that operate anywhere near 0.6  
490 watts. In fact there have not been 0.6 watt handheld analog units manufactured in  
491 years. Moreover, the power at which the handheld unit "transmits" has nothing to  
492 do with the "number of bars" as referred to by Mr. Schoonmaker (Schoonmaker  
493 2-I Direct p. 56, lines 1326-1328, 2-II Direct p. 56, lines 1329-1331, 2-III Direct  
494 p. 56, lines 1325-1326). The "bars" are an indication of *received* signal level and  
495 have nothing to do with the output power of the handheld unit. The  
496 reference to the -100 dBm received signal level is a reasonable indication of the

497 “floor” or minimum signal level at which a handheld unit would operate in a rural  
498 environment (assuming a properly designed network which accounts for the lower  
499 power of the handheld operation when “talking back” to the cell site). However,  
500 if you think of that signal as the “floor” below which the handheld unit does not  
501 have quality service, sound engineering practice would not depict coverage base  
502 upon a -100 dBm. Radio wave propagation is a function of a number of  
503 environmental factors which affect the received signal strength at any given  
504 location. In point of fact, standing perfectly still at a fixed location, one would  
505 see the received signal strength vary over time as a function of both  
506 environmental conditions (humidity, the amount of vegetation on a trees, etc.) and  
507 simply as a function of time itself (a concept known as Raleigh Fading). For that  
508 reason, in preparing a “coverage map” engineers routinely depict a higher  
509 received signal level of -95 dBm. This provides a 5 dB “fade margin” so that  
510 changes in environmental conditions and/or time of 5 dB would still result in the  
511 received signal level being above the “floor” below which the handset would not  
512 operate with an acceptable level of quality.

513 Next Mr. Schoonmaker talks about a -75 dBm as the signal level needed  
514 for “urban quality.” This is a meaningless benchmark and a misleading statement.  
515 As a general matter, so long as the handheld unit receives a signal that is above its  
516 “floor” the unit receives suitable “quality” whether it is in a city or in a farm field.  
517 Accordingly, urban vs. rural design criteria have little to do with having higher  
518 power level at the handheld unit. Rather, it is a function of trying to ensure that  
519 the received signal level remains above the necessary signal “floor” at the

520 handset. From the handset's perspective, "excess" received signal level above the  
521 floor does not improve the "quality of service."

522           However, Mr. Schoonmaker's statement is accurate to the point that in an  
523 urban environment, the handheld unit is more likely to encounter "obstacles" to  
524 radio wave propagation that attenuate or reduce the amount of RF energy that  
525 reaches the handheld unit. For example, when the unit is taken inside of a  
526 building, the signal that penetrates the building is less than the amount of signal  
527 "on the street." The denser the building material, the less signal can reach the  
528 handset inside of the building. So, for a given distance from a transmitting site,  
529 the handheld unit inside of a concrete and steel building would receive far less  
530 signal than a handset located the same distance from a transmitting site that is  
531 inside of a wood frame building. Similarly, the handheld unit on the street would  
532 receive a higher signal level than a handheld unit in a car at the same location.  
533 So, in an urban environment, engineers typically do design networks for a higher  
534 signal level "on the street" to ensure that the required signal "floor" is present in  
535 locations where the handset might be taken.

536 **Q. But a difference of "25" does not appear be very great. Why is that sufficient**  
537 **to make a difference in an urban setting?**

538 A. The key here is to understand that the signal level expressed in dBm is a  
539 logarithmic reference to a specified signal level. A change of "3" dB represents a  
540 doubling of the power. So an increase of 25 dB represents more than a doubling  
541 of power 8 times. Stated another way, for the first 3 dB increase in received  
542 signal level, the power doubles. The second 3 dB increase doubles the power

543 again representing a 4-fold increase over the original signal. The third 3 dB  
544 doubles it again to a power level that is now 8 times stronger than the original  
545 power, and so on. Applying this “doubling” 8 times (which would be a change of  
546 24 dB) would result in a power level that is **256** times stronger than the original  
547 power. A 25 dB increase represents an increase in power that is approximately  
548 **316** times as great as the original power level.

549 But received signal level is only part of the picture. If there is interference  
550 in the area, the handheld might not be able to operate with a suitable level of  
551 quality even if the signal it is receiving is above the -100 dBm floor. This second  
552 concept is referred to as the signal to noise ratio. In an urban environment (like a  
553 downtown area) there are much more sources of interference so the effective  
554 “floor” actually rises above the -100 dBm previously discussed. So when one  
555 says that they are looking for an urban design using a -75dBm received signal  
556 level, they are actually saying that they are looking to get a signal to a handset  
557 that is above the handset floor after allowing for the need to overcome obstacles  
558 that reduce the amount of signal reaching the handset and to keep the amount of  
559 energy reaching the handset above the handset’s “floor” in that higher-noise  
560 environment.

561 The point to be made here in this somewhat over-simplified engineering  
562 analysis is that trying to evaluate the acceptability of the IVC service based upon  
563 where there is a received signal level of -75 dBm for “urban quality” is  
564 meaningless. In the rural market such as Illinois RSA 2, the noise floor is  
565 typically not an issue. As a result, essentially all of the radiated power is

566 available to provide service. We then look to see what the typical “obstruction” is  
567 that would be expected to be encountered and then design for an average signal  
568 level that would overcome the obstacles likely to be encountered in that  
569 environment. We don’t need to have sufficient signal available to penetrate a  
570 concrete and steel skyscraper if there are no such structures in the market being  
571 served.

572 **Q. So what is an appropriate criterion for an environment such as IVC’s?**

573 A. Again, at any given location the needed level of signal is a function of the  
574 obstacles to propagation that will be encountered. While this means that the  
575 question has no simple answer, the -85 dBm is a reasonable number to use from  
576 the standpoint of evaluating IVC service on an overall basis.

577 **Q. And how can that be graphically presented?**

578 A. On the average, areas where the IVC received signal level would be predicted to  
579 be below a -85 dBm could be characterized as areas where IVC’s network  
580 performance would benefit from signal enhancement. That is, of course, the  
581 proprietary maps which IVC submitted in its original applications labeled as  
582 Areas Where CDMA Coverage Would Benefit from Enhancement (IVC  
583 Application Proprietary Exhibits E and Proprietary Exhibit 2.4 to my Direct  
584 Testimony). Those maps depict areas in IVC’s FCC-licensed service area where  
585 the existing IVC CDMA received signal level is predicted to be below a -85 dBm.

586 **Q. So why have you submitted maps in this testimony showing the -75 dBm and**  
587 **-100 dBm service levels?**

588 A. IVC had submitted the appropriate maps with its original application. While I  
589 think we can see why the levels advanced by Mr. Schoonmaker are not really  
590 dispositive in the rural environment, I have submitted the maps using Mr.  
591 Schoonmaker's levels so that in evaluating his testimony the reader can at least  
592 have accurate maps with which to "evaluate" the IVC network. Again, I caution  
593 that the entire analysis of using a -75 dBm signal level as indicative of  
594 determining whether IVC offers "urban quality service" in any given area is  
595 meaningless, as is the corollary that areas (such as portions of the C-R area) that  
596 will receive "less than urban quality service" from the IVC proposal, is  
597 meaningless. (Compare Schoonmaker RSA 2-III Direct Testimony at p.58).

598 **Q. So how can the ICC determine what wire centers will receive improved**  
599 **service from IVC's network enhancement plan?**

600 A. Appended to my Supplemental Direct testimony as Proprietary Exhibit 3.1 was a  
601 detailed listing of the proposed network enhancement information identifying the  
602 specific wire centers and population within the proposed ETC service area that  
603 would receive signal from each proposed additional cell site. This information  
604 was presented separately for each and every proposed new cell site. Attached  
605 hereto as Proprietary Attachment 6 is a map that depicts the composite of IVCs  
606 coverage assuming that it receives ETC designation and its entire 5 year  
607 enhancement plan has been implemented.

608 **Q. So how would the completion of the 5 year enhancement program affect**  
609 **dropped calls and dead spots?**

610 A. There is no doubt that the addition of these cell sites would substantially enhance  
611 the IVC network, especially in some of the most rural portions of its proposed  
612 ETC service area. However, wireless services will always have dead spots and a  
613 number of dropped calls.

614 Dead spots will occur anywhere that the received signal level falls below  
615 the signal “floor” previously discussed. However, as the number of cell sites is  
616 increased, the number of dead spots declines. In the wireline environment we  
617 don’t typically think of “dead spots” yet, from an availability of service  
618 perspective, every location where there is *not* an active phone jack with a phone  
619 plugged into it is, in essence, a “dead spot.” I suspect that comparing the  
620 geographic area encompassed within a few feet of every active phone jack in the  
621 proposed ETC service area with the spots where wireless service might not be  
622 available, would show that IVC has far fewer dead spots than the ILECs.

623 With respect to the concept of “dropped calls”, dropped calls that are  
624 associated with traveling into dead spots will clearly be reduced as the number of  
625 dead spots decreases. However, there are a myriad of other items that can cause a  
626 call to drop. When a subscriber drives out of the licensed service area, the call  
627 can drop. If the mobile handset moves into a location where there is a strong  
628 interfering signal, the call can also drop. Similarly, where there is sufficient  
629 signal but inadequate network capacity a call can drop because the handset moves  
630 out of the coverage area of the serving cell into the coverage area of another cell  
631 that has no “available” channel to carry the call.

632 **Q. What steps does IVC take to ensure that it has adequate network capacity to**  
633 **protect against these types of “dropped calls?”**

634 A. IVC monitors traffic on every cell site in its network on a real-time basis and adds  
635 capacity as needed. In a wireless network, the radio channels are effectively  
636 “trunked” and IVC applies standard traffic engineering analysis to maintain a  
637 level of service comparable to that experienced in an ILEC trunk environment.  
638 The need to expand network capacity on an ongoing basis is why IVC has  
639 included in its network enhancement plan capacity expansions at existing cell  
640 sites and proposed sites to ensure that network capacity keeps up with subscriber  
641 usage growth and demands. In the *FCC Guideline Order*, the FCC recognized  
642 such expenditures as a valid component of a five year network enhancement plan.

643 **Q. Turning to the map in Proprietary Attachment 6, I notice that even after**  
644 **implementation of the 5 year network enhancement plan there remain areas**  
645 **in the IVC proposed ETC service area that are depicted as having a received**  
646 **signal level below -95 dBm. Why is that?**

647 A. The IVC proposed ETC service area encompasses a large, rural geographic area.  
648 With the level of ETC support not being tied to IVC’s cost of providing service,  
649 the IVC network enhancements must be timed to correlate with the actual receipt  
650 of USF support. The amount of money projected to be received over the initial 5  
651 year period would finance the construction and operation of the plan as proposed  
652 in the IVC application. However, the IVC USF support and network  
653 enhancement is not envisioned to terminate at the end of those first five years. As  
654 IVC completes this initial 5 year plan, it would expand its network enhancement

655 to include additional areas and further upgrades over the next successive five year  
656 period.

657 **Q. But what are the implications of these remaining areas with a received signal**  
658 **level below -95 dBm in the event that an ILEC in those areas were to decide**  
659 **to relinquish its ETC designation and IVC were required to become the**  
660 **carrier of last resort?**

661 A. There should be no adverse implication. In the context of carrier or last resort  
662 obligation, the obligation does not require “mobility.” Rather, the obligation is to  
663 the supported services at a fixed location. Accordingly until such time as  
664 sufficient USF support was received to allow IVC to expand its basic network to  
665 accommodate full mobility in those areas, IVC would follow the procedures set  
666 forth in Mr. Walsh’s Direct Testimony, including modifying or replace the  
667 requesting customer’s equipment to provide service; adjusting the nearest cell site  
668 to provide service; identifying and making any other adjustments that can  
669 reasonably be made to the network or customer facilities to provide service; or  
670 installing a roof-mounted antenna or other equipment to provide service; in order  
671 to provide the required service at a location outside of the area that is then capable  
672 of receiving reliable mobile coverage. In areas where the signal level was truly  
673 below -100 dBm, IVC would most likely deploy a rooftop or pole-mounted  
674 receive antenna.

675 **Q. How would utilizing a rooftop or pole-mounted antenna bring the signal level**  
676 **above the “floor” needed to allow service.**

677 A. In predicting received signal levels and developing coverage maps such as those  
678 attached to this testimony, the engineer has to make assumptions about the  
679 receiver. For these situations, the assumption is that the receiver would be a  
680 handheld unit at a height of about 5 feet with only the standard antenna that  
681 comes with the subscriber handset. As the height of the receiving antenna is  
682 increased, the effective signal level also increases. As a rule of thumb, every time  
683 the height of the antenna is doubled, the effective received signal level increases  
684 by 6 db (or, doubles twice). So just by “elevating” the receiving antenna from 5  
685 to 10 feet, we would see a four-fold increase in signal level. On top of that, in a  
686 fixed wireless environment IVC could deploy a “high gain” directional antenna  
687 oriented back toward the closest cell site. These antennas, similar to a standard  
688 residential TV antennas (but typically much smaller) can readily provide gains of  
689 12 to 15 db above the standard “built-in” antenna in the handset with even higher  
690 gain antennas being available. Adding even the 12 db gain antenna to the 6 db  
691 gain realized by moving the antenna to the roof gives an overall system gain of 18  
692 db (or a doubling of received power 6 times since 18 db represents 6, 3 dB  
693 “steps”). In addition, electronic amplification is also available if the antenna  
694 gains alone were insufficient to provide quality service at a fixed location. IVC is  
695 quite confident that utilizing these techniques, because of the number of cell sites  
696 that it has deployed and will be adding, it can provide carrier of last resort service  
697 throughout its proposed ETC service area, even though it might not be able to  
698 provide full mobility at any given site.

699                   And with respect to mobility, please keep in mind that, unlike a fixed  
700 ILEC phone, when the subscriber leaves the residence where that is being served  
701 by this “fixed wireless,” the subscriber can remove the handset from the docking  
702 station that connects it to the outside antenna and take that phone with them.  
703 Once they are in the coverage area, that handset obtains full mobility capabilities  
704 throughout the IVC service area.

705 **Q.   Were there any other items in Mr. Schoonmaker’s testimony that warrant**  
706 **response?**

707 A.   Mr. Schoonmaker makes one comment in closing that warrants careful  
708 consideration by the ICC. Mr. Schoonmaker states that the fact that wireless USF  
709 is being made available to carriers in other states “should have little impact on  
710 whether the ICC grants such status.” (Schoonmaker 2-I Direct at p. 65, line 1529-  
711 1531, 2-II Direct at page 70, line 1639-1641, 2-III Direct at page 66, line 1562-  
712 1563). Nothing could be further from the truth. The USF in question is a pool of  
713 Federal money for the purpose of enhancing telecommunications in rural areas.  
714 The citizens of Illinois pay significant amounts of money into the fund and where  
715 a portion of those funds can be used to enhance the level of service available in  
716 rural Illinois, the ICC should remain cognizant of the fact that these monies are  
717 being used in other states to meet the rural needs of their citizens. IVC is not  
718 advocating that the ICC should simply grant every ETC request, but where, as  
719 here, the wireless carrier has demonstrated a strong existing commitment to serve  
720 rural parts of its market (as opposed to only the interstate highways and major  
721 population centers currently being served by some of the large nationwide and

722 regional carriers) and where the ETC applicant, like IVC, has shown a plan to  
723 deploy further enhancements to its network in rural areas, wholly within the state  
724 of Illinois, the ICC needs to be very cognizant of the impact on the citizens of  
725 rural Illinois if such an application were denied.

726 **Q. Moving on to the ICC Staff testimony I direct your attention to the testimony**  
727 **of Mr. James Zolnierek. Can you summarize Mr. James Zolnierek's**  
728 **testimony?**

729 A. Mr. James Zolnierek has independently analyzed the proposed ETC service area  
730 redefinitions proposed by IVC and has confirmed that there are no cream  
731 skimming issues presented in the context of any proposed redefinition.

732 **Q. Mr. Samuel S. McClerren has raised questions regarding IVC's network**  
733 **reliabilities. Are there any items you wish to address that Mr. Walsh has not**  
734 **addressed in his rebuttal testimony?**

735 A. While Mr. Walsh has responded to the code-specific questions Mr. McClerren has  
736 raised, I did want to further elaborate on the questions with respect to operation of  
737 the IVC network in emergency situations.

738 In addition to testifying that IVC is complying with the emergency backup  
739 power requirements at IVC's switching center, Mr. Walsh provided direct  
740 testimony with respect to the backup power and generator capabilities IVC  
741 maintains at each of its cell site. However, I wanted to make sure that there was a  
742 clear understanding that in an emergency situation and in the context of peak  
743 traffic load management, the IVC network offers some other distinct advantages  
744 over the traditional landline networks.

745           Each cell site provides radio coverage to a fixed geographic service area.  
746           However, these service areas have a high degree of overlapping coverage. Cell  
747           overlap allows IVC to manage peak demand loads as well as providing a level of  
748           redundancy not found in the context of the traditional landline local loop.

749   **Q.   Let’s focus on the peak traffic load management aspect. Can you elaborate**  
750   **on that?**

751   A.   Where a given area is able to receive sufficient coverage from multiple  
752   transmitting sites, subscriber demand in that area can be met by any one of the  
753   sites. So a call can be placed through any site that can offer sufficient signal to  
754   serve the subscriber handset. In many parts of the IVC network there is coverage  
755   from multiple cell sites.

756   **Q.   So am I correct that where there is only coverage from a single cell site, IVC**  
757   **does not have the ability to shift traffic to account for heavy demand in a**  
758   **particular cell site?**

759   A.   That would be an incorrect inference. First, there is no place in the IVC network  
760   where a cell site does not have at least some degree of overlap with another cell  
761   site. So even in the case where an unusual demand appears at a location where  
762   there is only one cell capable of providing coverage, the IVC network has the  
763   ability to shed the traffic being carried by the heavily-used cell site in the areas  
764   where there is cell overlap so that the cell site experiencing unusual demand can  
765   devote all of its capacity to the area where there is no overlap. The IVC network  
766   is configured to perform this “load shedding” function automatically. Whenever a  
767   cell site reaches a pre-set loading of approximately 80% of capacity, the network

768 immediately begins looking to shed traffic from that cell. The network examines  
769 all calls in progress on that cell and polls adjacent cells to see what signal levels  
770 they are experiencing in conjunction with calls. When the network finds a call  
771 that can be handled by an adjacent cell site, the call is “handed-off” to that  
772 adjacent cell to free up additional capacity in the original cell for the areas where  
773 only that cell can serve.

774 **Q. How does this cell overlap improve reliability with respect to the “local**  
775 **loop?”**

776 A. Instead of a single pair of wires providing service to an end user, IVC provides  
777 service by utilizing radio waves from one or more cell sites connecting to the  
778 subscriber handset for the duration of the call. With the CDMA technology, a call  
779 in progress in an area of overlap between cell sites is typically handled by more  
780 than one cell site even when the mobile unit is stationary. This is commonly  
781 referred to as “soft” handoff. The call is simultaneously “taking place” through  
782 multiple cell sites. In this situation, the loss of signal from any one cell does not  
783 “drop” the call. Similarly, in the rare event of a cell site outage, the subscriber  
784 can still receive service from any other cell capable of providing service to the  
785 location where the subscriber is located. As Mr. Walsh has already testified, all  
786 IVC cell sites are fully redundant and have backup power supplies to minimize  
787 the likelihood of an outage.

788 In contrast, if an ILEC subscriber’s loop is down there is no ability for that  
789 subscriber to receive service. Since the loop is at a fixed location, the subscriber  
790 remains out of touch until service over that loop is restored. In the wireless

791 context, while there may only be a single cell site that provides sufficient signal to  
792 afford “in-building” coverage for a particular subscriber, often, in the event of an  
793 outage, there is sufficient signal to enable the customer to obtain coverage right  
794 outside his door. Of course, if that subscriber changes locations, he or she is  
795 immediately back “in service” as soon as the handset reaches the coverage area of  
796 any other cell site.

797 **Q. Mr. McClarren also asks for guidance with respect to setting service metrics**  
798 **regarding dead spots and dropped calls. Can you comment on that?**

799 A. I previously testified about dead spots and dropped calls. From that discussion, I  
800 would hope that the ICC would come to realize that dead spots, while a part of  
801 wireless coverage, are actually far less than occur in the “wired” network if you  
802 think of the landline network as effectively having a “dead spot” wherever a fixed  
803 phone is not physically located. Since wireless dead spots are reduced as  
804 additional cell sites are added, the awarding of ETC designation would act to  
805 reduce the number of dead spots as network enhancement plans are implemented.  
806 The ICC must be very careful to remember that dictating quality of service for an  
807 ILEC is one thing since the ILEC can recover additional USF support based upon  
808 any resulting increased costs. Hence requiring a capital improvement from an  
809 ILEC to improve service quality results in an increased cost basis upon which the  
810 ILEC USF support is based.

811 In sharp contrast, the level of USF support for a wireless carrier in no way  
812 ties to the wireless provider’s cost of providing service. Therefore if the ICC  
813 were to adopt metrics for “dead spots” the wireless ETC would have no means of

814 financing the cost of those capital improvements. This is why the FCC has urged  
815 the submission of five-year network enhancement plans. By submitting such a  
816 plan, and making periodic reports as to the progress toward implementing that  
817 plan, the ICC is able to monitor where the USF funds are being spent and how  
818 those funds are improving coverage and addressing issues relating to “dead spots”  
819 or dropped calls. However, since there is no funding mechanism to enable a  
820 wireless ETC to make capital expenditures outside of its fixed level of USF, the  
821 ICC should refrain from creating a metric that would, in application, be  
822 tantamount to establishing an unfunded mandate.

823 **Q. For the sake of this question, ignore the cost of putting up a cell tower in**  
824 **every location needed to meet a given metric for dead spots, and ignore the**  
825 **resulting unfunded mandate. Isn't some form of metric needed to ensure**  
826 **adequate service by a wireless carrier designated as an ETC?**

827 A. First, you cannot ignore the costs when establishing a metric. The setting of any  
828 metric would need to be based on a balancing of the competing interests of  
829 service quality versus reasonable cost of providing the service (and the related  
830 interests of reasonable rates for the service and/or USF funding levels necessary  
831 to support the construction of facilities to meet the metric). Getting beyond the  
832 need to balance the interests, I do not believe that a metric would be needed in the  
833 situation where there is both a landline ETC and a wireless ETC in a given service  
834 area because in the rare cases where a wireless carrier using the steps discussed  
835 above could not provide service up to the level of the customer's expectations in a  
836 given "dead spot," the customer would have the choice to switch to the landline

837 service provider. Only in situations where the landline ETC sought to abandon its  
838 ETC designation would the question of a metric become necessary. If the ICC  
839 wants to initiate a rulemaking to establish metrics for dead spots for wireless  
840 ETCs in advance of such an occurrence, I am certain that IVC would participate  
841 in workshops, present necessary and appropriate data and ultimately take  
842 reasonable steps to meet any rule establishing such a metric. IVC has already  
843 committed to fix a number of spots in its service area. The investment necessary  
844 to remedy some of these spots can be justified economically without USF support.  
845 They are just a function of cash flow and time. For other spots, the investment  
846 necessary to remedy them cannot be economically justified, and therefore IVC's  
847 commitment to make these investments is contingent on designation as an ETC  
848 and the timing of USF funds.

849 **Q. What about a metric for dropped calls?**

850 A. Dropped calls need to be divided into two distinct categories to properly consider  
851 this issue. Calls that drop because the subscriber drives out of the service area or  
852 encounters a “dead spot” present the same issue discussed above with respect to a  
853 possible metric for dead spots. However, as I previously eluded to, calls can drop  
854 in an area of adequate coverage if there is insufficient capacity to meet service  
855 demand. I believe that this situation could be addressed in the context of a metric  
856 and could fit well within the current ICC regulatory structure.

857 Unlike a wired loop, the wireless loop is a shared facility. Although only  
858 a single user has access to a given radio “channel” for a given conversation, once  
859 that call is over that same channel becomes available for another user. This is

860 directly analogous to traffic engineering for telco trunks. The Section 730.500  
861 traffic study obligations could be extended in an appropriate rulemaking  
862 proceeding to cover cell sites of wireless carriers that have been designated as  
863 ETCs. The study requirements of this section should be extended to address both  
864 cell site radio capacity as well as “back-haul” facilities used to connect the cell  
865 site to the MTSO. IVC currently performs this type of traffic analysis on all of its  
866 cell sites as well as performing daily monitoring of all network traffic.

867 To the extent that wireless cell sites function in a manner analogous to  
868 “trunked” circuits in a landline environment, adoption of traffic metrics based  
869 upon standard traffic engineering may be appropriate with the precise levels being  
870 developed through a rulemaking where interested parties could participate in  
871 workshops and file comments and data to enable the ICC to properly adopt  
872 metrics. Without the opportunity to engage in such a process, I cannot say at this  
873 time what such an appropriate metric would be.

874 **Q. Did you have any comments to make with respect to testimony of Mr. Mark**  
875 **Hanson or Ms. Marci Schroll?**

876 A. No, I did not. I believe Mr. Walsh’s rebuttal testimony addresses the issues they  
877 raised.

878 **Q. Turning then to Mr. Jeffrey H. Hoagg’s testimony. In addition to**  
879 **summarizing the other ICC witness’ testimony, it lists a number of items**  
880 **which he feels IVC has yet to satisfy. First, Mr. Hoagg questions the IVC 5**  
881 **year plan. Can you respond to that?**

882 A. I am somewhat confused by the statements made by Mr. Hoagg in his testimony  
883 (See, Hoagg 2-I Direct at p. 23-24, lines 592-607, 2-II Direct at p. 23-24, lines  
884 592-607, 2-III Direct at p. 24, lines 593-608). The IVC Supplemental Direct  
885 Testimony of Mr. Walsh and myself provided a detailed 5-year construction plan  
886 identifying cell sites to built, projected start dates for each site (stated in terms of  
887 time from the grant of ETC designation), the projected cost for each additional  
888 cell site, the underlying ILEC wirecenters that each proposed new cell site would  
889 serve as well as the population within each such proposed service area. While the  
890 prior testimony did not include a projected completion date for each such site, Mr.  
891 Walsh has clarified in his rebuttal testimony that the average time needed for IVC  
892 to construct a new cell site is 6 months.

893 With respect to the suggested submission of coverage maps, IVC would  
894 not have a problem making annual coverage submissions along the lines outlined  
895 by Mr. Hoagg (See Hoagg 2-I Direct Testimony at p. 24, lines 611-618, 2-II  
896 Direct Testimony at p. 24, lines 611-618, 2-III Direct Testimony at p. 24 lines  
897 612-619). We do, however wish to clarify that while IVC would make the  
898 informational filings discussed, the network enhancement plan is based upon  
899 IVC's entire proposed ETC service area and while the informational filings can be  
900 made on a per wire center basis, there should be no requirement that a wireless  
901 carrier devote, dollar for dollar in network enhancement expenditures, to the wire  
902 center from which each dollar was received.

903 Once again, the ICC needs to keep in mind that the level of USF received  
904 by the rural ETC other than the ILEC, is not tied to that ETC's costs.

905 Accordingly, the wireless ETC will receive a certain amount of dollars which  
906 would be spent in accordance with its network enhancement plan. As set forth in  
907 its filing, over the course of the full 5 year plan, network improvements will reach  
908 virtually all underlying wire centers. However, requiring that IVC earmark  
909 dollars every year to the specific wire center from which the USF support was  
910 obtained would substantially delay the deployment of the plan. Mr. Walsh has  
911 projected the costs associated with each proposed network enhancement. IVC  
912 intends to use all USF support received from its ETC service area to make the  
913 deployments as detailed in its plan on the timelines set forth therein.

914 IVC does not envision waiting to construct each site in its network  
915 enhancement plan until enough USF funds have been received from the service  
916 area of that particular proposed cell site to cover the costs of that specific cell site.  
917 To require IVC to do so would require that USF funds remain fallow until each  
918 fragmented segment could be individually financed. While it is appropriate for  
919 the ICC to track overall monies spent over the course of the 5 year plan on a per  
920 wire center basis, it must consider IVC's ETC designation as applying to its entire  
921 ETC service area.

922 **Q. Mr. Hoagg also takes issue with the statement that the IVC plan would be**  
923 **subject to change. Has the FCC considered that factor?**

924 A. Yes they have. For example, in finding that Virginia Cellular had committed to  
925 extend service to previously unserved area, the FCC cites to the Virginia Cellular  
926 November 12 application supplement that set forth its proposed construction plan.  
927 In that supplement, Virginia Cellular made it absolutely clear that it reserved the

928 right to make changes in that plan in order to meet changing circumstances such  
929 as those identified by IVC. Most other carriers have made similar reservations  
930 with respect to their proposed network enhancement plans and the FCC has  
931 uniformly found them acceptable. The reason for this is not to try and avoid  
932 meeting a commitment but recognizing that wireless service evolves over time.  
933 The unexpected construction of a new shopping mall on the north side of a town  
934 may mandate the need to shift a previously-proposed cell site that had previously  
935 been proposed a few miles to the south of town. Delays in approvals needed to  
936 construct one proposed cell site might warrant finding an alternate location for the  
937 cell site or proceeding to construct a lower priority cell site ahead of the originally  
938 proposed site.

939 The public interest is in no way diminished by the carrier retaining the  
940 flexibility needed to modify and evolve the plan as time goes on. In sharp  
941 contrast, the public interest is grossly disserved by requiring a carrier to proceed  
942 to construct a cell site 4 years later when intervening events have lessened the  
943 benefit of proceeding with that particular construction. Significantly, IVC has not  
944 proposed that it be allowed to vitiate its network enhancement plan. IVC agrees  
945 with the proposed annual filings showing how the USF monies have been spent  
946 and how its network has been enhanced in its ETC service area. This will provide  
947 the Commission with information about any changes that occurred in the plan and  
948 assurance that the USF money is being properly spent. Even if IVC modifies the  
949 specifics of its network enhancement plan, IVC remains obligated to spend USF  
950 support for the intended purpose. The public interest would be best served by

951 allowing carriers the flexibility to evolve those plans as time passes to meet then-  
952 current need and address unforeseen intervening events.

953 In addition, IVC made it clear that its ability to proceed with the plan as  
954 set forth presumes that USF support continues and in an amount comparable to  
955 that which IVC would presently anticipate drawing. Reductions in the amount of  
956 support available would necessitate reductions in the amounts expended by IVC  
957 and could result in a material reduction in what IVC was able to deploy in that 5  
958 year period.

959 Mr. Hoagg suggests that any material changes in the 5 year plan be subject  
960 to prior ICC approval. IVC readily acknowledges the ICC would retain oversight  
961 over the ETC and its 5 year plan but the prior approval process is flawed. For  
962 example, what happens if the level of USF support is dramatically curtailed in  
963 year 3, the funds needed to complete a forth year cell site are not received, and the  
964 ICC does not “approve” the material change in the enhancement plan needed to  
965 bring the plan within the financial constraints of the available USF support? ICC  
966 prior approval should not be required for any changes that are consistent with the  
967 purposes of the original 5 year plan and utilize available USF funding in the  
968 manner approved by applicable rules and regulations. Significantly, the ICC does  
969 not require a 5 year plan from the ILECs nor is it required to approve proposed  
970 network enhancements. Rather, the ILEC is afforded the discretion to meet its  
971 evolving customer’s needs. The same latitude should be afforded to the wireless  
972 ETC with the ICC reviewing all use of funds. Since the ICC is required to  
973 annually certify that ETC funds were used properly by all ETCs, the ICC retains

974 oversight over the use of the funds. Ultimately, the ICC also retains the right,  
975 after appropriate due process, to withdraw the designation of any ETC if it fails to  
976 properly utilize the USF funds.

977 **Q. There has been extensive testimony on the new FCC-suggested guidelines**  
978 **and whether IVC has adequately made all of the required showings**  
979 **thereunder. Since those guidelines were issued, have we had any indication**  
980 **as to how the FCC might apply the new guidelines in deciding ETC**  
981 **designations on a prospective basis?**

982 A Yes we do. As I previously testified, the FCC has just issued its *NTELOS Order*.  
983 That order confirmed that the requirements of the *FCC Guideline Order* codified  
984 the FCC *Virginia Cellular Order* and *Highland Cellular Order* while adding the  
985 additional requirements discussed in the prefiled testimony in this proceeding.  
986 However, rather than going back and making NTELOS modify its pending  
987 proposal, the FCC clarified that “Carriers that had ETC applications pending  
988 before the [*FCC Guideline Order*] took effect, such as NTELOS, will be required  
989 to make [the additional] showings [required in the *FCC Guideline Order*] when  
990 they submit their annual certification filing no later than October 1, 2006.”  
991 *NTELOS Order* at ¶ 8. The FCC then proceeded to analyze the NTELOS  
992 application strictly under its precedent as it existed at the time NTELOS filed its  
993 ETC application.

994 IVC’s applications were pending long before the *FCC Guideline Order*  
995 were adopted. Yet IVC has endeavored to update its pending application to make  
996 the additional showings set forth in the *FCC Guideline Order*. While IVC

997 believes that it has made all of the suggested showings, the *NTELOS Order* makes  
998 it clear that, to the extent that the ICC would decide to require additional  
999 showings (either in the context of analysis of the IVC application under the FCC-  
1000 suggested guidelines or some modification thereof), it would be wholly consistent  
1001 with the FCC's application of its own guidelines to proceed and grant IVC's ETC  
1002 designation and require IVC to make such additional showings as may be required  
1003 as a part of its annual certification filing, once the ICC requirements are fully  
1004 developed. IVC respectfully submits that it has more than demonstrated that the  
1005 grant of its ETC designation would be in the public interest and to the benefit of  
1006 the rural citizens of Illinois and that any additional submissions desired by the  
1007 ICC would be more appropriately required as a part of IVC's annual certification  
1008 and not be used as a basis for denying the IVC ETC designation.

1009 **Q. Does this conclude your testimony?**

1010 A. Yes, it does.