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**BEFORE THE
FLORIDA PUBLIC SERVICE COMMISSION**

Docket No. 070736-TP

**Petition of Intrado Communications Inc. Pursuant to Section 252(b) of the
Communications Act of 1934, as amended, to Establish an Interconnection
Agreement with BellSouth Telecommunications, Inc., d/b/a AT&T Florida**

REBUTTAL TESTIMONY OF THOMAS W. HICKS

May 28, 2008

**Q: PLEASE STATE YOUR NAME, TITLE, AND BUSINESS ADDRESS
FOR THE RECORD.**

A: My name is Thomas W. Hicks. My business address is 1601 Dry Creek Drive, Longmont, CO, 80503. I am employed by Intrado Inc. as Director - Carrier Relations. I also serve as the Director – Carrier Relations for Intrado Inc.’s telecommunications affiliate, Intrado Communications Inc. (“Intrado Comm”), which is certified as a competitive local exchange carrier (“CLEC”) in Florida.

**Q: PLEASE DESCRIBE YOUR RESPONSIBILITIES FOR INTRADO
COMM.**

A: I am responsible for Intrado Comm’s carrier relations with incumbent local exchange carriers (“ILECs”), such as BellSouth Telecommunications, Inc. d/b/a AT&T Florida (“AT&T”), CLECs, wireless providers, and Voice over Internet Protocol (“VoIP”) providers.

Q: WHAT IS THE PURPOSE OF YOUR TESTIMONY?

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1 A: The purpose of my testimony is to explain Intrado Comm's position on the
2 following unresolved issues: Issue 1(a), (b), and (d); Issue 3(a) and (b); Issue
3 4(a), (b), and (c); and Issue 5(a) and (b).

4 *Issue 1(a): What service(s) does Intrado Comm currently provide or intend to*
5 *provide in Florida?*

6 Q: DOES AT&T'S REPRESENTATION OF SCENARIOS 1 THROUGH 3
7 ACCURATELY REPRESENT THE INTRADO COMPETITIVE 911
8 SERVICE OFFERING?

9 A: AT&T technical depiction of the scenarios is accurate, however the testimony
10 characterizing the scenarios as separate, non-related, and distinct occurrences
11 is misleading at best. The Intrado Comm Intelligent Emergency Network
12 (IEN)[®] is best described as a competitive local exchange service that is
13 purchased by public safety answering points ("PSAPs") so as to receive,
14 process, and respond to calls to 911 placed by consumers of traditional dial
15 tone services, wireline and wireless, as well as emerging IP-based
16 communication services. The introduction and deployment of an advanced
17 E911 system will require interconnection and interoperability with existing
18 E911 systems which are provided by the ILEC. This includes interoperability
19 among PSAPs served by competing Selective Router providers. Furthermore,
20 as both Intrado Comm and AT&T are authorized to provide local exchange
21 services to end users there will be a mutual exchange of E911 traffic when
22 each Party is designated as an E911 Service provider. It is immaterial if
23 Intrado Comm is providing local dial tone services in its E911 tariff offering;

1 Intrado Comm is authorized to provide such services and any terms and
2 conditions of a 251 interconnection agreement should reflect that ability.

3 AT&T states Scenario 1, where AT&T is the designated E911 Service
4 provider and Intrado Comm will pass E911 traffic and database information,
5 is appropriate for a 251 interconnection agreement.

6 Scenario 2, which AT&T states is not appropriate for a 251 agreement,
7 merely reflects the reciprocal side of a mutual exchange of E911 traffic when
8 Intrado Comm has been designated as the E911 Service Provider and
9 therefore is appropriately addressed in the context of a 251 agreement.

10 Lastly, Scenario 3 is the interconnection required to make competing
11 local exchange 911 networks interoperate without a degradation of service
12 that may ensue when competitive entrants roll out services. The FCC clearly
13 understood that network interoperability of competing local exchange
14 networks is a keystone of the Telecommunications Act of 1996. Scenario 3 is
15 appropriately addressed in the context of a 251 agreement because it goes to
16 the heart of making competing E911 networks interoperable for the benefit of
17 consumers. Therefore, it is apparent that each of AT&T's self described
18 scenarios are in reality inter-related and inter-dependent events that are
19 properly addressed by a Section 251 interconnection agreement.

20 **Q: WHERE DOES SUBSEQUENT TESTIMONY SUPPORT YOUR**
21 **POSITION THAT AT&T DOESN'T UNDERSTAND THE CONCEPT**
22 **OF A COMPETITIVE E911 SERVICES PROVIDER?**

1 **A:** Ms. Pellerin's testimony on Pages 5-6 indicates this lack of understanding.
2 She blithely states because Intrado Comm has a Selective Router and an ALI
3 database, and network transport can be purchased from anyone, then Intrado
4 Comm has no need for AT&T E911 network components. Therefore, she
5 concludes, no 251 agreement with AT&T is necessary and AT&T can
6 negotiate network transport under a commercial agreement. This glib
7 description leaves out some crucial details. Intrado's E911 Selective Router
8 and ALI database is going to be marketed in areas where AT&T is offering
9 services off the AT&T E911 Selective Routers and ALI hosts. Competing
10 networks operating in the same geographic area marketing to the same
11 customer base will require system interoperability so as to maximize
12 consumer choice and promote network efficiencies.

13 ***Issue 1(b): Of the services identified in (a), for which, if any, is AT&T required***
14 ***to offer interconnection under Section 251(c) of the Telecommunications Act of***
15 ***1996?***

16 **Q: WHY ISN'T A PEERING ARRANGEMENT BETWEEN INTRADO**
17 **COMM AND AT&T A MORE APPROPRIATE VEHICLE FOR**
18 **OBTAINING THE INTERCONNECTION INTRADO COMM NEEDS?**

19 **A:** Peering arrangements are typically used between non-competing 911/E911
20 providers located in adjacent territories. Rather, Intrado Comm is going to
21 actively sell a competing 911/E911 service in AT&T's Florida serving area.
22 Section 251 interconnection was developed for competitors operating in the

1 same geographic area rather than non-competitors operating in adjacent
2 territories.

3 **Q: ARE YOU AWARE OF HOW THE FCC DEFINES**
4 **“INTERCONNECTION”?**

5 **A:** While I am not a lawyer, I understand that the FCC has defined
6 “interconnection” as the linking of two networks for the mutual exchange of
7 traffic.

8 **Q: DOES THE ARRANGEMENTS INTRADO COMM SEEKS TO**
9 **IMPLEMENT WITH AT&T FIT WITHIN THAT DEFINITION?**

10 **A:** Yes. Intrado Comm seeks to link its network with AT&T’s network for the
11 mutual exchange of traffic between the Parties’ end users.

12 **Q: IS INTRADO COMM UNFAIRLY IMPEDING AT&T’S ABILITY TO**
13 **RECEIVE COMPENSATION FOR SERVICES IT PROVIDES TO**
14 **PSAPS?**

15 **A:** No, Intrado Comm is not denying AT&T the ability to receive compensation
16 from PSAPs when AT&T is the designated E911 service provider. What
17 Intrado Comm has proposed is for AT&T to cease subsidizing via the E911
18 tariff charges billed to PSAPs certain aspects of local exchange provisioning.
19 These aspects are borne by all entrants in a competitive local exchange
20 market, and therefore the incumbent should receive no special compensation
21 for these activities just because it is simultaneously providing E911 services to
22 PSAPs. To fully understand this intertwining of E911 and local exchange
23 responsibilities and to assist in determining a “demarcation” point for cost

1 recovery in a competitive local exchange market it is necessary to review the
2 evolution of today's ILEC E911 service offerings.

3 ILEC E911 service offerings pre-date competition in the local market.
4 ILEC E911 services were designed and sold to PSAPs who were answering
5 calls from dial tone subscribers of the ILEC. A very closed looped system, at
6 best. The costs associated with getting a dial tone subscriber's call to an E911
7 selective router (network transport and ANI delivery) as well as preparing dial
8 tone subscriber data for submission to the E911 database (Automatic Location
9 Identification records and E911 call routing databases) were incurred when a
10 PSAP purchased E911 services from AT&T. Therefore, it was believed the
11 PSAP should rightfully pay for these costs normally associated with the
12 provisioning of dial tone services where E911 systems have been deployed. It
13 should be noted that any costs associated with E911 database fallout and
14 subsequent error correction were also factored into the E911 tariffed rates.

15 **Q: WHAT ARE THE COST ELEMENTS THAT SHOULD BE**
16 **ASSOCIATED WITH E911 SERVICE OFFERING AND NOT LOCAL**
17 **EXCHANGE PROVISIONING?**

18 **A:** The FCC established the selective router as the demarcation point for what it
19 has referred to as the "Wireline E911 Network." Also, CLEC interconnection
20 agreements are structured so that the CLEC is responsible for the delivery of
21 E911 calls with ANI up to the ILEC selective router. For database, the CLEC
22 is responsible for delivery of subscriber record information to the ILEC E911
23 Database Management System in a NENA recommended standard format.

1 Activities and services that occur beyond the demarcation point at the
2 selective router and the 911 Database Management System should be
3 considered E911 services and subject to tariff rates payable by PSAPs. These
4 services may be regulated or not. Those services or activities would include:

- 5 • Creation and maintenance of the Selective Routing Database to be
6 used in 911 call routing to the appropriate PSAP.
- 7 • E911 Tandem Software.
- 8 • Selective Transfer functionality and speed dial lists.
- 9 • Network transport and trunking from the Selective Router to the
10 PSAP.
- 11 • Delivery of caller voice and ANI to the PSAP.
- 12 • Alternate Answer translations and busy out circuits from the Selective
13 Router to the PSAP.
- 14 • Creation and maintenance of the ALI record database.
- 15 • ALI data network maintenance.
- 16 • ALI node interfaces for transactions with 3rd party ALI.
- 17 • MSAG maintenance.
- 18 • Equipment to answer E911 and retrieve ALI.

19 All of the aforementioned services are found in the E911 tariffs.

20 Unfortunately, many ILEC tariffs are set up on a bundled service
21 offering basis on a per 100 or 1,000 local exchange subscribers, so it is very
22 easy for the ILEC to “throw in” the costs associated with providing access to

1 E911 services up to the demarcation points of the selective router and E911
2 Database Management System.

3 **Q: WHAT DOES INTRADO COMM INFER FROM AT&T'S**
4 **TESTIMONY THAT AT&T IS "UNFAIRLY" BEING DENIED COST**
5 **RECOVERY?**

6 **A:** Intrado Comm has inferred AT&T mistakenly believes it is justified in
7 continuing to charge the PSAPs for delivery of ANI to the Intrado Comm
8 selective router. If this is so, then AT&T is being disingenuous in regards to
9 what it takes to deliver ANI. Today, most E911 selective routers can receive
10 E911 calls with Signaling System 7 ("SS7") and SS7, as per the AT&T
11 interconnection agreement, is the preferred way to interconnect to the AT&T
12 Selective Router. The beauty of using SS7, besides network integrity, is the
13 Calling Party Number ("CPN") must be delivered in the call set up message.
14 Otherwise, the call will not complete. This greatly reduces the frequency of
15 ANI failure incidents that occur when Multi-frequency ("MF") Centralized
16 Automated Message Accounting ("CAMA") trunks were used to connect to
17 the E911 Selective Router. Today's circuit switch networks are almost always
18 SS7 between switches, as MF CAMA is a costly anachronism to support.
19 Furthermore, since delivery of ANI is on the local exchange side of the
20 Selective Routing demarcation point it is more appropriate for AT&T to
21 recover any possible costs associated with ANI delivery from its local
22 exchange operations and not from the PSAPs, which is what other local
23 service providers do. For AT&T to make PSAPs and regulators believe it is

1 still entitled to cost recovery for delivery of ANI to E911 selective routers
2 from an AT&T end office in a competitive local exchange market when all
3 other local carriers recover these costs internally is beguiling behavior.

4 **Q: ARE THERE ANY OTHER LOCAL EXCHANGE ACTIVITIES AT&T**
5 **IS IMPLYING THEY SHOULD CONTINUE TO RECEIVE COST**
6 **RECOVERY VIA THE RATES CHARGED TO PSAPS WHO MAY NO**
7 **LONGER BE THEIR CUSTOMERS?**

8 **A:** Yes, AT&T has implied in other dockets before the Florida Commission it
9 should continue to receive cost recovery for submission of subscriber data to
10 the E911 database management system of the designated E911 Services
11 provider. Also, AT&T believes that use of its existing Selective Routers to
12 “call sort” E911 traffic from AT&T end offices that have subscribers served by
13 competing E911 service providers should be paid for by the PSAPs served by
14 competing E911 Service Providers.

15 **Q: WHY IS IT INAPPROPRIATE FOR AT&T TO CONTINUE TO BILL**
16 **FOR THESE SERVICES WHEN PSAPS ARE NO LONGER AT&T’S**
17 **CUSTOMER?**

18 **A:** Beyond the patently obvious absurdity of billing a customer who has not
19 contracted for AT&T services, the submission of subscriber data to the E911
20 Database Management System, as well as the subsequent correction of error
21 fallout, are clearly within the realm of AT&T’s activities as a local exchange
22 service company provisioning dial tone services to end users. In a
23 competitive local exchange market each CLEC is expected to submit this

1 subscriber data to the E911 Database provider in a NENA recommended
2 format. The CLEC is also expected to investigate, correct, and re-submit any
3 errors that do not pass the E911 Database processing rigors. Mr. Neinast
4 clearly implies these activities solely CLEC responsibilities in his testimony
5 on page 12 where he discusses how AT&T provides a CLEC the MSAG for
6 use in processing its subscriber information for submission to the AT&T E911
7 Database. These CLECS, who do not have E911 tariffs as they are not E911
8 Service providers, do not attempt to recover the costs associated with this
9 preparation from PSAPs. Again, it is absurd for AT&T to assert they should
10 be allowed this special dispensation merely because it is an incumbent with
11 an E911 tariff. The rationale that access to E911 services should be
12 distinguished from the actual E911 services billed to PSAPs should also be
13 applied to AT&T's desire to eschew Class Marking and instead use its
14 existing E911 Selective Routers to "call sort" AT&T end office traffic
15 destined for different E911 Selective Routers. To continue to compensate
16 AT&T for these functions, but deny cost recovery to CLECs for performing
17 the same function, would not result in parity for other providers obligated to
18 interconnect with the 911 network.

19 *Issue 1(d): For those services identified in 1(c), what are the appropriate rates?*

20 **Q: WHAT RATES FOR INTRADO COMM SERVICES SHOULD**
21 **APPEAR IN THE ICA AND WHAT ARE THE APPROPRIATE**
22 **RATES?**

1 **A:** Intrado Comm has proposed rates to govern AT&T's interconnection to
2 Intrado Comm's Intelligent Emergency Network®, such as port termination
3 charges. The charges proposed by Intrado Comm are similar to the entrance
4 facility and port charges imposed by AT&T on competitors for
5 interconnection to AT&T's network. A copy of Intrado Comm's proposed
6 rates are attached as Exhibit No. _____, Hicks Rebuttal TH-8.

7 **Issue 3(a):** *What trunking and traffic routing arrangements should be used for*
8 ***the exchange of traffic when Intrado Comm is the designated 911/E911 Service***
9 ***Provider?***

10 **Issue 3(b):** *What trunking and traffic routing arrangements should be used for*
11 ***the exchange of traffic when AT&T is the designated 911/E911 Service Provider?***

12 **Q:** **WHAT TRUNKING AND TRAFFIC ROUTING ARRANGEMENTS**
13 **SHOULD BE USED FOR THE EXCHANGE OF TRAFFIC WHEN**
14 **INTRADO COMM HAS BEEN DESIGNATED BY THE**
15 **GOVERNMENTAL AUTHORITY TO PROVIDE 911/E911 SERVICES?**

16 **A:** The optimal way for carriers to route their traffic to the appropriate 911
17 provider is to establish direct and redundant trunk configurations from ILEC
18 originating offices to multiple, diverse 911 network access points. This would
19 require the carrier to sort its calls at the originating switch, and deliver the
20 calls to the appropriate 911 routing system over diverse and redundant
21 facilities (this technique is known as "Line Attribute Routing"). This trunk
22 and transport configuration minimizes the switching points, which reduces the
23 potential for failure arising from the introduction of additional switching

1 points into the call delivery process. Also, should one path be unable to
2 complete the call, the presence of an alternative diverse facility greatly
3 enhances the ability for the emergency call to be delivered to the PSAP.

4 **Q: IS LINE ATTRIBUTE ROUTING TECHNICALLY FEASIBLE?**

5 **A:** Yes. Through synchronization of the Master Street Address Guide and
6 building appropriate tables in AT&T's digital end offices, accurate Line
7 Attribute Routing is technically feasible.

8 **Q: IS INTRADO COMM ASKING AT&T TO CHANGE ITS ENTIRE 911**
9 **NETWORK TO ACCOMMODATE INTRADO COMM'S**
10 **PREFERENCE TO USE "LINE ATTRIBUTE ROUTING" TO ROUTE**
11 **TRAFFIC?**

12 **A:** No. Intrado Comm is simply requesting that when Intrado Comm is
13 designated as the local PSAP's 911 network provider for an area containing
14 AT&T end users, that the affected end user 911 calls are forwarded to Intrado
15 Comm on direct, dedicated 911 trunks. This is no different than how AT&T
16 currently routes traffic when it or another ILEC serves as the E911 network
17 provider. However, where a portion of an end office is served by PSAPs
18 hosted by separate wireline E911 networks, Intrado Comm is requesting that
19 the necessary sorting of the calls to determine which wireline E911 network is
20 to receive the call be performed at the end office through the use of the
21 caller's line attributes, rather than inserting a second stage of switching at
22 another central office.

1 **Q: IF THE FLORIDA COMMISSION DETERMINES AT&T MAY USE**
2 **ITS EXISTING SELECTIVE ROUTERS TO PERFORM “CALL**
3 **SORTING” FUNCTIONS IN LIEU OF LINE ATTRIBUTE ROUTING,**
4 **SHOULDN’T AT&T GET COST RECOVERY FROM THE PSAPS**
5 **WHO RECEIVE 911 CALLS FROM THE SORTED END OFFICES?**

6 **A:** No. The establishment of call routing from a switch or end office over a
7 particular trunk group to an E911 selective router is clearly on the local
8 exchange service provider’s side of the demarcation point. Delivery of a call
9 to the appropriate E911 selective router is a local exchange service function of
10 providing access to the Wireline E911 Network. Delivery of the E911 call to
11 the appropriate PSAP and the delivery of caller associated location
12 information is part of the E911 services provided to the PSAP by its network
13 provider, not access to E911 Services. The delivery of a 911 call to the
14 appropriate E911 selective router, whether it be by Line Attribute Routing or
15 call sorting via a central office running an E911 Selective Router application,
16 is still access to E911 services for the benefit of end user subscribers, and the
17 costs of delivery to the selective route should be borne by that subscriber’s
18 local service provider and recovered from its subscribers just as it is done by
19 CLECs, VoIP, and wireless carriers. Mr. Neinast supports this assertion in his
20 testimony on pages 28-29.

21 Even if the Commission concurred with AT&T’s assertions that Line
22 Attribute Routing is too onerous and costly for AT&T to deploy and
23 continued to allow AT&T to “call sort” with its central offices running a

1 selective routing application, it would still be inappropriate for AT&T to
2 charge Intrado Comm or its PSAPs. Allowing AT&T to recover costs from
3 PSAPs for this “call sorting” arrangement would give AT&T preferential
4 treatment over CLECs and other local service providers (wireless and VoIP)
5 while subsidizing a technologically inefficient provisioning system that has
6 not fundamentally changed since the advent of competition in the local
7 exchange service market.

8 **Q: WHY DO YOU THINK AT&T IS OPPOSED TO USING LINE**
9 **ATTRIBUTE ROUTING?**

10 **A:** In his condemnation of Line Attribute Routing, Mr. Neinast iterates a list of
11 problems it would cause AT&T. Every issue he mentions has to do with the
12 provisioning of local exchange dial tone service and the ability to deliver each
13 call to the appropriate E911 selective router. AT&T’s immediate inability to
14 support Line Attribute Routing has its roots in AT&T initial E911 network
15 design in a monopoly franchise environment. In that environment, there
16 would be no need to segregate end office traffic because E911 was a “closed
17 loop” system -- AT&T would provide E911 services to PSAPs who served
18 AT&T end office subscribers. Therefore, there was no need to sort calls
19 between E911 systems. On the other hand, in a competitive environment
20 CLECs and other local service providers often serve larger geographic areas
21 with a single switch. Consequently, a CLEC switch may need to support 911
22 call delivery to multiple different E911 selective routers – for example, there
23 are four in the South Florida LATA. Thus, competitive local providers must

1 integrate the Master Street Address Guide into their provisioning systems so
2 as to allow for the ability to assign line attributes for Line Attribute Routing.
3 AT&T posits that PSAPs who choose Intrado Comm should pay AT&T to
4 sustain these inefficient provisioning processes when no other local carrier
5 does this. The reality is this is the way it is going to have to be as further
6 competition is introduced in the local network by Intrado Command other
7 providers. AT&T is entitled to design its network as it wants, but it should
8 bear the cost of its inefficient design.

9 **Q: WHAT DOES INTRADO COMM MEAN BY THE TERM**
10 **“DESIGNATED” WHEN REFERRING TO THE ENTITY SERVING**
11 **THE PSAP OR MUNICIPALITY?**

12 **A:** The term “designated” refers to the certificated telecommunications provider
13 that has been chosen by the PSAP or municipality to be the provider of
14 911/E911 services or of ANI, ALI, and Selective Routing from the 911/E911
15 selective router (or its functional equivalent) to the PSAP.

16 **Q: SHOULD THE TERM “DESIGNATED” OR THE TERM “PRIMARY”**
17 **BE USED TO INDICATE WHICH PARTY IS SERVING THE PSAP**
18 **OR MUNICIPALITY?**

19 **A:** Use of the term “designated” is more appropriate in the interconnection
20 agreement. The term “primary” implies that there is a “secondary” provider.
21 Moreover, the use of the term “primary” may be confused with the use of the
22 term “primary PSAP” as defined by NENA, which refers to an entirely
23 different concept.

1 **Q: WHY IS THE TERM “DESIGNATED” MORE APPROPRIATE?**

2 **A:** In a competitive 911 market, a PSAP has the right to chose or designate the
3 entity from which it seeks to purchase 911/ E911 services. This is similar to
4 presubscription. A PSAP picks a carrier to provide its network service. For
5 example, a PSAP might designate different 911 network services providers,
6 for example one carrier for wireline 911/E911 calls and another carrier for
7 wireless 911/ E911 calls. Whether a PSAP “presubscribes” to a single,
8 competitive 911 service provider or presubscribes to two, one for wireline and
9 one for wireless, there is no “secondary” 911/ E911 services provider.

10 **Q: IN YOUR VIEW, WHY DOES AT&T SEEK TO USE THE TERMS**
11 **“PRIMARY/SECONDARY” RATHER THAN DESIGNATED?**

12 **A:** The concept of a “secondary” provider is a Hobson’s choice scenario
13 attributable to the ILEC that is reluctant to cede control of its end user 911
14 calls to a competitive provider. The incumbent desires to leverage the fixed
15 asset of its selective router to sort end user 911/E911 calls between its
16 911/E911 system and a competitor’s system. The incumbent refers to this as a
17 “secondary” provider to justify continuing to charge the rates set forth in its
18 E911 tariff for selective routing to PSAPs who may switch to a competitive
19 provider like Intrado Comm. Optimally, in a competitive 911/E911 market,
20 each voice provider should implement within its *local exchange dial tone*
21 *provisioning processes* the ability to sort 911/E911 and deliver calls from the
22 originating office to the appropriate 911/E911 service provider.

1 **Q: IS A 911/E911 SERVICE PROVIDER’S ABILITY TO BILL FOR**
2 **CERTAIN SERVICES DETERMINED BY WHETHER IT IS A**
3 **“PRIMARY” PROVIDER OR “SECONDARY” PROVIDER?**

4 **A:** An ILEC should not be entitled to charge a PSAP for services that have not
5 been ordered. Accordingly, when Intrado Comm has been designated to serve
6 as the 911 service provider, the ILEC should not be entitled to charge the
7 PSAP for selective routing services, ALI services, and/or data base
8 management services. The ILEC is no different than any other local exchange
9 carrier and/or telecommunications service provider (*i.e.*, CMRS, CLEC, VoIP
10 service provider, MLTS provider, etc.). As all other providers receive no cost
11 recovery from an PSAP for any investment necessary to sort 911 call traffic to
12 determine which selective router to route the call to, an ILEC should not be
13 entitled to recover its costs for sorting 911 traffic whether accomplished via
14 Line Attribute Routing or via the use of a second stage of switching using a
15 selective routing application to sort and forward the 911 calls. This is
16 consistent with the Commission’s recent decision that “The law is clear that
17 telecommunications companies may not charge for services they do not
18 provide.”

19 ***Issue 4: What terms and conditions should govern points of interconnection***
20 ***(POIs) when (a) Intrado Comm is the designated 911/E911 service provider; (b)***
21 ***AT&T is the designated 911/E911 service provider; and (c) Intrado Comm requests***
22 ***the use of a mid-span meet point?***

1 **Q: DOES INTRADO COMM INSIST ON A SINGLE POI WHEN AT&T IS**
2 **THE DESIGNATED E911 SERVICE PROVIDER WHILE**
3 **SIMULTANEOUSLY DEMANDING THAT AT&T INTERCONNECT**
4 **AT MULTIPLE POIS WHEN INTRADO COMM IS THE**
5 **DESIGNATED E911 SERVICE PROVIDER?**

6 **A:** No. This is another unfortunate mischaracterization on the part of AT&T.
7 AT&T is correct in its assertion that Intrado Comm is requiring a minimum of
8 two, geographically diverse POIs when Intrado Comm is the designated E911
9 service provider. Intrado Comm agrees with Mr. Neinast's testimony on
10 Pages 21 and 38 which extols the benefits of multiple POIs for E911
11 interconnection. Intrado Comm would certainly abide by the terms and
12 conditions for interconnection at multiple POIs for the exchange of 911 traffic
13 when AT&T is the designated E911 services provider; however, AT&T's
14 proposed 911 Appendix and Interconnection Trunking Requirements ("ITR")
15 Appendix sets forth no terms and conditions for such multiple interconnection
16 points for 911. Furthermore, given that generally only a single selective
17 router serves a given AT&T territory, it is difficult to establish diverse and
18 redundant interconnection points at a single switch.

19 **Q: PLEASE ELBORATE.**

20 **A:** For example, of the ten Selective Routers AT&T maintains in Florida, it
21 appears that only Brevard County is served by dual tandems and therefore
22 would be conducive to establishing multiple POIs for the exchange of E911
23 services traffic. However, this is only speculation on the part of Intrado

1 Comm as the AT&T 911 Appendix and ITR make no exceptions for multiple
2 POIs for E911 or dual E911 tandem configurations. Consequently, Intrado
3 Comm does not insist on a single POI when interconnecting to AT&T's E911
4 network but instead can only work within the parameters of interconnection to
5 E911 as set forth by AT&T in its own template documents.

6 *Issue 5(a): Should specific terms and conditions be included in the ICA for*
7 *inter-selective router trunking? If so, what are the appropriate terms and*
8 *conditions?*

9 *Issue 5(b): Should specific terms and conditions be included in the ICA to*
10 *support PSAP-to-PSAP call transfer with automatic location information ("ALI")?*
11 *If so, what are the appropriate terms and conditions?*

12 **Q: DO INTRADO COMM'S PROPOSED TERMS AND CONDITIONS**
13 **FOR DEPLOYMENT OF INTER-SELECTIVE ROUTER TRUNKS**
14 **UNFAIRLY SHIFT COSTS TO AT&T?**

15 **A:** No. The ubiquitous and unconditional deployment of inter-selective router
16 trunks is a natural requirement when interconnecting competing E911
17 systems. Intrado Comm understands there are costs associated with the
18 deployment of this functionality and, as a competitive E911 services provider,
19 is prepared to attribute those costs to overhead as a part of doing business in a
20 competitive E911 market. Inter-selective router trunks are a key element in
21 interoperability of competing E911 networks so the PSAP's end user callers
22 will have a comparable level of service functionality that it has in today's
23 ILEC monopoly model. Look at the processes and functionality AT&T and

1 CLECs had to deploy to assure the comparable level of service when the local
2 exchange market shifted from a monopoly service provider to a competitive
3 model. Competitive entrants had to deploy processes associated with Local
4 Number Portability (“LNP”) and hot cuts so subscribers could have the same
5 user experience when changing local exchange service providers. Congress
6 and the FCC wisely understood that the ILEC would not voluntarily make
7 migration to competitive service providers a smooth and easy transition.
8 Therefore, they mandated LNP and charged the state regulatory bodies with
9 establishing service migration benchmarks and standards so as to assure an
10 optimal consumer experience. The Florida Legislature and this Commission
11 have mandated similar requirements and policies in order to make competition
12 work. It is no different in this new area that is now subject to meaningful and
13 effective competitive choices.

14 **Q: IN WHAT TYPES OF SITUATIONS WOULD INTER-SELECTIVE**
15 **ROUTER TRUNKING BE USED?**

16 **A:** Interoperability between 911 networks, such as that created by inter-selective
17 router call transfers, could mean the difference between saving a life or
18 property through the provision of voice and location data or an emergency
19 response disaster. Inter-selective router trunking enables PSAPs to
20 communicate with each other more effectively and expeditiously. Misdirected
21 calls can be quickly and efficiently transferred to the appropriate PSAP with
22 the appropriate caller details which will improve public safety’s ability to
23 provide accelerated emergency responses. Full interoperability allows the

1 ANI and ALI associated with an emergency call (*i.e.*, the information needed
2 by the public safety agency to respond to the caller's emergency) to remain
3 with that communication when it is transferred to another selective router
4 and/or PSAP. Today, when AT&T is the 911 network provider, if the call is
5 required to be re-routed over the PSTN, the caller's ANI and ALI are lost and
6 the valuable information needed to assist emergency services personnel is
7 unavailable.

8 As a matter of public policy, it is critical that with the deployment of
9 advanced and/or next-generation 911/E911 services by Intrado Comm or
10 others that the network interconnections are geographically diverse and
11 redundant where technically feasible. The public benefit of such diverse and
12 redundant interconnection arrangements is well recognized by the FCC. In its
13 *Best Practice ES01 - Diverse Interoffice Transport Facilities*, the FCC's
14 Network Reliability and Interoperability Council states, "When all 9-1-1
15 circuits are carried over a common interoffice facility route, the PSAP has
16 increased exposure to possible service interruptions related to a single point of
17 failure (e.g., cable cut). The ECOMM Team recommends diversification of 9-
18 1-1 circuits over multiple, diverse interoffice facilities" (relevant excerpts as
19 Exhibit No. ____, Hicks Rebuttal TH-9).

20 **Q: DOES THIS COMPLETE YOUR REBUTTAL TESTIMONY?**

21 **A:** Yes.

Intrado Communications Inc.

IEN INTERCONNECTION PRICING SCHEDULE

	One Time Fee	Monthly Recurring Charge
Per DS1	\$250.00	\$127.00
Per DS0	\$250.00	\$ 40.00

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Network Reliability Council Focus Group IV

Essential Communications During Emergencies Team Report

Findings and Recommendations Pertaining to Emergency Service Network Reliability

January 12, 1996

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6. Essential Services Best Practice Recommendations

Best Practices are those countermeasures (but not the only countermeasures) that go furthest in eliminating the root causes of outages. *Network Reliability: A Report to the Nation* contained a total of 27 Best Practices pertaining to 9-1-1. All 27 original Best Practices have been rewritten and expanded to include alternate technologies where appropriate. These 27, and new best practices ES28 through ES33, being introduced by the ECOMM Team are categorized as follows. The ECOMM Team believes implementation of these practices will improve the reliability of the Public Switched Telephone Network (PSTN) and minimize the potential for interruption to vital emergency communications.

Category	New Best Practice No.	Former Best Practice No.
6.1 Defensive Measures for Interoffice Facilities...		
6.1.1 Diverse Interoffice Transport Facilities	ES01	112
6.1.2 Diverse Interoffice Transport Facilities with Standby Protection	ES02	113
6.1.3 Diverse Interoffice Transport Facilities Using DCS	ES03	114
6.1.4 Fiber Ring Topologies for 9-1-1 Circuits	ES04	115
6.1.5 Red-Tagged Diverse Equipment	ES05	125
6.2 Alternate Path when the Primary 9-1-1 Interoffice Facility Fails...		
6.2.1 Alternate PSAPs from the 9-1-1 Tandem Switch	ES06	118
6.2.2 Alternate PSAPs from the Serving End Office	ES07	119
6.2.3 PSTN as a Backup for 9-1-1 Dedicated Trunks	ES08	121
6.2.4 Wireless Network as Backup for 9-1-1 Dedicated Trunks	ES09	122
6.2.5 Intraoffice 9-1-1 Termination to Mobile PSAP	ES10	123
6.2.6 Backup PSAP in the LECs Serving Office	ES11	124
6.3 Defensive Measures for 9-1-1 Tandem Switches...		
6.3.1 Dual Active 9-1-1 Tandem Switches	ES12	116
6.3.2 Re-home to backup 9-1-1 Tandem Switch	ES13	117
6.3.3 Redundant Paired 9-1-1 Tandems	ES14	126
6.3.4 Multiple Diverse Tandem Switches with Diverse DCSs	ES15	127
6.3.5 TOPS as a 9-1-1 Tandem Backup	ES16	120

Table 6-1 NRC Essential Service Best Practices

Category	New Best	Former Best
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	Practice No.	Practice No.
6.4 Reverse Trends toward Centralization	ES17	109
6.5 Local Loop Diversity	ES18	128
6.6 Network Management Center and Repair Priority	ES19	129
6.7 Diverse ALI Data Base Systems	ES20	130
6.8 Mass Call Management...		
6.8.1 Move Mass Calling Stimulator away from 9-1-1 Tandem Switch	ES21	131
6.8.2 Pre-Planning for Mass Calling Events	ES22	132
6.9 Contingency Planning...		
6.9.1 Contingency Plan Development	ES23	133
6.9.2 Contingency Plan Training	ES24	134
6.9.3 Public Education on Proper Use of Essential Communications	ES25	135
6.10 Improve Communications among Network Providers and PSAPs	ES26	111
6.11 Common Channel Signaling (CCS)	ES27	110
6.12 Critical Response Link Redundancy/Diversity	ES28	New
6.13 Media and Repair Link Redundancy/Diversity	ES29	New
6.14 Private Switch/Alternative LEC ALI	ES30	New
6.15 CMRS - Emergency Calling	ES31	New
6.16 Cable Television Services	ES32	New
6.17 Outage Reporting	ES33	New

Table 6-1 NRC Essential Service Best Practices

Some of the best practices are alternate solutions for improving network reliability, and implementation of one practice may negate the need to implement another. For example, if one

were to implement Best Practice ES03, it would not be necessary to implement Best Practice ES01 since the concept of facility route diversity is achieved in both practices.

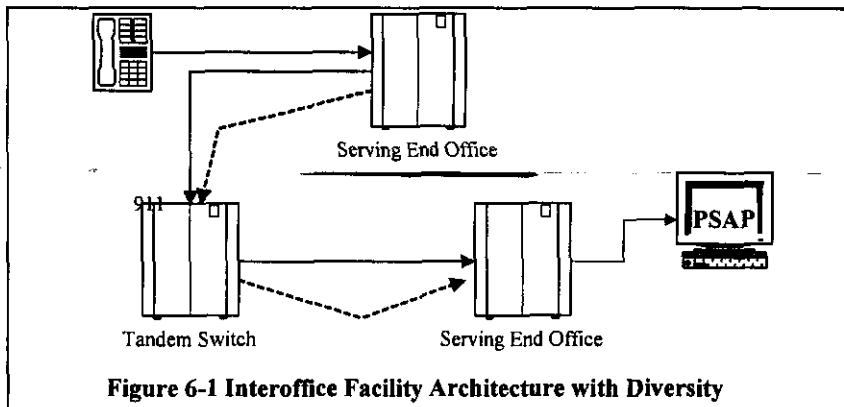
6.1 *Defensive Measures for Interoffice Facilities*

Best Practices ES01 through ES05 describe practices that promote safeguarding of network facility paths between the callers end office and the PSAP.

6.1.1 *Best Practice ES01 Diverse Interoffice Transport Facilities*

When all 9-1-1 circuits are carried over a common interoffice facility route, the PSAP has increased exposure to possible service interruptions related to a single point of failure (e.g., cable cut). The ECOMM Team recommends diversification of 9-1-1 circuits over multiple, diverse interoffice facilities.

Diversification may be attained by placing half of the essential communication circuits on one facility route, and the other half over another geographically diverse facility route (i.e., separate facility routes). Many LECs deploy diverse interoffice facility strategies when diverse facilities are already available. (See Figure 6-1)

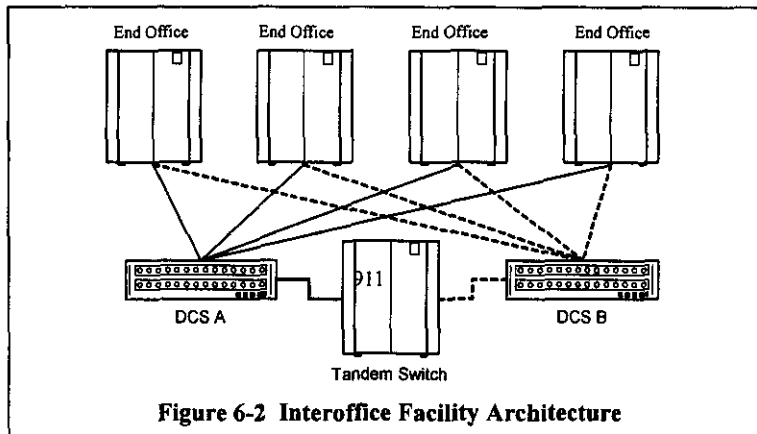


6.1.2 *Best Practice ES02 Diverse Interoffice Transport Facilities with Standby Protection*

A variation of the facility diversity architecture is deployment of a 1-by-1 facility transport system. This architecture is protected by a standby protection facility that is geographically diverse from the primary facility. Because no calls are lost while switching to the alternate transport facility during primary route failure, this architecture is considered self-healing.

6.1.3 Best Practice ES03 Diverse Interoffice Transport Facilities Using DCS

Earlier NRC Focus Group recommendations suggested using diverse interoffice transport facilities from the called serving end office via two diverse Digital Cross-connect Systems (DCS) for concentration. This approach provides diversity and, due to the concentration by the DCS network elements, offers a less costly network solution. Circuit rearrangement activity under this configuration will less likely result in the circuits being placed into non-diverse facilities. (See Figure 6-2)



6.1.4 Best Practice ES04 Fiber Ring Topologies for 9-1-1 Circuits

Fiber optic network elements offer network service providers the ability to aggregate large amounts of call traffic onto one transport facility. Traffic aggregation opposes the diverse facility transport recommendations defined in this document. However, fiber rings permit a collection of nodes to form a closed loop whereby each node is connected to two adjacent nodes via a duplex communications facility.

Fiber rings provide redundancy such that services may be automatically restored (self healing), allowing failure or degradation in a segment of the network without affecting service. Fiber rings are used in some metropolitan areas, ensuring essential communications service is unaffected by cuts to fibers riding on the ring. Ring features and functionality are part of the Synchronous Optical Network (SONET) technical requirements. The ECOMM Team believes

when essential communications is placed on SONET rings, service interruptions are minimized due to the self-healing architecture employed. (See Figure 6-3)

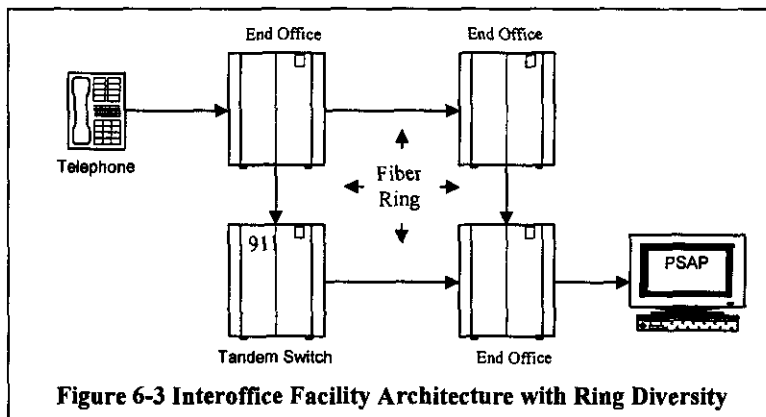


Figure 6-3 Interoffice Facility Architecture with Ring Diversity

6.1.5 Best Practice ES05 Red-Tagged Diverse Equipment

Depending on LEC provisioning practices, the equipment in the central office can represent single points of failure. The ECOMM Team supports the common LEC practice of spreading 9-1-1 circuits over similar pieces of equipment, and marking each plug-in-level component and frame termination with red tags. The red tags alert LEC maintenance personnel that the equipment is used for critical, essential services and is to be treated with a high level of care.

6.2 Alternate Path when the Primary 9-1-1 Interoffice Facility Fails

Best Practice ES06 through ES11 provide practices that promote establishment of alternate call paths between the caller's end office and the PSAP serving office.

6.2.1 Best Practice ES06 Alternate PSAPs from the 9-1-1 Tandem Switch

A common method of handling PSAP-to-Tandem transport facility interruptions is to program the 9-1-1 tandem switch for alternate route selection. If the 9-1-1 caller is unable to complete the call to the PSAP, the tandem switch would automatically complete the call to a pre-programmed directory number or alternate PSAP destination. The alternate PSAP may be either administrative telephones or another jurisdiction's PSAP positions, depending upon the primary PSAPs pre-arranged needs. (See Figure 6-4)