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BEFORE THE
FLORIDA PUBLIC SERVICE COMMISSION
Docket No. 070699-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 Embarq Florida Inc.

REBUTTAL TESTIMONY OF JOHN R. MELCHER

May 28, 2008

SECTION I - INTRODUCTION

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

A: My name is John R. Melcher. My business address is 1511 Waterside Drive, League City, Texas, 77573.

Q: WHO ARE YOU EMPLOYED BY?

A: I am the founder and president of the Melcher Group – a consulting firm specializing in public safety related activities. I am also a principal in Cyren Call Communications – advisor to the Public Safety Spectrum Trust Corporation. I act as a consultant to many public safety-related companies such as Intrado Communications Inc. (“Intrado Comm”).

Q: PLEASE SUMMARIZE YOUR EDUCATIONAL BACKGROUND AND PROFESSIONAL EXPERIENCE.

A: My curriculum vitae is attached as Exhibit No. ____ (Melcher, Rebuttal Exhibit JM-1). Prior to joining Cyren Call Communications in 2006, I was

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1 employed by the Greater Harris County 911 Emergency Network for fifteen
2 years in various positions including, most recently, Executive Director and
3 Chief Operating Officer. I was responsible for the design and management of
4 integrated voice and data networks providing emergency number service for
5 over 4.5 million citizens in 48 cities and four counties in the Houston
6 metropolitan areas. The Greater Harris County 911 Emergency Network is
7 the largest regional 911 program in the country. I also managed numerous
8 projects, including an early warning notification system, an automatic crash
9 notification system, and several projects surrounding wireless 911
10 implementation.

11 **Q: PLEASE DESCRIBE YOUR PROFESSIONAL AFFILIATIONS AND**
12 **PARTICIPATION IN INDUSTRY ASSOCIATIONS.**

13 **A:** I am certified as a National Emergency Numbering Association (“NENA”)
14 Emergency Number Professional (“ENP”). During my career, I have served
15 as the President, 2nd Vice President, and 1st Vice President of NENA. I have
16 also served as the wireless liaison for NENA working closely with wireless
17 carriers, manufacturer trade associations, the Federal Communications
18 Commission (“FCC”) and the Cellular Telecommunications & Internet
19 Association (“CTIA”). I have received six (6) NENA Presidential Citations
20 for contributing to and leading industry and association efforts. I also
21 regularly speak at public safety related conferences.

22 **Q: HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE FLORIDA**
23 **PUBLIC SERVICE COMMISSION?**

1 A: No, I have not previously testified before the Florida Public Service
2 Commission (“Commission”).

3 **Q: WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

4 A: The purpose of my testimony is to provide information on some of the
5 technical issues raised in this proceeding from an industry perspective.

6 **SECTION II – BACKGROUND**

7 **Q: HOW MANY YEARS HAVE YOU BEEN INVOLVED WITH THE**
8 **PUBLIC SAFETY INDUSTRY?**

9 A: Twenty-nine (29) years.

10 **Q: IN THAT TIME, HAVE YOU SEEN CHANGES IN THE 911**
11 **INDUSTRY?**

12 A: Yes.

13 **Q: CAN YOU PLEASE DISCUSS SOME OF THOSE CHANGES.**

14 A: Changes in the emergency services industry have affected every area of 911
15 operations from technical and political changes to legislative changes.
16 Among these changes, the biggest driver is access to telecommunications. We
17 now have access to telecommunications devices and telecommunications
18 applications far beyond what the original 911 network, its architects, and
19 industry policymakers ever envisioned. As a result, in order to keep up with
20 technological changes, 911 related funding and policy initiatives have and
21 continue to change.
22 Historically, 911 has been a very specialized niche area provisioned by
23 incumbent local exchange carriers (“ILECs”). Among the ILECs’ portfolio of

1 services, the 911 network and infrastructure has received far too little attention
2 with respect to the modernization and evolutionary design and development
3 compared to their ever-expanding networks. The Commission and its Staff
4 have, to their credit, recognized that 911 services have been overlooked, and
5 through this proceeding and other activities, are beginning to enhance public
6 safety's access to modern technologies, supporting interoperability among
7 PSAPs, and recognizing the overall benefits of competition in the 911
8 marketplace.

9 **Q: WHAT ISSUES WILL BE CRITICAL TO THE FUTURE OF THE**
10 **PUBLIC SAFETY INDUSTRY?**

11 **A:** The most critical issue for public safety is achieving performance parity for
12 the 911 network through technological advancements and synchronizing
13 public safety technologies with those of the rest of the telecommunications
14 industry. There are broad-based consumer applications that do not
15 appropriately incorporate 911 solutions. Public safety is commonly left out of
16 the equation in the development, standardization and promulgation of these
17 modern technologies and applications. As a result, consumers dangerously
18 assume that 911 is part and parcel of all modern telecommunications service
19 offerings. Unfortunately, 911 and citizen access to emergency
20 communications has become more of an afterthought than a forethought.
21 Many state commissions, such as Florida's, are left to bat clean-up. The
22 citizens of Florida have the right to expect better performance from their 911
23 systems, just as they enjoy expanded consumer choice in this modern

1 competitive environment. This is necessary to continue to serve the public
2 interest. The Commission has the ability to put mechanisms in place to ensure
3 that Florida's citizens enjoy state-of-the-art emergency services and access to
4 those resources that the public has come to expect.

5 **Q: IS THERE COMPETITION IN THE 911 INDUSTRY TODAY?**

6 **A:** Yes, but unfortunately it is very limited. There are many examples in the 911
7 industry where technologies are available to assist public safety, but barriers
8 to access, such as outdated policies, restrict competition. In many states,
9 policies have not changed since the inception of the 911 system. They remain
10 way behind the curve on cost recovery, interoperability, and other issues
11 related to a competitive environment, especially where multiple providers are
12 offering service.

13 **Q: WHAT PROCESS WAS USED TO IMPLEMENT 911 COMPETITION**
14 **IN THOSE AREAS?**

15 **A:** Competition in those areas is a new and emerging response to the needs of
16 public safety. Texas, for example, has had competition for selective routing
17 database provisioning since the late 1990s. Only since the inception of
18 competitive local exchange carriers ("CLECs") have we seen the removal of
19 some barriers to competition. Unfortunately, limited efforts were made for
20 911 competition and it has remained on the tail end. The instant proceeding
21 reflects the challenges to providing a competitive 911 service despite the
22 overall telecommunications revolution that commenced in 1996 with the
23 passage of the federal Telecommunications Act, an Act that was specifically

1 passed twelve (12) years ago to give competitive providers the tools necessary
2 to enter a market controlled by unwilling ILECs.

3 **Q: HOW HAS COMPETITION BENEFITED PUBLIC SAFETY**
4 **AGENCIES?**

5 **A:** The benefits of competition have been limited so far, and it has been an uphill
6 battle for public safety. While we have made some strides in going to a larger
7 cadre of service providers, we have not been able to take advantage of choice
8 and competitive price points enjoyed by the larger telecommunications
9 industry because of the barriers to access and competition. While all
10 telecommunications providers would agree that access for public safety to
11 current and advanced technologies is in the public interest, new entrants are
12 overwhelmingly mired into adversarial processes. The instant proceeding
13 serves as an example of the difficulty in increasing options for public safety.

14 **Q: ARE YOU FAMILIAR WITH THE TERM “NEXT-GENERATION”**
15 **WITH RESPECT TO 911 NETWORKS?**

16 **A:** Yes. I continue to work with various committees and standard setting
17 organizations focused on developing Next-Generation E911.

18 **Q: WHAT DOES THAT TERM MEAN?**

19 **A:** The term is overused, misused and abused. The immediate work for public
20 safety in all states, including Florida, is to bring 911 up to current technical
21 and operational best practices. This work should not be confused with “next-
22 generation” systems or applications. For example, the ability to support 911
23 calls from Voice over Internet Protocol (“VoIP”) service callers or from

1 wireless callers is based on current technology that would bring Florida to
2 existing standards and requirements. A true multi-provider market requires
3 interoperability among networks. Indeed, the significant changes in the 911
4 industry to date are centered on a service provider's ability to interconnect its
5 network with the public safety entity and to send the appropriate voice and
6 data and/or location information.

7 The question then becomes how do we take 911 to a place that we have not
8 seen yet? Next-generation architectures assume changes will take place.

9 Their platforms can anticipate advancements, *e.g.*, via scalability. However,
10 these yet-to-be-seen changes have no bearing on public safety's immediate
11 need to access current technologies, open access, and the need for enhanced
12 interoperability.

13 **Q: HOW HAS NENA BEEN INVOLVED WITH THE DEVELOPMENT**
14 **OF NEXT-GENERATION 911 NETWORKS?**

15 **A:** NENA continues to focus more on ensuring that public safety has access to
16 current state-of-the-art technologies to fight the disparity in service levels
17 across the country. We know that incumbent providers' customers in other
18 industries have access to state-of-the-art technologies while 911 customers
19 suffer from outdated architectures and service offerings. The 911 community
20 is deprived of modern technologies due to barriers in the marketplace,
21 including the notion that only the incumbents may serve as the designated 911
22 provider. Incumbent providers ensure that other industry segments have the
23 ability to take calls from all over the world. This global standard has not been

1 applied to 911. Alternative providers offer current, modern, and off-the-shelf
2 technologies and applications that public safety needs but cannot get due to
3 artificial barriers.

4 NENA, however, needs to support a vision whereby 911 networks and
5 systems are interoperable. It is not enough to remove barriers to entry.

6 Enhancements to public safety cannot be done in a vacuum. Section 251
7 interconnection is an existing, viable mechanism whereby a state commission
8 may ensure that interoperability among its 911 service providers is
9 administered efficiently, fairly and in keeping with the public interest.

10 Commercial agreements have previously served as an impediment to a level
11 playing field. Congress recognized this when it passed the 1996 Act. There is
12 little incentive for the incumbent provider to act timely or to price its services
13 as it would in a vibrant competitive market. I have direct experience in Harris
14 County, Texas where we invested millions of dollars into an upgrade that took
15 an exorbitant amount of time and resources due to the "turf battles" of
16 incumbent providers.

17 **Q: WHY IS IT IMPORTANT FOR PUBLIC SAFETY TO ENSURE**
18 **THEIR NETWORKS CAN SUPPORT CURRENT TECHNOLOGIES?**

19 As self evident as it may seem, technology is not the issue. *Access to*
20 *technology is the issue.* By examining industries outside of public safety, the
21 disparity is highlighted. For example, the energy, aerospace, and biomedical
22 industries are typically early adopters and are able to enjoy new technologies
23 as they are introduced. The early adopters generally have more current

1 telecommunications technology platforms and are able to integrate innovative
2 technologies as they are released.

3 In the 911 industry, we know the public is using leading edge technologies
4 and applications and they must be able to contact public safety. The 911
5 authorities committed to responding to 911 callers should be no more
6 restricted than any other consumers in the marketplace. Alternative providers
7 are currently offering solutions that, if integrated into the network now, would
8 permit public safety to be able to support the needs of these 911 callers.

9 Integration into today's modern network is key. Otherwise, public safety is
10 limited to legacy systems that we know lack the capability of supporting
11 current technologies and applications.

12 To further illustrate public safety's needs, we know that there is an incredible
13 investment on the part of incumbents and competitors alike into broadband
14 and IP-based networks. This evolution is important because it emphasizes
15 that services will not be about voice and data alone, they will be about
16 information and information sharing. The information sent over an IP
17 network could include voice, bursty data, building plans, streaming video,
18 mug shots, fingerprints, etc. The possibilities to enhance public safety's
19 response will grow exponentially. If my thirteen year old niece can send a
20 photo with a text message to her friends, why can't a witness to a crime do the
21 same? IP is the platform upon which all current telecommunications
22 applications reside and all future developments will be deployed. Public
23 safety's inability to integrate IP technologies and infrastructure today is

1 stifling their progress and making it unaffordable for them to advance to
2 current, off-the-shelf products and services. Public safety will remain behind
3 the curve if it is denied more robust competitive 911 service offerings, which
4 is diametrically opposed to the level of service the public expects and
5 demands and this Commission, Congress, and the FCC have mandated.

6 **SECTION III – UNRESOLVED ISSUES**

7 ***Issue 2(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 2(b): What trunking and traffic routing arrangements should be used for***
11 ***the exchange of traffic when Embarq is the designated 911/E911 Service Provider?***

12 **Q: CAN YOU EXPLAIN WHAT IS MEANT BY “CLASS MARKING”?**

13 **A:** I understand the term “class marking,” which describes the process used
14 generally to direct calls in split wire center areas or serving central office.
15 However, it is not germane to the 911 multi-provider market, as I further
16 discuss below. The appropriate term is more like “Line Attribute Routing,”
17 (Subscriber Data Element Specific) which is the process whereby a
18 subscriber’s voice and related data is provided for the appropriate routing of
19 an emergency call.

20 **Q: DO LOCAL EXCHANGE CARRIERS USE LINE ATTRIBUTE**
21 **ROUTING FOR 911 IN THE INDUSTRY TODAY?**

22 **A:** Yes, in limited applications.

1 **Q: IS IT TECHNICALLY FEASIBLE TO USE LINE ATTRIBUTE**
2 **ROUTING TO ROUTE 911 CALLS?**

3 **A:** Yes. It is similar to the call setup information used when a consumer makes a
4 long distance or 1+ call. By relying on line attributes associated with the end
5 user's service choice and related data elements, the serving switch knows
6 where to send the call.

7 **Q: WHAT OTHER PROCESS CAN BE USED TO ROUTE 911 CALLS**
8 **WHEN THERE ARE MULTIPLE 911 PROVIDERS?**

9 **A:** Secondary processing, such as through an incumbent's selective router, is
10 another method. Line attribute routing is preferred since the line attribute data
11 is established prior to call set-up, rather than through secondary processing or
12 switching systems. By relying on line attribute data elements that relate to
13 subscriber's information, the call may be delivered without introducing further
14 complexities or points of failure during call set-up and delivery to the
15 appropriate E911 system. The fewer points of failure introduced into call set-
16 up and delivery, the more accurate call delivery will be.

17 **Q: WHY IS LINE ATTRIBUTE ROUTING A SUPERIOR METHOD?**

18 **A:** In the 911 industry, generally, we try to avoid multiple links, multiple hops,
19 and the creation of multiple points of failure. By applying options such as
20 Line Attribute Routing at call set-up, we mitigate the potential for failure.

21 **Q: WHO IS USING THIS TODAY?**

22 **A:** Internet service providers use this process today. Indeed, every call delivery
23 system can use these attributes, similar to the way the functionality is

1 achieved in other areas, such as 1+ long distance. When a service order is
2 processed for a consumer to receive dial tone, line attributes are encoded into
3 the central office database to depict the consumer's choice of long distance
4 provider. 911 Line Attribute Routing works the same way. As the incumbent,
5 as a local telephone exchange provider, has the obligation to direct calls to the
6 customer's pre-subscribed long distance provider, it too has the obligation to
7 deliver emergency calls to the appropriate PSAP. Both use subscriber-based
8 attributes to determine where the call is delivered.

9 **Q: WHY SHOULD INCUMBENTS, AS LOCAL EXCHANGE**
10 **PROVIDERS, BE REQUIRED TO UTILIZE LINE ATTRIBUTE**
11 **ROUTING?**

12 **A:** It is my understanding that there is an obligation on all telecommunications
13 providers of local exchange dial tone services in Florida to deliver 911 calls to
14 the designated E911 Services provider for ultimate delivery to the appropriate
15 PSAP. For example, a CLEC serving Florida today may rely on switching
16 facilities located in New York. The CLEC does not have the option of
17 choosing call delivery to PSAPs in the closest rate center to New York in
18 order to fulfill its 911 obligation in Florida. The CLEC has to make
19 arrangements for the call to be delivered appropriately.

20 While I cannot make an apples-to-apples comparison with wireless providers
21 because they do not rely on line attributes, they perform call sorting on their
22 side of the network prior during call set-up to ensure 911 calls are delivered to
23 the appropriate 911 system.

John R. Melcher, ENP Curriculum Vitae

Corporate History

Mr. Melcher is the founder and president of The Melcher Group – a consulting firm specializing in public safety related activities. Activities include corporate mergers, acquisitions and strategy. Mr. Melcher is also a principal in Cyren Call Communications – advisor to the Public Safety Spectrum Trust Corporation (PSST). Cyren Call is led by veterans of the wireless industry and Public Safety communications, who will assist the PSST in the creation of a nationwide, wireless broadband network that will carry priority Public Safety communications. Cyren Call is headed by Morgan O'Brien, a co-founder of Nextel and a long-time champion of improving public safety communications.

9-1-1 and Public Safety Management/Related Activities

Cyren Call Communications 2006 – Present

Executive Vice President, Office of the Chairman

Managed external corporate communications, legislative, regulatory, lobbying and all outreach efforts to achieve favorable public policy positions for Cyren. Maintained relationships with various industry and public safety organizations such as APCO, IAFC, IACP, NENA to advance these public policy positions. An external presenter and speaker for Cyren at key public safety conferences as well as regulatory and legislative venues.

Greater Harris County 9-1-1 Emergency Network 2004 - 2005

Executive Director

Responsible for design and management of integrated voice and data networks providing emergency number service for over 4.5 million citizens in 48 cities and four counties in the Houston metropolitan area. Greater Harris County 9-1-1 Emergency Network is the largest regional 9-1-1 program in the country.

Chief Operating Officer - 1990 – 2004

Early Warning System Implementation, 2002

- Project Director, implementation of nation's largest early warning notification system for municipalities within coverage area.

Automatic Crash Notification Project (ACN), 2002 -present

- 2000 – Project Director of first proof-of-concept demonstration combining telematics technology within the native 9-1-1 communications infrastructure.
- 2002 – Project Director of first implementation of ACN technology in the public safety environment.
- 2005 – Expansion to include demonstration of mobile threat notification for chemical and bio-hazard.
- Total of 800 police cars across two technology platforms

Wireless 9-1-1 Implementation, 2002

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- Project Director for first implementation of wireless 9-1-1 technology for major metropolitan area in the country. The first major deployment of location technology, allowing 9-1-1 call-takers and first responders to pinpoint location of wireless devices calling 9-1-1. Now a national mandate by the Federal Communications Commission.

Texas Wireless Integration Project (WIP), 1996

- Co-chaired the first proof-of-concept demonstration utilizing location technology for routing and delivery of wireless 9-1-1 calls.

Inventor - patented 9-1-1 emergency communications system solutions

National Emergency Number Association (NENA) -16-Year Member

- President of NENA June 2002 – 2003
- 2nd Vice President of NENA 2001 – 2002
- 1st Vice President of NENA 2000 – 2001
- Numerous Testimonies before the United States Congress
- Wireless Liaison for NENA working closely with wireless carriers manufacturer trade associations, the FCC and CTIA, TR45
- ENP certification 1999

Pasadena Police Department - Pasadena, Texas

Technical Director, Dispatch Supervisor 1986 - 1990

Dispatcher, 1982 – 1986

Paramedic, 1984 - 1990

City of Pasadena – Office of Emergency Preparedness

Radio Officer 1978 – 1980

Communications Manager 1980 - 1982

Recognitions:

Presidential Citation, NENA 1995, 1996, 1997, 1998, 2002, 2006

APCO 1993, 1994, 1995, 1996

Recognition by Radio Resource magazine, Most Influential People in Public Safety, 1998 and 1999

Innovator Award from Computerworld Smithsonian for Visionary Use of Information Technology, (organizational award) 1995

Presidential Award, APCO Project 31, 1992 and 1993

Other Endeavors:

President, Pasadena Rotary Club 1992-1993

Licensed Pilot – Instrument Rating

Regular keynote speaker at public safety related conferences