

**FEDERAL COMMUNICATIONS COMMISSION
INDEPENDENT PANEL REVIEWING
THE IMPACT OF HURRICANE KATRINA
ON COMMUNICATIONS NETWORKS**

January 30, 2006



**Michael R. Anderson
Chairman**

PART-15.ORG

FOREWARD

Appointed by Federal Communications Commission (FCC) Chairman Kevin J. Martin, released in Public Notice DA 06-57, dated January 12, 2006

MISSION STATEMENT – To review the impact of Hurricane Katrina on the telecommunications and media infrastructure in the affected area and will make recommendations to the commission regarding ways to improve disaster preparedness, network reliability, and communications among first responders.

OBJECTIVES

- Brief presentation to the impact of Hurricane Katrina on your company's, departments, and/or industry sector's communications infrastructure
- Issues the panel should be focusing on based upon:
 - (a) Particular communications infrastructure resiliencies or weaknesses Hurricane Katrina uncovered,
 - (b) Particular successes or weaknesses in disaster preparation and/or recovery Hurricane Katrina uncovered (with regard to communications infrastructure)
 - (c) Successes or weaknesses in emergency communications Hurricane Katrina uncovered (you don't have to cover all of these issues, just what is relevant from your company's/department's/industry sector's perspective).

Good morning, Mr. Chairman and distinguished members of the Commission, fellow panel members and guests. My name is Michael Anderson and I serve as the Chair of PART-15.ORG. PART-15.ORG is a vendor and technology neutral industry organization of License Exempt Wireless Internet Service Providers, equipment manufacturers, resellers, distributors, and consultants along with other industry professionals who provide Voice, Video and Data services throughout America and abroad. PART-15.ORG provides wireless training and certification courses as well as the industries leading conference WISPCON (www.wispcon.info).

PART-15.ORG OVERVIEW

PART-15.ORG first began recovery efforts after receiving information and distress calls from numerous fellow WISPs located in the path of Hurricane Katrina. This assistance quickly grew to rather amazing proportions.

PART-15.ORG was notified and asked to participate in a FCC conference call, led by FCC Chief of Staff Dan Gonzalez. During the call, participants agreed that a vendor/technology neutral industry organization should be the focal point to funnel industry relief efforts and capabilities to the Commission and other responding agencies. PART-15.ORG stepped up to the challenge and volunteered our services.

1. PART-15.ORG and the License Exempt Wireless Internet Service Providers Industry

PART-15.ORG's estimate is that there are currently about 8000 Wireless Internet Service Providers – WISPs, in the United States. WISPs provide broadband connectivity in thousands of communities across America -- often providing the only available broadband option in communities, especially rural America. WISPs also provide a competitive alternative to cable, DSL, and satellite Internet access. Some WISP Networks extend for as much as thousands of square miles..

WISPs, because they mostly use license-exempt spectrum to build their wireless networks, do not require pre-approval from the Commission in deploying their wireless networks. This allows the WISP industry the capability of deploying wireless networks without restraint or delay by fulfilling an immediate communications need, which is one of the competitive advantages of WISPs. License Exempt WISPs do not require pre-approvals from the commission in deploying their wireless networks; the Commission does regulate its use however.

At the request of the FCC, PART-15.ORG was asked to coordinate and act as the clearinghouse for the industries relief efforts. The FCC specifically asked for continual updates and assessments of the WISP Industries Capabilities, Availabilities and Status of Field Deployments.

2. WISP Industry Response

In my role as PART-15.ORGs Chair, I am primarily responsible for coordinating the License Exempt Wireless Industry's support of the Hurricane Katrina disaster communications relief efforts.

The efforts detailed here today and over the past few months include those from the WISP industry as a whole. The Wireless ISP Industry responded to the relief efforts immediately upon hearing the call of need. Within 24 hours of hearing the distress calls of fellow WISPs and others describing the immediate need for assistance, over 300 volunteers responded by deploying to those areas in and around the most devastated areas. WISPs from as far away as California, Oregon and even Canada sprung to relief efforts by loading their trucks and cars with as much wireless networking equipment as possible. Manufacturers and resellers began assembling on-hand stock to be shipped to the areas of WISP deployments.

It is important to note that Hurricane Katrina was the *first* time in history that the WISP industry has mobilized its collective resources for the purpose of helping to relieve human suffering and restore basic communications. My report is a culmination from numerous individual and joint efforts of the entire License exempt Wireless Internet Service Provider.

Within 48 hours of accepting the responsibility of coordinating these efforts, PART-15.ORG established an Ad-Hoc Emergency Relief Center where logistics, personnel, supply, and technical advisers began the coordination efforts. Those efforts included two forms of coordination. A web-based volunteer form to be completed by those desiring to assist in the overall efforts and another web-based form that WISPs in the field could complete when requesting additional support. To date, there are over 400 additional volunteers have come forth and millions of dollars worth of communications equipment has been pledged. Over 70 locations are currently identified as either receiving WISP assistance or awaiting safety or security obstacles to be solved before relief efforts can begin.

The WISP industry's positive and enthusiastic approach to providing communications assistance to those in distress is truly reflective of their **Get It Done** attitude. Through the enormous volunteer efforts of the entire industry, the capabilities of the WISPs are unlimited and include:

Volunteers with equipment, generators, and self-support equipment (e.g., food, water, campers) can be onsite anywhere in the U.S. within 24 hours of notification

Initial network (including voice and data) for facilities management, ARC, and FEMA officials operational within 12 hours of access to facility

- Network covering 85% of facility and containment area operational within 3-5 days of access to site.

- o Network to support voice, data, and non-entertainment video

- o Network includes a total of 1000 phones

- _ 1000 phones in a single location, or

- _ 1000 phones broken down into smaller phone banks, e.g.

- 5 banks of 200 phones

- 10 banks of 100 phones

- 20 banks of 50 phones

- _ Phone Banks to call anywhere in U.S. for free on Vonage and Asterisk donated equipment and service

- _ 500 Mobile (hand-held) Wi-Fi phones used by Facility Management

- Backhaul bandwidth can be provided by wireless link to locations in excess of 100 miles away (DS3 capabilities)

- o Equipment on hand

- o Provisioning within 24 hours of request

- PART-15.ORG teams are self-sufficient except for physical security which will need to be provided.

The skills, education and training of WISPs provide for immediate permanent or temporary installations of communications providing Voice, Video and Data capabilities. WISPs are using every tool at their disposal to acquire the rapid establishment of communications.

The technologies at the WISPs disposal include WiMAX, Mesh, high-speed, long range Point-to-Point links, Wi-Fi; whatever works for the particular problem at hand. VoIP is also a primary resource for rapid telecommunications and is being widely deployed to provide basic and enhanced phone services. WISPs are presently in and around the most devastated areas. Inside New Orleans and as far away as those states becoming temporary homes for those fleeing the destruction.

It is with great pleasure and pride that I now provide the panel with updates from the field. WISPs have already established communications to over 400 locations. These efforts include but not limited to the Houston Astrodome, Albuquerque Stadium, Rayville LA, Lyman and Bilxoi and Pass Christian MS, and New Orleans.

Communications support is being provided to municipalities, emergency responders such as police, fire and medical personnel, and shelters regardless of size. Churches, schools, official ARC relief centers, and anywhere the need for communications exists. Of specific importance, most of these communications efforts are accomplished within 24 to 72 hours upon arrival of the WISP industry. To be more specific by naming a few of the organizations currently receiving communications support from the WISP industry are: Dept of Social Services, Dept of Health and Services, State Police, Military Disaster Preparedness, ARC, FEMA, and Small Business Associations.

3. WISP Industry Response Issues This Panel Should Focus On

While no stroke of a pen can prevent such a massive communications failure. there are many things that can be done to limit and mitigate such devastations in the future.

Funding – Non-traditional means of communications

While the WISP industry and our estimated 2 million customers have known about the resilience of license exempt wireless broadband for over ten years, the industry remains *non-traditional*. As such, the industry fails to qualify for most, if not all *traditional* forms of funding.

Better coordination and education with first responders

The WISP industry has never meshed with traditional forms of first responders in the past, most first responders were unaware, leery of our capabilities or not in a position to authorize entry.

Many WISP efforts were delayed or turned away because of the lack of appropriate authority to enter certain areas. Memorandum of Understanding (MOUs) should be establish with government, along with public and private industries.

Providing information to first responders on our capabilities will assist those first responders in determining communications assessments and capabilities of the WISP industry.

Formalize Response efforts by the Communications industry

WISP training programs with ARC, FEMA, and state and local authorities.

Memorandum of Understanding (MOUs) should be established with government entities along with traditional public and private industries.

SUMMARY

- License Exempt Wireless Industry Deployed
 - o 700+ volunteer personnel
 - o 2000+ VoIP phones
 - o 1000+ Computer Workstations
 - o 4000+ Wireless Networks

The panel should note that while the WISP industry has deployed vast amounts of relief support to date, the Industry remains only partially tapped for personnel and available resources. The panel, along with other Federal, State and Local authorities should seriously consider the WISP industry as a valuable asset in determining the communications needs of relief efforts.

WISPs and wireless entities all across America are establishing the much needed wireless networks in every aspect of relief efforts. Shelters as large as the Houston Astrodome to as small as single tents and buildings. While experiencing very little delays in establishing the communications necessary in these relief efforts, the WISP industry has worked well to overcome any obstacles and concerns of safety, security, and coordination.

This report further notes the overwhelming particularities of massing thousands of individual businesses, both public and private, each of which bringing forth unique talents and readily available communications solutions. Organizations and entities not previously set up to intermingle with outside agencies are now interfacing and becoming a valuable part of the overall relief effort. These thousands of volunteer organizations and entities have their own way of doing things and are adapting extremely well, whether those needs are coordinated through official agencies or local demands.

PART-15.ORG has attempted to establish a single clearinghouse (acceptable to these 8,000+ entities) to assist federal, state, local entities along with relief efforts to ensure rapid recovery of telecommunications services to those individuals, businesses and municipalities. We hope the efforts of PART-15.ORG and the many entities cooperating in the overall relief efforts have been and will continue to be valuable to the Commission.

In a very feeble attempt of providing recognition to those entities providing support in the License Exempt Wireless Industry Relief Efforts are: PART-15.ORG, WISPA, CUWIN, BANC, Intel (WiMAX), Cisco, Vonage, Asterisk,

Digium, Motorola, smartBridges, Trango Broadband, Teletronics, Wireless Tech Radio, Redline Communications (WiMAX), Electro-comm. Distributing, Digital Phoenix, Times Microwave, Slingshot Wireless, EOI, Inc. and the literally thousands of other participants.

I would also like to take this opportunity to thank the Federal Communications Commission and more specifically, the following personnel within the FCC: Chairman Martin, the Commissioners, Chief of Staff Daniel Gonzales, Director of Homeland Security Kenneth Moran, Lauren Van Wazer, Julie Knapp, and Bruce Franca, along with the many others within the agency who are providing the exhaustive communications coordination and assistance.

Respectfully Submitted
Michael R. Anderson
Chairman, PART-15.ORG