



EMERGENCY PREPAREDNESS

CASE STUDY

Emergency Preparedness - Hurricane Beryl Response

June 28-July 11, 2024 Case Study

Case Study: Hurricane Beryl Response – C-AT’s ICRI Ensures Quick, Communication Continuity Amid Widespread Power Loss and Infrastructure Damage

SITUATION

Hurricane Beryl, a Category 4 storm, left a trail of devastation across multiple regions, causing prolonged power outages and crippling local communication networks. Essential microwave towers were twisted and destroyed, while a power surge rendered the ACU 2000 inoperable, with no immediate service support from Raytheon available. Emergency responders faced significant obstacles in coordinating rescue, medical, and relief operations without reliable communication. Amid these challenges, only two solutions remained consistently dependable: Starlink satellite for emergency internet access & C-AT’s Incident Commanders’ Radio Interface (ICRI) for critical, interoperable communication.

INDUSTRY
State/Local Government
Public Safety

APPLICATION
Communications
Interoperability

CHALLENGE

The most pressing challenge was restoring reliable communication in the face of widespread infrastructure collapse. Response teams from local, state, and federal agencies arrived with an array of devices—VHF, UHF, satellite phones—that, without a solution, could not connect to each other. To make matters worse, debris-blocked roads kept aid from reaching critical areas quickly, isolating entire communities and cutting off vital coordination. With twisted towers, prolonged power outages, and limited access across the region, the need for a fast, dependable, and easy-to-deploy interoperability solution was critical. C-AT’s ICRI was exactly that solution. Engineered to provide instant cross-agency communication, the ICRI bridged gaps between all responder devices, allowing teams to connect directly and work in sync. This plug-and-play system brought responders together in real time, regardless of the barriers on the ground, empowering them to communicate effectively and act quickly where every second counted. The ICRI’s dependability on the front lines restored coordination where it was needed most, bringing help to those who needed it and ensuring no community was left behind.



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SOLUTION

In response to Hurricane Beryl, the Texas Department of Emergency Management (TDEM) launched a large-scale mutual aid effort to restore critical communication amid widespread infrastructure failure. Communication Unit members worked together to adapt, patch, and reinstate essential links for responders—a test of versatility and resilience in action.

At the heart of this effort, C-AT's Incident Commander's Radio Interface (ICRI) bridged communication gaps. Its quick, plug-and-play setup allowed rapid deployment in minutes, restoring connections across heavily damaged Land Mobile Radio (LMR) systems. Near Houston, an ICRI linked to Starlink satellite and Push-to-Talk over Cellular (PoC), allowing responders to coordinate convoys and communicate with the TDEM operations center by smartphone via Starlink, depending on coverage.

Where the damage was most severe, the ICRI created critical patches between radio systems and brought together incoming mutual aid units. Its flexibility allowed seamless connections with the Texas statewide system, bridging 800MHz, P25, and trunking systems, and creating a unified network for statewide, national, and other mutual aid talkgroups. This interoperability empowered thousands of first responders arriving daily, enabling coordinated cross-agency communication and filling essential gaps.

Key ICRI capabilities during Hurricane Beryl included:

- **Quick and Easy Setup:** The ICRI's plug-and-play design ensured fast deployment, allowing responders to establish a reliable network within minutes—a critical need during initial response efforts.
- **Fast, Reliable Connections:** Linking VHF, UHF, satellite phones, and more, the ICRI enabled seamless, immediate communication across various devices, despite damaged infrastructure.
- **Durability and Reliability:** Built to endure extreme conditions, the ICRI provided continuous communication throughout the disaster response, ensuring stable connectivity where other systems failed.

The deployment of C-AT's ICRI during Hurricane Beryl showcased its role as a fast, reliable, and adaptable solution in mission-critical situations. Together with Starlink, the ICRI ensured constant coordination, empowering responders to act decisively and restoring vital communication for isolated communities.

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OUTCOME

The deployment of the ICRI, complemented by Starlink, was pivotal in restoring communication capabilities for emergency teams during Hurricane Beryl. The ICRI enabled:

- **Swift Coordination of Rescue Efforts:** Teams could rapidly connect and coordinate medical evacuations, resource allocation, and search operations, significantly enhancing response times.
- **Seamless Cross-Agency Communication:** Local, state, and federal responders were able to collaborate effectively, thanks to the ICRI's compatibility across different devices and platforms.
- **Reduced Downtime and Increased Operational Resilience:** Unlike the ACU 2000, which could not be serviced onsite, the ICRI's quick setup and durable design minimized downtime, keeping crucial communications intact.

CONCLUSION

The Hurricane Beryl response underscored the necessity of reliable, quickly deployable communication solutions in disaster scenarios. C-AT's ICRI, with its quick and easy setup, fast connections, and field-tested reliability, provided emergency teams with a critical communication bridge. Together with Starlink, the ICRI ensured that life-saving operations could proceed uninterrupted, demonstrating its essential role in supporting effective, resilient disaster response efforts.

 Enables agencies to utilize existing LMR subscriber units and equipment

 Seamless communication between LMR and PoC devices

 True Plug and Play Reliable Tactical Comms Radio, Frequency and Band Agnostic

