



The University of Texas at Austin, Center for Space Research was established in 1981 under the direction of Dr. Byron D. Tapley.

The mission of the Center is to conduct research in orbit determination, space geodesy, the Earth and its environment, exploration of the solar system, as well as expanding the scientific applications of space systems data.

Results of CSR's research have provided solutions to questions associated with fishery, agriculture, mapping ocean circulation, improving models of the Earth's gravity field, environmental impacts of oil spills, oil exploration and drilling operations, and weather forecasting.

Dr. Byron D. Tapley, Senior Research Fellow at The University of Texas, Center for Space Research

Project Summary

Company

The University of Texas

Market

Government / Health Care

Location

Texas



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RFID aid hurricane evacuation and reunite evacuees and their property

RFID tags track evacuee's pets and medical assets in Texas

Opportunity: provide real-time information on evacuees

In 2005, Hurricanes Katrina and Rita challenged Texas official capacity to manage a mass evacuation. The state was already hosting more than 470,000 evacuees from Katrina when they were forced to scale their evacuation to nearly three million people as Rita headed for shore.

When the Rita evacuation was complete, families struggled to reconnect as there was little documentation of the movement of evacuees. And while Texas officials tried diligently to reunite families, there was added stress as people struggled to hold on to critical medical assets like wheelchairs and pets were lost or stolen when they were sheltered separately.

In the wake of that emergency response, the Texas Governor's Division of Emergency Management recognised the need to improve the tracking of evacuees in emergency situations and put a team together to create a solution.

The University of Texas Centre for Space Research led the state's effort to create the Texas Special Needs Evacuation Tracking System, the country's first state wide citizen evacuation system. They contracted with an AT&T led group of technology providers, including Texas based Radiant RFID, to deliver a system providing real-time information on evacuees.

Solution: RFID & GPS aid in the tracking process

The Texas Special Needs Evacuation Tracking System design uses a variety of technologies including GPS and RFID to track the process of evacuation and sheltering.

RFID tags are central to the system; they are placed on evacuees, their pets and essential medical assets and tied to a database to report on every milestone in the evacuation, including transport along the evacuation route. The tracking allows the state to manage the evacuation, respond to inquiries from the public and reunite families in the wake of a disaster.



There were a series of full scale exercises in 2006 and 2007 to refine the system and select the best components for the design. As the Special Needs Evacuation Tracking System was still in development and testing in August 2007, Hurricane Dean arrived to challenge the team.

Radiant RFID turned to **METALcraft** to quickly produce 50,000 barcode tags to support the deployment against the hurricane threat. More than 3,000 tags were delivered within 24 hours; another 5,000 were in Texas in 48 hours. Dean never made landfall in Texas, but **METALcraft** had demonstrated its value.

"METALcraft is a converter of choice," said Kenneth Ratton, VP of Sales & Marketing with Radiant RFID. *"I can count on them to turn orders around quickly."*

As Radiant continued its work refining the RFID components of the Special Needs Evacuation Tracking System, **METALcraft** was asked to develop an RFID tag to support the tracking of pets and personal medical assets.

Result: RFID completes the puzzle, linking equipment and pets to their owners

Personal medical equipment, such as wheelchair can be misplaced during evacuations. RFID tagging of these assets and association with the owner in the evacuation database ensures misplaced items can be quickly matched to their owners.

Pets are an important consideration in a mass evacuation, and RFID tags benefited their evacuation in two ways.

First, animals are usually sheltered separately, and some evacuees are reluctant to leave their homes for fear of losing their pets. RFID tracking to assure against lost or stolen animals is a strong incentive for people to leave a dangerous area.

A second important consideration is the safety of the pet handlers; pets under stress and in an unfamiliar setting can be agitated. The ability to use an RFID scanner outside a pet's enclosure is safer for keepers and animals.

Contact Peter Laws for more information on idtracon's barcode and RFID custom solutions.