Our Story

On November 16, 2012 tragedy struck at the Knox County Regional Airport (RKD) located in Owls Head, Maine. A Cessna 172 carrying three young men crashed shortly after takeoff. What happened? All the details may never be known however, unlike many tragedies, something positive has come of this one. A new technology has been invented. While it can't change the past, it has great potential for training and avoiding tragedies like this from happening again. It also possesses other great attributes. GARD® (General Aviation Recording Device) by Invisible Intelligence, LLC is now available to all airports. In simple terms, it is similar to a commercial airplanes black box, but this is for airports. It is important to understand the background for its development.

In regards to the tragedy of November 16, 2012, as published in the Bangor Daily News: "According to a preliminary report by the National Transportation Safety Board filed a few days after the Nov. 16 crash, Turner told the NTSB investigator that he announced over the common traffic advisory frequency for aircraft that he planned to cross the runway. He said he heard no response and didn't see anything on the 5,000-foot-long Runway 31, so he proceeded to cross.

"He subsequently saw something grayish in color, continued to cross the runway, and then got out to inspect what he saw, at which time he observed an airplane attempting to climb," NTSB stated in its preliminary report. "He continued watching the airplane drift to the left of the runway and make a left turn as if attempting to return to the airport. Subsequently, the airplane was then observed in slow flight, and then it began to spin." The plane then went nose-down into the woods about 2,200 feet from where the truck and plane collided on the runway, according to the federal agency's preliminary report.

Pieces of both the right elevator and the right rear stabilizer from the Cessna 172 single-engine plane were found on the runway near the site where the collision occurred." Three young men flying in the Cessna 172 lost their lives that day.

Unfortunately, scenes like this happen all too often in the aviation world. Airport managers, pilots and all of us in the aviation industry dread these happenings and have wanted a way to help mitigate this from happening. To date we have all relied on training, hoping and praying. The FAA and airports across the world, along with pilots associations and flying clubs spend hundreds of hours each year training pilots and airport users the importance of communications, communication between pilots, pilots and ground control, and ground vehicles and ground control. But what happens when you are at a non-towered or general aviation airport? Radio communications are not required by the FAA. Pilots are trained in radio communication, airport staff and airport users are trained in communication and yet it is not mandatory. Conscientious users will always use their radio skills. But if there is no black box in the aircraft to record communications and no tower that records, then what?

After talking with another airport manager about the events of November 16th, John Guimond, Airport Manager of the Augusta State Airport (AUG) in Augusta, Maine had an idea. What if a technology could be created to record communications at GA airports? While recording these communications can't

directly prevent accidents from happening, they can be used as airport specific training tools and could help the NTSB in investigations. John spoke with Ron Cote, an innovative electronic hobbyist and computer programmer, who works with many Maine airports repairing electrical components. John's idea was to create an inexpensive system to record CTAF and/or Unicom communications, but to record at the local airport level only. John's thoughts were originally to allow each airport to record the local communications and use them to train the local pilots and drivers of ground vehicles that are present at the airports (typically maintenance).

After a week of various thought processes Ron was able to create hardware and software technology to connect to any computer, record CTAF and Unicom communications, save them as .wav files and store them. The technology only records communications, not radio silence. After Ron presented his creation to John, they both determined there was so much more that can be done with the recorded information. As a testing site, they discussed their prototype with another airport manager who happily installed a prototype at their airport.

As we all know, training may not directly prevent an aviation accident, it is certainly the best way to indirectly prevent accidents. As pilots and ground vehicles are more aware of what they are doing and the need for radio communications, accidents may be avoided in the future because of the feedback from their own radio use! While the recorded information is worth its weight in gold for training, it is also worth as much for accident investigation. Yet, this is just the beginnings of GARD®.

John realized that, for the most part, each of his local pilots communicated five times for each landing, and four times for each take-off. With this knowledge, he could determine operational counts for his airport. As you can see, this information is more accurate than noise meters and a great deal better than the guesstimate of operations that many folks give the 5010 inspectors! Ron realized that with additional programming, not only could counts be done, but operational statistics could be created from this information.

Ron and John at this time joined together and created a partnership, Invisible Intelligence, LLC. At each step along the way, they have brainstormed new uses for the recorded information. John being the idea man and Ron the programmer/developer, GARD has continued advancing its usefulness. GARD software produces graphs and charts of the operations at the airport. Graphs can be produced showing hourly traffic, daily traffic, monthly traffic and yearly traffic patterns. This information can translate into determining staffing times, maintenance schedules and other time and money saving ideas.

The aforementioned airport manager has been so impressed with the software and uses of GARD that he has purchased the full package and now continues to assist in Beta testing each upgrade. To date GARD has been purchased by several airports in Maine and each airport manager has been able to use the information for employee training and user trainings. Invisible Intelligence LLC has presented GARD to the Aviation Staff of the MaineDOT. The staff at MaineDOT can see great potential use for all GA Airports for planning studies as they have been looking for a technology that can provide accurate operational counts. As we all know, accurate operational counts have been something of an enigma for GA airports, considering that not all airports are attended or have staff available.

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Noise attenuated counters are the latest technology, but these simply count what may be aircraft and are based on proximity of the noise. Longer runways would require multiple noise meters; multi-runway airports would need even more of the meters. By using GARD®, each airport manager would only need one GARD unit per frequency monitored, no matter how long the runway and no matter how many runways. GARD also records exactly what is being said. As John envisioned early on, he and Ron have created a very cost effective and GA airport affordable product that no airport should be without.

While we will never know who said what on the radio that tragic November morning at the Knox County Regional Airport; from now on airports using the GARD system will know what their pilots, ground vehicles and other radio users do. The recordings will help protect pilots, ground vehicles and airport users in the case of lawsuits and insurance claims. When used for the initial thoughts, the airport specific training alone may save lives, and that is what it is all about. Do you want to know what your operations really are at your airport? Do you want to be able to show your towns and cities exactly what your airport does for business and operations? Do you want to provide more accurate schedules for staffing your airports and FBO's? Do you want to protect your airport? Are you ready to GARD your airport, your pilots and your friends? If you answered yes to any of these questions, then you need to contact Invisible Intelligence, LLC at http://www.InvisibleIntelligenceLLC.com and get your GARD up today!