

**Written Testimony of Mr. Charles Benton for a House Committee hearing on
“Using New Ocean Technologies: Promoting Efficient Maritime Transportation
and Improving Maritime Domain Awareness and Response Capability”.**

Presented May 21, 2014

2253 Rayburn House Office Building

Chairman Hunter and distinguished Members of the Committee,

Thank you for the opportunity to appear before you to testify on the subject of Small Vessel Safety and Security at this important hearing. I appreciate and welcome the Committee’s continued focus on this subject.

Vessel tracking enables collision avoidance, makes more efficient use of our waterways possible, and enhances maritime security and response. The Automatic Identification System (AIS) developed in the 1970’s is the primary vessel tracking capability for large ships. This capability has been extremely successful and is used in a broad range of operational settings. However, the reality is that the costs and infrastructure of AIS result in less than 1% of all vessels actually using it.

There is a long identified need to better support small vessel operations through enhanced identification and tracking capabilities. In 2010, the the Department of Homeland Security issued a Small Vessel Security Strategy¹ that outlines many issues relating to this.

In 2010 the Department of Homeland Security S&T Directorate, Borders and Maritime Division issued a Small Business Innovation Research Program Topic looking for innovative new “Small Vessel Identification and Tracking Technologies”. My company responded with a proposal titled “Smart Chart AIS”, and set forth the concept that since virtually all small vessel operators also had smart phones, a surrogate AIS capability could be developed that took advantage of these already present systems.

This resulted in development of the Smart Chart AIS app that is distributed for free to the public. Features in Smart Chart AIS include: NOAA charts, weather radar, cruising guide information, social network functionality, Augmented Reality capability, and most importantly, surrogate AIS capability for small vessels, referred to as AIS-i.

AIS-i is a new AIS protocol we developed for use over the wireless internet. We are putting this protocol into the open domain, and have engineered it so that any company can integrate the protocols into their equipment. The intent is to enable all small vessels to use AIS-i for free or at very low cost.

¹ <https://www.dhs.gov/small-vessel-security-strategy>

A recent conference at the California Maritime Academy, titled “e-Navigation Underway”. e-Navigation is defined as:

The harmonized collection, integration, exchange, presentation and analysis of marine information onboard and ashore by electronic means to enhance berth to berth navigation and related services for safety and security at sea and protection of the marine environment.

I presented a paper titled “AIS-i – Supporting the Recreational Boating Community over Wireless Internet”, which was enthusiastically received. Attendees included senior government and industry personnel from around the world. This led to an invitation by the Radio Technical Commission for Maritime Services (or RTCM) to make a presentation at their annual technical meeting. RTCM is an international body that creates standards and documentation that are referenced by the International Electronics Commission and the UN’s International Maritime Organization in establishing, and sometimes mandating, performance standards.

An outcome of the meeting was a unanimous committee vote to have two Special Committees evaluate and report on having AIS-i formally reviewed and incorporated into the international standards process. This is the first step in a process leading to AIS-i protocols being adopted on a global basis.

The protocols and service that have emerged from this project are gaining national and international recognition as an appropriate and clearly needed solution that will enhance maritime safety and security. The project is rapidly transitioning from an R&D phase to a transitional phase in which standards will be finalized and formally adopted. Continued support for these efforts will ensure that Homeland Security interests are addressed and that the US will provide the leadership needed to enhance the safety and security of the 99% of the maritime community that small vessels represent.

Thank you again for your interest and focus on this important subject.

For further information contact Chuck Benton at 207-607-4242 or cbenton@tsinc.com