AIS makes waves: Accessing consolidated and accurate AIS information through the internet

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Since the end of 2004 Automatic Identification System (AIS) equipment has been obligatory on board SOLAS ships greater than 300 gt when traveling on international voyages. The wide scale implementation of AIS equipment and subsequent availability of AIS signals has not passed unnoticed and has led to, amongst other things, the introduction of www.aislive.com.

AIS on the internet fills a need

Ever since AISLive started, industry, as well as governments, military and international authorities have shown a positive interest in what AISLive is doing. They see the benefits of having access to a consolidated source of accurate and timely information which can be supplied in a cost effective and efficient manner.

The popularity of the website, once referred to as the “nautical hit of the year”, is undisputed with over 65,000 registered users and on an average day approximately 9,500 users are on-line.

Amongst the growing number of AISLive users are ship owners, tugboat and salvage companies, pilot organisations, port authorities, VTS organisations, ship’s agents, mooring companies, and also law enforcement. Private individuals may also register to use the site but are required to fill out a form stating their name and address.

Sources of information

There are many ways of obtaining shipping information, for example:

- Every port of importance, and nowadays even the smaller ones, use the internet for displaying the arrivals and departures of ships, including estimated time of arrivals and departures, last port of call, and next destination.
- Commercial ship watching services provide ships’ information on request.
- AIS receivers in many shapes and forms can be used to monitor shipping (vessel transponders, handheld receivers, even the combination of a VHF receiver plugged in to the sound card of a computer and free software will do the trick).

In May 2004, AISLive became active and became another source of real-time information. The rather simple display of vessels, including their AIS information, in a geographical area obviously attracted many users in the nautical environment in different ways.

Looking at the user base of this service and having talked to many of them, the following typical usage patterns emerge:

- Ship owners like to see where their ships are and if the progress is in accordance with their planning.
- Tugboat operators use the information to make a reliable planning for their working day.
- The same goes for the linesmen companies. By supplying them with real time information they are also able to plan ahead.
- VTS operators often have to rely on their radar horizon and management information system. The ‘over the horizon’ capability of AISLive is well recognised within this group and enables them to anticipate things to come.
- Ship agents want to know where their customers are in order to refine their planning and ordering for harbour services etc.
- Pilot organisations, to a large extent, already rely on the information provided by AISLive. Where is the ship we have to board? The additional information gives opportunities to optimise their services, thus avoiding unnecessary costs.

In short, its main use is to gain a quick overview of the current and expected situation. The added value of the AISLive service is twofold. First of all, it provides a much wider coverage than single users or organisations would be able to set up at comparable costs. Secondly, the service allows the verification of AIS data. The data quality depends on the diligence with which individual ships’ transponders have been installed and configured. In practice, there is ample room for improvement. AISLive allows the user to cross reference vessel data with other information sources.

Recent and future developments

As a result of discussions with industry, national authorities, the European Union and the International Maritime Organization, beginning in May 2005 the AISLive service will split into an Industry Subscriber Service for which a fee is charged and a Public Service which remains free. The Industry service will continue to offer near real time AIS information and other value added services. It is intended that access will be restricted to companies and organisations within the shipping industry. The public services...
will require less detailed registration, however, the information provided will be time delayed (by at least one hour) and significantly reduced.

Split services like these are not unique and are very similar to public and commercial websites of the kind used within the aviation industry, offering both real-time and 15 minute delayed information.

In the near future users may expect expansion of the network to obtain the final AISLive goal of a worldwide coverage of local receivers. Furthermore, the number of services will be extended. Planning and billing applications, embedded in the website, will become available in due course; thus providing even smaller users groups with the necessary information to run their individual businesses.

**AISLive in detail**

How does AISLive work? After (approved) registration and subsequent logging in at www.aislive.com, a region can be selected, for instance southern North Sea. The position of each vessel in the region is displayed on a chart and, by placing the cursor over a specific vessel, users can display additional details including latitude, longitude, course, speed and next port. By selecting to view further information, subscribers gain access to complete vessel and ownership details. AISLive also has a database containing photographs of various vessels. When an asterisk is placed after the name of a ship in the list of vessels below the map, a photo is available.

AISLive also offers value added services for which a fee is charged. These services include the use of the site’s search engine, the so-called ‘trigger function’ and the button ‘Show Ships Register Information’ which offers vessel information such as the details of ownership, management, technical specifications, and items such as inspection history and previous port state control detentions.

The search engine can be used to trace the location of a vessel by typing in its name. If the ship is under coverage of an AIS-antenna it will be found. The trigger function is designed for ship owners wanting to know when one of their vessels passes a certain line or location. A number of predefined trigger points have been established in the approaches to major ports. Once a selected vessel enters the pre-defined trigger area, the AIS Service server will automatically trigger an alert. The alert can be sent to a mobile phone as an SMS.

In the future, AISLive envisions an almost worldwide coverage of local receivers and hopes that many of these will be connected to the AISLive network.

Visiting the website, one instantly can observe that receiver owners obviously choose to join the public display area, thus reinforcing the network ideas of AISLive; at the same time benefiting from the ‘over the horizon looking’ capabilities. The improvement of the network is substantial, within the last two months Denmark, France, southern U.K. and even areas of the Caribbean (Puerto Rico) became part of the AISLive network on the website. It is clear that AISLive has gained considerable momentum and ports are no longer reluctant to join the network. At the time of writing, the network contains 65 receivers.

**Final thoughts**

On the whole, we think that publishing AIS data on the Internet is beneficial. The new split service model helps to restrict the use of AIS to legitimate users. The large number of visitors visiting AISLive each day clearly indicates that this site serves the needs users in shipping have.

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**ABOUT THE AUTHOR**

Huib van Roosmalen MSc is a System Engineer for HITT Traffic, provider of turnkey systems for VTS and Air Traffic Control. He is responsible for the specification of traffic guidance systems. Mr. van Roosmalen has contributed to the design and implementation of many VTS systems and VTS simulators, including those for Hong Kong and the Port of Rotterdam.

**ABOUT THE COMPANY**

HITT Traffic is a business unit of HITT. The HITT group of companies share the vision that safety, security and efficiency are vital drivers in airport and harbour management. Based on this vision, HITT business units provide software dominant system solutions in traffic management, security systems, navigation, and enterprise resource planning. The organisational structure of HITT ensures product focus at each individual business unit, whilst providing for open access to each other’s technology and resources. As a result HITT match unique technological strength and a high level of flexibility with a competitive cost structure. With establishments in Asia, Europe and America, the company has a worldwide presence.

**ENQUIRIES**

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