

THE AMERICAN PILOTS' ASSOCIATION

GUIDING PRINCIPLES FOR VTS IN THE UNITED STATES

November 10, 1999

APA Views on VTS

The APA has expressed the following public positions on Vessel Traffic Service (VTS) Systems. A number of these positions were submitted to a National Dialog Group convened by the United States Coast Guard (USCG) in 1997 to discuss the future of VTS in the United States. They were eventually reflected in an April, 1997 "Summary of Guidance" on VTS produced by the Group and accepted by the USCG (see discussion below).

1. The primary function of a VTS is to provide mariners with information that has the potential to help prevent or avoid accidents. Other functions and benefits, such as traffic management, traffic monitoring, interventions in navigation emergency situations, or other regulatory activities, are secondary.
2. Except in emergency situations, navigation decisions should be made on the bridge of the ship by the master, pilot, and other individuals involved in directing the movement of the ship. The mission of the VTS should be to give those mariners the information that they feel is useful in making those decisions.
3. There is no such thing as "Shore-Based Pilotage." In several places in the United States and other countries, shore-side tracking stations provide vessels with advice or, in some cases, direction as they approach the pilot embarkation point. In a few places outside the United States, navigation advice is provided from ashore to vessels moving within pilotage waters. Neither of those activities, however, is "pilotage." Pilotage is a service provided by a licensed pilot on the bridge of a vessel.
4. VTS systems should be based on AIS/DGPS/transponder technology and take advantage of other real-time information resources.
5. Any VTS system should be as non-intrusive and non-distracting as possible.
6. Emphasizing the goal of minimizing distractions and communication overload, the principle value of AIS technology for VTS systems is that it should substantially

reduce voice communications. The objective is to eliminate shore-to-vessel voice communication except in navigation emergency situations. AIS is more than simply an improvement in the ability of a VTS center to monitor the position of vessels.

7. Future VTS systems should rely less on watchstanders and other shoreside, VTS Center personnel. The function of the few shoreside personnel that might still be required in future, next generation VTS systems should largely consist of ensuring that the voiceless information exchange system is operating properly. Ultimately, an AIS-based VTS system may resemble a local area computer network (LAN) with information flowing freely in all directions among all the network participants, shipboard and shoreside.
8. The decision to establish a VTS in a particular area should be made cooperatively by the competent authority and the local pilots and other users/stakeholders. Similarly, pilots and other users/stakeholders should have input into decisions as to types of equipment and VTS procedures and operations.
9. Each VTS system should be designed to match the particular circumstances and needs of its area. With the exception of shipborne equipment requirements, a national VTS program should avoid a rigid "one size fits all" approach.
10. Participation in a VTS (including the carriage of AIS-compatible equipment and technology) should be mandatory for vessels subject to the Vessel Bridge to Bridge Radiotelephone Act. (all power-driven vessels greater than 20 meters, towing vessels greater than 26 feet (8 meters) while engaged in towing, and vessels 100 gross tons or more carrying one or more passengers for hire).
11. The federal (national) government should be responsible for the installation and maintenance of shoreside equipment, facilities and other infrastructure elements, such as antennas, relay stations or central servers, required by the AIS and DGPS systems.
12. In the United States, pilot-operated or port-sponsored VTIS systems should be supported by the USCG. Pilot-operated VTIS systems should be accessible by the USCG, including, where feasible, being available to the USCG for the exercise of COTP authorities, under the terms of mutually satisfactory partnership agreements.

The 1997 National Dialog on VTS.

Responding to a direction from Congress to fashion a new VTS program in close consultation with "users," the USCG in 1997 convened a "national dialog" with maritime and port community stakeholders. The intention was to develop a consensus national policy on VTS and other forms of navigational assistance. A series of meetings were held under the auspices of the National Research Council, and a "Summary of Guidance" dated April, 1997 was produced.

The Summary identified a number of principles intended to guide the development and implementation of future navigational assistance systems in the United States, including VTS, VTIS, Enhanced Automatic Identification Systems (EAIS) and AIS. Subsequently, the USCG confirmed its support for, and agreement with, the Summary of Guidance. The expectation of the dialog participants has been that future USCG activities will be consistent with the Guidance.

The major feature of the Summary of Guidance is its endorsement of "the widespread use of AIS employing Differential Global Positioning System (DGPS) and on-board transponder technologies." These technologies would provide the basis for navigation support services in both VTS and non-VTS areas. The stakeholders stressed that AIS supports ship-to-ship information exchange as well as shore to ship and ship to shore exchanges for enhanced systems, such as EAIS, VTIS and VTS.

Recognizing that pilots are the principal users of VTS services and, for most vessels, the point of contact between the VTS and the vessel, the APA was one of the leading stakeholders participating in the dialog. APA representatives were the foremost proponents of AIS and provided much of the technical and operational expertise during the group's discussions. Joined by INTERTANKO and the U.S. Chamber of Shipping, the APA advocated a two-tiered approach in which the USCG would be responsible for implementing a national AIS/transponder system as the baseline or basic "navigation support system" to supplement traditional aids to navigation. Beyond that, the USCG and local stakeholders/users could determine that a VTS or some other enhanced system should be implemented where necessary, with the caveat that the enhanced system would be built upon the AIS.

The Summary of Guidance ultimately reflected that approach, although the APA, INTERTANKO, and the Chamber of Shipping submitted a supplemental letter stressing even further that national application of AIS technology should be the foundation for all future VTS systems. Moreover, the letter cautioned that although "other surveillance and communications technologies" could be added to an AIS foundation where necessary, such technologies should not be considered as alternatives or replacements for the basic AIS foundation

In its discussion of VTS systems, the Summary makes several very important points, which are consistent with the views of the APA:

- “The primary goal of a VTS system is to ensure the safety of vessel traffic in U. S. Ports and waterways and to protect the marine environment by ensuring that the mariner has the information necessary to prevent or avoid collisions, allisions, and groundings.” The other benefits or capabilities of a VTS, e.g., providing the USCG with the means of implementing its Captain of the Port authorities and of facilitating traffic management activities and interventions in response to emergency situations, are secondary. Moreover, according to the Summary, “The USCG’s use of VTS to accomplish related missions and responsibilities should not interfere with the primary goal of promoting safe navigation.”
- An AIS-based VTS system should make information collection and transmission less intrusive and distracting to the mariner than would be the case with a traditional voice-based system. The objective is to minimize voice communications. The Summary states, “Dialog participants believe that use of AIS technology should largely obviate the need for USCG-to-vessel communications except in navigation emergency situations.”
- While the USCG’s fulfillment of statutory obligations and enforcement of mandatory participation rules may require some level of shoreside oversight, that level can be dramatically reduced by taking full advantage of AIS technology. In particular, dialog participants expressed the belief that “use of AIS technology would greatly reduce the number of shoreside personnel and other shore-based resources needed for effective involvement in a VTS.”

With respect to VTIS, in the initial and follow-up National Dialog meetings and in other settings, the USCG has indicated that it supports VTIS systems in non-VTS areas and will seek to enter into formal “partnership agreements” (which could provide for mandatory participation requirements enforced by the USCG) with non-governmental operators of VTIS systems meeting certain criteria. Further, the USCG will not move to displace existing VTIS systems that are working well and will encourage VTIS and EAIS systems for areas in which the USCG and local stakeholders agree there is no compelling need for a full-scale USCG-operated VTS.

The Summary’s treatment of VTS provides a useful guide to future activities in the areas of VTS and other forms of navigation assistance systems. As the USCG proceeds with the development of new VTS systems and the upgrading of existing systems, APA members and others should measure those efforts against the standards provided in the Summary.