



Automatic Identification System (AIS) Aid-to-Navigation (ATON) Application & Specification Form



USCG Office of Navigation Systems AIS ATON Approval Granted 2013-11-07

Applicant Details			
	Applicant & Owner		Operator (if different)
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AIS ATON Details			
Message 21 Content	Parameter	Values	Comment / description
	Maritime Mobile Service Identity (MMSI)	Transmitter Site: 993678000 eATONs: 993668001-10	To be provided by USCG, upon Aton approval
	Type of AtoN	Type 3	Denote the type of AtoN per IALA Recommendation A-126. If 0, explain purpose
	Aton Name(s)	CAMO PIPELINE SAFETY TEST eATONs: PIPELINE BELOW	Denote the name of the AtoN, up to 20 characters (or 34 if also using 'Name of Aton Extension' parameter and 2-slots)
	Dimension / Reference for Position	ABCD=0	Denote the name of the AtoN, up to 20 characters (or 34 if also using 'Name of Aton Extension' parameter and 2-slots)
	Type Of Electronic Position Fixing System (EPFS)	7-Surveyed [EPFS – Disabled]	0 = Undefined (default) 1 = GPS 2 = GLONASS 3 = Combined GPS/GLONASS 4 = Loran-C 5 = Chayka 6 = Integrated Navigation System 7 = surveyed. For fixed AtoN and virtual AtoN, the charted position should be used. The accurate position enhances its function as a radar reference target 8 = Galileo 9-14 = not used 15 = internal DGNSS
	Position Accuracy	1	1 = high (> 10m); 2 = low (<= 10m) 0 = default
	Aton Status	00000000=Default	Denote status indicators available on the AtoN per IALA Recommendation A-126
	RAIM Capability	Yes, but, using surveyed	Denote whether EPFS has RAIM capability
	Assigned Mode	Continuous	Either: Autonomous & continuous, or, assigned mode
Off-Position Threshold	N/A, Shore side install	Denote off-position threshold expressed in meter, see IALA A-126	

Equipment Particulars	Process For Deployment	Shore-side installation	Indicate how and who will be deploying the unit
	Intended Position	Tower location Lat: 29 9' 10.73" N Long: 90 10' 51.20" W Virtuals for pipelines - TBD	The position where the AtoN will be deployed. Upon deployment intended position shall be update with an actual position and provided to the USCG. Fixed AtoN positions shall be given as an average of at least 500 valid observed positions.
	Station Type	Type 3	Denote AIS AtoN Station Type, either: No receiver (Type 1); Receiver for control functions only (Type 2), Receiving for autonomous mode (Type 3)
	Make, Model, Version	L-3 Communications Desktop AtoN Type 3 Ver. 1.40A	Provide the make, model, and firmware version
	Certification Number	BSH/46162/4320834-1/09	Provide the IEC 62320-2 type certification body and number
Messaging	Access Mode [Message 21]	RATDMA	FATDMA, RATDMA or both. If FATDMA: VDL slot management will be provided by the Coast Guard
	Access Mode [Other]	RATDMA	FATDMA, RATDMA and/or CSTDMA. For messages other than 21, is FATDMA specified, state slots used or requested
	Messages to be used– Reporting Interval / Ch.	Msg 21, every 3 minutes alternating on Ch A & Ch B. Msg 12, when triggered, thence every 3 minutes alternating on Ch A & Ch B for 21 minutes or until acknowledged. And one of the following: Msg 21 (Virtual AtoN flagged=1); every 3 minutes alternating on Ch A & Ch B for 21 minutes or until acknowledged. Msg 6, DAC= 367, FI=22v1b, Type=3, Desc=20, GeoNotice; every 3 minutes alternating on Ch A & Ch B for 21 minutes or until acknowledged.	Reporting rate(s). Message 21 transmissions are required at minimum every 3 minutes, alternating on Channel A and B; additional messages 6, 8, 12, 14 or other appropriate messages possible, but, must be denoted here. Application Specific Message should provide DAC, FI, Version as registered at http://www.e-navigation.nl/asm
Data Configuration	Configuration Method	Standard PI sentences	Denote whether via the VDL or proprietary. Provide further information, such as: Standard PI sentences (IEC 61162) . Standard binary configuration messages. Proprietary sentences, which and for what. Proprietary binary configuration messages
	Transmit Power	12.5W	Denote transmit power: default (12.5 W) or as defined by manufacturer and denoted here
	Power Availability	Test site has main A/C power only. No back-up power available.	Denote power source: main or auxiliary e.g. power grid, and, whether there is back-up power
	Transmitter Capability	Dual	Denote whether dual or single channel (Type 1 & 2 only)
	Receiver Availability	Continuous, Automated data recording and 24/7 automated monitoring. Response during normal business hours except in case of emergency.	Denote receiver on times
	UTC Synchronization	Direct	Denote either direct, indirect or semaphore (Types 3)
	Chaining	N/A	If capable, provide all MMSIs in the chain and the neighboring AIS AtoN station (parent and child) of this station in the chain

Additional Details or Comments

Statement of Purpose

The Coastal and Marine Pipeline Operators (CAMO) are an organization that is extremely proactive in pipeline damage prevention. The goal of this organization is to bridge the gap between landside prevention initiatives for underground utilities and enhance visibility on subsea pipeline asset integrity. Several safety initiatives exist on land and the CAMO group has taken ownership of the seaside damage prevention to raise awareness around subsea infrastructure.

The Greater LaFourche Port Commission has partnered with CAMO and PortVision to host an antenna and provide the test area for this initiative. This equipment will deliver an AIS AtoN communication, to provide advanced subsea pipeline awareness, better risk management, new statistics on vessel passage-over-pipeline interaction, and generate forward-looking notification to vessel in pipeline zone. PortVision will be the operator of the equipment and subject matter experts to synthesize data deliver messages to vessels, and increase maritime domain awareness for the Port Fourchon region. Multiple maritime stakeholders have been consulted for this project. The benefit from this solution will assist; pipeline owners, vessel owners, government response and environmental protection organizations.

Period of operation: 250 days from publication notice of the test bed in the USCG Local Notice to Mariner.

Area of Operation. Three geographic zones will be monitored (200' 'charted pipeline' warning zone)

1. Centered on the point Lat. 29.11072, Long. -90.222945 'Pipeline Corridor 1 SouthWest Channel'
2. Centered on the point Lat. 29.157558 Long. -90.230906 'Pipeline Corridor 2 Bayou LaForche North'
3. Centered on the point Lat. 29.096002 Long. -90.222945 'Pipeline Corridor 3 SouthWest Mid Channel'

Concept of Operation. Use AIS to notify users that they may be anchoring over a pipeline.

- A. *Notification trigger and message:* Two warning zone scenarios:
 1. Vessel navigating at 0 kts for 10 minutes or more within a warning zone: 'PIPELINE BELOW'
 2. Vessel AIS Navigation Status changes to "At anchor" (NavStatus=1) within warning zone: 'DO NOT ANCHOR ON PIPELINE'

- B. *Notification type:*

Phase 1: via an addressed AIS Safety Related Message (message 12)

Phase 2: Same as Phase 1, but, every 3 minutes, alternating on Ch A & Ch B, for 21 minutes or until acknowledged

Phase 3: Same as Phase 2, but, augmented by either a message 6 [DAC= 367, FI=22v1b, Type=3, Desc=20] Geo-Notice or message 21 [VATON-flag=1].

Phase 3 is tentative, upon the success of Phase 1 & 2. We may also consider the use of the Linked Text msg too; during Phase 3, 8/367/29 and will investigate further during test period.

During the initial start-up we will be monitoring when the system is running. At some point, monitoring will be automated with alerts being sent to operations if necessary.