

Application Specific Message's (ASM) potential impact to the WWNWS

Submitted by United States

SUMMARY

Executive Summary: This information document provides an explanation of AIS Application Specific Messages (ASM), its format, and how it is displayed

Action to be taken: [Last paragraph]

Related documents: IMO SN.1/Circ.290, ITU-R M.1371, IMO SOLAS Regulation V/19.2.4, Geographic Notice Message, Version 2 (23 March 2015)

Introduction/Background

1. The concept for Automatic Identification System (AIS) Application Specific Messages (ASM) dates back to 2004 with SN/Circ.236. In 2010, the IMO Maritime Safety Committee, at its eighty-seventh session, formally approved guidance for the presentation and display of ASM as proposed by the Sub-Committee on Safety of Navigation (NAV) at its fifty-fifth session. AIS is an autonomous continuous non-proprietary ship-to-ship navigation broadcast system. It is internationally adopted (ITU-R M.1371) and required (IMO SOLAS Regulation V/19.2.4) on all tankers and passenger vessels irrespective of size, ships of 300 gross tonnage or greater on international voyage, and on ships of 500 gross tonnage or greater on a domestic voyage. The United States now requires AIS on (need to find this from RTCM paper)
2. The current draft standard for ASM is referred to as a Geographic Notice message. What follows is taken directly from that standard, released on 23 March 2015, version 1b. The Geographic Notice message's purpose is to transmit information that pertains to a region or area, for example a security zone, an area of fog, or where dredging operations are underway. The areas that are being defined can be circles, rectangles, polygons, or sectors. They can also be defined as a simple point or series of points (polyline). The Geographic Notice message can be made up of multiple subareas in which case the total area is the union of the subareas. This message can also be used to convey advisory lines or tracks (using the polyline subarea); however, the Route Information message should be used for recommended or directed routes.
3. A Geographic Notice should be used to broadcast dynamic information (i.e., information that is time- dependent). These messages are to be used for a specific time period, and will automatically timeout at the end of the period. If the Geographic Notice must be in place longer, then a new Geographic Notice must be transmitted with a new start and end time. It should be only used to convey pertinent time-critical navigation-safety information to mariners or authorities, and not as a means to convey information already provided by official nautical charts or publications.

4. Geographic Notice Message Usage Notes

- 4.1. The information is time-dependent (i.e., has start date/time and duration). If a Geographic Notice (except for a cancellation message – Area Type 126) is received without a valid start date/time and duration then it should be discarded.
- 4.2. When the current month is December and the notice start month is January, the notice start year shall be the current year plus one; the notice start year shall be the current year in all other cases.
- 4.3. The message may be transmitted prior to the start time/date to allow for advance notice. To avoid confusion, it should not be transmitted more than one day in advance.
- 4.4. The message should not be transmitted beyond the designated end date/time except for a cancellation message. A cancellation message can be transmitted before the designated end date/time using the same Message Linkage ID with an Area Type of 126 (cancellation), a Duration = 0, and start time fields all set to “not available.”
- 4.5. Presentation software should automatically remove the Geographic Notice from the display after the end date/time or upon receipt of a cancellation message.
- 4.6. Up to 5-slot messages can be created, but messages with more than three slots should be avoided. Messages with more slots are less likely to be received due to RF noise or packet collision.
- 4.7. A circular sub-area (Type 0) with a zero radius (scale factor should also be set to 0) is a point that can be used as a node in a polygon. This is used when more precision is needed than is possible using the points in the polygon subarea (the trade-off is more subareas and a longer message).
- 4.8. Polygon sub-areas (Type 4) must follow immediately after a circle/point sub-area (Type 0 sub-area with 0 radius) in the same Geographic Notice message. The point defines the start of the line segments. If more than five points are needed for a polygon, then additional polygon sub-areas can be used. However, they must follow immediately after the first polygon sub-area and be contained in the same Geographic Notice message.
- 4.9. A rectangular sub-area (Type 1) with a zero for both North and East dimensions (scale factor and orientation should also be set to 0) is a point that can be used as a waypoint or to define a line. This is used when more precision is needed than is possible using the points in the polyline subarea (the trade-off is more subareas and a longer message).
- 4.10. Waypoints can be specified using the polyline/waypoint sub-area (Type 3). If more precision is needed then multiple rectangle/point sub-areas (Type 1 sub-area with 0 North and East dimensions) can be used (e.g., one for each waypoint).
- 4.11. When waypoints are specified using polyline or rectangle/point sub-areas, they should be numbered/used in the order that they appear in the message.
- 4.12. Polyline sub-areas (Type 3) must follow immediately after a rectangle/point subarea (Type 1 sub-area with 0 for North and East dimensions) in the same Geographic Notice message. The point defines the start of the line segments. If more than five points are needed for a polyline, then additional polyline sub-areas can be used. However, they must follow immediately after the first polyline subarea and be contained in the same Geographic Notice message.
- 4.13. The polygon sub-area (Area Shape 4) should be used to create polygon areas. However, if more precision is needed to specify the points in the polygon then the circle/point sub-area (Type 0 with radius set to zero) can be used, one sub-area per point. All points (sub-areas of Type 0) must occur in sequence and be contained

within the same message. The polygon is formed by connecting the points and closing the shape from the last point back to the first.

- 4.14. Distances and bearings between points in the Geographic Notice should be calculated using Rhumb lines not Great Circles.
- 4.15. The Message Linkage ID and the source MMSI can be used to link additional text (e.g., a separate Linked Text message). This information must be included in both the Geographic Notice and additional Linked Text message.
- 4.16. The total area defined by one Geographic Notice (one Message Linkage ID) is the union of all of the sub-areas contained in the message.
- 4.17. If the same Message Linkage ID is retransmitted with different sub-areas and/or times the presentation software should replace the old Area with the new.
- 4.18. The Message Linkage ID must be unique across all ASMs to which it applies. In this way, the Message Linkage ID and Source MMSI are connected to the same text message.
- 4.19. A message version number is encoded as part of the message; if the received version number is different than what the display system has been programmed for, the data should be ignored; recently changed to a message should be displayed to the operator indicating the mismatch in the version.
- 4.20. All directions are relative to True North, all positions are WGS-84 Datum, and all distance calculations should be in accordance with IEC 61993-2 Annex G.

5. Message Format

Table 1: Geographic Notice – Broadcast

	Parameter	# of bits	Description	
Standard Message Header	Message ID	6	Identifier for Message 8; always 8.	
	Repeat Indicator	2	Used by the repeater to indicate how many times a message has been repeated. (See ITU-R M.1371-3, Annex 2, § 4.6.1). 0 – 3; 0 = default; 3 = do not repeat any more. Set to 0 (default).	
	Source MMSI	30	MMSI number of source station. This varies according to the transmitter ID.	
	Spare	2	Not used. Set to zero.	
Binary Data	Designated Area Code	10	Designated area code (DAC). (See Rec. ITU-R M.1371-3 § 2.1, Annex 5). Set to 367 (US).	
	Function Identifier	6	Function identifier. Set to 22.	
	Application Data	Message Version	6	Sequential number used to indicate the message version in steps of 1. 0 = test message = default; 1 – 15 = message version; 16 – 63 (don't use). Set to 2.
		Message Linkage ID	10	A source specific running number, unique across all binary messages equipped with Message Linkage ID. Used to link additional information to the message by a Text Description message. The Message Linkage ID and the first six digits of the source MMSI uniquely identify the sent message. 1 – 1,023; 0 = not available = default.

	Parameter	# of bits	Description
	Notice Description	7	Notice Description as per Table 10. Set to 0 – 127 according to description. If 127, there must be associated text (see Table 9).
	Start time of Area	UTC month	4 UTC month of the Area start. 1 – 12; 0 = UTC month not available = default; 13 – 15 (reserved for future use).
		UTC day	5 UTC day of the Area start. 1 – 31; 0 = UTC day not available = default.
		UTC hour	5 UTC hour of the Area start. 0 – 23; 24 = UTC hour not available = default; 25 – 31 (reserved for future use).
		UTC minute	6 UTC minute of the Area start. 0 – 59; 60 = UTC minute not available = default; 61 – 63 (reserved for future use.)
	Duration	18	Minutes until end of Geographic Notice, measured from start date and time of Geographic Notice. Maximum duration is 262,142 minutes (182.04 days). 0 = cancel Geographic Notice; 1 – 262,142; 262,143 = undefined = default.
	Action	1	Action parameter: 0 = Advisement; 1 = Directive;
	Spare	2	Set to zero.
	Sub-area 1	96	Area description, structured as in Table 4 - Table 9. A short text description may be associated with the areas using Sub-area 5: Associated text. 2-slot message.
	Sub-area 2	96	Optional additional area, structured as in Table 4 - Table 9. 2-slot message.
	Sub-area 3	96	Optional additional area, structured as in Table 4 - Table 9. 2-slot message.
	Sub-area 4	96	Optional additional area, structured as in Table 4 - Table 9. 3-slot message.
	Sub-area 5	96	Optional additional area, structured as in Table 4 - Table 9. 3-slot message.
	Sub-area 6	96	Optional additional area, structured as in Table 4 - Table 9. 4-slot message.
	Sub-area 7	96	Optional additional area, structured as in Table 4 - Table 9. 4-slot message.
	Sub-area 8	96	Optional additional area, structured as in

	Parameter	# of bits	Description
			Table 4 - Table 9. 5-slot message.
	Sub-area 9	96	Optional additional area, structured as in Table 4 - Table 9. 5-slot message.
Total		216 – 984	2-5 slot message

Table 1: Geographic Notice – Addressed

	Parameter	# of bits	Description	
Standard Message Header	Message ID	6	Identifier for Message 6; Set to 6 addressed , acknowledgement needed.	
	Repeat Indicator	2	Used by the repeater to indicate how many times a message has been repeated. (See ITU-R M.1371-3, Annex 2, § 4.6.1). 0-3; 0 = default; 3 = do not repeat any more. Set to 0 (default) .	
	Source MMSI	30	MMSI number of source station. Varies according to the transmitter ID.	
	Sequence number	2	0 – 3; refer to ITU-R M.1371-3, Annex 2, § 5.3.1.	
	Destination MMSI	30	MMSI number of destination station.	
	Retransmit Flag	1	Retransmit Flag. 0 = no retransmission = default; 1 = retransmitted.	
	Spare	1	Not used. Set to zero .	
Binary Data	Designated Area Code	10	Designated area code (DAC). (See Rec. ITU-R M.1371-3 § 2.1, Annex 5). Set to 367 (US) .	
	Function Identifier	6	Function identifier. Set to 22 .	
	Application Data	Message Version	6	Sequential number used to indicate the message version in steps of 1. 0 = test message = default; 1 – 15 = message version; 16 – 63 (don't use). Set to 2 .
		Message Linkage ID	10	Used to link additional information to the message by a Text Description message. The Message Linkage ID and the first six digits of the source MMSI uniquely identify the sent message. 1 – 1,023; 0 = not available = default.
		Notice Description	7	Notice Description as per Table 10. Set to 0 – 127 according to description. If 127, there must be associated text (see Table 9).
Start time of Area	UTC month	4	UTC month of the Area start. 1 – 12; 0 = UTC month not available = default; 13 – 15 (reserved for future use).	

Parameter		# of bits	Description
	UTC day	5	UTC day of the Area start. 1 – 31; 0 = UTC day not available = default.
	UTC hour	5	UTC hour of the Area start. 0 – 23; 24 = UTC hour not available = default; 25 – 31 (reserved for future use).
	UTC minute	6	UTC minute of the Area start. 0 – 59; 60 = UTC minute not available = default; 61 – 63 (reserved for future use.)
	Duration	18	Minutes until end of Geographic Notice, measured from start time of Geographic Notice. Maximum duration is 262,142 minutes (182.04 days). 0 = cancel Geographic Notice; 1 – 262,142; 262,143 = undefined = default.
	Spare	3	Set all spare bits to 0.
	Sub-area 1	96	Area description, structured as in Table 4 - Table 9. A short text description may be associated with the areas using Sub-area 5: Associated text. 2-slot message.
	Sub-area 2	96	Optional additional area, structured as in Table 4 - Table 9. 2-slot message.
	Sub-area 3	96	Optional additional area, structured as in Table 4 - Table 9. 3-slot message.
	Sub-area 4	96	Optional additional area, structured as in Table 4 - Table 9. 3-slot message.
	Sub-area 5	96	Optional additional area, structured as in Table 4 - Table 9. 3-slot message.
	Sub-area 6	96	Optional additional area, structured as in Table 4 - Table 9. 4-slot message.
	Sub-area 7	96	Optional additional area, structured as in Table 4 - Table 9. 4-slot message.
	Sub-area 8	96	Optional additional area, structured as in Table 4 - Table 9. 5-slot message.
	Sub-area 9	96	Optional additional area, structured as in Table 4 - Table 9. 5-slot message.
Total		248 – 1016	2-5 slot message

Table 2: Geographic Notice – Number of Slots

Number of sub-areas transmitted	1	2	3	4	5	6	7	8	9
Number of bits used for a broadcast message	216	312	408	504	600	696	792	888	984
Number of slots used for a broadcast message	2	2	3	3	3	4	4	5	5
Number of bits used for an addresses message	248	344	440	536	632	728	824	920	1016
Number of slots used for an addressed message	2	2	3	3	4	4	5	5	5

Table 3: Geographic Notice Sub-Areas

Value	Area Shape	Table for Definition
0	Circle or point	5
1	Rectangle	6
2	Sector	7
3	Polyline	8
4	Polygon	9
5	Associated text	10
6-7	Reserved	--

Table 4: Circle or Polygon Point

	Parameter	# of bits	Description
Geographic Notice: Sub-area	Area Shape	3	Defines the shape of the area. Set to 0 for Circle.
	Scale Factor	2	Scale factor. This is a multiplier for the dimensions of the shape. 1 (default), 10, 100, & 1,000 (scale factor = 10^n where n=decimal value of scale factor). 0 = 1x (default), 1 = 10x; 2 = 100x, 3 = 1000x.
	Longitude	28	Longitude of the center in 1/10,000 minute ($\pm 180^\circ$). East = positive, West = negative (as per 2's complement); 181° (6791AC0h) = not available = default.
	Latitude	27	Latitude of the center in 1/10,000 minute ($\pm 90^\circ$). North = positive, South = negative (as per 2's complement); 91° (3412140h) = not available = default.
	Precision	3	Precision of the Lat/Long. Data to be truncated to the number of decimal places specified in this parameter. 0-4 decimal places. Default = 4 (no truncation). 5-6 = Reserved; 7 = Do not use.
	Radius	12	Defines the size of the circular area. This is the radius of the circle in meter increments. 0 = point (default); (scale factor should also be set to 0 in this case) 1 – 4,095m. This is multiplied by the scale factor to give a maximum size of 4,095,000m (4,095km).
	Spare	21	Spare. Do not use. Set to 0.
	Total	96	90 bit subarea

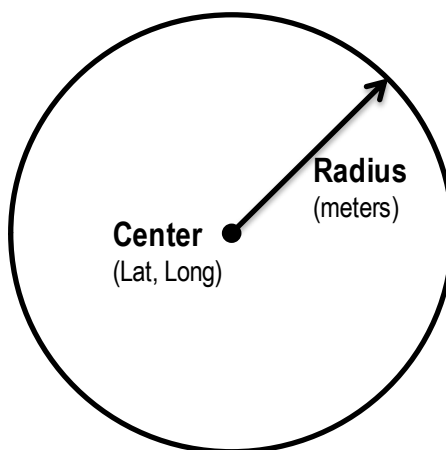


Figure 1: Circle diagram.

Table 5: Rectangle or Line or Line Point

	Parameter	# of bits	Description
Geographic Notice: Sub-area	Area Shape	3	Defines the shape of the area. Set to 1 for Rectangle.
	Scale Factor	2	Scale factor. This is a multiplier for the dimensions of the shape. 1 (default), 10, 100, & 1,000 (scale factor = 10^n where n =decimal value of scale factor). 0 = 1x (default), 1 = 10x; 2 = 100x, 3 = 1000x.
	Longitude	28	Longitude of the corner point ¹ in 1/10,000 minute. ($\pm 180^\circ$). East = positive, West = negative (as per 2's complement); 181° (6791AC0h) = not available = default.
	Latitude	27	Latitude of the corner point ¹ in 1/10,000 minute ($\pm 90^\circ$). North = positive, South = negative (as per 2's complement); 91° (3412140h) = not available = default.
	Precision	3	Precision of the Lat/Long. Data to be truncated to the number of decimal places specified in this parameter. 0-4 decimal places. Default = 4 (no truncation). 5-6 = Reserved; 7 = Do not use.
	E dimension	8	Box dimension East from the corner point in meter increments. This is multiplied by the scale factor to give a maximum dimension of 255,000m (255 km). 0=line North-South (default) ² ; 1 – 255 * scale factor meters.
	N dimension	8	Box dimension North from the corner point in meter steps. This is multiplied by the scale factor to give a maximum dimension of 255,000m (255 km). 0=line East-West (default); 1 - 255 * scale factor meters.
	Orientation	9	Rotation of area in degree steps. Area is rotated clockwise this number of degrees about the position above. 0 = no rotation = default; 1 - 359 = rotation in degrees; 360 – 511 (reserved for future use).
	Spare	8	Spare. Do not use. Set to 0.
Total		96	90 bit subarea

¹ Corner point is the Southwest corner – prior to any rotation.

² If both North and East Dimensions are 0 then the shape collapses to a point to be used as a waypoint or in a line.

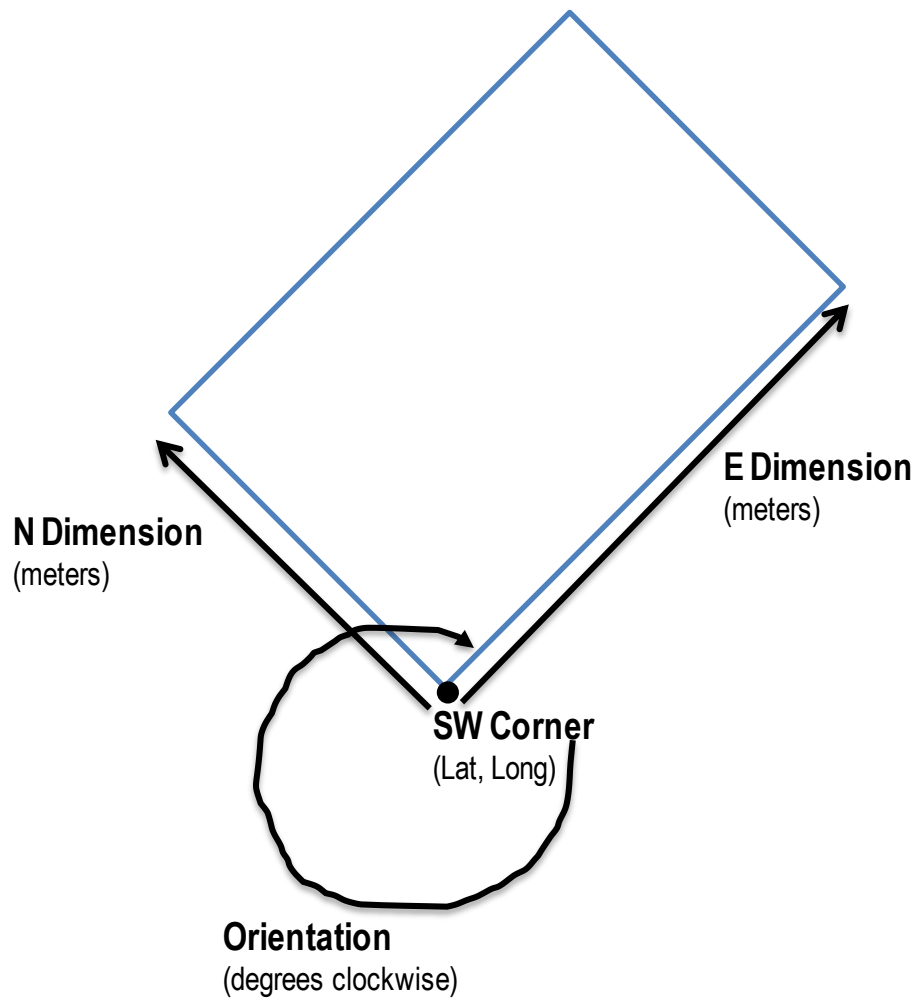


Figure 2: Description of the process required to define a “rectangle” area.

Table 6: Sector

	Parameter	# of bits	Description
Geographic Notice: Sub-area	Area Shape	3	Defines the shape of the area. Set to 2 for Sector.
	Scale Factor	2	Scale factor. This is a multiplier for the dimensions of the shape. 1 (default), 10, 100, & 1,000 (scale factor = 10^n where n=decimal value of scale factor). 0 = 1x (default), 1 = 10x; 2 = 100x, 3 = 1000x.
	Longitude	28	Longitude of the center in 1/10,000 minute ($\pm 180^\circ$). East = positive, West = negative (as per 2's complement); 181° (6791AC0h) = not available = default.
	Latitude	27	Latitude of the center in 1/10,000 minute ($\pm 90^\circ$). North = positive, South = negative (as per 2's complement); 91° (3412140h) = not available = default.
	Precision	3	Precision of the Lat/Long. Data to be truncated to the number of decimal places specified in this parameter. 0-4 decimal places. Default = 4 (no truncation). 5-6 = Reserved; 7 = Do not use.
	Radius	12	Defines the size of the sector. This is the radius of the sector in meter steps. This is multiplied by the scale factor to give a maximum size of 4,095,000 m (4095 km). 0 = point = default; 1 – 4,095 * scale factor meters.
	Left Boundary	9	Orientation of the left boundary edge of the sector. This is in degree steps measured clockwise from true North about the center point. 0 = no rotation = default; 1-359 = rotation in degrees; 360-511 (reserved for future use).
	Right Boundary	9	Orientation of the right boundary edge of the sector. This is in degree steps measured clockwise from true North about the center point. Total sector area is the area measured from the left boundary clockwise to the right boundary. 0 = no rotation = default; 1-359 = rotation in degrees; 360-511 (reserved for future use)
	Spare	3	Set to zero.
Total		96	96 bit subarea

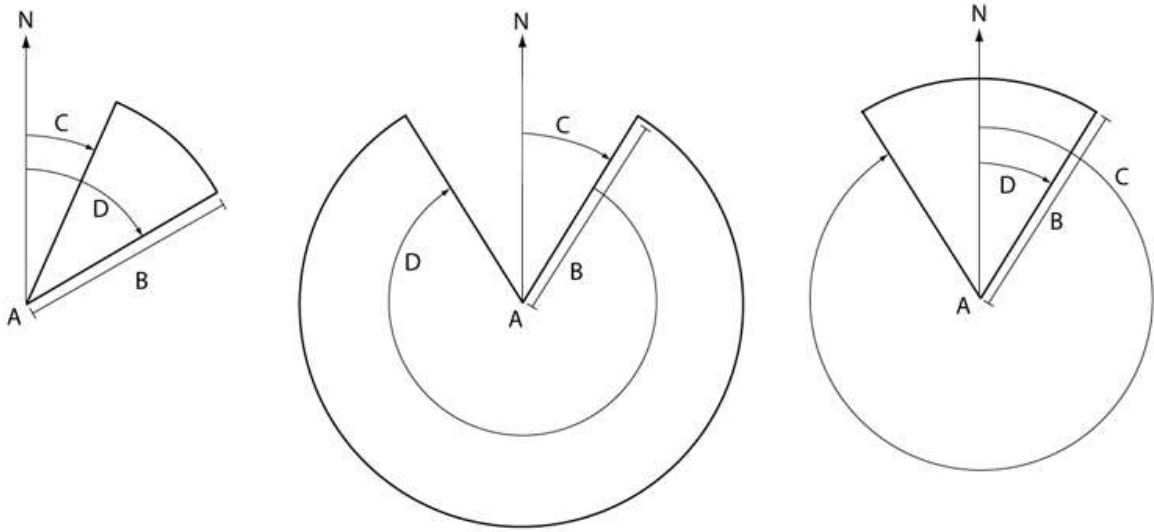


Figure 3- Sector description. a) Center point, b) Sector radius, c) Sector bearings from center point, left boundary, d) Sector bearings from center point, right boundary.

Table 7: Polyline

	Parameter	# of bits	Description
Geographic Notice: Sub-area	Area Shape	3	Defines the shape of the area. Set to 3 for Polyline (open area or line). The initial point (point 0) is defined by an Area Shape = 1 (rectangle/point).
	Scale Factor	2	Scale factor. This is a multiplier for the dimensions of the shape. 1 (default), 10, 100, & 1,000 (scale factor = 10^n where n =decimal value of scale factor). 0 = 1x (default), 1 = 10x; 2 = 100x, 3 = 1000x.
	Point 1 Angle	10	True bearing (in half-degree steps) from Point 0 to Point 1 or from the last Point in a Polyline directly preceding this Polyline to Point 1 in this Polyline. Degrees bearing = decimal value (0-719)/2; 720 = not available (no point) = default; 721 – 1,023 (not for use).
	Point 1 Distance	11	Distance (in meters) from Point 0 or from the last Point in a Polyline directly preceding this Polyline to Point 1 in this Polyline. Multiply by the scale factor to give a maximum of 2,047,000m (2,047 km). 0 = default (no point); 1- 2,047 * scale factor meters.
	Point 2 Angle	10	True bearing (in half-degree steps) from Point 1 to Point 2. Degrees bearing = decimal value (0-719)/2; 720 = not available (no point) = default; 721 – 1,023 (not for use).
	Point 2 Distance	11	Distance (in meters) from Point 1 to Point 2. Multiply by the scale factor to give a maximum of 2,047,000m (2,047 km). 0 = default (no point); 1- 2,047 * scale factor meters.
	Point 3 Angle	10	This is the true bearing (in half-degree steps) from Point 2 to Point 3. Degrees bearing = decimal value (0-719)/2; 720 = not available (no point) = default; 721 – 1,023 (not for use).
	Point 3 Distance	11	This is the distance (in meters) from Point 2 to Point 3.. Multiply by the scale factor to give a maximum of 2,047,000m (2,047 km). 0 = default (no point); 1- 2,047 * scale factor meters.
	Point 4 Angle	10	This is the true bearing (in half-degree steps) from Point 3 to Point 4. Degrees bearing = decimal value (0-719)/2; 720 = not available (no point) = default; 721 – 1,023 (not for use).
	Point 4 Distance	11	This is the distance (in meters) from Point 3 to Point 4. . Multiply by the scale factor to give a maximum of 2,047,000m (2,047 km). 0 = default (no point); 1- 2,047 * scale factor meters.
	Spare	7	Not used. Set to 0.
Total		96	90 bit subarea

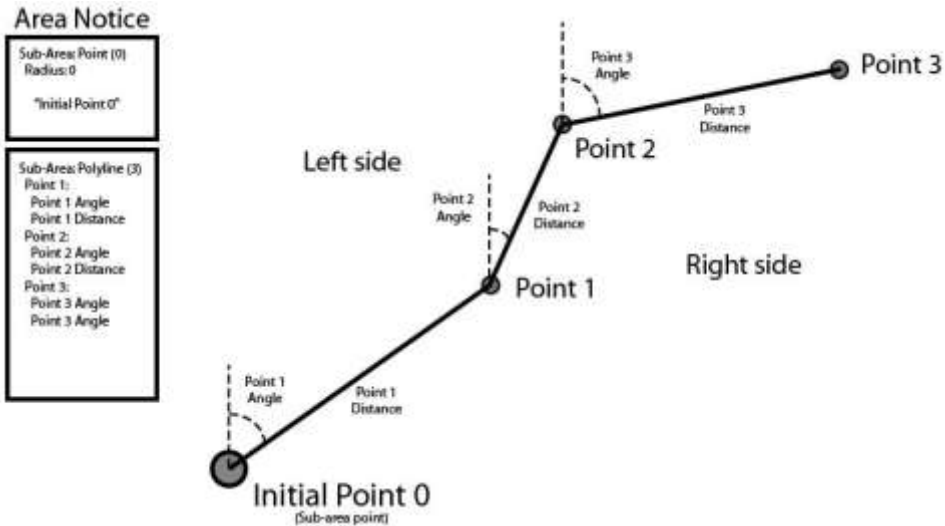


Figure 4 - Graphic description of a waypoint/polyline, showing angle and distance between points. If one side of a polyline is to be a boundary (e.g., edge of ice area), this is defined by the left side of the line in order of sequence from the initial sub-area point (Point 0).

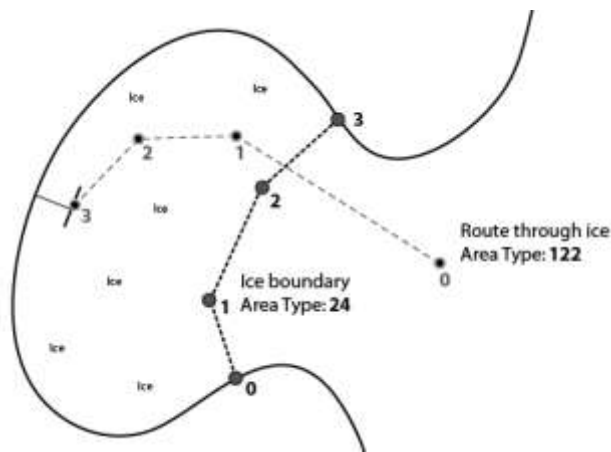


Figure 5 - Graphic depiction of: 1) ice boundary between sea ice and open water, and 2) recommended route through the sea ice area.

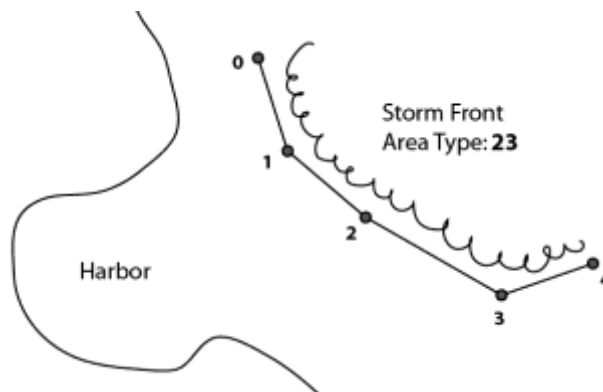


Figure 6 - A graphic depiction of a storm front message.

Table 8: Polygon

	Parameter	# of bits	Description
Geographic Notice: Sub-area	Area Shape	3	Defines the shape of the area. Set to 4 for Polygon (closed area). To close the polygon shape, connect the last defined point back to the initial point (Point 0). To be preceded by an Area Shape = 0 (circle).
	Scale Factor	2	Scale factor. This is a multiplier for the dimensions of the shape. 1 (default), 10, 100, & 1,000 (scale factor = 10 ⁿ where n=decimal value of scale factor). 0 = 1x (default), 1 = 10x; 2 = 100x, 3 = 1000x.
	Point 1 Angle	10	True bearing (in half-degree steps) from Point 0 to Point 1 or from the last Point in a Polygon directly preceding this Polygon to Point 1 in this Polygon. Degrees bearing = decimal value (0-719)/2; 720 = not available (no point) = default; 721 – 1,023 (not for use).
	Point 1 Distance	11	Distance (in meters) from Point 0 or from the last Point in a Polygon directly preceding this Polygon to Point 1 in this Polygon. Multiply by the scale factor to give a maximum of 2,047,000m (2,047 km). 0 = default (no point); 1- 2,047 * scale factor meters.
	Point 2 Angle	10	True bearing (in half-degree steps) from Point 1 to Point 2. Degrees bearing = decimal value (0-719)/2; 720 = not available (no point) = default; 721 – 1,023 (not for use).
	Point 2 Distance	11	Distance (in meters) from Point 1 to Point 2. Multiply by the scale factor to give a maximum of 2,047,000m (2,047 km). 0 = default (no point); 1- 2,047 * scale factor meters.
	Point 3 Angle	10	True bearing (in half-degree steps) from Point 2 to Point 3. Degrees bearing = decimal value (0-719)/2; 720 = not available (no point) = default; 721 – 1,023 (not for use).
	Point 3 Distance	11	Distance (in meters) from Point 2 to Point 3. Multiply by the scale factor to give a maximum of 2,047,000m (2,047 km). 0 = default (no point); 1- 2,047 * scale factor meters.
	Point 4 Angle	10	True bearing (in half-degree steps) from Point 3 to Point 4. Degrees bearing = decimal value (0-719)/2; 720 = not available (no point) = default; 721 – 1,023 (not for use).
	Point 4 Distance	11	Distance (in meters) from Point 3 to Point 4. Multiply by the scale factor to give a maximum of 2,047,000m (2,047 km). 0 = default (no point); 1- 2,047 * scale factor meters.
	Spare	7	Not used. Set to 0.
Total		96	90 bit subarea

Table 9: Associated Text

	Parameter	# of bits	Description
Geographic Notice Sub-area	Area Shape	3	Defines the shape of the area. Set to 5 for Associated text. This text is associated with the area defined in this binary message. Multiple Associated Text sub-areas are glued together in the order they appear in the message.
	Text	90	Fifteen 6-bit ASCII characters, 6 bit ASCII characters as per Table 44 in ITU 1371-4. If less than 15 characters are required, then the remainder of the field should be filled with "@" characters (set bits to 0). On the ECS the @ characters at the end should not be displayed.
	Spare	3	Not used. Set to 0.
Total		96	90 bit subarea

Table 10: Notice Description

Value	Description
0	Caution: Marine mammal habitat
1	Caution: Marine mammals in area - reduce speed
2	Caution: Marine mammals in area - stay clear
3	Caution: Marine mammals in area - report sightings
4	Caution: Protected Habitat - reduce speed
5	Caution: Protected habitat - stay clear
6	Caution: Protected habitat - no fishing or anchoring
7	Caution: Derelicts (drifting objects)
8	Caution: Traffic congestion
9	Caution: Marine event or regatta
10	Caution: Divers down
11	Caution: Swim area
12	Caution: Dredge operations
13	Caution: Survey operations
14	Caution: Underwater operation
15	Caution: Seaplane operations
16	Caution: Fishery - nets in water
17	Caution: Cluster of fishing vessels
18	Caution: Fairway closed
19	Caution: Harbor closed
20	Caution: Submerged pipeline or cable
21	Caution: Unmanned vehicle operation
22	Caution: other (define in associated text field)
23	Environmental Caution: Storm front (line squall)
24	Environmental Caution: Hazardous sea ice i.e. icebergs and growlers
25	Environmental Caution: Storm warning (storm cell or line of storms)
26	Environmental Caution: High wind
27	Environmental Caution: High waves
28	Environmental Caution: Restricted visibility (fog, rain, etc)
29	Environmental Caution: Strong currents
30	Environmental Caution: Heavy icing
31	Environmental Caution: Oil or other hazardous substance in area
32	Environmental Caution: other (define in associated text field)
33	Restriction: Fishing prohibited
34	Restriction: Entry approval required prior to transit
35	Restriction: Entry prohibited

36	Restriction: Active military OPAREA
37	Restriction: Firing - danger area
38	Restriction: Drifting mines
39	Restriction: other (define in associated text field)
40	Anchorage: Anchorage open
41	Anchorage: Anchorage closed
42	Anchorage: Anchoring prohibited
43	Anchorage: Deep draft anchorage
44	Anchorage: Shallow draft anchorage
45	Anchorage: Vessel transfer operations
46	Anchorage: other (define in associated text field)
47	Ice Report: Ice Edge
48	Ice Report: New Ice (<10cm ocean <5cm lake)
49	Ice Report: Young Ice (10-30cm)
50	Ice Report: Thin 1 st year ice (30-70cm ocean, 5-15cm lake)
51	Ice Report: Medium 1 st year ice (70-120cm ocean, 15-30cm lake)
52	Ice Report: Thick 1 st year ice (120-200 cm ocean, 30-70cm lake)
53	Ice Report: Old /very thick ice (>200cm ocean, >70cm lake)
54	Ice Report: Undetermined or unknown thickness
55	Reserved for Future Use
56	Security Alert - Implement USA MARSEC Level 1
57	Security Alert - Implement USA MARSEC Level 2
58	Security Alert - Implement USA MARSEC Level 3
59	Reserved for Future Use
60	Reserved for Future Use
61	Reserved for Future Use
62	Reserved for Future Use
63	Reserved for Future Use
64	Distress: Vessel disabled and adrift
65	Distress: Vessel sinking
66	Distress: Vessel abandoning ship
67	Distress: Vessel requests medical assistance
68	Distress: Vessel flooding
69	Distress: Vessel fire/explosion
70	Distress: Vessel grounding
71	Distress: Vessel collision
72	Distress: Vessel listing/capsizing
73	Distress: Vessel under assault
74	Distress: Person overboard

75	Distress: SAR area
76	Distress: Pollution response area
77	Distress: other (define in associated text field)
78	Reserved for Future Use
79	Reserved for Future Use
80	Instruction: Contact VTS at this point/juncture
81	Instruction: Contact Port Administration at this point/juncture
82	Instruction: Do not proceed beyond this point/juncture
83	Instruction: Await instructions prior to proceeding beyond this point/juncture
84	Instruction: Proceed to this location – await instructions
85	Instruction: Clearance granted – proceed to berth/lock
86	Instruction: other (define in associated text field)
87	Reserved for Future Use
88	Information: Pilot boarding position
89	Information: Icebreaker waiting area
90	Information: Places of refuge
91	Information: Position of icebreakers
92	Information: Location of response units
93	Information: VTS active target
94	Information: Rogue or suspicious vessel
95	Information: Vessel requesting non-distress assistance
96	Information: other (define in associated text field)
97	Chart Feature: Submerged object / sunken vessel (describe in associated text field)
98	Chart Feature: Semi-submerged object
99	Chart Feature: Shoal area
100	Chart Feature: Shoal area due north
101	Chart Feature: Shoal area due east
102	Chart Feature: Shoal area due south
103	Chart Feature: Shoal area due west
104	Chart Feature: Channel obstruction
105	Chart Feature: Reduced vertical clearance
106	Chart Feature: Bridge/Gate/Lock/other closed
107	Chart Feature: Bridge/Gate/Lock/other partially open (opening)
108	Chart Feature: Bridge/Gate/Lock/other fully open
109	Chart Feature: Bridge/Gate/Lock/other partially closed (closing)
110	Chart Feature: Bridge/Gate/Lock/AtoN/other inoperative or not working properly
111	Chart Feature: other (define in associated text field)
112	Report from ship: Icing info
113	Report from ship: Intended route

114	Report from ship: other (define in associated text field)
115	Reserved for Future Use
116	Reserved for Future Use
117	Reserved for Future Use
118	Reserved for Future Use
119	Reserved for Future Use
120	Route: Recommended Route
121	Route: Alternative Route
122	Route: Recommended Route through ice
123	Route: other (define in associated text field)
124	Reserved for Future Use
125	Other – Define in associated text field
126	Cancellation – cancel area as identified by Message Linkage ID
127	Undefined (default)

6. Recommendations: None

7. Actions required:

The Subcommittee is invited to review the Geographic Notice message format and determine if it will positively or negatively impact S-124 development and the transmission of MSI with respect to the GMDSS.