

1 Satellite Ship Weather 1-Slot Version: 0

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Release Version: 0

DAC: 367 FI: 23

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Future variant: TBD.

Summary of changes:

Release Version 0a:

- updated e-mail, corrected some text.

1.1 Introduction

The Satellite Ship Weather message is intended to be used to transmit weather observations over ship that will be received by Satellite AIS receivers. The difference between this message and the DAC 1 FI 21 Ship Weather report is that this message has been reduced in size to provide increased probability of detection via satellite. This version is a single slot long.

All directions are relative to True North, all positions are WGS-84 Datum.

1.2 Usage notes

1. For this message, the data is assumed to be from transmitting MMSI, and is a ship station. The sensor owner is the source of the data, as indicated by the MMSI. The data is assumed to be raw real time data with a validity interval of 6 hours.

1.3 Message Format

Table 1: Satellite Ship Weather Framework – 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 to be used. Set to zero .	
Binary Data	Application 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 23 .
	Version	3	Sequential number used to indicate the message version in steps of 1. 0 = test message = default; 1 – 7 = message version. Set to 0 .	
	UTC day	5	UTC day of the time of the data. 1 – 31; 0 = UTC day not available = default.	
	UTC hour	5	UTC hour of the time of the data. 0 – 23; 24 = UTC hour not available = default; 25 - 31 (reserved for future use).	
	UTC minute	6	UTC minute of the time of the data. 0 – 59; 60 = UTC minute not available = default; 61 - 63 (reserved for future use).	
	Longitude	25	Longitude of the data in 1/1,000 minute ($\pm 180^\circ$) in WGS-84 datum. East = positive, West = negative (as per 2's complement); 181° = not available = default.	
	Latitude	24	Latitude of the data in 1/1,000 minute ($\pm 90^\circ$) in WGS-84 datum. North = positive, South = negative (as per 2's complement); 91° = not available = default.	
	Air Pressure	9	Air pressure, defined as pressure reduced to sea level, in 1 hPa increments. 0 = pressure <800 hPa; 1 - 401 = 800 – 1200 hPa; 402 = pressure of 1201 hPa or greater; 403 = data unavailable = default; 404-510 = reserved; 511 = not to be used.	

		Air Temperature	11	Dry bulb temperature in degrees Celsius, in 0.1 degree steps. -60.0 to +60.0 degrees Celsius(as per 2's complement); -1024 = data unavailable = default; -1023 to -601 = reserved; 601 – 1023 = reserved.
		Wind Speed	7	Average of wind speed values over the last 10 minutes in 1 knot increments. 0 - 120 knots; 121 = wind 121 knots or greater; 122 = data unavailable = default; 123 – 126 = reserved; 127 = not to be used.
		Wind Gust	7	Max wind speed reading during the last 10 minutes in 1 knot increments. 0 - 120 knots; 121 = wind 121 knots or greater; 122 = data unavailable = default; 123 – 126 = reserved; 127 = not to be used.
		Wind Direction	9	Direction of the average wind over the last 10 minutes in 1 degree increments. 0 – 359 degrees; 360 = not available = default; 361 - 510 = reserved; 511 = not to be used.
		Spare	1	Set to zero.
		Total bits	168	1 slot message