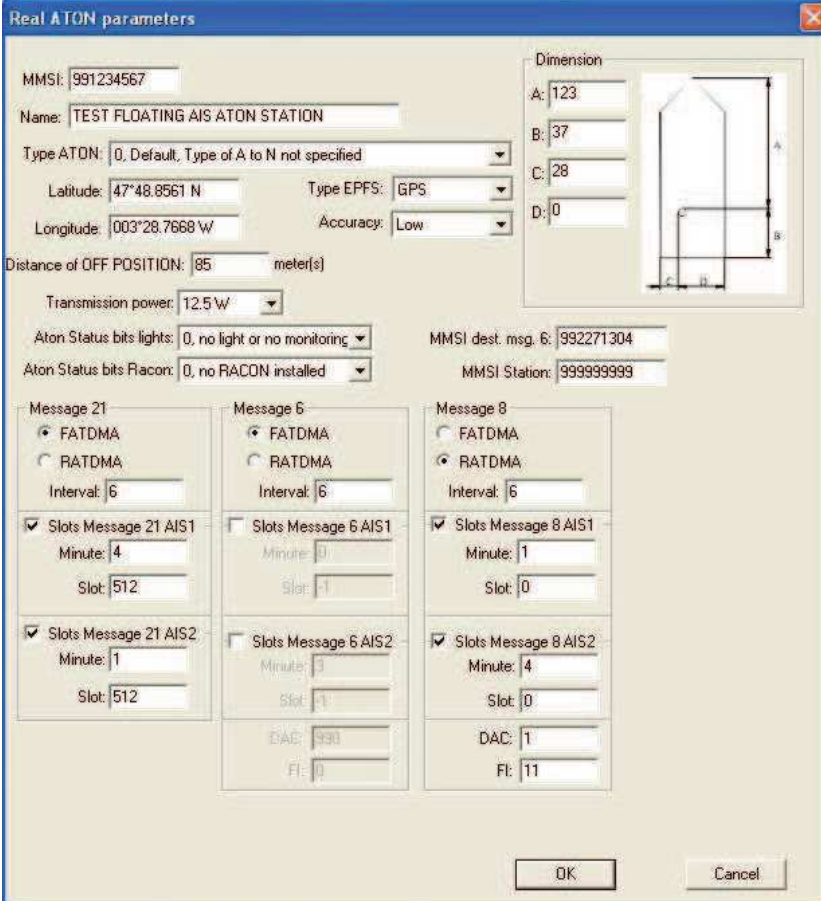


4.9.5. TESTS RATDMA MODE A

4.9.5.1. Configuration

A) configure the EUT with RATDMA mode A



Real AtoN parameters

MMSI: 991234567
Name: TEST FLOATING AIS AtoN STATION
Type AtoN: 0, Default, Type of A to N not specified
Latitude: 47°48.8561 N Type EPFS: GPS
Longitude: 003°28.7668 W Accuracy: Low
Distance of OFF POSITION: 85 meter(s)
Transmission power: 12.5 W
Aton Status bits lights: 0, no light or no monitoring
Aton Status bits Racorn: 0, no RACON installed
MMSI dest. msg. 6: 992271304
MMSI Station: 999999999

Message 21
☒ FATDMA
☐ RATDMA
Interval: 6
☒ Slots Message 21 AIS1
Minute: 4
Slot: 512
☒ Slots Message 21 AIS2
Minute: 1
Slot: 512

Message 6
☒ FATDMA
☐ RATDMA
Interval: 6
☐ Slots Message 6 AIS1
Minute: 0
Slot: 1
☐ Slots Message 6 AIS2
Minute: 0
Slot: 1
DAC: 999
FI: 0

Message 8
☐ FATDMA
☒ RATDMA
Interval: 6
☒ Slots Message 8 AIS1
Minute: 1
Slot: 0
☒ Slots Message 8 AIS2
Minute: 4
Slot: 0
DAC: 1
FI: 11

Dimension
A: 123
B: 37
C: 28
D: 0

OK Cancel

4.9.5.2. TestS REPORTS RATDMA mode A

A) Access method, channel reporting are conforms :

PASS

The message content is conform :

PASS

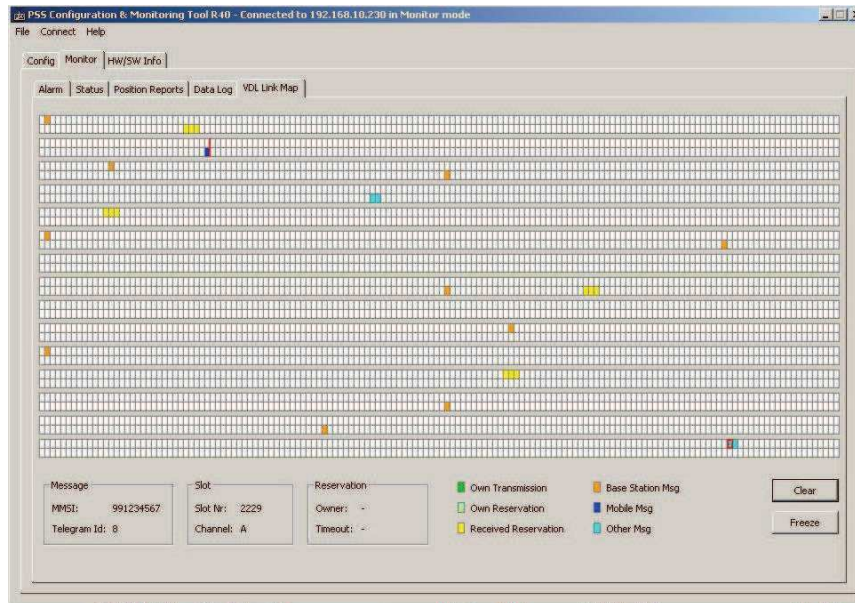
The message 21 is always transmitted:

PASS

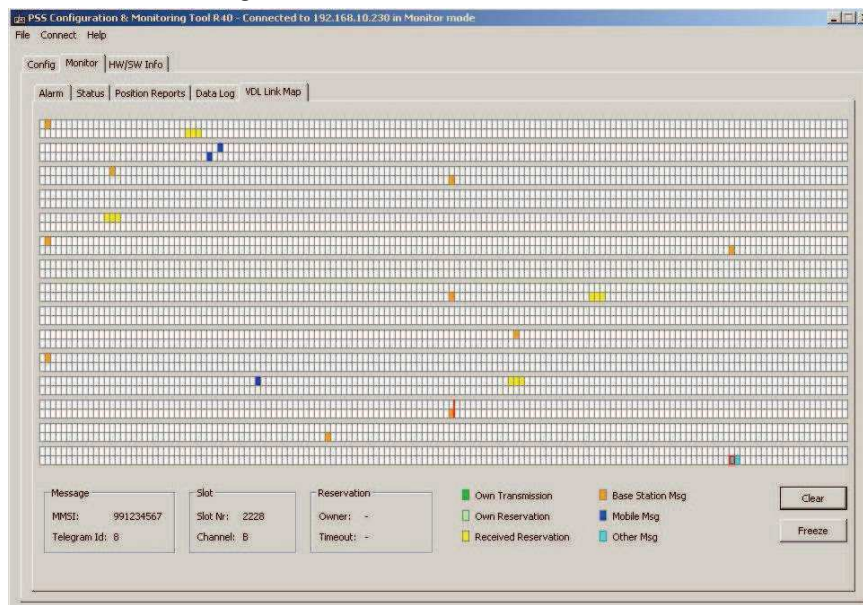
Transmitted data is correct:

PASS

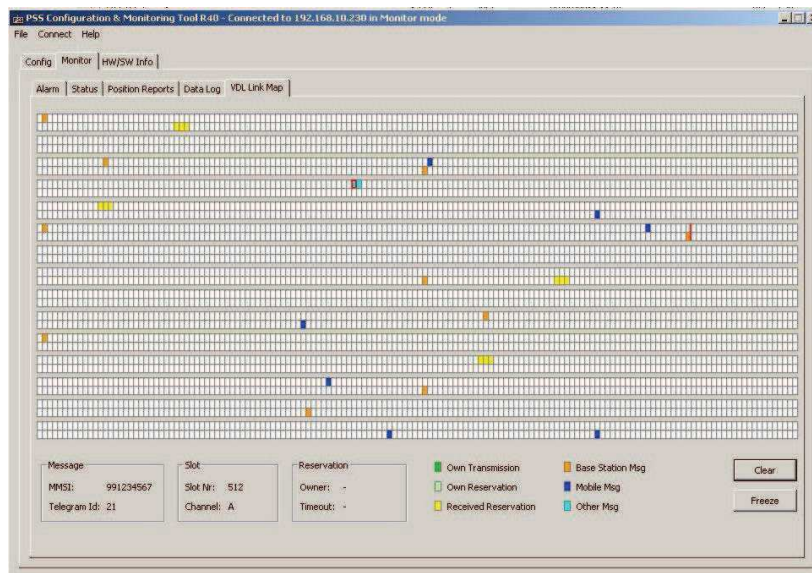
Slot number of message 8 channel A:



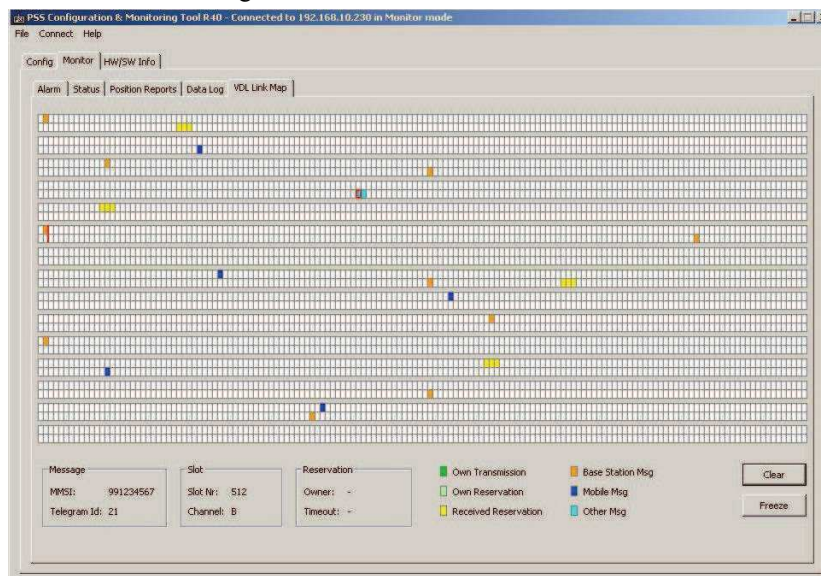
Slot number of message 8 channel B:




Slot number of message 21 channel A:



Slot number of message 21 channel B:



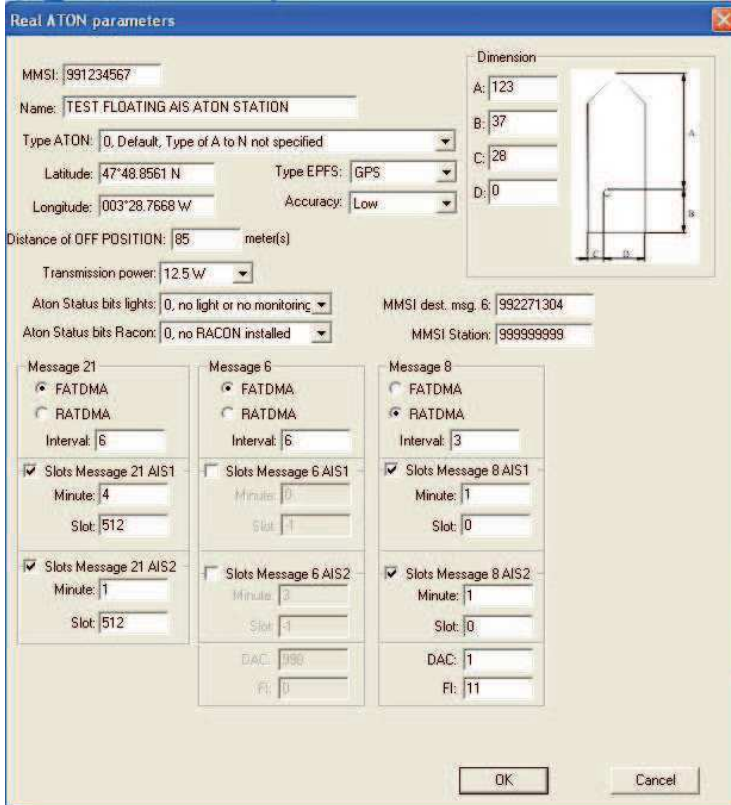
See Annexe R for the received data file:

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4.9.6. TESTS RATDMA MODE B

4.9.6.1. Configuration

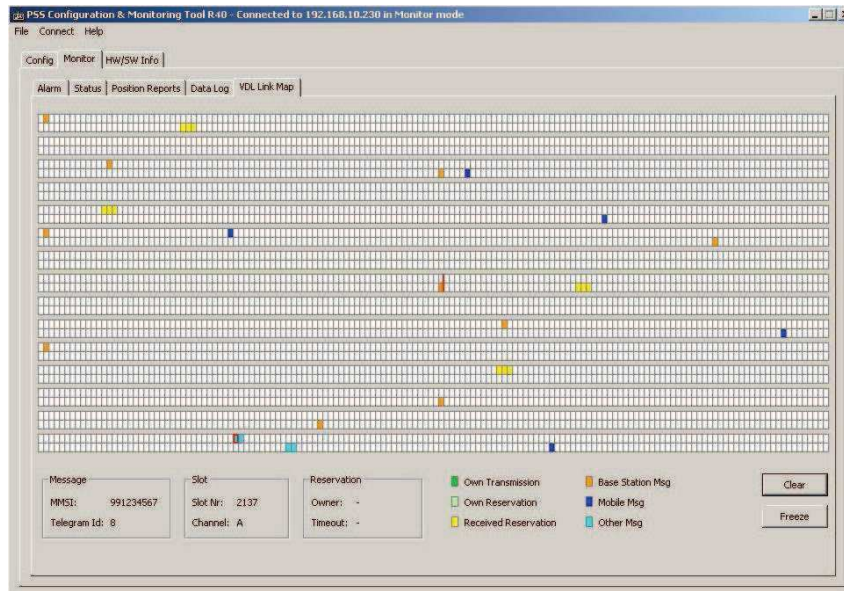
A) configure the EUT with RATDMA mode B



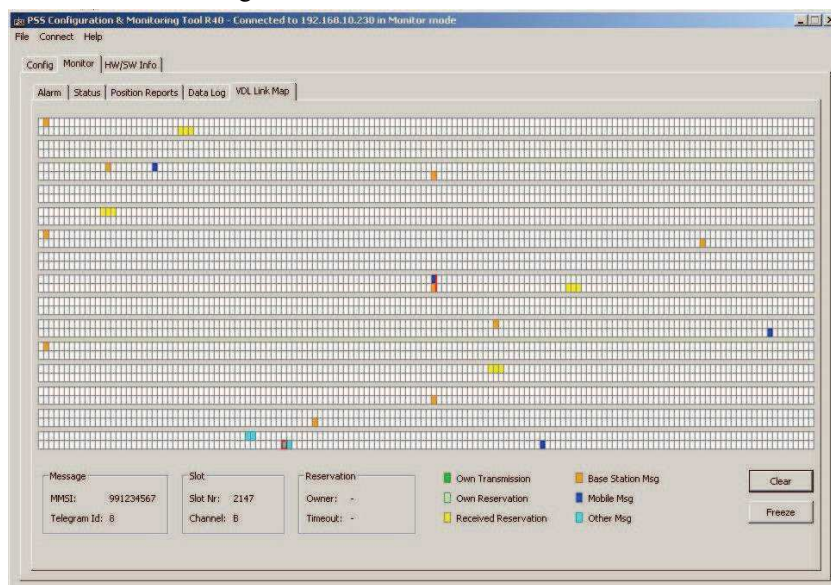
4.9.6.2. TestS REPORTS RATDMA mode B

A) Access method, channel reporting are conforms :	PASS
The message content is conform:	PASS
The message 21 is always transmitted:	PASS
Transmitted data is correct:	PASS

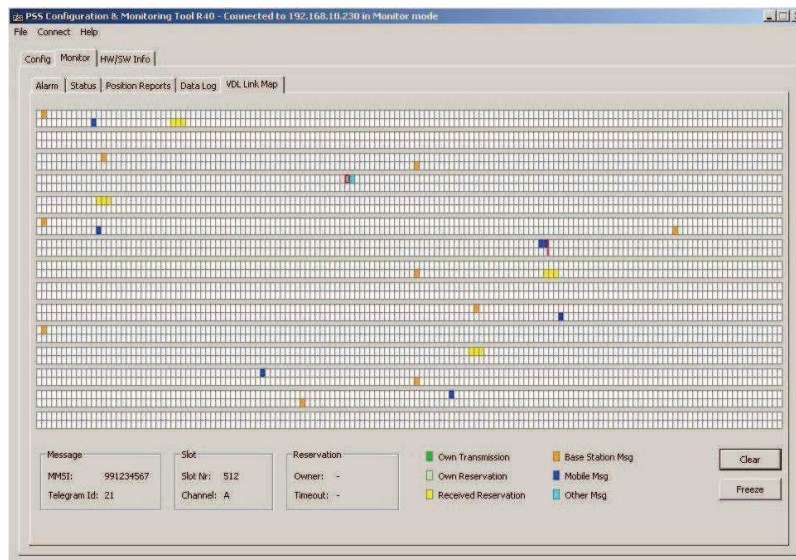
Slot number of message 8 channel A:



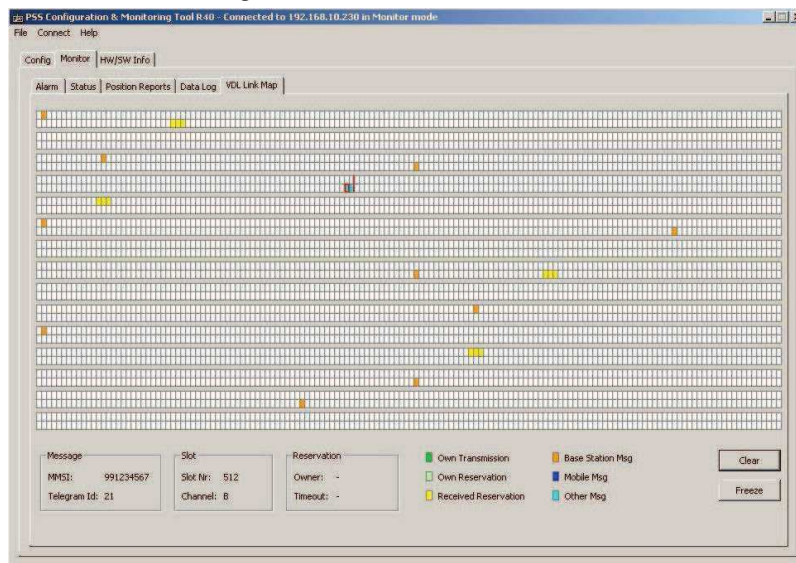
Slot number of message 8 channel B:



Slot number of message 21 channel A:



Slot number of message 21 channel B:

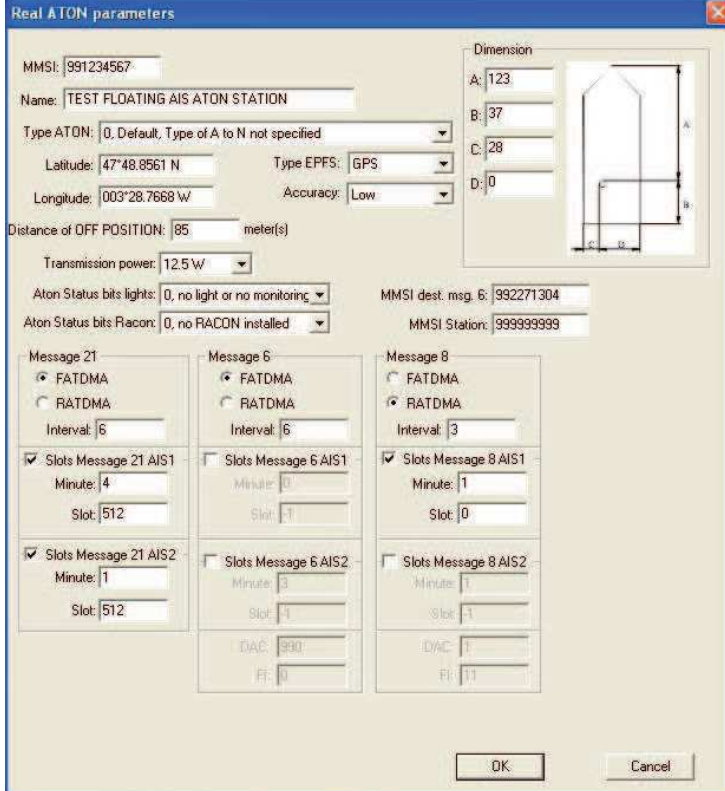


See Annexe S for the received data file:

4.9.7. TESTS RATDMA MODE C

4.9.7.1. Configuration

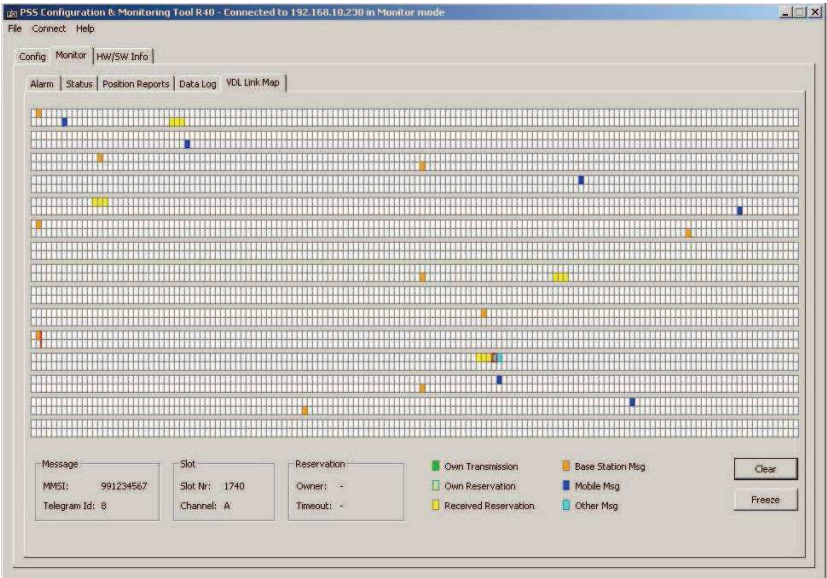
A) configure the EUT with RATDMA mode C



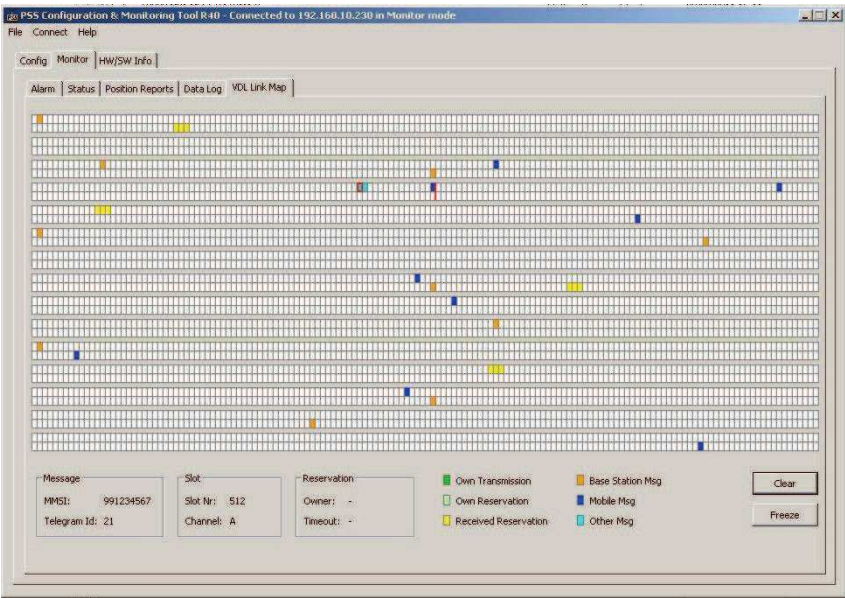
4.9.7.2. TestS REPORTS RATDMA mode C

A) Access method, channel reporting are conforms :	PASS
The message content is conform :	PASS
The message 21 is always transmitted:	PASS
Transmitted data is correct:	PASS

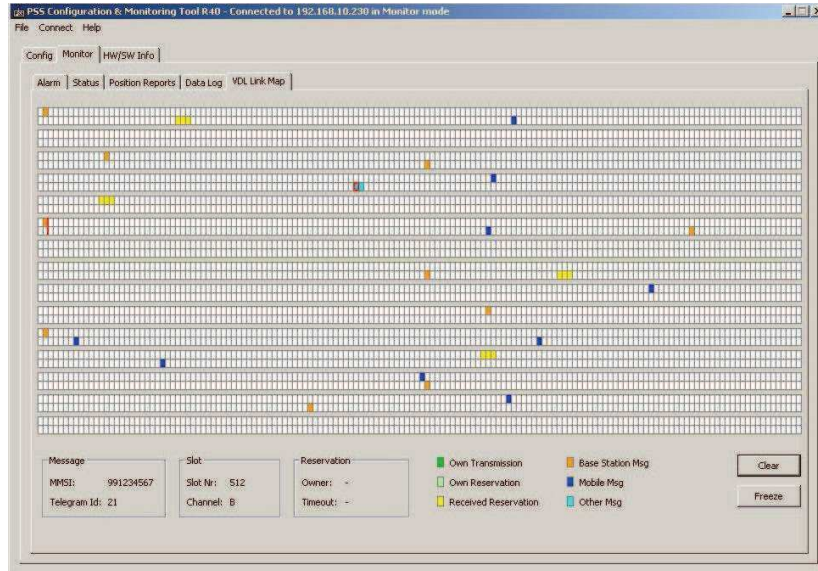
Slot number of message 8 channel A:



Slot number of message 21 channel A:



Slot number of message 21 channel B:



See Annexe T for the received data file:

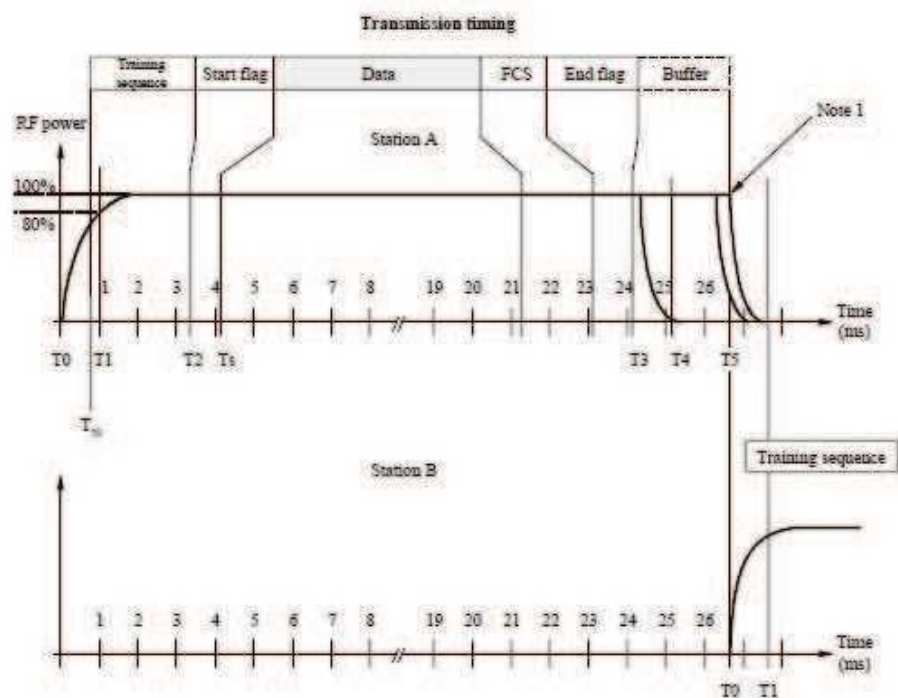
4.10. TESTS FOR SYNCHRONISATION ACCURACY

Chap 8.2 IEC62320-2

Remark: THE EUT uses only UTC direct synchronization

Measured time according M1371 (Fig.8) : Dealy between T0 and end of start flag « 7E » = $4,16\text{ms} \pm 0,104\text{ms}$

FIGURE 8



T(n)	Time (ms)	Description
T0	0.000	Slot start. RF power is applied
T ₁₀	0.832	Beginning of training sequence
T1	1.000	RF power and frequency stabilization time
T2	3.328	Start of transmission packet (start flag). This event can be used as a secondary synchronization source should the primary source (UTC) be lost
T _s	4.160	Slot phase synchronization marker. End of start flag, beginning of data
T3	24.128	End of transmission, assuming zero bit stuffing. No modulation is applied after termination of transmission. In case of a shorter data block, the transmission may end earlier
T4	T3 + 1.000	The time when RF power should have reached zero
T5	26.670	End of slot. Beginning of next slot

Reading time for the transponder AIS KanAton under test:

4,12ms

4,13ms

4,13ms

4,13ms

4,14ms

4,13ms

4,11ms

4,10ms

This times are conform,


Tests for synchronization accuracy :

PASS.

Example of measured times:

Message AIS reçu	
Compte rendu pour les aides à la navigation	
Message Décodé	Phrases NMEA
Item	Data
ID du message	21
Indicateur de répétition	0
ID Utilisateur (ISMM)	998765432
Type d'aide pour la navigation	Default, Type A à N non spécifié
Nom	SN
Précision de position	Elève (Mode Différentiel)
Longitude	4° 34' 0298 W
Latitude	48° 21' 5626 N
Référence de Position	L (123 m : 37 m), I (28 m : m)
Détermination de la position	GPS
Horodatage	4 secondes
Indicateur de position hors service	Indicateur de position en service
AtoN Statut	224
Fanion RAIM	RAIM utilisé
AtoN drapeau virtuel	AtoN réel
Mode attribution des fanions	Fonctionnement en mode Conti...
Information	
Trame : 0	IT: 151 Offset: 4.120 µ s
Canal A	RSSI 169 Taille en octets 34

Message AIS reçu	
Compte rendu pour les aides à la navigation	
Message Décodé	Phrases NMEA
Item	Data
ID du message	21
Indicateur de répétition	0
ID Utilisateur (ISMM)	998765432
Type d'aide pour la navigation	Default, Type A à N non spécifié
Nom	SN
Précision de position	Elève (Mode Différentiel)
Longitude	4° 34' 0298 W
Latitude	48° 21' 5626 N
Référence de Position	L (123 m : 37 m), I (28 m : m)
Détermination de la position	GPS
Horodatage	4 secondes
Indicateur de position hors service	Indicateur de position en service
AtoN Statut	224
Fanion RAIM	RAIM utilisé
AtoN drapeau virtuel	AtoN réel
Mode attribution des fanions	Fonctionnement en mode Conti...
Information	
Trame : 1	IT: 150 Offset: 4.102 µ s
Canal B	RSSI 171 Taille en octets 34

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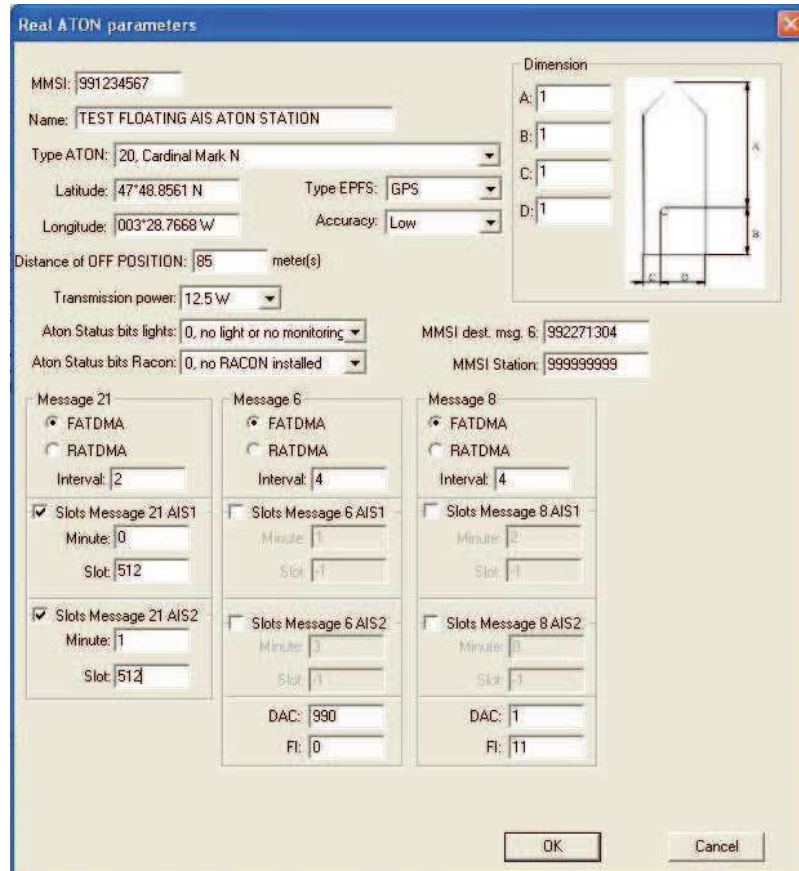
4.11. TESTS FOR EPFS, POSITION SOURCE

Chap 8.3.1 IEC62320-2

4.11.1.CONFIGURATION EPFS=GPS


Idem 5.2.1

A) Type of EPFS = GPS



4.11.2.TESTS REPORTS

A)The position and time stamp fields are valid :	PASS
RAIM flag :	PASS
Accuracy :	PASS
Position :	PASS

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EPFS with no RAIM :


"24/02/2011 13:55:13" \$GPGBS,125513.00,,,,,,*6E

"24/02/201113:55:16"\$GPRMC,125516.00,A,4748.85222,N,00328.76939,W,0.032,,240211,,,A*68

"24/02/201113:55:26"!AIVDO,1,1,2,B,E>iD:1r:2ab@367Pb4W3h0Tah0b?p2Ck=cPA010888e>03k'4m0E2CkP0,6

*66

Detail		
Description	Value	Value Description
Creation Time	24/02/2011 13:55:47	
Nmea Sentence	IAIVDM,1,1,7,B,E>iD:1r:2a	
Received Time	24/02/2011 13:55:26	
AIS Sentence	IAIVDM	336 bits (56 6-bit words)
Fragments in this message	1	
Fragment No	1	
Sequential Message ID	7	
Radio Channel	B	
Payload	E>iD:1r:2ab@367Pb4W3h	336 bits (42 8-bit words)
Fill bits	0	
CRC check	57	
Vessel Name		Not yet received
AIS Message Type	21	Aid-to-Navigation Report
Repeat Indicator	0	Repeatable
MMSI	991234567	Aid to Navigation
MID	0	Not defined
Aid type	20	Cardinal Mark N
Name	TEST FLOATING AIS AT	20 characters
Position Accuracy	0	>= 10m unaugmented GNSS fix (default)
Longitude	-3.479488	3° 28,7693' W
Latitude	47.814200	47° 48,8521' N
Dimension to Bow	1	meters
Dimension to Stern	1	meters
Length	2	meters, {calculated}
Dimension to Port	1	meters
Dimension to Starboard	1	meters
Beam	2	meters, {calculated}
Type of EPFD	1	GPS
UTC Second	26	Second of UTC timestamp
Dit-Position Indicator	0	on position
Regional reserved	224	8 bits
RAIM Flag	0	RAIM not in use
Virtual-aid flag	0	real aid
Assigned	0	Station operating in autonomous mode (default)
Spare	0	1 bits
Name Extension	ON STATION	10 characters

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EPFS with RAIM and LOW ACCURACY:

"24/02/2011 12:43:13" \$GPRMC,114313.00,A,4748.82692,N,00328.75302,W,0.005,,240211,,,A*64

"24/02/2011 12:43:16" \$GPGBS,114316.00,11.8,13.1,26.8,,, *76

"24/02/2011 12:43:26"!AIVDO,1,1,4,B,E>iD:1r:2ab@367Pb4W3h0Tah0b?p2Cs=cP9h10888e>23k'4m0E2CkP0,6*

5A

Radio Channel	8	
Payload	E>iD:1r:2ab@367Pb4W3h	336 bits (42 8-bit words)
Fill bits	0	
CRC check	6D	
Vessel Name		Not yet received
AIS Message Type	21	Aid-to-Navigation Report
Repeat Indicator	0	Repeatable
MMSI	991234567	Aid to Navigation
MID	0	Not defined
Aid type	20	Cardinal Mark N
Name	TEST FLOATING AIS AT	20 characters
Position Accuracy	0	>= 10m unaugmented GNSS fix (default)
Longitude	-3.479475	3° 28.7685' W
Latitude	47.814100	47° 48.8461' N
Dimension to Bow	1	meters
Dimension to Stern	1	meters
Length	2	meters, (calculated)
Dimension to Port	1	meters
Dimension to Starboard	1	meters
Beam	2	meters, (calculated)
Type of EPFD	1	GPS
UTC Second	26	Second of UTC timestamp
Off-Position Indicator	0	on position
Regional reserved	224	8 bits
RAIM Flag	1	RAIM in use
Virtual-aid flag	0	real aid
Assigned	0	Station operating in autonomous mode (default)
Spare	0	1 bits
Name Extension	ON STATION	10 characters

EPFS with RAIM and HIGH ACCURACY:


"24/02/2011 11:52:03" \$GPRMC,105203.00,A,4748.85140,N,00328.76298,W,0.036,,240211,,,A*6A

"24/02/2011 11:52:06" \$GPGBS,105206.00,4.5,4.4,8.8,,, *40

"24/02/2011 11:52:15"!AIVDO,1,1,2,A,E>iD:1r:2ab@367Pb4W3h0Tah0bOp2Dg=cP?@10888`>23k'4m0E2CkP0,

6*17

Radio Channel	8	
Payload	E>iD:1r:2ab@367Pb4W3h	336 bits (42 8-bit words)
Fill bits	0	
CRC check	4D	
Vessel Name		Not yet received
AIS Message Type	21	Aid-to-Navigation Report
Repeat Indicator	0	Repeatable
MMSI	991234567	Aid to Navigation
MID	0	Not defined
Aid type	20	Cardinal Mark N
Name	TEST FLOATING AIS AT	20 characters
Position Accuracy	1	<= 10m DGPS quality fix
Longitude	-3.479368	3° 28.7621' W
Latitude	47.814220	47° 48.8530' N
Dimension to Bow	1	meters
Dimension to Stern	1	meters
Length	2	meters, (calculated)
Dimension to Port	1	meters
Dimension to Starboard	1	meters
Beam	2	meters, (calculated)
Type of EPFD	1	GPS
UTC Second	16	Second of UTC timestamp
Off-Position Indicator	0	on position
Regional reserved	224	8 bits
RAIM Flag	1	RAIM in use
Virtual-aid flag	0	real aid
Assigned	0	Station operating in autonomous mode (default)
Spare	0	1 bits
Name Extension	ON STATION	10 characters

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EPFS with DGPS , RAIM and LOW ACCURACY:

"24/02/2011 14:49:07" \$GPRMC,134908.00,A,4748.84417,N,00328.76542,W,0.088,,240211,,,D*6E

"24/02/2011 14:49:10" \$GPGBS,134910.00,9.9,3.2,16.4,,,,*7D

"24/02/2011 14:49:12" \$GPRMC,134913.00,A,4748.84431,N,00328.76553,W,0.036,,240211,,,D*65

"24/02/2011 14:49:15" \$GPGBS,134915.00,9.7,3.1,16.1,,,,*70

"24/02/201114:49:25"!AIVDO,1,1,5,B,E>iD:1r:2ab@367Pb4W3h0Tah0b?p2DJ=cP7@10888e>23k`4m0E2CkP0,6

*43

Radio Channel	B	
Payload	E>iD:1r:2ab@367Pb4W3h	336 bits (42 8-bit words)
Fill bits	0	
CRC check	7A	
Vessel Name		Not yet received
AIS Message Type	21	Aid-to-Navigation Report
Repeat Indicator	0	Repeatable
MMSI	991234567	Aid to Navigation
MID	0	Not defined
Aid type	20	Cardinal Mark N
Name	TEST FLOATING AIS AT	20 characters
Position Accuracy	0	>= 10m unaugmented GNSS fix (default)
Longitude	-3.479423	3° 28,7654' W
Latitude	47.814070	47° 48,8443' N
Dimension to Bow	1	meters
Dimension to Stern	1	meters
Length	2	meters, (calculated)
Dimension to Port	1	meters
Dimension to Starboard	1	meters
Beam	2	meters, (calculated)
Type of EPFD	1	GPS
UTC Second	26	Second of UTC timestamp
Off-Position Indicator	0	on position
Regional reserved	224	8 bits
RAIM Flag	1	RAIM in use
Virtual-aid flag	0	real aid
Assigned	0	Station operating in autonomous mode (default)
Spare	0	1 bits
Name Extension	ON STATION	10 characters

EPFS with DGPS , RAIM and HIGH ACCURACY:


"24/02/2011 13:22:15" \$GPRMC,122215.00,A,4748.85488,N,00328.77154,W,0.003,,240211,,,D*68

"24/02/2011 13:22:16" \$GPGBS,122216.00,1.0,0.8,1.9,,,,*44

"24/02/201113:22:26"!AIVDO,1,1,2,A,E>iD:1r:2ab@367Pb4W3h0Tah0bOp2CN=cPD010888e>23k`4m0E2CkP0,

6*37

Radio Channel	A	
Payload	E>iD:1r:2ab@367Pb4W3h	336 bits (42 8-bit words)
Fill bits	0	
CRC check	04	
Vessel Name		Not yet received
AIS Message Type	21	Aid-to-Navigation Report
Repeat Indicator	0	Repeatable
MMSI	991234567	Aid to Navigation
MID	0	Not defined
Aid type	20	Cardinal Mark N
Name	TEST FLOATING AIS AT	20 characters
Position Accuracy	1	<= 10m DGPS quality fix
Longitude	-3.479523	3° 28,7714' W
Latitude	47.814240	47° 48,8544' N
Dimension to Bow	1	meters
Dimension to Stern	1	meters
Length	2	meters, (calculated)
Dimension to Port	1	meters
Dimension to Starboard	1	meters
Beam	2	meters, (calculated)
Type of EPFD	1	GPS
UTC Second	26	Second of UTC timestamp
Off-Position Indicator	0	on position
Regional reserved	224	8 bits
RAIM Flag	1	RAIM in use
Virtual-aid flag	0	real aid
Assigned	0	Station operating in autonomous mode (default)
Spare	0	1 bits
Name Extension	ON STATION	10 characters

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EPFS with DGPS ,no RAIM :

"24/02/2011 14:04:15" \$GPRMC,130415.00,A,4748.85430,N,00328.77201,W,0.027,,240211,,,D*6B

"24/02/2011 14:04:17" \$GPGBS,130417.00,,,,,,*6F

"24/02/2011 14:04:26"!AIVDO,1,1,5,A,E>iD:1r:2ab@367Pb4W3h0Tah0bOp2CF=cPD010888e>03k'4m0E2CkP0,6*3A

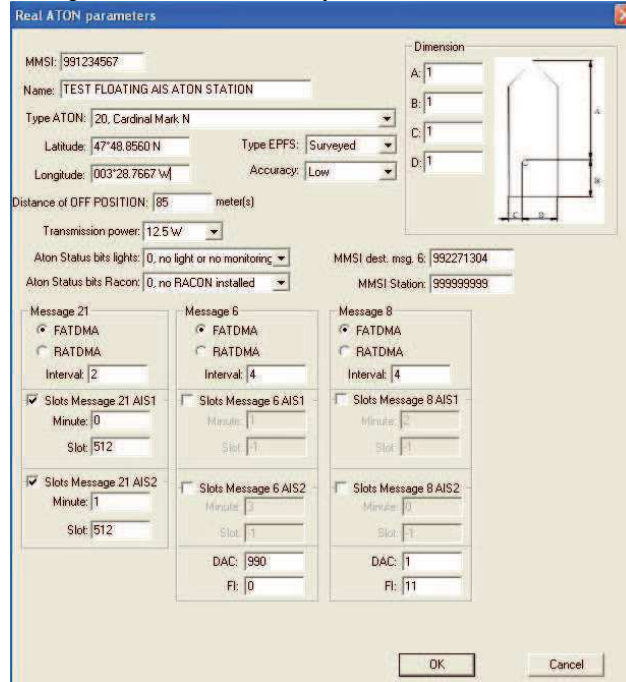
Radio Channel	A	
Payload	E>iD:1r:2ab@367Pb4W3h	336 bits (42 8-bit words)
Fill bits	0	
CRC check	0A	
Vessel Name		Not yet received
AIS Message Type	21	Aid-to-Navigation Report
Repeat Indicator	0	Repeatable
MMSI	991234567	Aid to Navigation
MID	0	Not defined
Aid type	20	Cardinal Mark N
Name	TEST FLOATING AIS AT	20 characters
Position Accuracy	1	<= 10m DGPS quality fix
Longitude	-3.479537	3° 28,7722' W
Latitude	47.814240	47° 48,8544' N
Dimension to Bow	1	meters
Dimension to Stern	1	meters
Length	2	meters, (calculated)
Dimension to Port	1	meters
Dimension to Starboard	1	meters
Beam	2	meters, (calculated)
Type of EPFD	1	GPS
UTC Second	26	Second of UTC timestamp
Off-Position Indicator	0	on position
Regional reserved	224	8 bits
RAIM Flag	0	RAIM not in use
Virtual-aid flag	0	real aid
Assigned	0	Station operating in autonomous mode (default)
Spare	0	1 bits
Name Extension	ON STATION	10 characters

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4.11.3.CONFIGURATION EPFS=SURVEYED

Idem 5.2.1

Configuration for low accuracy



Real AtoN parameters

MMSI: 991234567

Name: TEST FLOATING AIS ATO N STATION

Type ATO N: 20. Cardinal Mark N

Latitude: 47°48.8560 N Type EPFS: Surveyed

Longitude: 003°28.7667 W Accuracy: Low

Distance of OFF POSITION: 85 meter(s)

Transmission power: 12.5 W

AtoN Status bits lights: 0, no light or no monitoring

AtoN Status bits Racon: 0, no RACON installed

MMSI dest. msg. 6: 992271304

MMSI Station: 999999999

Message 21

☒ FATDMA ☐ RATDMA

Interval: 2

☒ Slots Message 21 AIS1

Minute: 0 Slot: 512

☒ Slots Message 21 AIS2

Minute: 1 Slot: 512

Message 6

☒ FATDMA ☐ RATDMA

Interval: 4

☐ Slots Message 6 AIS1

Minute: 1 Slot: 1

☐ Slots Message 6 AIS2

Minute: 3 Slot: 1

DAC: 990 Fl: 0

Message 8

☒ FATDMA ☐ RATDMA

Interval: 4

☐ Slots Message 8 AIS1

Minute: 0 Slot: 1

☐ Slots Message 8 AIS2

Minute: 0 Slot: 1

DAC: 1 Fl: 11

OK Cancel

And for High accuracy

Real ATON parameters

MMSI: 991234567
Name: TEST FLOATING AIS ATON STATION
Type ATON: 20, Cardinal Mark N
Latitude: 47°48.8560 N Type EPFS: Surveyed
Longitude: 003°28.7667 W Accuracy: High
Distance of OFF POSITION: 85 meter(s)
Transmission power: 12.5 W
Aton Status bits lights: 0, no light or no monitoring
Aton Status bits Racoon: 0, no RACON installed
MMSI dest. msg B: 992271304
MMSI Station: 999999999

Dimension
A: 1
B: 1
C: 1
D: 1

Message 21
☒ FATDMA
☐ RATDMA
Interval: 2
☒ Slots Message 21 AIS1
Minute: 0
Slot: 512
☒ Slots Message 21 AIS2
Minute: 1
Slot: 512

Message 6
☒ FATDMA
☐ RATDMA
Interval: 4
☐ Slots Message 6 AIS1
Minute: 1
Slot: 1
☐ Slots Message 6 AIS2
Minute: 3
Slot: 1
DAC: 990
FI: 0

Message 8
☒ FATDMA
☐ RATDMA
Interval: 4
☐ Slots Message 8 AIS1
Minute: 2
Slot: 1
☐ Slots Message 8 AIS2
Minute: 0
Slot: 1
DAC: 1
FI: 11

OK Cancel

4.11.4. TESTS REPORTS

Position same as parameters :

PASS

Type of EPFS = 7 :

PASS

RAIM Flag =0

PASS

Accuracy according parameter

PASS

LOW ACCURACY

Description	Value	Value Description
Creation Time	05/04/2011 13:11:18	
Nmea Sentence	IAIVDM,1,1,8,8,E>D:1r:2a	
Received Time	05/04/2011 13:11:06	
AIS Sentence	IAIVDM	336 bits (56 6-bit words)
Fragments in this message:	1	
Fragment No	1	
Sequential Message ID	8	
Radio Channel	B	
Payload	E>D:1r:2ab@367Pb4W3h	336 bits (42 8-bit words)
Fill bits	0	
CRC check	36	
Vessel Name		Not yet received
AIS Message Type	21	Aid-to-Navigation Report
Repeat Indicator	0	Repeatable
MMSI	991234567	Aid to Navigation
MID	0	Not defined
Aid type	20	Cardinal Mark N
Name	TEST FLOATING AIS AT	20 characters
Position Accuracy	0	>= 10m unaugmented GNSS fix (default)
Longitude	-3.479445	3° 28.7667' W
Latitude	47.814270	47° 48.8560' N
Dimension to Bow	1	meters
Dimension to Stern	1	meters
Length	2	meters, (calculated)
Dimension to Port	1	meters
Dimension to Starboard	1	meters
Beam	2	meters, (calculated)
Type of EPFD	7	Surveyed
UTC Second	00	Second of UTC timestamp
Off-Position Indicator	0	on position
Regional reserved	224	8 bits
RAIM Flag	0	RAIM not in use
Virtual-aid flag	0	real aid
Assigned	0	Station operating in autonomous mode (default)
Spare	0	1 bits
Name Extension	ON STATION	10 characters

HIGH ACCURACY

Description	Value	Value Description
Creation Time	05/04/2011 15:48:31	
Nmea Sentence	IAVDM,1.1.6,A,E>ID:1r2a	
Received Time	05/04/2011 15:48:23	
AIS Sentence	IAVDM	336 bits (56 6-bit words)
Fragments in this message	1	
Fragment No	1	
Sequential Message ID	6	
Radio Channel	A	
Payload	E>ID:1r2ab@367Pb4W3h	336 bits (42 8-bit words)
Fill bits	0	
CRC check	45	
Vessel Name		Not yet received
AIS Message Type	21	Aid-to-Navigation Report
Repeat Indicator	0	Repeatable
MMSI	991234567	Aid to Navigation
MID	0	Not defined
Aid type	20	Cardinal Mark N
Name	TEST FLOATING AIS AT	20 characters
Position Accuracy	1	<= 10m DGPS quality fix
Longitude	-3.479445	3° 28.7667' W
Latitude	47.814270	47° 48.8560' N
Dimension to Bow	1	meters
Dimension to Stern	1	meters
Length	2	meters, (calculated)
Dimension to Port	1	meters
Dimension to Starboard	1	meters
Beam	2	meters, (calculated)
Type of EPFD	7	Surveyed
UTC Second	00	Second of UTC timestamp
Off-Position Indicator	0	on position
Regional reserved	224	8 bits
RAIM Flag	0	RAIM not in use
Virtual-aid flag	0	real aid
Assigned	0	Station operating in autonomous mode (default)
Spare	0	1 bits
Name Extension	ON STATION	10 characters

4.12. TESTS FOR EPFS, INVALID POSITION

Chap 8.3.2 IEC62320-2

The EUT does not transmit if the EPFS receiver does not generate position fixes.:
PASS


4.13. TESTS FOR EPFS, OFF-POSITION MONITOR

Chap 8.3.3 IEC62320-2

4.13.1.CONFIGURATION

Idem 5.2.1

Remark: New reporting interval is not implemented when the EUT is OFF position


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4.13.2.TESTS

- a) Set the EUT EPFS antenna at its assigned position and with off-position behaviour set to maintain current broadcast schedule.
- b) After verification of the off-position indicator in Message 21, the EUT EPFS antenna shall be moved to off-position.
- c) Move the EUT EPFS antenna to be on-position.

4.13.3.TESTS REPORTS

- a) message 21 has the off-position indicator field set to “0” : PASS
- b) message 21 has the off-position indicator field set to “1” within a time period 10mn : PASS
- c) message 21 has the off-position indicator field set to “0” within a time period 10mn : PASS


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Message 21 “EUT EPFS in assigned position”

Radio Channel	A	
Payload	E>ID:1r:2ab@367Pb4w3h	336 bits (42 8-bit words)
Fill bits	0	
CRC check	1A	
Vessel Name		Not yet received
AIS Message Type	21	Aid-to-Navigation Report
Repeat Indicator	0	Repeatable
MMSI	991234567	Aid to Navigation
MID	0	Not defined
Aid type	20	Cardinal Mark N
Name	TEST FLOATING AIS AT	20 characters
Position Accuracy	1	<= 10m DGPS quality fix
Longitude	-3.479380	3° 28,7628' W
Latitude	47.814240	47° 48,8544' N
Dimension to Bow	5	meters
Dimension to Stern	5	meters
Length	10	meters, (calculated)
Dimension to Port	5	meters
Dimension to Starboard	5	meters
Beam	10	meters, (calculated)
Type of EPFD	1	GPS
UTC Second	13	Second of UTC timestamp
Off-Position Indicator	0	on position
Regional reserved	224	8 bits
RAIM Flag	1	RAIM in use
Virtual-aid flag	0	real aid
Assigned	0	Station operating in autonomous mode (default)
Spare	0	1 bits
Name Extension	ON STATION	10 characters

Message 21 “EUT EPFS in off position” First 10 minutes


Creation Time	14/03/2011 11:34:25	
Nmea Sentence	!AIVDM,1,1,0,A,E>ID:1r:2ab@367F	
Received Time	14/03/2011 11:34:14	
AIS Sentence	!AIVDM	336 bits (56 6-bit words)
Fragments in this message	1	
Fragment No	1	
Sequential Message ID	0	
Radio Channel	A	
Payload	E>ID:1r:2ab@367Pb4w3h0Tah0bC	336 bits (42 8-bit words)
Fill bits	0	
CRC check	4E	
Vessel Name		Not yet received
AIS Message Type	21	Aid-to-Navigation Report
Repeat Indicator	0	Repeatable
MMSI	991234567	Aid to Navigation
MID	0	Not defined
Aid type	20	Cardinal Mark N
Name	TEST FLOATING AIS AT	20 characters
Position Accuracy	1	<= 10m DGPS quality fix
Longitude	-3.479478	3° 28,7687' W
Latitude	47.812870	47° 48,7724' N
Dimension to Bow	5	meters
Dimension to Stern	5	meters
Length	10	meters, (calculated)
Dimension to Port	5	meters
Dimension to Starboard	5	meters
Beam	10	meters, (calculated)
Type of EPFD	1	GPS
UTC Second	13	Second of UTC timestamp
Off-Position Indicator	0	on position
Regional reserved	224	8 bits
RAIM Flag	1	RAIM in use
Virtual-aid flag	0	real aid
Assigned	0	Station operating in autonomous mode (default)
Spare	0	1 bits
Name Extension	ON STATION	10 characters

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Message 21 “EUT EPFS in off position” after 10 minutes

Creation Time	14/03/2011 11:43:17	
Nmea Sentence	IAIVDM,1,1,2,B,E>ID:1r.2ab@367F	
Received Time	14/03/2011 11:43:14	
AIS Sentence	IAIVDM	336 bits (56 6-bit words)
Fragments in this message	1	
Fragment No	1	
Sequential Message ID	2	
Radio Channel	B	
Payload	E>ID:1r.2ab@367Pb4w3h0Tah0bC	336 bits (42 8-bit words)
Fill bits	0	
CRC check	3A	
Vessel Name		Not yet received
AIS Message Type	21	Aid-to-Navigation Report
Repeat Indicator	0	Repeatable
MMSI	991234567	Aid to Navigation
MID	0	Not defined
Aid type	20	Cardinal Mark N
Name	TEST FLOATING AIS AT	20 characters
Position Accuracy	1	<= 10m DGPS quality fix
Longitude	-3,479482	3° 28,7689' W
Latitude	47,812890	47° 48,7729' N
Dimension to Bow	5	meters
Dimension to Stern	5	meters
Length	10	meters, (calculated)
Dimension to Port	5	meters
Dimension to Starboard	5	meters
Beam	10	meters, (calculated)
Type of EPFD	1	GPS
UTC Second	13	Second of UTC timestamp
Off-Position Indicator	1	off position
Regional reserved	224	8 bits
RAIM Flag	1	RAIM in use
Virtual-aid flag	0	real aid
Assigned	0	Station operating in autonomous mode (t
Spare	0	1 bits
Name Extension	ON STATION	10 characters

Message 21 “EUT EPFS in on position” First 10 minutes after remove in assigned position:


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Creation Time	14/03/2011 11:58:20	
Nmea Sentence	IAIVDM,1,1,2,A,E>ID:1r:2ab@367F	
Received Time	14/03/2011 11:58:15	
AIS Sentence	IAIVDM	336 bits (56 6-bit words)
Fragments in this message	1	
Fragment No	1	
Sequential Message ID	2	
Radio Channel	A	
Payload	E>ID:1r:2ab@367Pb4w3h0T ah0bC	336 bits (42 8-bit words)
Fill bits	0	
CRC check	4C	
Vessel Name		Not yet received
AIS Message Type	21	Aid-to-Navigation Report
Repeat Indicator	0	Repeatable
MMSI	991234567	Aid to Navigation
MID	0	Not defined
Aid type	20	Cardinal Mark N
Name	TEST FLOATING AIS AT	20 characters
Position Accuracy	1	<= 10m DGPS quality fix
Longitude	-3.479365	3° 28,7619' W
Latitude	47.814300	47° 48,8583' N
Dimension to Bow	5	meters
Dimension to Stern	5	meters
Length	10	meters, (calculated)
Dimension to Port	5	meters
Dimension to Starboard	5	meters
Beam	10	meters, (calculated)
Type of EPFD	1	GPS
UTC Second	13	Second of UTC timestamp
Off-Position Indicator	1	off position
Regional reserved	224	8 bits
RAIM Flag	1	RAIM in use
Virtual-aid flag	0	real aid
Assigned	0	Station operating in autonomous mode (c
Spare	0	1 bits
Name Extension	ON STATION	10 characters


Message 21 “EUT EPFS in on position” after 10 minutes after remove in assigned position:

Creation Time	14/03/2011 12:07:34	
Nmea Sentence	IAIVDM,1,1,9,B,E>ID:1r:2ab@367F	
Received Time	14/03/2011 12:07:14	
AIS Sentence	IAIVDM	336 bits (56 6-bit words)
Fragments in this message	1	
Fragment No	1	
Sequential Message ID	9	
Radio Channel	B	
Payload	E>ID:1r:2ab@367Pb4w3h0T ah0bC	336 bits (42 8-bit words)
Fill bits	0	
CRC check	4E	
Vessel Name		Not yet received
AIS Message Type	21	Aid-to-Navigation Report
Repeat Indicator	0	Repeatable
MMSI	991234567	Aid to Navigation
MID	0	Not defined
Aid type	20	Cardinal Mark N
Name	TEST FLOATING AIS AT	20 characters
Position Accuracy	1	<= 10m DGPS quality fix
Longitude	-3.479400	3° 28,7640' W
Latitude	47.814290	47° 48,8574' N
Dimension to Bow	5	meters
Dimension to Stern	5	meters
Length	10	meters, (calculated)
Dimension to Port	5	meters
Dimension to Starboard	5	meters
Beam	10	meters, (calculated)
Type of EPFD	1	GPS
UTC Second	13	Second of UTC timestamp
Off-Position Indicator	0	on position
Regional reserved	224	8 bits
RAIM Flag	1	RAIM in use
Virtual-aid flag	0	real aid
Assigned	0	Station operating in autonomous mode (c
Spare	0	1 bits
Name Extension	ON STATION	10 characters

Additional functionality:

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When the flag “Off position indicator” is 0 : static relay is OPEN : PASS
When the flag “Off position indicator” is 1 : static relay is CLOSE : PASS

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4.14. ADDITIONAL FUNCTIONALITY, VERSION INFORMATION

Chap 8.5.5 IEC62320-2

4.14.1.METHOD



4.14.2.TESTS REPORTS



Verify that the EUT provides with the requested version information.: PASS

4.15. TEST FOR BIIT


Chap 8.6 IEC62320-2

4.15.1.CONFIGURATION

Idem 5.2.1

4.15.2.TESTS REPORTS

- | | |
|--|------|
| A) Disconnect Antenna | |
| The EUT shall cease transmissions: | PASS |
| B) Apply Fault to the channel 1 receiver | PASS |

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RATDMA shall cease on channel 1

- | | | |
|----|--|------|
| C) | Apply Fault to the channel 2 receiver
RATDMA shall cease on channel 2 | PASS |
| D) | Disable the augmentation system :
The EUT shall continue to operate | PASS |

\$AITXT,01,01,03,AIS: Rx Channel 1 malfunction*

\$AITXT,01,01,04,AIS: Rx Channel 2 malfunction*

\$AITXT,01,01,01,AIS: Tx malfunction*

\$AITXT,01,01,02,AIS: Antenna VSWR exceeds limit**;

4.16. TRANSMITTER SHUTDOWN PROCEDURE

Chap 8.7 IEC62320-2

See Manual