DELTAWAVE COMMUNICATIONS, LLC.

SAILOR PUSH-TO-TALK

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Thrane & Thrane

BACKGROUND

- A need for an alternative to a traditional VHF radios and MSAT PTT exists in light of the age of the MSAT satellite network and Lightsquared's shaky situation currently.

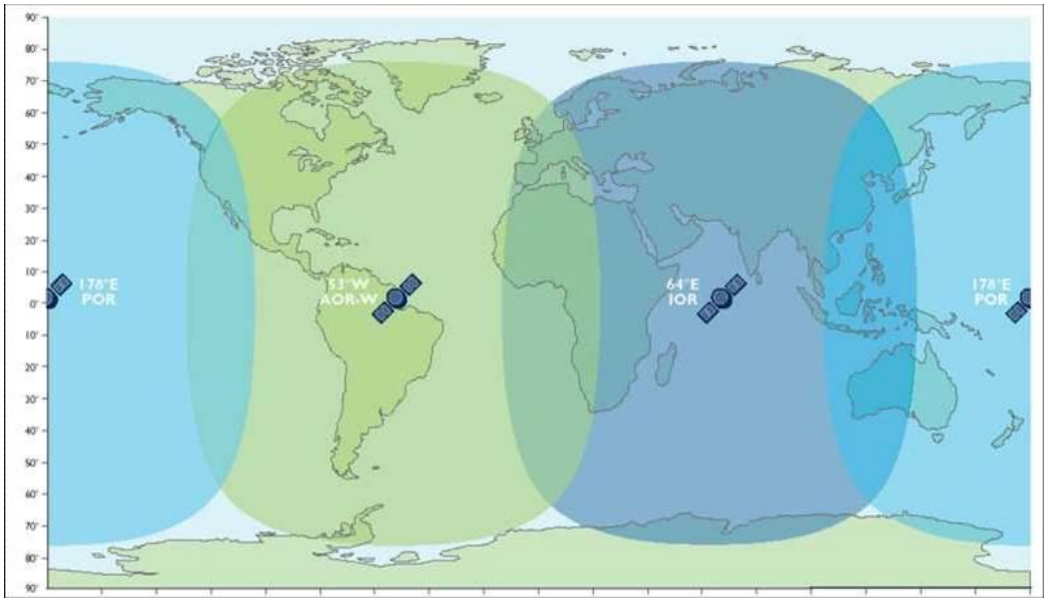
- The task was to create a cost efficient, simple and user friendly communication solution with a PTT/VHF user experience and with improved voice quality and global coverage.

- The system was originally designed for, and is curently in use by a Brazilian Electric company who has installed them on 700 vehicles using the vehicular version of Inmarsat FBB service (BGAN vehicular).

- Delta Wave is adapting this for the maritime market using the FleetBroadband solution.

COVERAGE MAP COMPARISON

MSAT PTT COVERAGE – NORTH AMERICA



INMARSAT COVERAGE – GLOBAL

FEATURES COMPARISON

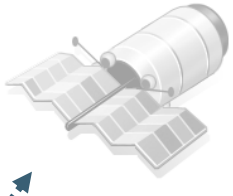
MSAT (G2)

- EQUIPMENT COST – AROUND $5K
- COVERAGE – N. AMERICA
- MONTHLY SERVICE – FROM $89 TO $200.00
- TALK GROUPS MUST BE CONFIGURED BY NETWORK OPERATOR
- BASE UNIT MUST HAVE ANTENNA AND HARDWARE
- CURRENT SATELLITES ARE ON THE OLD MSAT SATELLITES DUE TO ISSUES WITH THE NEWER SATELLITE AND IS NOT GLOBAL
- CANNOT BE CONNETED VIA SMARTPHONE
- EXTERNAL ALARM/SPEAKER OPTION
- G2 HAS NO EMAIL OR VOICE CAPABILITY

SAILOR PTT

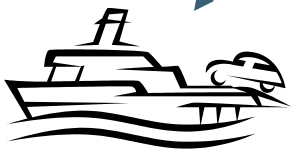
- EQUIPMENT COST – AROUND $5K
- COVERAGE – SEAMLESS GLOBAL COVERAGE
- MONTHLY SERVICE – FROM $57 TO $200.00
- TALK GROUPS EASILY CONFIGURED BY DISPATCHER
- BASE UNIT IS IP BASED SOFTWARE, DISPATCHER CAN BE LOCATED ANYWHERE USING A LAPTOP WITH AN IP CONNECTION
- SATELLITE USED IS THE NEW INMARSAT I-4 SATELLITE WITH GLOBAL COVERAGE
- CAN BE CONNECTED VIA SMARTPHONE
- EMERGENCY ALERTS SENT TO LANDLINE
- EXTERNAL ALARM/SPEAKER OPTIOJN
- HAS VOICE, EMAIL AND INTERNET CONNECTIVITY (CAN BE BLOCKED OUT) VOICE CALLS ONLY $0.78/MIN.

OLD MSAT BASED DISPATCH PTT

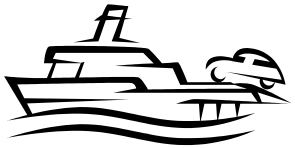


Satellite (MSAT)

TALK GROUPS COST EXTRA AND HAVE TO BE CONFIGURED BY THE NETWORK OPERATOR/AIRTIME PROVIDER

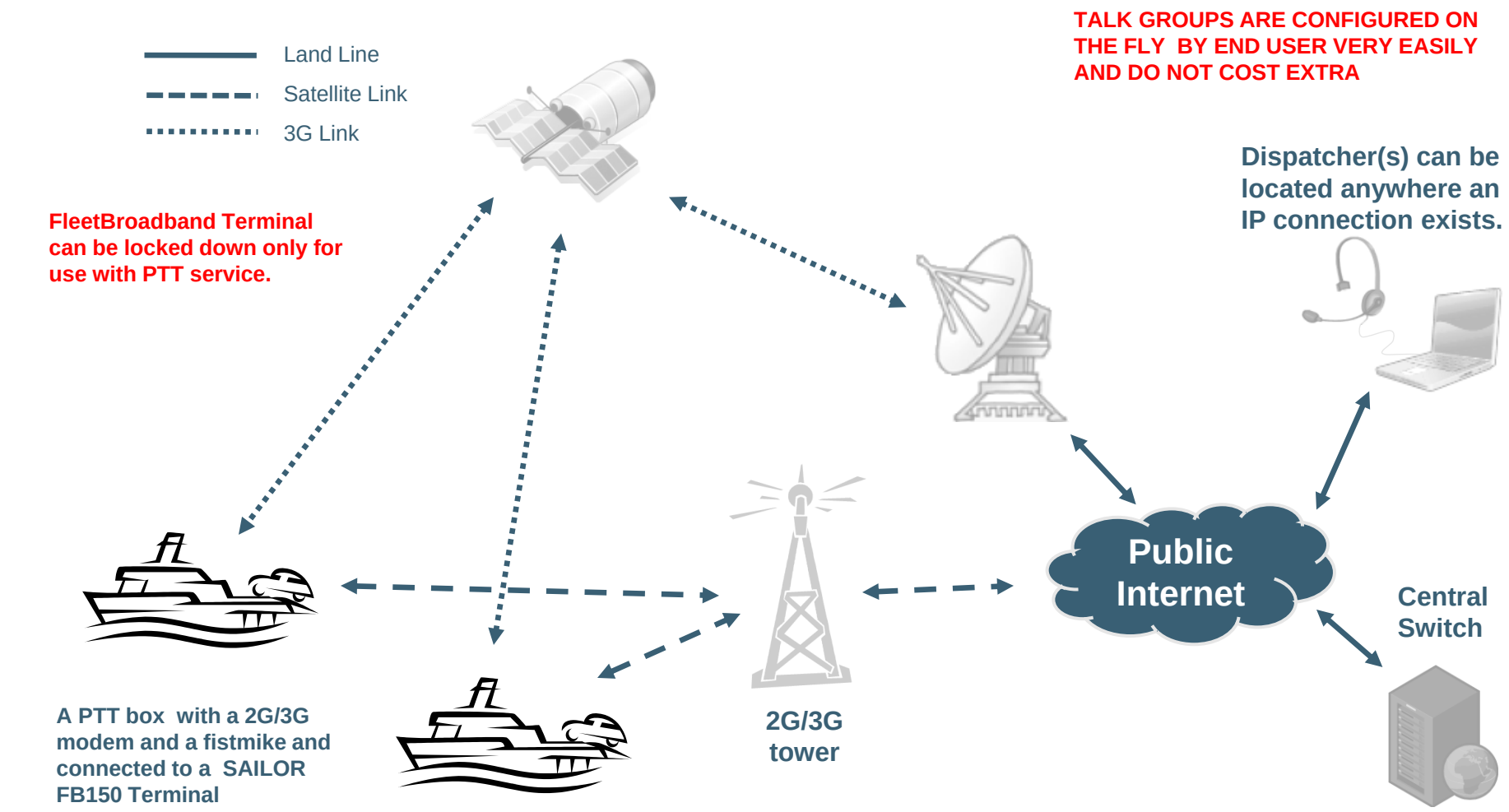


A PTT box and a fistmike connected to Hughes MSAT G2 terminal or MSAT compatible device.



A PTT box and a fistmike connected to Hughes MSAT G2 terminal or MSAT compatible device and external antenna

NEW INMARSAT BASED DISPATCH PTT



HYBRID SAILOR FB150 PTT SOLUTION

The SAILOR FB150 PTT Solution consists of:

- An Sailor FB150 Inmarsat FleetBroadband terminal
- A PTT box and a fistmike
- 2G/3G/4G modem
- Dispatch software

Advantages:

- Least cost routing (2G/3G/4G/INMARSAT)
- Voice and Data – one system
- No expensive infrastructure needed (no VHF towers, no fixed VSAT) and low cost maintenance
- Global Coverage
- IP Based – No hardware required at dispatcher locations.
- “Portable management – can be controlled over any land base where an IP connectio exists.
- Voice Calls AND Broadband Email capability

THE SAILOR FB150 PTT SOLUTION

Sailor FB150

Fistmike

PTT
user terminal

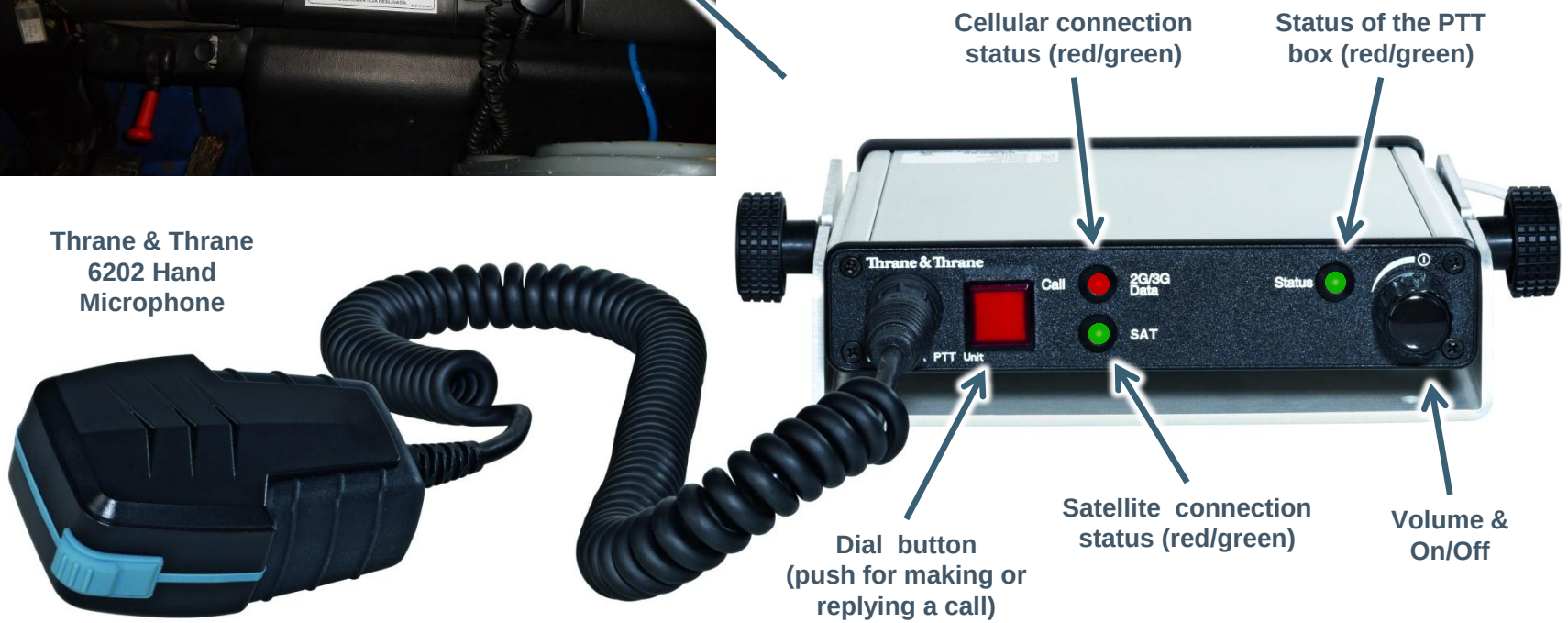
Cellular Modem
(optional)

THE USER TERMINAL (PTT BOX)

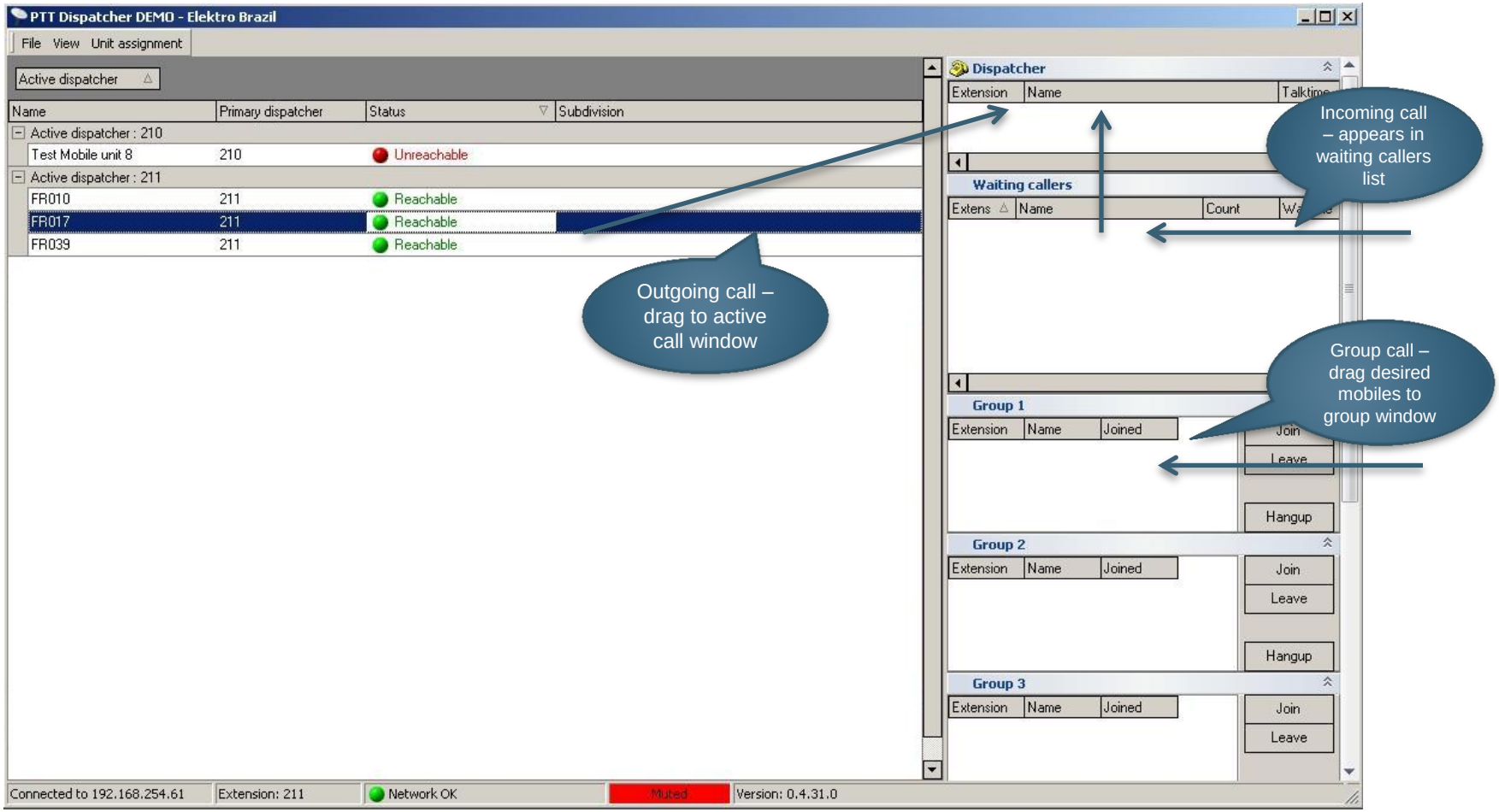
- Connected to the SAILOR FB terminal via Ethernet
- Voice-over-IP gateway optimized for satellite use
- Transmits data 1k/sec.
- Based on Push-To-Talk with a connected SAILOR 6202 Hand Microphone acting as Microphone / Speaker.
- One call option by design
- Possible least cost routing between networks (2G/3G/4G, BGAN)
- Communication and Assets / Call Groups handled by central dispatch

IN THE VESSEL

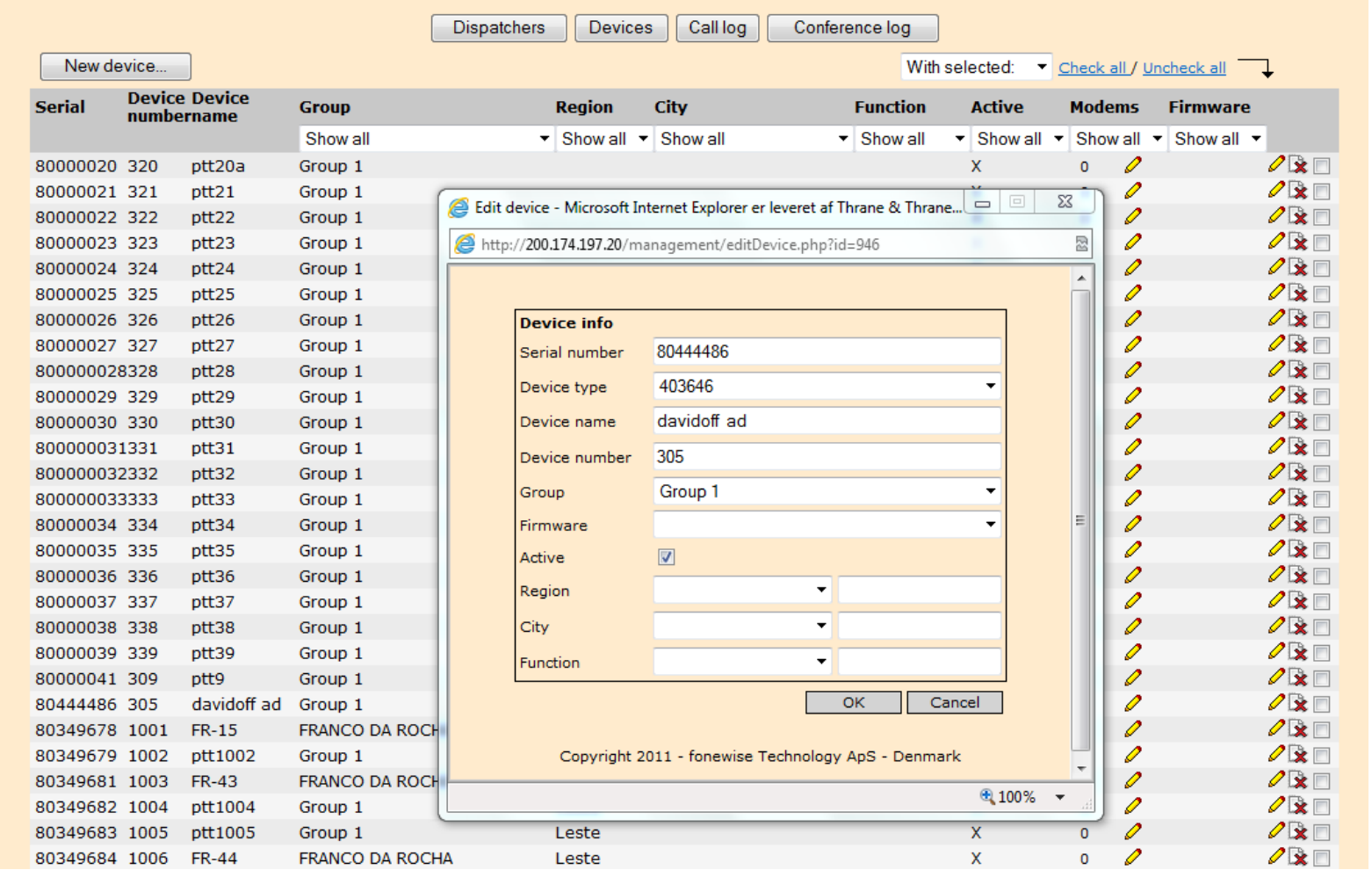
- USB ports to connect two 2G/3G modems
- RJ45 ethernet interface to connect to the Inmarsat terminal



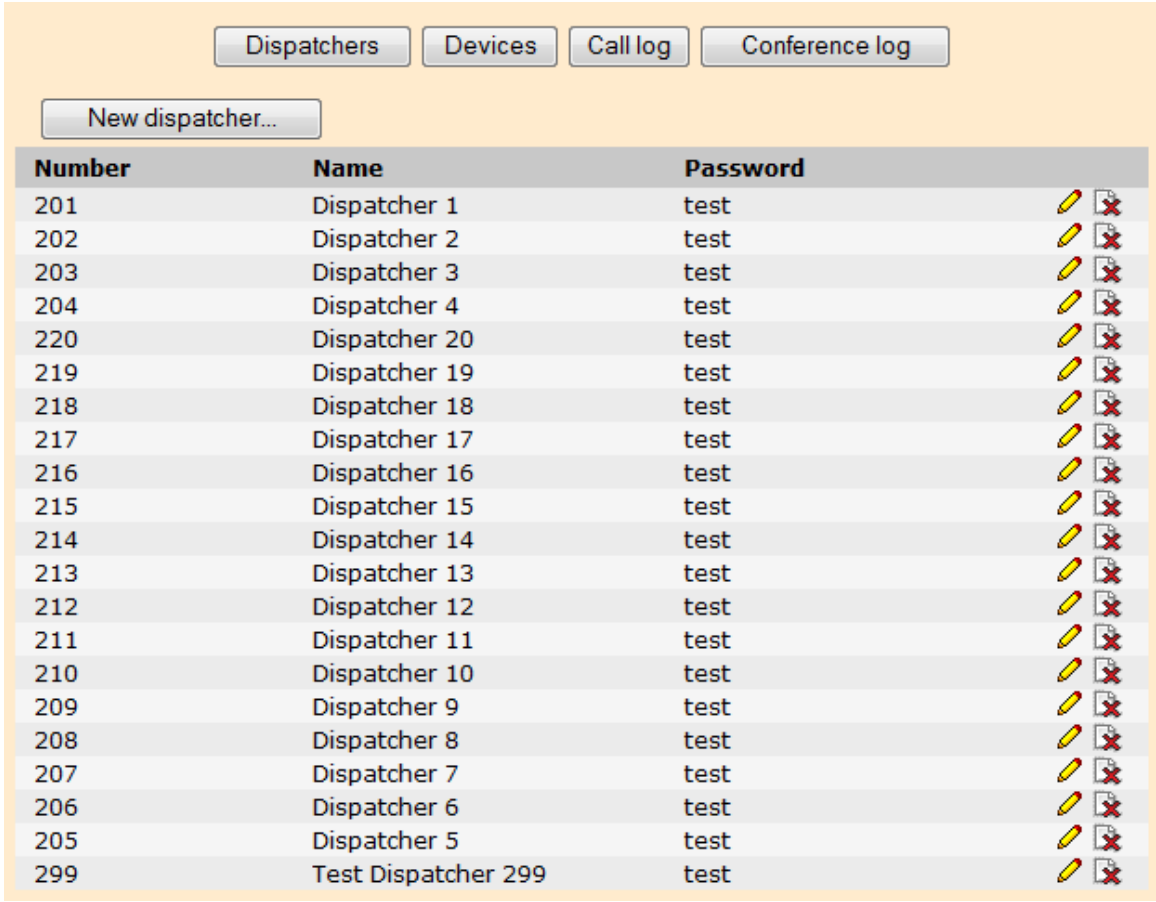
AT THE DISPATCH CENTER



AT THE DISPATCH CENTER



MANAGE DISPATCHERS



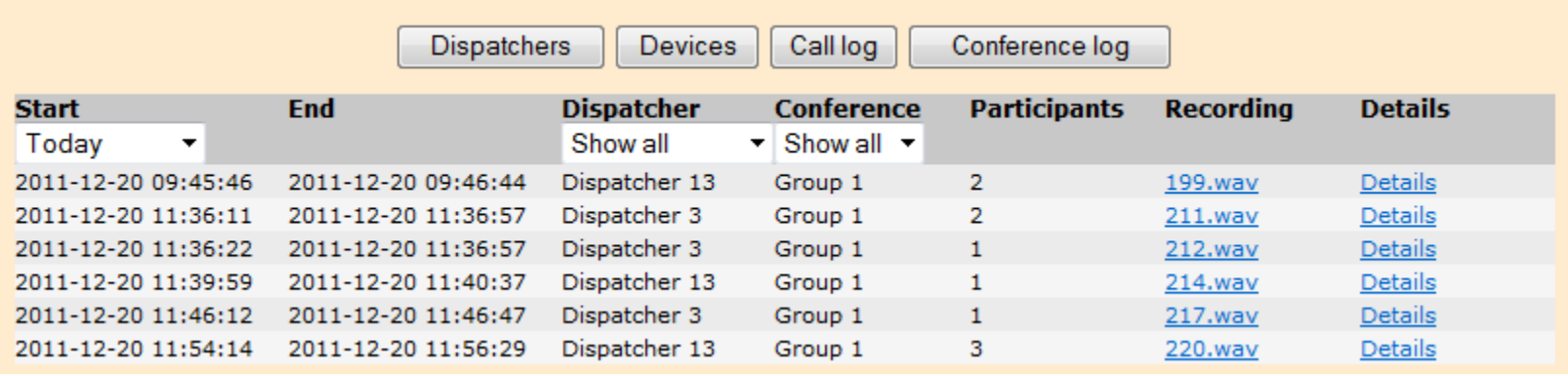
Number	Name	Password
201	Dispatcher 1	test
202	Dispatcher 2	test
203	Dispatcher 3	test
204	Dispatcher 4	test
220	Dispatcher 20	test
219	Dispatcher 19	test
218	Dispatcher 18	test
217	Dispatcher 17	test
216	Dispatcher 16	test
215	Dispatcher 15	test
214	Dispatcher 14	test
213	Dispatcher 13	test
212	Dispatcher 12	test
211	Dispatcher 11	test
210	Dispatcher 10	test
209	Dispatcher 9	test
208	Dispatcher 8	test
207	Dispatcher 7	test
206	Dispatcher 6	test
205	Dispatcher 5	test
299	Test Dispatcher 299	test

CALL LOG AND VOICE RECORDING MANAGEMENT

Dispatchers | Devices | Call log | Conference log

Date/time	Direction	Dispatcher	Team	Status	Group	Duration	Talktime	Disp. count	Recording
Today	Show all	Show all	Show all	Show all	Show all				
2011-12-20 00:18:50	INCOMING	Dispatcher 2	SI-13	ANSWERED	Group 1	58	54	1	184.wav
2011-12-20 00:44:25	INCOMING		SI-13	NO ANSWER	Group 1	20	0	0	
2011-12-20 01:53:18	INCOMING		NoBGAN1591	NO ANSWER	Group 1	20	0	0	
2011-12-20 07:14:50	INCOMING		ptt1044	NO ANSWER	Group 1	1	0	0	
2011-12-20 07:45:07	INCOMING		ptt1053	NO ANSWER	Group 1	1	0	0	
2011-12-20 07:46:26	INCOMING		ptt1090	NO ANSWER	Group 1	20	0	0	
2011-12-20 07:47:10	INCOMING		ptt1062	NO ANSWER	Group 1	18	0	0	
2011-12-20 07:47:47	INCOMING		ptt1090	NO ANSWER	Group 1	20	0	0	
2011-12-20 07:58:35	INCOMING		ptt1030	NO ANSWER	Group 1	0	0	0	
2011-12-20 07:59:33	INCOMING		IS-46	NO ANSWER	Group 1	20	0	0	
2011-12-20 08:08:44	INCOMING		ptt1044	NO ANSWER	Group 1	5	0	0	
2011-12-20 08:10:42	INCOMING		SI-13	NO ANSWER	Group 1	20	0	0	
2011-12-20 08:11:58	INCOMING		ptt1024	NO ANSWER	Group 1	0	0	0	
2011-12-20 08:29:22	INCOMING		ptt1090	NO ANSWER	Group 1	2	0	0	
2011-12-20 08:29:56	INCOMING		CJ-14	NO ANSWER	CAMPOS DO JORDÃƒO	20	0	0	
2011-12-20 08:42:11	INCOMING		ptt1076	NO ANSWER	Group 1	12	0	1	
2011-12-20 08:42:59	OUTGOING	Dispatcher 15	NoBGAN1602	NO ANSWER		6	0		185.wav
2011-12-20 08:51:59	INCOMING		AA-30	NO ANSWER	ATIBAIA	20	0	0	
2011-12-20 09:05:23	OUTGOING	Dispatcher 10	PTT39 at Elektro	NO ANSWER		40	0		28.wav
2011-12-20 09:05:27	OUTGOING	Dispatcher 10	PTT39 at Elektro	NO ANSWER		10	0		28.wav
2011-12-20 09:05:29	OUTGOING	Dispatcher 10	PTT39 at Elektro	NO ANSWER		9	0		28.wav
2011-12-20 09:05:31	OUTGOING	Dispatcher 10	PTT39 at Elektro	NO ANSWER		8	0		28.wav
2011-12-20 09:06:08	INCOMING		PTT39 at Elektro	NO ANSWER	Group 1	1	0	1	
2011-12-20 09:06:45	OUTGOING	Dispatcher 10	PTT39 at Elektro	NO ANSWER		3	0		28.wav
2011-12-20 09:06:53	OUTGOING	Dispatcher 10	FM-17	NO ANSWER		3	0		191.wav
2011-12-20 09:06:58	OUTGOING	Dispatcher 10	ptt1026	NO ANSWER		14	0		192.wav

GROUP CALL LOG



Dispatchers | Devices | Call log | Conference log

Start	End	Dispatcher	Conference	Participants	Recording	Details
Today		Show all	Show all			
2011-12-20 09:45:46	2011-12-20 09:46:44	Dispatcher 13	Group 1	2	199.wav	Details
2011-12-20 11:36:11	2011-12-20 11:36:57	Dispatcher 3	Group 1	2	211.wav	Details
2011-12-20 11:36:22	2011-12-20 11:36:57	Dispatcher 3	Group 1	1	212.wav	Details
2011-12-20 11:39:59	2011-12-20 11:40:37	Dispatcher 13	Group 1	1	214.wav	Details
2011-12-20 11:46:12	2011-12-20 11:46:47	Dispatcher 3	Group 1	1	217.wav	Details
2011-12-20 11:54:14	2011-12-20 11:56:29	Dispatcher 13	Group 1	3	220.wav	Details

THANK YOU

Thrane & Thrane