



SAILOR PUSH-TO-TALK

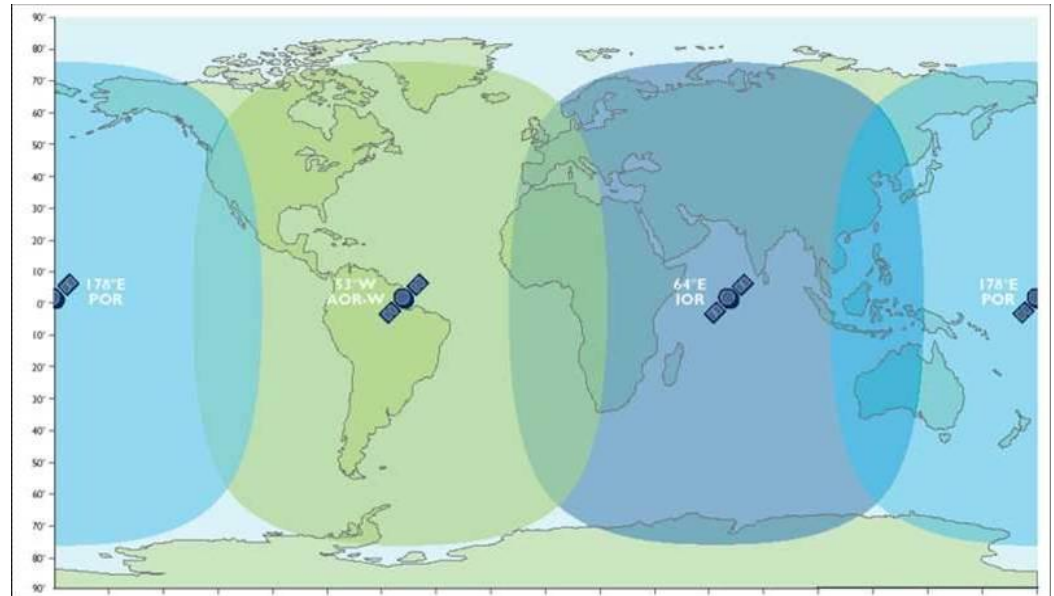
BACKGROUND

- 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 currently 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

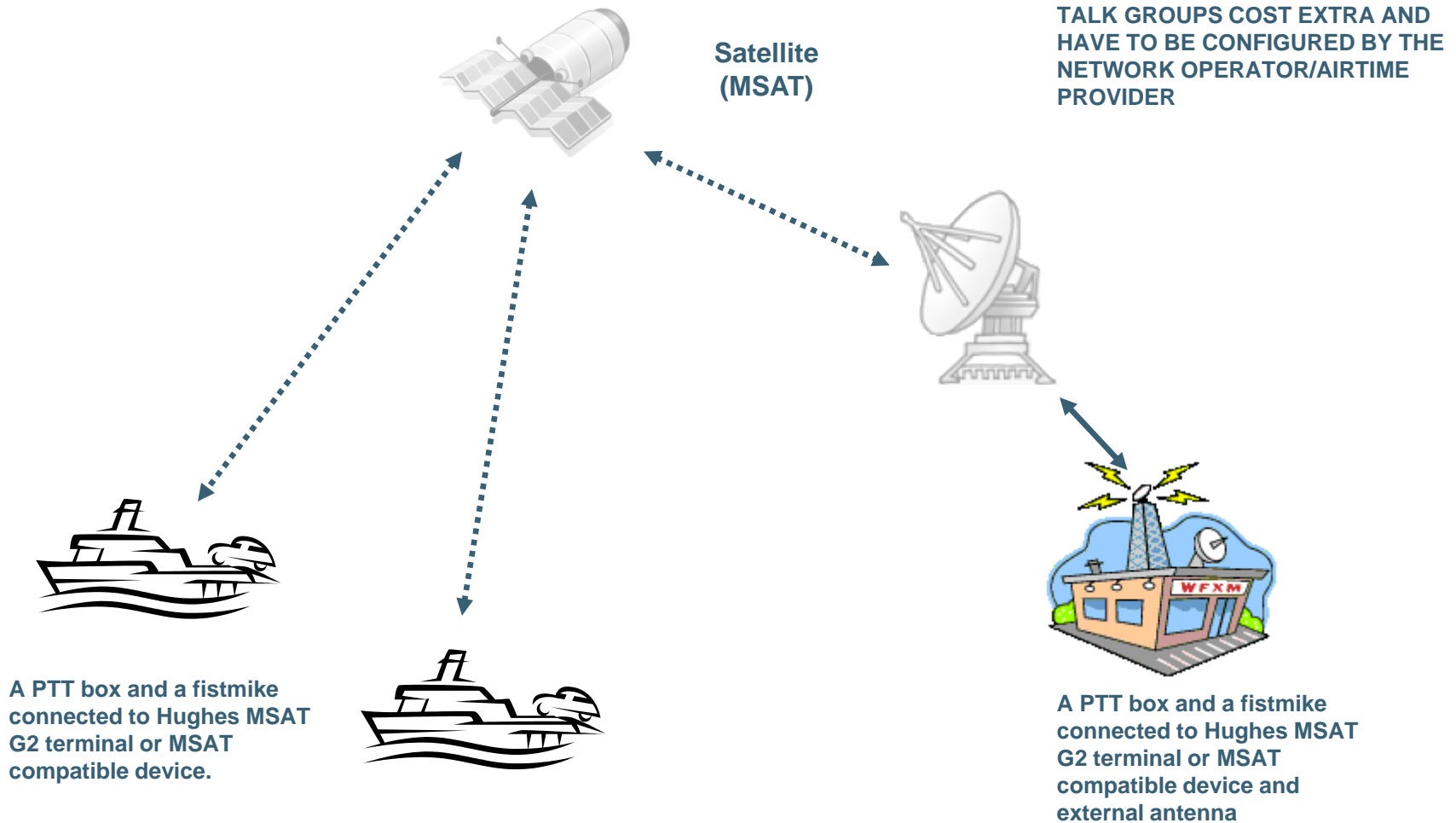
MSAT (G2)

- 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

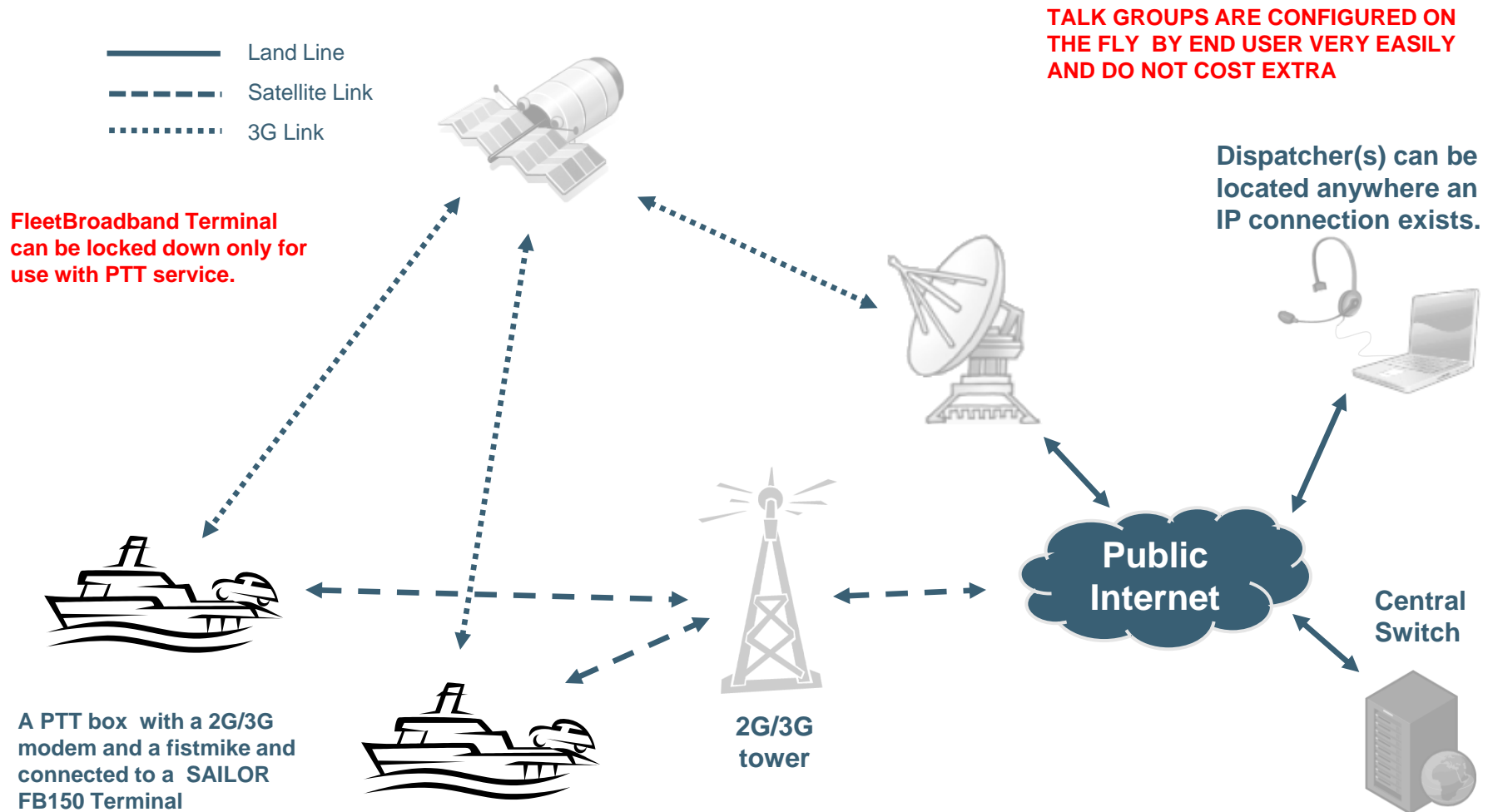
SAILOR PTT

- 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



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



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

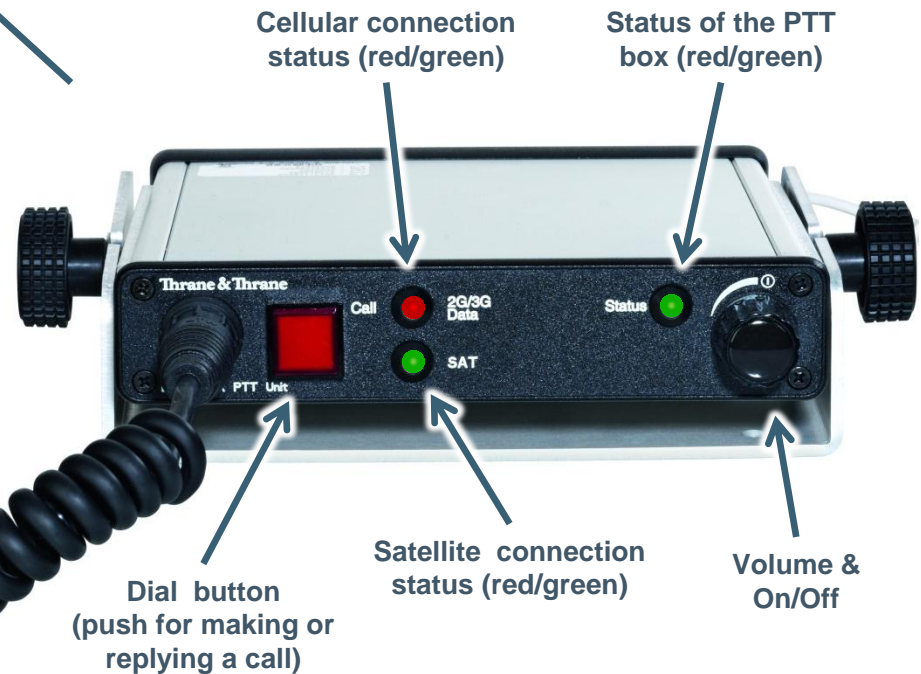




IN THE VESSEL

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

Thrane & Thrane
6202 Hand
Microphone



AT THE DISPATCH CENTER

The screenshot displays the PTT Dispatcher DEMO - Elektro Brazil interface. The main window is divided into several sections:

- Active dispatcher:** A table listing dispatchers and their status.
- Dispatcher:** A section for managing incoming and outgoing calls.
- Waiting callers:** A section for managing callers waiting for service.
- Group 1, Group 2, Group 3:** Sections for managing mobile units within different groups.

Annotations with arrows point to specific features:

- Outgoing call – drag to active call window:** Points to the 'FR017' entry in the 'Active dispatcher' table.
- Incoming call – appears in waiting callers list:** Points to the 'Waiting callers' section.
- Group call – drag desired mobiles to group window:** Points to the 'Join' button in the 'Group 1' section.

The status bar at the bottom shows: Connected to 192.168.254.61 | Extension: 211 | Network OK | Mixed | Version: 0.4.31.0

| Name | Primary dispatcher | Status | Subdivision |
|-------------------------|--------------------|-------------|-------------|
| Active dispatcher : 210 | | | |
| Test Mobile unit 8 | 210 | Unreachable | |
| Active dispatcher : 211 | | | |
| FR010 | 211 | Reachable | |
| FR017 | 211 | Reachable | |
| FR039 | 211 | Reachable | |

| Extension | Name | Joined |
|-----------|------|--------|
| Group 1 | | |
| | | |
| Group 2 | | |
| | | |
| Group 3 | | |
| | | |

AT THE DISPATCH CENTER

Dispatchers Devices Call log Conference log

New device... With selected: [Check all](#) / [Uncheck all](#)

| Serial | Device number | Device name | Group | Region | City | Function | Active | Modems | Firmware |
|----------|---------------|-------------|-----------------|--------|------|----------|--------|--------|----------|
| 80000020 | 320 | ptt20a | Group 1 | | | | X | 0 | |
| 80000021 | 321 | ptt21 | Group 1 | | | | | | |
| 80000022 | 322 | ptt22 | Group 1 | | | | | | |
| 80000023 | 323 | ptt23 | Group 1 | | | | | | |
| 80000024 | 324 | ptt24 | Group 1 | | | | | | |
| 80000025 | 325 | ptt25 | Group 1 | | | | | | |
| 80000026 | 326 | ptt26 | Group 1 | | | | | | |
| 80000027 | 327 | ptt27 | Group 1 | | | | | | |
| 80000028 | 328 | ptt28 | Group 1 | | | | | | |
| 80000029 | 329 | ptt29 | Group 1 | | | | | | |
| 80000030 | 330 | ptt30 | Group 1 | | | | | | |
| 80000031 | 331 | ptt31 | Group 1 | | | | | | |
| 80000032 | 332 | ptt32 | Group 1 | | | | | | |
| 80000033 | 333 | ptt33 | Group 1 | | | | | | |
| 80000034 | 334 | ptt34 | Group 1 | | | | | | |
| 80000035 | 335 | ptt35 | Group 1 | | | | | | |
| 80000036 | 336 | ptt36 | Group 1 | | | | | | |
| 80000037 | 337 | ptt37 | Group 1 | | | | | | |
| 80000038 | 338 | ptt38 | Group 1 | | | | | | |
| 80000039 | 339 | ptt39 | Group 1 | | | | | | |
| 80000041 | 309 | ptt9 | Group 1 | | | | | | |
| 80444486 | 305 | davidoff ad | Group 1 | | | | | | |
| 80349678 | 1001 | FR-15 | FRANCO DA ROCHA | | | | | | |
| 80349679 | 1002 | ptt1002 | Group 1 | | | | | | |
| 80349681 | 1003 | FR-43 | FRANCO DA ROCHA | | | | | | |
| 80349682 | 1004 | ptt1004 | Group 1 | | | | | | |
| 80349683 | 1005 | ptt1005 | Group 1 | Leste | | | X | 0 | |
| 80349684 | 1006 | FR-44 | FRANCO DA ROCHA | Leste | | | X | 0 | |

Edit device - Microsoft Internet Explorer er leveret af Thrane & Thrane...

http://200.174.197.20/management/editDevice.php?id=946

Device info

Serial number: 80444486

Device type: 403646

Device name: davidoff ad

Device number: 305

Group: Group 1

Firmware:

Active: ☒

Region:











































City:

Function:

OK Cancel

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MANAGE DISPATCHERS

| Dispatchers | | | |
|-------------------|---------------------|----------|---|
| Devices | | | |
| Call log | | | |
| Conference log | | | |
| New dispatcher... | | | |
| 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

| <div> <div>Dispatchers</div> <div>Devices</div> <div>Call log</div> <div>Conference log</div> </div> | | | | | | | | | |
|--|-----------|---------------|------------------|-----------|------------------|----------|----------|-------------|-------------------------|
| 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 JORDÃO | 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

| <div>DispatchersDevicesCall logConference log</div> | | | | | | |
|---|---------------------|---------------|------------|--------------|-------------------------|-------------------------|
| 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