

**Supply of Equipment for the Implementation of the Automated Identification of Ships (AIS) System, Croatia**  
Phare 2005

Questions and Answers

EuropeAid/123414/D/SUP/HR

**Questions and answers**

**Supply of Equipment for the Implementation of the Automated Identification of Ships (AIS) System, Croatia**

**1. Publication reference**

EuropeAid/123414/D/SUP/HR

**2. Procedure**

Open

**3. Programme**

Phare 2005

**4. Financing**

Croatia 2005 Phare National Programme

**5. Contracting authority**

Ministry of Finance of the Republic of Croatia, Central Finance and Contracting Unit

QUESTIONS	ANSWERS
<p><b>Date: 13<sup>rd</sup> March 2007</b></p> <p>1.: AIS Base Station Standards The tender states: ANNEX II: TECHNICAL SPECIFICATIONS - PART I Specification: Applicable standard and approvals IMO MSC. 74(69) Annex 3; ITU-R M 1371-1; ITU-R M. 825-3; IALA Tech. Clar. of ITU-R M.1371-1; IA L.A Guidelines on A/S (A 123, A 124); IEC 61162— 1,2,3 IEC 61993- 1, 2, IEC 60945 CE type-approval for AIS class A The recently adopted IEC 62320-1 Ed. 1 (2007) standard is now the official standard for AIS base stations. Please see the attached letter from the IEC TC80 committee chairman confirming this fact. With the exception of the “CE type-approval for AIS class A” requirement which does not apply to base stations, those other standards given in the list that are now included as part of the new IEC 62320-1 Ed. 1 (2007) standard. Our Question:</p> <p>Given that IEC 62320-1 Ed. 1 (2007) has just been adopted, and given that the CE type-approval for AIS class A” does not apply to base stations, will you accept, instead of the list of standards sought in the tender:</p> <p>a. A letter from the bidder stating conformity of the offered base station the IEC 62320-1 Ed. I (2007) standard, and b. A letter from a certification authority (e.g. BSH) confirming that the offered base station in in the process of being certified to IEC 62320-1 Ed. 1 (2007)? c. If the suggestions given in 1. and 2. above are not</p>	<p><b>Date 10<sup>th</sup> April 2007</b></p> <p>1. AIS Base stations compliant with IEC 62320-1 Ed 1. and IEC 60950 (confirmed by adequate approvals) will also be acceptable.</p>

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<p>acceptable, please clarify in detail which Certificates are needed?</p>	
<p>2. ANNEX II : TECHNICAL SPECIFICATIONS — PART I Specification: The data logger shall..., and WAN interface with data restore shall...</p> <p>Please clarify what is meant by the term Central Data Logger mentioned in the specifications?</p>	<p>2. <b>Central Data Logger</b> is the existing main server placed in Control centre in Rijeka. Central Data Logger collects all data received by any base station over Ethernet connection (Ethernet connection will be provided to all location including routers and modems).</p>
<p>3: Clarifications about Existing AIS System If this Central Data Logger mentioned in question 2 above is the part of the existing AIS Network, and you require bidders to integrate supplied equipment with the existing AIS network, then in order for us to quote, we will need information about the existing network</p> <p>Please supply a detailed description of the existing network &amp; installation This description will need to include information about:</p> <ul style="list-style-type: none"> <li>• interfaces</li> <li>• communication protocols</li> <li>• data exchange algorithms</li> </ul>	<p>3. The protocol between the Central Data Server and the BSI (or Base Station Controller) uses IEC61162 running on TCP/IP and applies the IALA A-124 Recommendations with regards to message priorities including when recovering from WAN / LAN outages. There are a number of proprietary IEC61162 messages that are used for the Network Monitoring System [NMS] to ensure the management of the remote stations is easily achieved. The TCP/IP links are also managed to take care of the changing bandwidth of the current WAN environment. The protocols to the local VTS / ECS / ECDIS are processed, filtered and data is provided according to the requirements of these equipments and the respective manufacturers' recommendations staying within the requirement of providing all real-time data within 250ms. Where VPN or UDP connections are required, these protocols are also implemented.</p>
<p><b>Date: 14<sup>th</sup> March 2007</b></p> <p>4. "ANNEX II: Technical specification - PART I" item 1:  The applicable standard and approvals are for mobile class A unit and not for Base Station. We could offer units compliant to the standard listed, but these (in particular ITU-R M.825-3, IEC 61993-1, IEC 61993-2, IEC 60945 and CE type approval for AIS class A, are intended for mobile shipboard equipment. Base Stations should instead conform to IEC 62320-1 and IEC 60950. We would like to offer units compliant with the latest standards, since we think these are the relevant ones for a shore-based AIS .</p> <p>How should we behave regarding to this issue?</p>	<p><b>Date 10<sup>th</sup> April 2007</b></p> <p>4. AIS Base stations compliant with IEC 62320-1 Ed 1. and IEC 60950 (confirmed by adequate approvals) will also be acceptable.</p>
<p><b>Date: 15<sup>th</sup> March 2007</b></p> <p>5. Please could you advise which areas/ports in Croatia will be covered by the AIS system, subject of the above tender.</p>	<p><b>Date 10<sup>th</sup> April 2007</b></p> <p>5. Minimum requirement for AIS system is to cover sea area of Adriatic Sea under jurisdiction of the Republic of Croatia, except the west side of Istra peninsula. (covered by existing base stations)</p>
<p>6. Document: ANNEX II: Technical Specifications – Part 1</p> <p>Item Nr 1 – Base Station Transponder Page 2: VHF transceiver: For what purposes should the DSC receiver be used? Our base station can transmit channel management information via DSC. Is that what is meant here?</p>	<p>6. Each AIS base station that is compliant to the ITU-R.M1371-1 standard uses CH70 DSC for channel management and is able to respond to commands on this channel. If verification is required, this can be obtained from ACR. Any DSC requirements outside of those described in the ITU-R.M1371 are not used or available.</p>

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<p>7. Item Nr. 2 Base Station Controller (BSC) Page 6: Power: Is it a compulsory requirement that hardware fulfilling the requirements for the BSC is powered with 12 or 24 VDC? Is it ok to use 230 VAC directly?</p>	<p>7. It is not compulsory requirement to use 12/24 VDC power supply for BSC and AIS base stations. Suppliers could use 230 VAC. Functional requirements are: - power supplies shall be redundant. - UPS or batteries backup have to cover all equipment inside rack for period of approximately 24 hours-</p>
<p>8. Page 6: Data Logger It's mentioned that export of the data to a local PC and a centralized data logger shall be possible. Shall we provide such PC or centralized data logger? If yes, we need the specifications.</p>	<p>8. No, it is not necessary. Centralized Data Logger is existing server placed in Control centre in Rijeka. See Picture No. 1 at the end of this table.</p>
<p>9. Page 7: Network Monitoring System Is it only the locally system at the site that is supposed to be monitored, or should the whole system (all sites) be monitored from each site? Should the Network Monitoring System be installed in the BSC?</p>	<p>9. Network Monitor System is software solution, it have to monitor network conditions, catch alarms and archive them. NMS have to monitor only conditions of local base station on each location. NMS solution must to be part of BSC application.</p>
<p>10. Page 8: WAN Interface It's mentioned to send all data to a central data logger: Shall we provide this central data logger? If not, please provide more detailed information how this shall be done.</p>	<p>10. No. Centralized Data Logger is existing server in Control centre, all base stations need to send received data to it. The protocol between the Central Data Server (or Central Data Logger) and the BSI (or Base Station Controller) uses IEC61162 running on TCP/IP and applies the IALA A-124 Recommendations with regards to message priorities including when recovering from WAN / LAN outages. There are a number of proprietary IEC61162 messages that are used for the Network Monitoring System [NMS] to ensure the management of the remote stations is easily achieved. The TCP/IP links are also managed to take care of the changing bandwidth of the current WAN environment. The protocols to the local VTS / ECS / ECDIS are processed, filtered and data is provided according to the requirements of these equipments and the respective manufacturers' recommendations staying within the requirement of providing all real-time data within 250ms. Where VPN or UDP connections are required, these protocols are also implemented.</p>
<p>11. Page 9: VTS data feed: Should we connect to a VTS and send data to it or should we only provide an interface for a VTS to get data? If we should send data, please provide more detailed information about the VTS interface. Are there existing VTS systems, and should each one of them be connected to one or several base stations? A general system block diagram would be very helpful, showing the ideas how the base stations will be installed and how/where the AIS data will end up.</p>	<p>11. The MariWeb system (existing system in Control centre in Rijeka) allows for the connection to be initiated from either direction. This means that the BSC or the CDS can be either a client or a server in terms of the TCP/IP connection. Each of these options has their own advantages and disadvantages. We strongly recommended configuring the CDS as a server, so that BSC need to connect on CDS (or Central Data Logger).</p>
<p>12. Item Nr. 5 GPS Antenna Page 13: Cable In the specification is the Impedance 50 Ohm but the Cable Type RG 412U has an Impedance of 75 Ohm. There is also no connector in the patch panel (Item 9) for this cable type. Can we use Cable Type RG 214U (the same as for the VHF antenna) instead?</p>	<p>12. RG 412U is type-writing mistake. It should be RG 214U.</p>

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<p>13. Item Nr. 11: Page 16: Power Supply It's assumed that this is an UPS for the hardware at each site. Is it ok to change the requirements so that our PC or Server hardware, powered with 220 VAC can use the UPS? The functionality from a user perspective will not be changed.</p>	<p>13 See answer No. 7</p>
<p>14. Page 30: Testing: System Acceptance Test: It is not clear how the AIS data shall be processed, transferred and presented. Local presentation on an ECS is mentioned under the Base Station Controller, but how will the Control center in Rijeka get available the full AIS pictures from all bases? We need more information about the existing AIS management system (hard- and software, data protocols, monitoring functions) to define a proper solution for the integration of the AIS Base Station in the AIS system.</p>	<p>14. Router and modem will be installed on all sites so complete test will be possible after installation on site. See Picture No. 1 at the end of this table and answers no. 10. and 11.</p>
<p><b>Date: 21<sup>st</sup> March 2007</b></p>	<p><b>Date 10<sup>th</sup> April 2007</b></p>
<p>15. The invitation to tender has a strong focus on hardware but little focus on software. Should this tender be considered a companion to a future software-related tender?</p>	<p>15. No. See Picture No. 1 at the end of this table and answers no. 10. and 11.</p>
<p>16. Data logging is mentioned for the BSCs. Is a central storage of all data from all BSCs also expected within the scope of the tender?</p>	<p>16. No. Central Data Logger is existing server placed in Control centre in Rijeka. Central Data Logger collects all data received by any base station over Ethernet connection (Ethernet connection will be provided to all location including routers and modems).</p>
<p>17. In Annex II the BSC is listed as item number 2. The Electronic Chart System, Network monitor and firewall are listed under this item. Is this correct?</p>	<p>17. Yes. It is necessary to implement all items in BSC. ECS – it is necessary to provide application solution on BSC, so that any user with any PC can connect locally on BSC (over Ethernet), and with some standard application (like for example WebBrowser) get chart with targets received only with that base station. Network monitor – it is necessary to provide application that will monitor network conditions, catch alarms and archive them. Firewall – It is not necessary to provide separate device or software, it is possible use Firewall of operation system (like Windows, Linux ETC.)</p>
<p>18. Will Customer supply PC Systems for data logging and chart display systems? If so please provide details regarding the number and specifications of these systems.</p>	<p>18. No. It's necessary to provide software solution to allow connection of any PC over Ethernet to BSC using login name and password. Software solution should provide function to get stored data on that PC and to provide ECS <b>picture</b> with targets and present it to local user. We recommended using WebBrowser for connecting on BSC and reach data and ECS picture with details about targets.</p>
<p>19. An Electronic Chart System (ECS) is mentioned in the technical requirements. Exactly how many ECSes should be provided?</p>	<p>19. None as separate items! ECS software shall be a part of complete solution on BSC. It is necessary to provide it for all locations, not separately. This way, PC that could be connected to BSC doesn't need to have any other application. We recommended using WebBrowser solution. But, you can provide other type of solution for example any application that every user can download from BSC and use to present ECS picture with</p>

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	target details. In that case, it's necessary to provide application independent of operation system.
20. How will the ECSes be deployed? Will they be centrally located?	20. See answers no. 18. and 19.
21. Please provide more detail on the usage scenarios for the user-accessible systems to be supplied as part of this scope.	21. See answers no. 18. and 19.
<b>Date: 28<sup>th</sup> March 2007</b>	<b>Date 10<sup>th</sup> April 2007</b>
22. Performance Guarantee and After-Sales In the Special Conditions of Contract (pg. 3) it states: ““The amount of the performance guarantee shall be 10% of the Contract Value and the part in respect of after sales service including any amounts stipulated in addenda to the contract is 15%.” And in Article 32, After-sales service (pg. 6) it states: “15% of the Performance Guarantee will be assigned to this activity”. Our Question: Please confirm it is 15% of the 10% performance Guarantee that is assigned to after-sales service, and not 15% of the entire contract value in addition to the 10% performance guarantee.	22. Value of the performance guarantee is established at 10 % of the contract value. Part assigned to the after-sales is intrinsic part of above mentioned performance guarantee, hence, <b>successful tenderer</b> is expected to clearly state, whilst using adequate template (template for performance guarantee is part of the Tender Dossier) that 15% of the performance guarantee (which is established at 10 % of the contract value) is assigned to after sales services.
23. Clarifications about Terminology The Instructions to Tenderers (pg. 6) states: ‘A statement by the tenderer confirming the number of staff presently employed as an authorized engineer of electrotechnics Our Question: Please clarify the term “authorised engineer of electrotechnics”. Does this refer to a specific qualification in Croatia, and/or does it refer to membership of a specific professional organization? Alternatively is the requirement a general question to ascertain the level of electronic, electromechanical and electrical competence held by individuals within the bidding company?	23. The term „authorized engineer of electrotechnics” (field of radio/telecommunications) refers to a engineer of electrotechnics who is a member of one Professional Society (e.g. authorized planning engineer, authorized engineer in construction ). In Croatia he should be a member of Croatian Societies of Architect and Engineers in Construction.
<b>Date: 4<sup>th</sup> April 2007</b>	<b>Date 10<sup>th</sup> April 2007</b>
24. The tender refers to IALA, but the requirements do not include the IALA recommendations regarding the LSS, ASM services and respecting database LSS and ASM services.  <u>1. Regarding the LSS services please clarify following:</u>  24.1.. Do you require filtering based on * Time * Number of messages * Removing duplicates * MMSI * Geographical Area * Vessel Type * Country of origin 24.2. Do you require individual filtering for different users? 24.3.. Do you require remote configuration of the LSS	24.  1. LSS services:  24.1. Filtering shall be based on at least: Time MMSI ROT COG SOG Type of vessel Geographical area Vessel type 24.2. Filtering shall be based on user and user groups. 24.3. The entire system shall be remotely configurable

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<p>filters? 24.4. Do you require any security measures for protecting the LSS configurations? 24.5. Do you require centralized configuration and automatic distribution of the LSS configurations? 24.6. Do you require a graphical tool to do configure the dataflow within the AIS Network? 24.7.. Do you require access control to the data * Based on IP address of connecting computers * Based on username and password 24.8. Is there any requirement for allowing external users access raw AIS data based on user credentials?</p>	<p>24.4. All access shall be username, password and permissions protected 24.5. The entire system shall be remotely configurable 24.6. The entire system shall be remotely configurable 24.7 All access shall be username, password and permissions protected 24.8. VTS data feed shall be possible.</p>
<p><u>25 .Regarding the ASM services please clarify following:</u>  25.1. Do you require a tool for Base Station Configurations? * Including Slot Map configuration * Centralized to configure Base Stations across the network 25.2. Shall the tool use control messages according to the AIS standard, or are proprietary messages allowed? * According to ITU-R 1371-2 25.3. Shall the AIS Base stations and the AIS software support the new messages in ITU-R 1371-3? * Not implemented by all AIS vendors 25.4. Are there any of the optional Base Station messages from ITU-R 1371-3 that you require implemented? * For the Base Stations * Shall it also be supported by the AIS Software proposed 25.5. Do you require a tool for Vessel Channel Management? * If so, what are the requirements? 25.6. Do you require a tool for Vessel Assignment Mode configuration? * If so, what are the requirements 25.7 Which of these messages are required to be implemented by the AIS Software: * BCF, CBM, DLM, ACA 25.8. Do you require a tool for doing interrogations? * Some data will not be sent and therefore require interrogations 25.9. Do you require a tool to graphically present the achieved AIS coverage within a map?</p>	<p>25. ASM services:  25.1. Base stations shall be configurable according to the latest published AIS base station specification.  25.2. Base stations shall be configurable according to the latest published AIS base station specification.  25.3. Base stations shall comply with the latest edition of applicable international standards, requirements and recommendations and shall have adequate approvals.  25.4. Base stations shall comply with the latest edition of applicable international standards, requirements and recommendations and shall have adequate approvals.  25.5. Base stations shall be configurable according to the latest published AIS base station specification using published messages for channel management  25.6. Base stations shall be configurable according to the latest published AIS base station specification using published messages for Assignment Mode configuration  25.7. Base stations shall be configurable according to the latest published AIS base station specification  25.8. All messages shall be possible including all published interrogation messages  25.9. This is not specified.</p>
<p><u>26. Regarding the LSS and ASM database services please clarify following:</u>  26.1. Is there a requirement for storing all the AIS data into a database? 26.2. Shall the solution support replay of raw AIS data? 26.3. Shall the solution support data query into the stored AIS data? 26.4. What is the expected number of AIS targets within the AIS Network? 26.5. For how long time shall AIS data be stored? 26.6. Do you require any possibility to generate reports based on the received AIS Data?</p>	<p>26. LSS and ASM database services:  26.1. Yes.  26.2. Yes. 26.3. Yes.  26.4. A full slot map per AIS shore station shall be assumed.  26.5. That option need to be configurable, or until HDD</p>

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	become full, oldest data must be deleted automatically. 26.6. No.
27. Is the intention to have an organization with a Central administration in Rijeka, and 13 local control centres with 24/7 service for operation of the system?	27. -30. Currently SAR and VTS Centre (main control centre) in Rijeka is responsible for 24/7 operation of the system with existing 4 locations.
28. What is the functionality of the Central administration in Rijeka and Zagreb? Is there a central management system which shall interface the Base stations and the base station controllers? - Control of the base station (change of output power, frequency changes, error notification, - Data transfer (eg. support of messaging services, etc.)	This tender is second phase of Croatian Automatic Identification System development by which 13 new AIS base stations will be integrated in the existing system handled by main control centre. For description of existing system please see answers no 3., 10., 11. and picture no 1. on the end of this table.
29. Please describe/clarify organization which will operate the system. Would you prefer a central control centre in order to reduce the staff on the Base station controller sites?	
30. Shall the system be integrated with existing legacy system or units? Please describe the existing system and interface to it (e.g. Central logging system, base station and base station controller management system if any)?	
<b>Item: 1.</b> <b>Requirement:</b> Base station transponder – Quantity 26 transponders (redundant system) to each location according to distribution list in Annex II : Technical Specifications – PART II	
31 The tender specifies AIS Transponders. The word AIS Transponder have been used both for the Mobile units mounted in the vessels and base stations. Can you clarify that you requires real AIS Base station as used in today AIS network solutions.	31. Yes, We are requiring real AIS Base stations.
32. Shall FATDMA be supported by the base station unit?	32. Base stations shall comply with the latest edition of applicable international standards, requirements and recommendations and shall have adequate approvals.
33. Shall the built-in GPS receiver be capable of using the WAAS/EGNOS signals?	33. Base stations shall comply with the latest edition of applicable international standards, requirements and recommendations and shall have adequate approvals.
34. Shall the AIS base station support differential GPS (DGPS) data exchange according to AIS standards?	34. Base stations shall comply with the latest edition of applicable international standards, requirements and recommendations and shall have adequate approvals..
<b>Item: 1.</b> <b>Requirement:</b> Sensitivity <-110 dB	
35. This requirement exceeds the standards you refer to. Is there any special reason for that or we can use sensitivity defined in the standards.	35. Base stations shall comply with the latest edition of applicable international standards, requirements and recommendations and shall have adequate approvals.
<b>Item: 1.</b> <b>Requirement:</b> Power supply 12 or 24 VDC	
36. The tender specifies 12/24 VDC power supply. Is there some special reason for use this power supply or we can use ordinary 220-230 VAC, 50 Hz. Most modern AIS systems today are normally powered by 230 VAC	36. See answer No. 7
<b>Item: 2.</b> <b>Requirement:</b> Base station controller - BSC – Quantity 13	

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Key functions:  
 Hot Stand-by of the AIS base station; one base station transponder must be normally working and the other in complete stand-by mode (no transmission and no reception).  
 If there is a failure with the working base station transponder the system shall realize this circumstance and will set the second one into normal operation automatically (an alarm is shown on the operator place)  
 Ability to provide continues duplex communication between base station and AIS network  
 Local storage of AIS data in the case of broken connection  
 Connecting two base station transponder on one communication link  
 Monitoring system  
 Possibility to connect on sub-nods

<p>37. Tender dossier specifies that BSC needs to provide Hot-Stand-by functionality for switching of base stations connected to that BSC. On the other hand only one BSC per site is specified. In that case if BSC fails there will be no hot stand-by functionality available at that site any more, what leads to conclusion that the base station site is not fully redundant. Do we need to provide redundant BSC to provide full redundancy of the site?</p>	<p>37. No, it is not necessary to provide two BSC. .</p>
<p>38. Please clarify which functionalities need to be highly available (redundant) at each base station site.</p>	<p>38. It is necessary to provide redundant base stations and power supplies.</p>
<p><b>Item: 2.</b>  <b>Requirement:</b> Hardware - Commercial Off The Shelf [COTS]</p>	
<p>39. The tender dossier specifies usage of COTS components for the BSC does this means that for the BSC ordinary PC or servers needs to be used or BSC based on the COTS components (eg. Processor, RAM, HDD etc) can be used as well.</p>	<p>39. BSC shall be based on the COTS components.</p>
<p><b>Item: 2.</b>  <b>Requirement:</b> Power - The BSC shall be powered off the same battery voltage power supply as the AIS base station (12 or 24VDC)</p>	
<p>40. The tender dossier specifies usage of 12/24 VDC power supply for the BSC. Is there any special reason for that or we can use 230 VAC, 50Hz power supply as well. Most modern AIS systems today are normally powered by 230 VAC</p>	<p>40. See answer No. 7.</p>
<p><b>Item: 2.</b>  <b>Requirement:</b> The data logger shall - Store all AIS data;          Date and time stamp all AIS data messages with GPS derived date and time;          Retain at least 1 month of AIS and alarm data;</p>	

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<p>Require no database administration (local or remote);                  Allow for the export of the data to a local PC and a centralized data logger;                  Keep records of which AIS data has been transferred to the central data logger and which has not;                  Not stop the system or any functionality or require manual intervention                  Allow automatic reconnection to the central data logger in the case of WAN failure</p>	
<p>41. The tender specifies a central data logger. Please describe/specify the central data logger functionality.                  - e.g. Use of message services, change of configurations, alarms, etc</p>	<p>41. See Picture No. 1 at the end of this table and answers no. 10. and 11.</p>
<p>42. Please describe the access procedure to the content (who is authorized to access data, describe the interfaces etc.).</p>	<p>42. All access shall be username, password and permissions protected</p>
<p><b>Item: 2.</b>  <b>Requirement:</b>     The Electronic Chart System [ECS] shall - Display all local AIS targets on a chart                  Enable the selection of any AIS target and the display of all available AIS data for this target                  Display S57,ESRI SHP, GIF, TIFF, PNG and JPG format charts</p>	
<p>43.No functionality is specified for the [ECS] system What is the operational purpose of the chart system?                  Please clarify how the operator will use the chart system</p>	<p>43. – 45. The ECS installed on the BSC shall allow user to view all vessels fitted with AIS transponders in the coverage area, select and display all relevant AIS data available from each vessel, send and receive AIS messages directly .</p>
<p>44. Is the Chart system only for display of vessel location?</p>	
<p>45. Are there any operational requirements for the ECS system (e.g. alarms, measurements, handling of vessel properties etc.?)</p>	<p>The operator will use the ECS and supporting screens as the prime operational interface.</p>
<p><b>Item: 2.</b>  <b>Requirement:</b>     The network monitoring system shall:                  - Log all AIS alarms messages with date and time                  - Allow the viewing of these alarms locally                  - Allow the capturing of BSC alarms                  - Allow the viewing of BSC alarms locally</p>	
<p>46. Is this the only requirement for AIS network management?</p>	<p>46. Requirements specified in the Technical specification (Part I) are compulsory as minimum standard.</p>
<p><b>Item: 2.</b>  <b>Requirement:</b>     WAN interface with data restore shall:                  Send all data to the central data logger                  Send all data in priority order as follows:                  Alarms                  Safety Related Messages                  Binary messages                  Real-time updates                  Archived data (up to 1 month of archived data)</p>	

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<p>Ensure that no data is lost in the case of the WAN link fail, become intermittent or have reduced information rate capacity Send all data at the measured information rate of the WAN.</p> <p>The WAN information rate shall be automatically measured from time to time and the WAN interface data rate shall be adjusted to this rate</p>	
<p>47. What kind of interface should be used for the WAN interface (ISND, modem, Ethernet, E1, ADSL)?</p>	<p>47. All current WAN interfaces are Ethernet TCP/IP.</p>
<p>48. Which responsibility is provisioning of physical connection to the WAN from the telecom operator</p>	<p>48. Contractor will provide all equipment necessary for WAN connection, supplier have to provide Ethernet interface for BSC.</p>
<p><b>Item: 2.</b> <b>Requirement:</b> The VTS data feed shall:</p> <ul style="list-style-type: none"> <li>- Use the IEC61162 message set</li> <li>- Transfer the data using either Ethernet or RS232C (configurable)</li> <li>- Have a maximum delay of 500ms</li> <li>- Filter VTS data based on:             <ul style="list-style-type: none"> <li>- Area</li> <li>- ITU-R.M1371-1 message type</li> </ul> </li> <li>- Number of any particular ITU-R.M1371-1 message type in a ration forma</li> </ul>	
<p>49. Does this requirement mean export of AIS data to a VTS system, or import data from VTS system. If it is import, what is the purpose of VTS feed to BSC (what will it be used to) and which interface use existing VTS system?</p>	<p>49. Data to and from the VTS system is to allow the update of the VTS database with AIS data and to accept ABM and BBM from the VTS system.</p>
<p><b>Item: 2.</b> <b>Requirement:</b> The firewall shall: Be configurable by any local user have a suitable username and password Be configured by: IP address Port</p>	
<p>50. For the purpose of the firewall functionality do you consider proper firewall equipment like CISCO firewall or IP and port filtering within Linux and Windows operating system shall be used.</p>	<p>50. Linux or Windows operating system firewall shall be used.</p>
<p><b>Item: 5.</b> <b>Requirement:</b> GPS antenna – Quantity 26</p>	
<p>51. How is it expected the two GPS antennas to be connected to the GPS receiver?</p>	<p>51. For each base station unit one GPS antenna.</p>
<p><b>Item: 8.</b> <b>Requirement:</b> Industrial Steel cabinet – Quantity 13 Industrial powder coated 36U 19" steel cabinet with front and back doors, 2 fans, door dust filter and temperature automatic regulator</p>	
<p>52. Is it allowed to use smaller standard industrial cabinet then 36U if provided equipment can fit in such cabinet? If not why?</p>	<p>52. No, cabinet size must to be 36U. It is for future expansion.</p>
<p><b>Item: 9.</b> <b>Requirement:</b> Patch panel (electrical interface) – Quantity 13 Connectors:</p>	

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<p>8 X RG 214U 4 x RS 232 4 TNC</p>	
<p>53. Do we need to provide patch panel exactly according to specification you provided or we can provide patch panel according to needs of equipment provided in our solution? If we need to provide exact patch panel why?</p>	<p>53. Patch panel can be organized on other way.</p>
<p><b>Item: 10.</b> <b>Requirement:</b> Batteries – Quantity 52 50Amp/Hr 12VDC sealed lead acid batteries for high rate, long life standby use.</p>	
<p>54. Tender dossier specifies battery system for 12 VDC and capacity of 50 Ah. Do we need to provide batteries with battery charger as specified or we can provide proper UPS system according to needs of our equipment provided in this solution? If we need to follow 12 VDC battery requirement can you clarify why?</p>	<p>54. See answer No. 7.</p>
<p>55. Tender dossier only specifies capacity of the battery of 50 Ah which is not sufficient for dimensioning of UPS system because max or average power consumption is not provided. Can you clarify how long (in minutes) should battery support the solution in case of power outages.</p>	<p>55. See answer No. 7</p>
<p><b>Item: 11.</b> <b>Requirement:</b> Power supply with battery charger and charger regulator - Quantity 26 AC input voltage: 220V, 50 Hz. DC output voltage: 12/24 V DC output current: 10A</p>	
<p>56. Do we need to provide battery charger with ordinary batteries for the UPS system or we can provide proper UPS system that is sufficient for the power consumption of equipment we will provide in our solution?</p>	<p>56. See answer No. 7</p>
<p>57. Do we need to provide UPS system with 12/24 VDC output or we can provide ordinary UPS with 230 VAC output?</p>	<p>57. See answer No. 7</p>
<p>58. What is the reason of specifying of max 10 A output current. What if our solution requires more or less current then specified?</p>	<p>58. Requirements specified in the Technical specification (Part I) are compulsory as minimum standard.</p>
<p><b>Item: 12,13,14,15</b> <b>Requirement:</b> Antenna's mast – Type 1 - Quantity 1 Antenna's mast – Type 2 - Quantity 4 Antenna's mast – Type 3 - Quantity 4 Antenna's mast – Type 4 - Quantity 1</p>	
<p>59. What are the applicable standards/regulations for the towers? E.g. Wind speed for operation, survival, pointing deviation, etc.</p>	<p>59. Environmental requirements for antenna's mast: - operational wind speed 55 m/s - survival wind speed 68 m/s.</p>
<p><b>Item: 16</b> <b>Requirement:</b> Antenna mast grounding material – Quantity 13 Appropriate material for grounding of antenna masts on each location</p>	
<p>60. What is the applicable standard for grounding? Is there any requirement for lightning protection of the Tower, if so what is the applicable</p>	<p>60. Complete grounding installations must to be in accordance with Croatian law. Requirements for lightning protection are specified in Technical specification (Part I)</p>

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standard/regulation?	
<b>Part D Item 7. Tenderer's Declaration</b>	
61. If the partner in charge has the Power of Attorney from other members of Joint Venture properly notarized, can the partner in charge sign the Tenderer's Declaration on behalf of each member, also?	61. Declaration should be signed by each legal entity making an offer, i.e. each partner in the consortium or joint venture. Any other solution will be addressed as a specific case brought upon consideration of the Evaluation Committee and decision will depend on their assessment.
<b>Additional requirements – regarding installation, testing, maintenance, commercial warranty</b>	
<b>Requirement:</b> Installation and testing – on all 13 locations	
62. Is supplier responsible for preparation of all documentation needed for obtaining of new or additional civil work permits for the installation of masts needed by the required solution?	62. Yes, it is.
63. Is supplier responsible for preparing of all documentation needed for obtaining of radio-frequency usage permits for the AIS equipment?	63. Yes, it is.
64. Who will provide needed civil works and radio-usage permits?	64. Permits will be provided by beneficiary.
<b>Requirement:</b> Testing: Site Acceptance Test (SAT) The Site Acceptance Test will be performed after the installation of complete AIS equipment and antenna masts on each location, with the complete AIS base station working in normal conditions.	
65. No communication network to the Control Center is specified Please describe the communication network between the sites and to the Control center.	65. All current WAN interfaces are Ethernet TCP/IP. See picture no 1. at the end of this table.
<b>Requirement:</b> System Acceptance Test (SAcT) The System Acceptance Test will be performed in the Control center (Croatian Maritime Rescue and Coordination Center, Rijeka, Senjsko pristanište 3, 51000 Rijeka, Croatia) after integration of each new AIS base station in existing AIS management system. During the System Acceptance Test the complete functionalities of the system will be validated in accordance with relevant international standards.	
66. Only central storage is mentioned in the Specifications. No Central functionality is specified. Please describe the central functionality to be used during System Acceptance Test.	66. The AIS network shall comply with the IALA A-124 Recommendation. Testing will be against IALA A-124 and the successful bidder's compliance statement.
<b>Date: 5<sup>th</sup> April 2007</b>	<b>Date: 10<sup>th</sup> April 2007</b>
67. The standard IEC 61162-3 is purely related to ship-born equipment and is in our opinion not relevant for AIS shore stations.	67. Please see Answer no. 1.
68. The antennas are specified very detailed - we would appreciate to know the make and type of these preferred antennas.	68. Requirements specified in the Technical specification (Part I) are compulsory as minimum standard.
69. Any preferences from the customer for the Power supply/Charger?	69. Requirements specified in the Technical specification (Part I) are compulsory as minimum standard.

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70. Is it sufficient to supply the BSC with AC 230V instead? It would be possible to use a UPS to secure the supply anyway if the mains power supply is lost.	70. See answer No. 7.
71. Is the temperature requirement -15 to +55 deg on BSC and Power supply firm? Standard temp range for this kind of COTS equipment is 0 to 40 deg which would reduce cost.	71. Requirements specified in the Technical specification (Part I) are compulsory as minimum standard.
72. Is the requirement on rel. humidity 0 to 95% on BSC and Power supply firm? Standard value for this kind of COTS equipment is 10 to 90% which would reduce cost.	72. Requirements specified in the Technical specification (Part I) are compulsory as minimum standard.
73. The international AIS standard requires a frequency band 156,025 to 162,025 MHz. We assume that this is sufficient instead of the specified 156 to 163 MHz?	73. Yes, it is.
74. Shall not the requirement on frequency band of the cavity filters be adapted to the AIS band? The filter should be tuned to the operational AIS frequencies. Is there really a need of "Triple cavity" filters? It should be more sensible to have a performance requirement such as max insertion loss etc.	74. Requirements specified in the Technical specification (Part I) are compulsory as minimum standard.
75. We assume that the 50 ohm cable RG214U is what is wanted rather than the specified 75 ohm cable?	75. See answer No. 12.
<b>Date: 6th April 2007</b>	<b>Date: 10th April 2007</b>
76. Refer to Croatian Law of telecommunication, it is necessary to prepare official document about measurement of grounding, before site inspection of telecommunication authorities. Who will take care about it?	Contractor
77. If base station location (building), doesn't have grounding system, who is responsible for complete grounding system installation?	Contractor

Picture No. 1

