

RFI Inquiry

M. O. D.	Request For Information	
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Date	06 November 2017
From	Hellenic Navy General Staff Directorate of C4IS Communications Division Email: gen_a4ii@navy.mil.gr
Ref.	

Table for participating entities (Completed by the participants)	
Name of the Company:	
Headquarters:	
Point Of Contact:	
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Project Table	
Project title:	Procurement of a complete VLF system (transmitter – antenna etc)
Procurement of materials/ Service offering	Procurement
Partial submission:	No
Funding Source:	Armament
Type of Competition:	REQUEST for INFORMATION
Award criterion:	-

Technical Description of the Project	
A.	<u>Project 's purpose – General Description :</u> Hellenic Navy General Staff intends to upgrade its communication capabilities from the LF band to the VLF band by purchasing a VLF Transmitter System in order to replace the existing LF system (located at Marathon Tx Site) as well as its relevant infrastructure (transmitting antenna, insulators, exciter, power amplifiers, etc).
B.	<u>Definitions</u> <u>VLF Antenna/Transmitter System</u>

The VLF Antenna/Transmitter System comprises from the following subsystems :

1. Antenna and insulators
2. Guy wires – Ground System
3. Lightning protection and transformers.
4. Land use planning of the system
5. Modulator
6. Management and Control System
7. Exciter
8. Power Amplifier
9. Antenna Tuning Unit
10. Transmitter Management and Control Processor
11. Dummy Load
12. Antenna – Transmitter connections

C. Operational Requirements of the System

The system would be compatible with STANAG 5030 Edition 4 and STANAG 4724 Edition 1 and also be able to cover Eastern Atlantic Ocean, Mediterranean, Black Sea and West Indian Ocean regions.

D. Functional Requirements of the System

The system (VLF Antenna/Transmitter System):

1. Must work uninterruptedly on a stable and permanent basis (24/7), without any limitations even in the most aggressive weather conditions (in terms of temperature-wind speed).
2. Its programmed service must not be extended in time.
3. The programmed service required spare parts must follow the COTS (Commercial off the shelf) philosophy and also must be easily purchased inside domestic market.
4. Must be capable to interconnect with NATO BRASS and in the near future with NATO BREITA architecture.
5. Must be compatible with STANAG 5030 Edition4 and STANAG 4724 Edition 1.
6. The recommended solution must also include power supply hardware and heat dissipation requirements. Moreover a radio-coverage study should be executed on behalf of the supplier in order to support the recommended solution.

E. Technical Specifications :

The principal technical specifications are the following :

1. Frequency Range
The transmitter must transmit in VLF band (3-30 KHz)
2. Transmitter's power output
No specific requirements regarding transmitter's power output are needed as long as the prerequisites of above paragraph C are fulfilled.
3. Bandwidth
The system must be able to handle the necessary data rate for MSK4 modulation till 200 bauds according to STANAG 5030 and 4724.
4. Antenna Type

There is no specific requirement regarding the antenna type.

5. Modulator – Exciter

They must be compatible with STANAG 5030 and 4724.

6. Management and Control System

There should be an interconnection capability with NATO BRASS and in the future with NATO BREITA.

E. Additional Requirements :

1. The supplier must be able to provide :

a. At least a 10 year guarantee of the VLF Antenna/Transmitter system (including all of its subsystems in terms of software and hardware) starting the day following the delivery date. The guarantee also includes all the necessary controls, services, repairs, software upgrades, spare parts, necessary transportation costs (personnel-spare parts of the system), taxes, duties, customs clearance costs etc. The guarantee VLF Antenna/Transmitter system as a whole must cover every malfunction to the equipment which is not due to misuse of the personnel who handles it or due to external not foreseen factors like earthquakes, flooding etc.

b. Full training courses in theoretical and in practical field for the personnel including control, management and use as well as trouble shooting of the VLF Antenna/Transmitter system and all of its subsystems.

2. Participating entities should present a complete solution for the whole VLF Antenna/Transmitter system including terms of cost not only for initial installation but also for future technical support and execution of programmed services either for the system or for its subsystems. It should be clearly noted that the provided financial figures about the VLF system procurement should be considered only as roughly price list which is going to be used for budgetary reasons.

F. Procedure :

This technical dialog is conducted openly in order for the Hellenic Navy General Staff to be informed about current technological advances in VLF transmission capabilities and define technical specifications regarding the future procurement. Participating entities should present their recommended solutions to Hellenic Navy General Staff in time that will be co-decided with all the parties but in any case no later than 15 December 2017. Following each supplier's presentation there will be a relative announcement about the event on Hellenic Navy's official web page.

Technical Solution Advantages

Technical Brochures of Recommended Solution

Other Suggestions