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To: S.C. ROKURA S.R.L.

Ministerul Educajei Cercefarii ai Tinerstulul Institutul Național de Cercefare - Dezvollare pentru Geologie al Geocologie Marină

Attn to: Maria ZGURĂ, Commercial Manager

Ref.: Notice no.2268/01.08.2011 regarding clarification questions open bid for the public acquisition contract – warning integrated system in real time for marine-geohazarde – cod CPV 38000000-5

# 1. Question No 1

Regarding Point 4 from the Tender Book, namely "Technical Specification and evaluation factors" for Lot 2, for the "Seismic Digitizer" is requested the following technical specifications (A.3):

- "maximum package transmission 1s/package"

Please specify where do you want to send this data and what means of communication is required?

### Answer:

These data will be transmitted via radio or internet to the Romanian Coordination Center.

## 2. Question No 2

Regarding the technical Specification of the "Coastal real time marine seismicity monitoring systems" (Lot 2):

The Dynamic Range requirement for the digitizer/recorder is 132-135 dB, while for the accelerometer sensor is requested to be >155 dB. Considering that this feature of the sensor is going to be measured by the recorder/digitizer, please modify this requested technical specification of the sensor to be within the dynamic range of the digitizer

### Answer:

Due to the complexity of the project it has been made an error.





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The Dynamic Range requirement for the digitizer/recorder is 180 dB.

## 3. Question No 3

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Regarding the technical Specification of the "Coastal real time marine seismicity monitoring systems" (Lot 2):

The maximum sampling rate requirement for the digitizer is 200 sps, while for the accelerometer sensor is requested to be DC-200 Hz. Considering that this feature of the sensor is going to be measured by the recorder/digitizer, please modify this requested technical specification of the accelerometer sensor to be less than maximum requested sampling rate of the digitizer.

## Answer:

The accelerometer sensor is requested to be DC-180 Hz.

### 4. Question No 4

Regarding the technical Specification of the "Coastal real time marine seismicity monitoring systems"(Lot 2): Please clarify why the temperature range requirement of the seismic sensor is different from the temperature range requirement of the digitizer/recorder?

## Answer:

The temperature range requirement will for both seismic digitizer and seismic sensor will be -20 to +45°C.

### 5. Question No 5

Regarding the technical specification of the "Coastal real time marine seismicity monitoring systems" (Lot 2), respectively of the "Accelerometer" component:

Is the accelerometer required to be a Model ES-T only, or can be offered also a different manufacturer's product that meets all the others requested technical specifications of the accelerometer?

#### Answer:

It will be preferably to have an accelerometer Model ES-T, but if not possible from various reasons, then a different manufacturer's product that meets all the others requested technical specifications can be offered.



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### 6. Question No 6

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5):

Regarding the technical specification of the "Strong motion seismometers" (Lot

The maximum sampling rate requirement for the data-logger is 2,000 sps, while for the sensor is requested to be 0-200 Hz. Considering that for a sensor bandwidth up to 200 Hz only 500 sps sampling rate of the data-logger are necessary, please modify the requested technical specification of the data-logger to be up to 500 sps.

## Answer:

The sampling rate of the data-logger is 500 sps.

# 7. Question No 7

Regarding the technical specification of the "Strong motion seismometers" (Lot 5), please clarify why is the channel requirement for data logger 4 channels?

## Answer:

These 4 channels of the data logger are for the connection with the accelerometers.

### 8. Question No 8

Regarding the technical specification of the "Strong motion seismometers" (Lot 5), please clarify to where are the extensometers to be connected? If the recorders ought to have 4 channels, then after connecting 3-axial-accelerometers there would be only one free channel left, but these extensometers would require 3 e.g. up to 6 channels. What is the intended topology here?

### Answer:

The extensometers are purely mechanical. There will be no connection with the recorders. The movement of the faults measured by the extensometers will be recorded by an operator at specific time periods.

## 9. Question No 9

Regarding the technical specification of the "Strong motion seismometers" (Lot 5), it is requested the GPS module of the data-logger to be built in. Please clarify if it



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is also acceptable a data-logger that use an external GPS module and meets all the others requested technical specifications of the data-logger.

## Answer:

It will be preferably that the GPS module of the data-logger to be built in. However, if not possible from various reasons, then an external GPS module which meets all the others requested technical specifications of the data-logger can be offered.

Yours sincerely,

Gheorghe OAIE

**General Director** 





