

**Request for Information (RFI) to identify Vendors
capable of providing integrated acoustic detection systems for the OSCE Special
Monitoring Mission to Ukraine**

Background

The OSCE Special Monitoring Mission to Ukraine (SMM) is an unarmed, civilian mission deployed in March 2014 with a mandate to observe and report in an impartial and objective way on the security situation in the country and thereby to contribute to reducing tensions and to help foster peace, stability and security.

Information from the area of responsibility, particularly Donetsk and Luhansk regions in eastern Ukraine, is collected by ground patrols or technical monitoring assets such as Unmanned Aerial Vehicles or camera systems in order to establish facts with regards to the security situation and to report on these findings.

1. Purpose of RFI

This RFI is aimed at supporting the OSCE Special Monitoring Mission to Ukraine to:

- Identify potential qualified Vendors for a subsequent competitive tender;
- Enhance the Terms of Reference (ToR) for the competitive tender;
- Assess recent technical developments on the acoustic systems market in view of better defining technical requirements for the competitive tender;
- Identify any limitations and risks pertaining to the deployment of various acoustic detection systems.

2. Scope of Services

The OSCE is seeking information from Vendors capable of fielding an integrated system of multiple wide-area acoustic sensors (some at fixed locations and others mounted on or towed by vehicles); with the information received from the array of sensors being fused remotely at one or more locations to provide a near-real-time understanding of the active use of military weapons occurring within the range of the sensor network's coverage.

The information should be depicted graphically on mapping software; and also should be capable of providing a tabular information output that can be used in Excel. The contractor will be responsible for supporting the development of maintenance and sustainment systems within the OSCE-SMM to keep the acoustic detection system operating effectively; and training of maintainers, operators and analysts who will be working with the system.

The system proposed by the Vendors is expected to meet the following general requirements:

- Totally passive equipment which does not produce or emit any energy;
- Operational in adverse weather conditions (temperatures between -30°C and +50°C);
- Hardened equipment capable of operating in a conflict environment;
- Coverage on a 360° azimuth radius and up to 180° elevation;
- Ability to register all sounds that are connected with kinetic activity (the initial acoustic blast, the projectile's subsonic or supersonic shock wave while in flight, and the sound of the projectile's impact in the case of explosive projectiles) and differentiate which kind of acoustic event it is detecting.
- Ability to differentiate between direct fire weapons, mortars, rockets or artillery based on the characteristics of the sounds produced;
- Ability to identify the direction to points of origin and points of impact with precision and accuracy, and when possible based on readings from multiple sensors provide precise locating information to these events. Analysis software should, based on information on location, time and type of events and distances between detected events (e.g. outgoing fire from a point of origin, incoming fire from a point of impact) infer which "outgoing fire" event (weapons use) resulted in which "incoming fire" event (destruction resulting from weapons use). This may not be possible to conclude during high-intensity exchanges of fire occurring over wider areas, but should be able to make inferences for more simple exchanges of fire;
- Capability to generate information of real-time transmission of acoustic information to be displayed on a viewing monitor e.g. ruggedized laptop in near-real-time geospatially using mapping software. Information generated by the system shall allow the option of exporting as tabular data in Microsoft Excel to facilitate reporting and data analysis;
- Ability to transmit data from the sensor posts to control stations wirelessly, in a secure/encrypted manner;
- Ability to provide alarms to operators using optical and audio signs;
- Ability to "geofence" geographical areas that need to be closely monitored;
- Capability to deploy the equipment at both fixed sites and either mounted on vehicles or trailers for use as a mobile detection platform. Information received by both fixed and mobile sensors should be capable of being fused by control stations to provide an integrated picture of acoustic events;
- Ability to perform first level servicing of sensor posts or control stations in Ukraine, via spare parts and training provided by the Vendor.

4. Vendor Qualification

Interested Vendors must possess a quality assurance certificate ISO 9000/9001 or equivalent.

5. Expected Contract Duration

The OSCE intends to enter into a Contract with a qualified Vendor(s) for the performance of these services upon conducting a subsequent competitive tender. The initial Contract duration is expected to be for a period of up to 1 year and will be subject to potential expansion and annual renewals for a total of up to 5 years subject to the need of service, funds availability and the Contractor's performance.

6. Requested Information

Interested Vendors are requested to provide the following information as part of their RFI response

- General company information (maximum 1 page), including a statement attesting that the Vendor has the capabilities, qualifications, financial and human resources to cover the requirements listed under the Scope of Services;
- Datasheets and any other relevant technical information on acoustic sensing technology produced by the company;
- Videos or photographs on equipment tests or operational use of the equipment (if available);
- Reference **information** which would prove that the Vendor has experience in providing the requested services to other clients.

7. Request for Information Procedure

Please note that this is not an invitation for submission of a bid or proposal. This RFI intends identifying interested and capable Vendors to provide technical solutions as stated above. No price information should be submitted.

OSCE may decide to invite some of the companies, which submitted requested information, to participate in subsequent meeting to discuss provided information.

Please address your response by email to Dmitriy.Kukushkin@osce.org by 24 July 2020

Please note that there is no specific format designed to provide your response to this RFI.

Should you have any questions concerning this RFI, please address them in writing to the above mentioned email address.