REQUEST FOR EXPRESSION OF INTEREST
MCAN/COM/EOI/2A02006

DESIGN, SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF A
COMPREHENSIVE UPGRADE OF THE WIDE AREA TWO WAY RADIO NETWORK OF
ETOSHA NATIONAL PARK

The Republic of Namibia has signed a grant funding agreement, the Millennium
Challenge Account (MCA) Namibia Compact, of US$304.5 million with the Millennium
Challenge Corporation (MCC), an Agency of the United States Government, to enable
the Government of Namibia to implement the MCA Namibia Programme and achieve
the objectives of the Compact. MCA Namibia, a programme implementation unit of
the National Planning Commission, will use a portion of the grant funding for the
acquisition of Consulting Services, Goods, Works, and other Services.

Purpose of the EOI

MCA Namibia hereby announces the request for Expression of Interest (EOI) for the
engagement of experienced service providers to compete for the Design, Supply,
Installation, Testing and Commissioning of a comprehensive upgrade of the Wide Area
Two Way Radio Network of Etosha National Park.

Terms of Reference and Bidding Instructions

The Terms of Reference and Bidding Instructions for this assignment are attached
hereto.

Length of Assignment

The entire period of the assignment shall not exceed 6 months.

Evaluation Process

Following receipt of expressions of interest, a Short List of firms will be selected
comprising those that propose acceptable, contemporary, practical and affordable
design proposals and demonstrate the capacity to perform the tasks described in the
Terms of Reference in a timely fashion and with a high level of quality, meeting the
minimum requirements indicated in EOI Forms 1 to 3. Short listed firms shall be invited
to submitted comprehensive, priced proposals based on detailed site inspections.
The procurement is open to all and qualified service providers except those persons or entities debarred, blacklisted or suspended from participation in procurements funded by the World Bank or the U.S. Federal Government or otherwise prohibited by applicable US law or Executive Order or policies, including under any existing anti-terrorist policies, shall be excluded from this procurement.

**Presentation Format**

Interested firms must submit information on their credentials to perform the services expected, including descriptions of similar assignments, experience in similar tasks and conditions, availability of appropriate skills among staff, financial statements, brochures (if available) and their design proposals, using EOI forms 1 to 3, which are included in this document.

**Submission of Expression of Interest**

Expression of Interest must be submitted in hard copy, English (original and two copies), in a sealed envelope to the address indicated below, not later than **13h00** official Namibian time on **04 June 2013**.

Ms Hilya Shikongo  
The Procurement Manager,  
MCA Namibia,  
Suite 13,  
Atlas House, c/o Sam Nujoma and Mandume Ndemufayo streets,  
Windhoek, Namibia.
To: The Procurement Director MCA Namibia

Dear Sir:

We, the undersigned, offer to provide our services for the Design, Supply, Installation, testing and commissioning of a comprehensive upgrade of the Wide Area Two Way Radio Network of Etosha National Park in accordance with your Request for Expression-of-Interest (EOI) dated [Insert Date]. We are hereby submitting our Expression of Interest.

We hereby declare that all the information and statements included in this Letter of EOI are true and accept that any misinterpretation contained in it may lead to our disqualification.

We understand you are not bound to accept any Proposal you receive.

We remain,

Yours sincerely,

Authorized Signature [In full and initials]: __________________________________________

Name and Title of Signatory: __________________________________________________________

Name of Consultant: _________________________________________________________________

Address: __________________________________________________________________________
<table>
<thead>
<tr>
<th>Name of the Firm (As reflected in the articles of incorporation)</th>
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</thead>
<tbody>
<tr>
<td>Abbreviations, if applicable</td>
</tr>
<tr>
<td>1. Date of Incorporation</td>
</tr>
<tr>
<td>Country of Origin (Nationality)</td>
</tr>
<tr>
<td>Address (Street, Number, City, State or Department, Country)</td>
</tr>
<tr>
<td>Branch Offices</td>
</tr>
<tr>
<td>Electronic Mail Address</td>
</tr>
<tr>
<td>Web Page</td>
</tr>
<tr>
<td>Phone</td>
</tr>
<tr>
<td>Fax</td>
</tr>
<tr>
<td>2. Name and position of Directors</td>
</tr>
<tr>
<td>3. Authorized Representative(s)</td>
</tr>
<tr>
<td>Name</td>
</tr>
<tr>
<td>Address</td>
</tr>
<tr>
<td>Phone</td>
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<tr>
<td>Fax</td>
</tr>
<tr>
<td>Electronic Mail Address</td>
</tr>
</tbody>
</table>

**Additional Information Appended Hereto**

- Exhibit A. Additional information that will enhance our knowledge of your firm's background, experience and technical capability and after sales support (no more than 10 pages).
- Exhibit B. Duly certified copies of articles of incorporation.
- Exhibit C. Audited Financial Statements for the last 3 years
- Exhibit D. Design Proposal
**FORM EOI – 3**

**Specific References to Technical and Managerial Capabilities, and Specific in the Field of the Proposed Assignment performed in the Last Five (5) Years**

*Using the format below, provide information on each assignment for which your firm, was legally contracted either individually as a corporate entity or as one of a consortium/Joint Venture of major companies, for carrying out services similar to the ones requested under this assignment. Provide a minimum of 5 references not older than 5 years of customers for which you have successfully performed Similar Services*

<table>
<thead>
<tr>
<th>Assignment name:</th>
<th>Approx. value of the contract (in current US$):</th>
</tr>
</thead>
<tbody>
<tr>
<td>Country: Location within country:</td>
<td>Duration of assignment (months):</td>
</tr>
<tr>
<td>Name of Client:</td>
<td>Total N(^2) of staff-months of the assignment:</td>
</tr>
<tr>
<td>Address:</td>
<td>Approx. value of the services provided by your firm under the contract (in current US$):</td>
</tr>
<tr>
<td>Start date (month/year): Completion date (month/year):</td>
<td>Name of associated Firms, if any:</td>
</tr>
</tbody>
</table>

**Narrative description of the Project:**

**Description of actual services provided by your firm within the assignment:**
TERMS OF REFERENCE

Expressions of Interest and Design Proposals are invited from experienced service providers for the Design, Supply, Installation, Testing and Commissioning for the upgrade of the Wide Area Two Way Radio Network of Etosha National Park (ENP).

1. BACKGROUND:

The wide Area radio network currently in use at ENP consists of six repeater sites namely, Otjivasando, Paradys, Ondundu, Ekuma, Helio and Von Lindequist Gate (See attached Map). These sites are linked via simplex UHF links in a chain configuration (See attached Network Layout). In order to provide radio communications from any point in the park, to any other point, the radios are set to the channel of the nearest repeater within the coverage area and are operated normally. At each of the sites except Paradys and Ekuma, an additional local repeater provides communications for that specific area on a dedicated channel for that area.

Total radio coverage of ENP is not achieved yet which means additional sites needs to be established. Currently eight repeater sites are keyed one after each other from end to end which increase the time delay for repeaters to be keyed up and the obvious result is a loss of voice quality. Also, a loss of signal at any repeater site will result in the one part of the system unable to communicate with the other part. It is behind this background that the Ministry of Environment (MET) decided to upgrade the radio network to address these problems.

Existing field equipment: Below is a list of the different radios currently in use on the system.
Make: Motorola
Models: CM140, CM 160, CP140 and CP160.

<table>
<thead>
<tr>
<th>EXISTING EQUIPMENT</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>MOBILES IN VEHICLES</td>
<td>54</td>
</tr>
<tr>
<td>PORTABLE MOBILES</td>
<td>7</td>
</tr>
<tr>
<td>HANDHELDs</td>
<td>32</td>
</tr>
<tr>
<td>BASESTATIONS IN OFFICES</td>
<td>15</td>
</tr>
<tr>
<td>TOTAL SYSTEM UNITS</td>
<td>108</td>
</tr>
</tbody>
</table>

2. REQUIREMENTS OF THE RADIO SYSTEM UPGRADE

The upgrade of the system means that it is expected from the successful bidder to design, supply, install, test and commission a wide area two way radio network which will address the following needs of the ENP radio system:

2.1. Establishment of new repeater sites and a thorough investigation of the problems at Ekuma and Paradys sites to achieve total radio coverage within ENP
with special attention to cover the Galton Gate Route and the route from Von Lindequist Gate to King Nehale Gate. (See Map)

2.2. Automatic Vehicle Location (AVL) facility to remotely locate vehicles and motorized equipment in real time on a dedicated server at the Okakuejo offices. Note: No GSM coverage exists – only in camping areas – see waypoint table and map.

2.3. A network channel (voice and AVL) to cover point to point communications (from one point to any other point) within ENP.

2.4. A local channel for daily operations at each repeater station (Radius of minimum 25 km)

2.5. A voice channel to communicate with external customers (Namibia Wildlife Resorts and neighboring farmers) who are currently operating on simplex channels also in the VHF frequency band.

2.6. Individual (private), group (team) or broadcast (all-informed) voice calls.

2.7. Training of operators to understand new system operation and perform small regular maintenance and repair tasks.

2.8. Provision of maintenance services.

3. PREVAILING SITE CONDITIONS AND SCOPE OF WORKS:

The Contractor shall design, supply, install, test and commission a wide area radio network which will include, but not limited to, the following existing repeater sites: (Simulated RADIO COVERAGE MAP needs to be included in the design proposal):

3.1. **Ondundu Site**: There are a lot of redundant antennae which needs to be removed from the mast to reduce wind load. The mast also needs servicing to tighten loose bolts and replace missing bolts. Power supply on site is adequate for the current system and the solar arrays, batteries and regulators must be tested for serviceability and reused if possible. Replacement of antennae, coaxial cabling, repeaters, network links as well as the addition of power supply equipment depends on the new system design. At the moment the site is only accessible by all-wheel drive vehicles and is situated about 20 km from the Okakuejo camp / office.

3.2. **Helio Site**: Power supply on site is adequate for the current system and the solar arrays, batteries and regulators must be tested for serviceability and reused if possible. Replacement of antennae, coaxial cabling, repeaters, network links as well as the addition of power supply equipment depends on the new system design. The mast appears to be in a good condition, but needs to be inspected for any defects. This site is easily accessible and situated nearby Halali camping site.

3.3. **Von Lindequist Gate**: Replacement of antennae, coaxial cabling, repeaters and network links depends on the new system design. The power supply to the site must be drawn from the office at the gate to do away with the solar panels which can easily be stolen. These solar panels can be utilized at another
repeater station. This site is easily accessible to the general public and will be fenced-in. The site earthing needs to be repaired and the mast needs to be inspected for any defects.

3.4. **Otjivasando Site**: Power supply on site is adequate for the current system and the solar arrays, batteries and regulators must be tested for serviceability and reused if possible. Replacement of antennae, coaxial cabling, repeaters, network links as well as the addition of power supply equipment depends on the new system design. The mast appears to be in a good condition, but needs to be inspected for any defects. At the moment the site is only accessible by all-wheel drive vehicles.

3.5. Currently the two new repeater sites at **Paradys** and **Ekuma** stations are not working at all. A full investigation / fault finding needs to be done on both sites and must be supported by documentary proof on why these sites are not working. Depending on the new design proposal, a list of reusable equipment must be compiled and utilized in conjunction with additional equipment as needed for the new design for optimal use of these two sites on the network.

3.6. **Field equipment: Future requirements.**

<table>
<thead>
<tr>
<th>EXISTING EQUIPMENT</th>
<th>FUTURE NEEDS</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>MOBILES IN VEHICLES</td>
<td>54</td>
<td>29</td>
</tr>
<tr>
<td>PORTABLE MOBILES</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>HANDHELDs</td>
<td>32</td>
<td>11</td>
</tr>
<tr>
<td>BASESTATIONS IN OFFICES</td>
<td>15</td>
<td>2</td>
</tr>
<tr>
<td>TOTAL SYSTEM UNITS</td>
<td>108</td>
<td>50</td>
</tr>
</tbody>
</table>

Transceivers must conform to proposed new network and proposed AVL design specification. Documentary proof by manufacturer will be required. Standardization on one manufacturer is preferred.

3.7. The design of the new radio system needs to incorporate an Automatic Vehicle Location (AVL) system and is a prerequisite for the new design. The following requirements will form part of the AVL design:

- No subscription fees will be involved in the operation of the system.
- A seamless migration path to possible future digital technology.
- Remote network management.
- Efficient deployment of required radio channels.
- Individual, group (team) or broadcast (all-informed) calls.
- PSTN and PABX telephone access.
- Call diversion and forwarding.
• Priority handling of emergency calls.
• A short message service for dispatch or job information.
• A polling channel providing efficient location updates for large fleets, which can co-exist with voice operation.
• Location details of vehicles should be available on a web based server located at Okaukeujo or Halali offices of MET.

3.8. Repeaters

Currently all network repeaters are made up of Motorola CM140 mobile radios configured in a back to back configuration. These units are not acceptable and any new design made up of these units will not be considered.

Preference will be given to the design proposal which can accommodate a conventional system and seamlessly switch over to the new system.

Co-ordinates of the repeater sites:

<table>
<thead>
<tr>
<th>Site</th>
<th>Latitude</th>
<th>Longitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ekuma</td>
<td>S 18 37.677</td>
<td>E 15 57.893</td>
</tr>
<tr>
<td>Paradise</td>
<td>S 18 36.842</td>
<td>E 15 05.419</td>
</tr>
<tr>
<td>Otjivasando</td>
<td>S 19 07.503</td>
<td>E 14 34.780</td>
</tr>
<tr>
<td>Ondundu</td>
<td>S 19 16.832</td>
<td>E 15 45.508</td>
</tr>
<tr>
<td>Nearest camp</td>
<td>Okakuejo</td>
<td>S 19 02.304</td>
</tr>
<tr>
<td>Nearest camp</td>
<td>Okakuejo</td>
<td>E 16 28.374</td>
</tr>
<tr>
<td>Namutoni/Von</td>
<td>S 18 44.293</td>
<td>E 17 02.577</td>
</tr>
<tr>
<td>Lindequist</td>
<td></td>
<td></td>
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<tr>
<td>Helio</td>
<td>S 19 02.475</td>
<td>E 16 29.505</td>
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<tr>
<td>Nearest camp</td>
<td>Helali</td>
<td>S 19 02.304</td>
</tr>
<tr>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

4. BIDDING INSTRUCTIONS

Bidders must complete the Expression of Interest Forms (Forms EOI1, EOI2 and EOI3) and provide all the required information and supporting documentation.

The required Design Proposal shall contain at least the following:

4.1 Technical Proposal

A general description of the proposed system design, technology to be used functionality, and specific equipment to be used.
4.2 General Approach and Methodology statement

A description on how the bidder would approach the project and the methodology to be followed to complete it successfully.

4.3 Costs.

It is well understood that bidders would not be in a position to fully cost the project without having inspected the existing equipment in order to ascertain re-usability. Bidders must however express themselves on the unit prices for major equipment, design costs and installation costs.

4.4 Training requirements

User friendliness of the system, training requirements for operators and solutions.

4.5 Maintenance Requirements and Proposals

Maintenance requirements of the proposed system and a maintenance contract proposal by the bidder.

4.6 Project Schedule

Bidders shall include, in their Design Proposals, detailed schedules that show the timing and sequencing of the design, manufacture, delivery, installation, testing and commissioning of the equipment for the upgrade of the wide area two way radio system.

5. PRESENTATION

Bidders may be required to perform a comprehensive presentations / demonstrations of their Proposed New System Designs during the Evaluation Process.
Travel distances from Okakuejo/Ondundu:
To Otjivasando: 180 km
To Halali: 75 km
To Namutoni/Van Lindequist Gate: 144 km
To Paradys: 130 km
To Ekuma: 72km