



Electronics Corporation of India Limited
(A Government of India Enterprise)
Communications Systems Group, ECIL (PO)
Hyderabad - 500062 {A.P.} India
Telephone : +91-40-2712 1471, Fax : +91-40-2712 1606
E-mail: cndmmd@ecil.co.in {<http://www.ecil.co.in>}

ECIL/CNSG/2013-14/EOI: 01

Date : 25.01.2014

Tender Document for Two part Bid

1. Invitation to Tender:

Electronics Corporation of India Limited, Communications Systems Group invites “Two Part Bid” for “**Technology Transfer To Design & Manufacture - Mobile Communication Network System Radios** ” as per details given below.

2. Important Dates

Due date for submission of 2 Part Bids: 17.02.2014, 4.00PM.

Techno-commercial bid (Part 1) will be opened on **18.02.2014 at 2.00PM**. Interested vendors may participate with proper Authorisation from the Bidders.

After evaluation of the techno-commercial bids, qualified list of vendors will be finalized.

Price bid (Part 2) of the qualified vendors will be opened at a later date, which will be communicated to the qualified vendors.

3. Manner and method of submission of offers:

All pages of the tender shall be numbered and typed on the Letter Head of the Vendor and be duly signed and stamped by Company's authorized Signatory. Hand written quotation will be summarily rejected. Corrections if any shall be duly authenticated with signature and seal of the Company.

The quotation in prescribed form to this invitation shall be submitted in Two Parts and in different sealed envelopes super scribing Tender Number with due date.



Part-I (Technical Bid). It shall comprise of two sections namely Technical Section and Commercial Section and both sections shall be submitted along with Tender Fee in a single sealed envelope. This bid shall not contain any price details.

Part-II (Price bid): It shall comprise of details regarding commercial terms and prices and shall be submitted in a separate sealed envelope.

The above two sealed envelopes of Part I & Part II shall be put in a single sealed envelope and submitted to the address given below:

Deputy General Manager
Communication Systems Group (CNSG)
Materials Management
Electronics Corporation of India Ltd.
ECIL POST,
Hyderabad 500 062, India
e-mail: cndmmd@ecil.co.in
Telephone: +91 40 2712 1471 / +91 40 2718 2392
Fax: +91 40 2712 1606

4. Cost of Tender Documents:

Tender fee of Rs. 1,000/- is to be remitted along with the techno-commercial bid in the form of a crossed Bank Draft favoring “Electronics Corporation of India Limited” from a nationalized bank payable at Hyderabad. The cost of tender document is non- refundable.



Technical Document

“EXPRESSION OF INTEREST” (EOI) FOR TECHNOLOGY TRANSFER TO DESIGN AND MANUFACTURE MOBILE COMMUNICATION NETWORK SYSTEM RADIOS

1. Introduction:

Electronics Corporation of India Limited is a Public Sector Undertaking (PSU), fully owned by Government of India, established in 1967 to create a strong indigenous base in Electronics Industry. Since then, it has played a pioneering role in spurring the growth of electronics industry in India. Over the years, ECIL has evolved into a multi-product, multi-disciplinary organization. The core segments of ECIL are Atomic Energy, Aerospace, IT& e-Governance, Communications and Defense sectors, and solutions for Inland Security. The Company has an experienced human resource pool of around 3500 Engineers / Technicians and the current annual turnover is above Rs.1700 Crores.

ECIL is an Electronics Equipment Manufacturer and also a solution provider for a number of prestigious projects for different Government departments. ECIL is having Head Office / Manufacturing plant at Hyderabad and Zonal Offices and maintenance/service centers throughout the Country for supporting Installation, Commissioning and Maintenance.

2. Requirement:

ECIL is a manufacturer of HF/ VHF/ UHF radios under Transfer of Technology (TOT) from reputed Global manufacturers and supplier to various Government Departments. ECIL is now looking for reputed OEMs manufacturing Radios suitable for Mobile Communication Network System (MCNS) as mentioned in this EOI and also willing to transfer the technology for design & manufacturing at ECIL. The MCNS should provide a seamless self-configuring and infrastructure less network of mobile radios facilitating uninterrupted exchange of information through voice, data and video (real time). The MCNS shall be a mix of terrestrial and satellite based communication radios for facilitating a failure less communication network.

ECIL invites EXPRESSION OF INTEREST (EOI) from reputed and experienced OEMs for the above requirement to address future business opportunities for the mentioned system.

3. Description of EOI Process:

- 3.1. The EOI process involves qualification of interested parties who submit their offers in accordance with the provisions of this EOI “the Respondent”. ECIL will short-list suitable pre-qualified applicants who shall be invited for deliberations to finalise the terms of technology transfer and further course of action.



- 3.2. The EOI in two (2) copies (original plus one) can be submitted by hand or sent by Registered Post so as to reach on or before **16:00 Hrs on February 17, 2014** at the following address. EOI received after the due date for submission and any extension thereof will not be considered.

Deputy General Manager
Communication Systems Group (CNSG)
Materials Management
Electronics Corporation of India Ltd.
ECIL POST,
Hyderabad 500 062, India
e-mail: cndmmd@ecil.co.in
Telephone: +91 40 2712 1471 / +91 40 2718 2392
Fax: +91 40 2712 1606

- 3.3. Any request for further information or clarification on the EOI document may be submitted in writing to ECIL at the above address. ECIL may respond to the queries raised/clarifications sought to the best of its ability. However, no extension of the time or date of EOI submission would be granted on the ground that ECIL has not responded to any query/clarification raised by any respondent.
- 3.4. ECIL at its discretion may extend the due date for submission of EOI and the decision of ECIL in this respect would be final & binding on the respondents.
- 3.5. No oral modification or interpretation of any provisions of this EOI shall be valid. Written communication shall be issued by ECIL when changes, clarifications or amendment to the EOI document is deemed necessary by ECIL at its sole discretion.
- 3.6. EOI submissions should be in English. Duly authorized representative shall sign on each page of the documents. EOI should be prepared in such a way so as to provide a straight forward, concise description of Applicants capabilities to satisfy the requirements of this EOI. Emphasis should be on (a) conformance to EOI instructions; (b) responsiveness to the EOI requirements; (c) completeness and clarity of content.
- 3.7. If at any time during the evaluation of EOI, ECIL requires any clarification on the documents submitted by the prospective parties, it reserves the right to request a clarification so as to complete the evaluation.
- 3.8. EOI which is found to be incomplete in content and/or attachments and/or authentication etc. is liable to be rejected.

4. Eligibility Criteria:

- 4.1. OEMs shall only apply.
- 4.2. The OEM should have designed, manufactured and supplied similar radios during the last 05 (five) years.
- 4.3. OEM shall be ready to provide clause-by-clause compliance to the specifications/requirements and willing to meet any enhancements and customization.
- 4.4. The OEM shall be ready for Transfer of Technology enabling ECIL to design, develop, manufacture, customize and enhance the product at ECIL.
- 4.5. The OEM shall provide installation, maintenance, repair services and training of ECIL engineers.
- 4.6. Equipment manufacturer must be an ISO accredited firm.



- 4.7. Offered solution must meet all safety requirements including EMI/EMC as per JSS 55555 & Environmental Mil Std 461 E as per international standards
- 4.8. The respondent shall be a profit making Company. Detailed Company Profile to be enclosed.
- 4.9. Details of similar Supplies/ Projects executed, including number of units installed in the field, either in India or Abroad, during last two/ three years to be enclosed.
- 4.10. Should have in house R&D for continuous development and support for a minimum of 10 years after supply.
- 4.11. After being short listed in the EOI, vendor need to participate in the trials with the end user alongwith ECIL. The hardware required for evaluation prior to short listing & for the User trials including the cost of any changes/modifications suggested by User during the trials need to be provided on “NCNC” basis by the vendor.
- 4.12. In case of ECIL being the winning party, the approximate quantities shall be of the order of 2000 nos (Hand held/Mobile & Static/Vehicle Mounted).

5. Evaluation Criteria:

- 6.1. Evaluation of the responses for this EOI will be based on the documents / technical proposals submitted and functional demonstration of the offered system at ECIL on No Cost - No Commitment (NCNC) basis
- 6.2. If required, ECIL team may visit to the respondents' premises/manufacturing facilities to verify claims made against the requirements outlined in this EOI.
- 6.3. Evaluation process will include analysis of system configuration offered vis-a-vis the requirements as per this EOI.
- 6.4. Selection criteria will involve assessment of technologies employed specifically for the development of Waveforms and Mobile Network Management System.
- 6.5. Acceptance and cost of Transfer of Technology for design, customization and manufacturing at ECIL shall be a vital factor in evaluating the offers.
- 6.6. Scope/provision to incorporate indigenous content to meet offset conditions set by Indian customers will be accessed.
- 6.7. Respondents would be subject to disqualification if they make false or incorrect or misleading claims in their response to this EOI.

6. Technical Details:

Refer Technical Document in Appendix-I

7. General Terms and Conditions:

- 7.1. The respondents shall give technical presentation and also offer the equipment for technical evaluation on NCNC basis.
- 7.2. The respondents shall accept all the commercial, technical and other terms mentioned in the EOI.
- 7.3. All the expenses associated with the submission of the EOI & subsequent evaluation and User trials shall be borne by the respondents.
- 7.4. The respondent should not be a black listed company or involved in any corrupt/ fraudulent practices.
- 7.5. ECIL shall have the right to accept / reject any of the EOIs without assigning any reason at its own discretion.



7.6. ECIL shall have the right to re-float the EOI at its own discretion.

8. Deliverable Documents:

The respondent shall submit the following documents along with the EOI:

- 8.1. All the Documents as per the mentioned eligibility criteria (at Para 4) shall be submitted.
- 8.2. All the commercial offer terms and conditions shall be documented.
- 8.3. Detailed technical document(s) describing complete system architecture including hardware and software. The document(s) shall contain detailed description of design, specifications, features and capabilities to meet the requirements mentioned in this EOI. Detailed technical data sheets should be included with the document.
- 8.4. Clause by clause compliance to the requirements mentioned in this EOI document.

TECHNICAL DOCUMENT**1. Introduction:**

Electronics Corporation Of India Limited intends to provide a Mobile Communication Network System (MCNS) solution suitable for communication needs of Network Centric Battlefield operations and management. For this, ECIL is looking for design and manufacture of variety of radios forming the MCNS in an integrated fashion that shall support exchange of information via terrestrial and satellite communication links, primarily on the move.

2. Mobile Communication Network System (MCNS):

MCNS shall offer a mobile communication network for exchange of information through voice, data and video within minimum latency for real time operation. It shall consist of communication radio variants for mounted and dismounted roles. The MCNS radios should self-form networks and allow seamless exchange of information on move. As and when two or more MCNS Radios come in proximity, they shall be able to form a communication network irrespective of the affiliations/ hierarchy enabling propagation of information. The Radios should provide uninterrupted exchange of information in an Electronic Warfare and EMI intense environment. The design of equipment shall emphasize on Size, Weight and Power (SWAP) constraints. The MCNS shall employ a mix of terrestrial and satellite based communication radios to circumvent any single point of communication failure. Satellite communication would be used in situations where terrestrial communication is not available either due to range limitations or due to any other technical reasons. It is desirable that the communication radios have provision of receiving their location information (GPS/GNSS) for sharing it in the network.

3. System Features:

- 3.1. Voice, Data & Video (Real time) communication in Clear, Secure and Hopping (Anti jam/Digital Spread Spectrum) modes.
- 3.2. Self - healing and self - forming Network. MANET (Mobile Ad-hoc Networking) enabled seamless exchange of information while on move.
- 3.3. Uninterrupted information flow in an Electronic Warfare and EMI intense environment.
- 3.4. Automatically share real time information of self-location to the network members.
- 3.5. Functional in all kind of terrains, e.g. Plains, Deserts, Jungles and Mountains and all climatic conditions.

- 3.6. System shall be suitable for providing a mobile communication network in a Network Centric Warfare Scenario.
- 3.7. Includes Manpack/ Wearable/ Handheld and Dockable radio variants.
- 3.8. For all variants SWAP (Size, Weight &Power) constraint and ergonomics are important factors.
- 3.9. Provision/option to incorporate user specific Encryption algorithm/module.
- 3.10. Remote destruction capability to ensure data is erased in the event of loss or capture.
- 3.11. Authentication & Access control enabled.
- 3.12. Low foot print & form factor.
- 3.13. Assured information exchange with minimum latencies.
- 3.14. Bandwidth and Spectrum efficient.
- 3.15. Dockable/Vehicular variants should function even when the vehicle engine is switched OFF for a sustained period.
- 3.16. Manpack/Wearable/Handheld variants should include power source and light weight man portable battery chargers capable of all weather, day and night operations. The charging solution should not generate noise above certain level.
- 3.17. Should allow graceful de gradation with availability of voice communication till the last.
- 3.18. Should retain certain amount of power to enable transmission of SOS messages and to purge the data in the event of imminent capture.
- 3.19. System shall include terrestrial communication radios and satellite based communication sets. Satellite communication would be used as backup method in case of unavailability of terrestrial link.
- 3.20. The radios shall have built in Compass, GPS and GNSS receiver capable of receiving the position information from multiple constellations to ensure sharing of location in the event of rest of the system being down due to any technical reasons.
- 3.21. The functionalities and hardware should be software defined, reconfigurable and scalable.
- 3.22. Radios driven by portable Waveforms for various functions and roles especially for Network-Centric operations. Scope for developing and hosting customer specific waveforms on radios.

- 3.23. Availability of interfaces in radios like LAN / USB / RS232serial / RS422 differential serial etc.
- 3.24. Should not require extensive infrastructure during operation.
- 3.25. Ergonomics should be suitable for dismounted and mounted roles without hindering operational effectiveness in battlefield.
- 3.26. Radios should have BITE facility up to card level.
- 3.27. Compliance to applicable MIL/equivalent standards for radios.
- 3.28. Manpack/hand held versions will be along with suitable antenna. Fixed/ vehicle mounted versions need to be with additional suitable antennae.

Additional terms and conditions

This tender and any order resulting from this tender shall be governed by the following terms and conditions of contract and the supplier quoting against this tender shall be deemed to have read and understood the same. In case counter terms & conditions of business have been offered by the supplier, ECIL shall not be deemed to be governed by those unless specific written acceptance thereof has been obtained from ECIL..

- 1. Terms of Prices:** Quotations shall be submitted on FOR Hyderabad or FOR destination basis including transit insurance. In case of Ex-works / Ex-godown / FOR dispatching station the approximate packing, forwarding and freight shall be indicated by the supplier. Hyderabad suppliers shall arrange free delivery at our stores.
- 2. Validity of quote:** The quotation shall remain valid for a minimum period of 180 days from tender opening date.
- 3. Performance Bank Guarantee:** Vendor shall submit a Performance Bank Guarantee for 10% of purchase order value covering standard warranty period of 2 years from the date of acceptance of goods by ECIL.
- 4. Payment terms:** Payment will be made within 60 days from the date of acceptance of goods by ECIL after completion of system integration on vehicle and trials.
- 5. Insurance:** The supplier shall insure goods for all transit risks if the payment term is FOR Hyderabad or FOR destination unless otherwise stated specifically by the supplier in their quotation. The insurance of goods against payment term Ex-works will be arranged by ECIL.
- 6. Liquidated Damages:** Delivery time is the essence of the contract. In the event of any delay in supply beyond the agreed delivery schedule, liquidated damages will be recovered @ 0.5% per week of delay or part thereof subject to a maximum of 10% of the value of the order.
- 7. Force Majeure:** If the execution of the purchase order is delayed beyond the period stipulated in the purchase order as a result of outbreak of hostilities, declaration of an embargo or blockage or fire, flood, acts of nature or any other contingency beyond the supplier's control due to act of God, then ECIL may allow such additional time by extending the delivery period as justified by the circumstances of the case and its decision in this regard shall be final. Power failure will not be considered as a Force Majeure condition.

- 8. Risk purchase:** In case of failure to deliver the goods within the delivery date stipulated in the purchase order unless prior extension of delivery period is obtained, ECIL will be at liberty to obtain such items as necessary from other source and / or cancel the order and in either case ECIL reserves the right to recover from the supplier the additional amount spent plus 10% to cover incidental expenses.
- 9. Dispute Resolution:** Any dispute arising out of purchase order or interpretation of any clause or terms and conditions hereof shall be settled through conciliation by both ECIL and the supplier, under the specific provisions of Arbitration and Conciliation Act 1996. Only courts in Ranga Reddy District, State of Andhra Pradesh, India, have exclusive jurisdiction over this order.
- 10. Right to Reject:** The purchaser reserves the right to reject any or all offers wholly or in part without assigning any reason.
- 11. Short Closure:** ECIL has the right to short close the tender even after evaluating the quotations without assigning any reason.
- 12. Inspection:** A team of ECIL engineers will inspect the goods at supplier premises before dispatch to ECIL. The inspection team may conduct Stage wise inspection if necessary.
- 13. Bank details:** The supplier shall give along with the quotation name of their Banker, Bank Account Number and also Income Tax Permanent Account Number (PAN).
- 14. Jurisdiction:** All disputes arising in connection with executing the purchase order will be subject to jurisdiction of the Courts in Hyderabad and Secunderabad only.



Additional Criteria for acceptance of bids

1. **Technical Specifications:** Vendor shall comply with the technical specifications given in the technical document ----Complied / Not complied
2. **Experience:** Vendor shall provide details with documentary evidence in manufacturing & supply of Ground Penetrating Radar (GPR).
3. **Service Center:** Details of service center locations / Engineers working.
4. **Facilities:** Details of factory, assembly and testing facility.
5. **Warranty:** 2-year free warranty to be provided against all manufacturing defects for the supplied goods. -----Complied / Not complied
6. **Quality systems & procedures:** The Supplier shall provide quality system procedures followed during manufacturing & testing to ensure confirmation of product quality to relevant standards.
7. **Inspection:** ECIL engineers may carry out stage wise inspection at suppliers premises (applicable for Indian manufactures only) ----Acceptable / Not Acceptable.
8. **Items of foreign origin:** Vendors can submit bids on behalf of foreign manufacturers with valid authorization to do so. If the items offered are of foreign origin the suppliers / agents are responsible for assembly and installation of the Ground Penetrating Radar (GPR) as required by ECIL. Quotes shall be submitted along with complete technical literature and approvals, —Complied / Not complied
9. **Packing and forwarding:** In case the supply is from foreign countries, the approximate weight of goods and the freight charges up to destination Hyderabad, India are to be furnished.-- Complied / Not complied.
10. **Acceptance of tenders:** No tenders will be accepted after due date. ECIL will not be responsible for postal / courier delay or lost in transit if any.
11. **No Cost No Commitment:** The vendors shall participate in the trials at our customer site on No cost No Commitment basis.
12. **Exclusivity clause:** Both seller and Buyer shall have MOU on exclusive basis. Neither party will work or co-operate either directly or indirectly with any other entity in India concerning any matter that is subject of this MOU. The vendor shall not directly sell the product GPR to any customer in India, but divert all enquiries



for these systems to ECIL in order to have long term business association with ECIL --- Acceptable / Not acceptable

13. **Non Disclosure Clause:** The Vendor and ECIL shall recognize the need to exchange technical information, hereinafter referred to as confidential information, amongst each other for the purpose of fulfilling their respective obligation. Both ECIL and the Vendor shall not disclose this confidential information with any third party --- Acceptable / Not acceptable

14. **Willingness for TOT:** The vendor shall explicitly mention the willingness on Technology Transfer for producing the products in India under an MOU.--- Acceptable / Not acceptable

15. **Payments:** Acceptance of payments from ECIL on Back to back basis based on receipt of payments from customer --- Acceptable / Not acceptable.

Note: Vendor shall provide documentary proof to prove his adherence to the qualifying criteria where ever necessary. Claims without support documents will not be given weightage.



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 Communications Systems Group (CNSG)
 Materials Management (MM),
 ECIL Post, Hyderabad 500062.
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 Fax:+91-40-2712 1606

Bid Document

General format for empanelment of vendors

1*	Establishment / Vendor	
1.1	Name	
1.2	Address – Office Works	
1.3	Telephone - Office Fax No.	
	Telephone – works Fax No. Web site E-mail ID	
1.4	Year of establishment	
1.5	Type of company Proprietary / Partnership Private Ltd / Public Ltd	
1.6	Status of Industry Sub-contract / Ancillary / Large / Small scale manufacturing / Agent / Distributor/ Stockist/ MSME Registered.	
1.7	Item of manufacture, Services offered (Enclose Technical literature / Leaflets)	
1.8	Item and services intend to supplying to ECIL	
1.9	Any technical collaboration with Foreign / Indigenous company	
1.10	Your local representative / Your parent organization	
1.11	Company Registration No. with date and particulars	
1.12	Your Major customers (enclose documentary evidence like purchase order etc.)	
2.0*	Financial status	
2.1@	Total capacity	

	(a) Land & Building (Area & Value) (b) Machinery and others (Value) (c) Working capacity Total	
2.2	Annual turnover for last 3 years	
2.3	Orders on hand for current year	
2.4	Name of the banker with A/c No.	
3.0*	Organization	
3.1	Chief Executive	
3.2@	Contact Official	
	Name of marketing official Designation Phone	
	Name of Quality lab official Designation Phone	
3.3	Total organizational strength Managerial Official staff Supervisory Workmen	
3.4@	No. of persons employed exclusively for Quality Control	
4.0*	Taxes and duties (for Indian vendors only)	
4.1@	Central Excise Assessee code	
4.2	CST No	
4.3	TIN No	
4.4	Income Tax clearance	
4.5	Service Tax registration No	
4.6	I.T.PAN No	
5.0@	Plant & Machinery	
6.0@	Material testing facilities	
7.0@	Quality system (<i>attach a brief note on quality assurance & quality control practices followed</i>)	
7.1	Quality System approvals if any (ISO 9000 or the like)	
7.2	Type of tests carried during manufacture	
7.3	Is quality test facilities available with you or out side	
7.4	List of quality records maintained	
7.5	Procedure for acceptance / rejection Maintenance of inward goods	



7.6	Procedure followed for calibration	
8.0	Any other relevant information	

Legend

* Mandatory

@ For Manufacturer's only

ECIL is requested to register our "Expression of Interest and Empanel us for :
Technology Transfer To Design & Manufacture Mobile Communication Network System Radios

Signature :

Name :

Designation :

Date :

To
Deputy General Manager
Communication Systems Group (CNSG)
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*****The End *****