Proposed Sole Source Purchase Form

Pursuant to New Mexico Procurement law, the UNM Purchasing Department will post your completed form on the UNM Sunshine Portal for 30 days prior to purchase of the goods/services.

I. GENERAL INFORMATION. PLEASE PROVIDE THE FOLLOWING:

<table>
<thead>
<tr>
<th>Date of Request</th>
<th>October 2, 2019</th>
<th>Requisition Number (If Applicable)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Request Submitted by</td>
<td>Christos Christodoulou</td>
<td>Title</td>
</tr>
<tr>
<td>Department</td>
<td>Electrical &amp; Computer Engineering</td>
<td>Email</td>
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<tr>
<td>Proposed Vendor</td>
<td>NSI-MI Technologies</td>
<td>Amount</td>
</tr>
<tr>
<td>Buyer Team - See Commodity list at</td>
<td><a href="http://www.unm.edu/~purch/commcodes.pdf">http://www.unm.edu/~purch/commcodes.pdf</a></td>
<td></td>
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</tbody>
</table>

Provide a basic description of goods/services to be provided:
The system being purchased is a near field test equipment that is used to characterize antennas and phased arrays and is essential in the research that is being done at the Antennas and RF Lab.

Why is this purchase needed?
This system will bring to UNM a measurement capability that few universities have. The Antennas and RF Lab at UNM will have the capability of characterizing the radiation behavior of any antenna that operates in the frequency range 750 MHz to 110 GHz and that is smaller than 0.7 m in diameter. This purchase will make our facility one of the leading in the countries and will attract more collaborations with companies/universities and open more funding doors.

II. BASIS FOR SOLE SOURCE PROCUREMENT. CHOOSE APPLICABLE BOX(ES) AND PROVIDE ADDITIONAL INFORMATION, AS REQUESTED:

- Proprietary item, technology or service only available from the proposed vendor. (Check box and describe proprietary component)

  The near field test system was first developed by NSI MI and they are the only company in the US that designs and sells this system.

- Compatibility requirement with existing item, technology or service. (Check box and describe compatibility requirement)
☐ Renewal of support/maintenance/subscription of software, technology or other intellectual property. (Check box and describe)

☐ Other Basis for Sole Source: Please describe below:

III. SUPPLEMENTAL DETAILS. PLEASE PROVIDE ADDITIONAL INFORMATION AS REQUESTED BELOW:

Describe in detail the unique capabilities of the proposed vendor’s goods/service and/or personnel performing the work and why this constitutes the only source. Focus on what is unique about the goods/service and why no other vendor could meet your needs.

The system requested has the following:
- 3-Dimensional radiation pattern measurement.
- Spherical system that can measure both radiation pattern and emissions from RF systems.
- The system covers any antenna smaller than 0.7m in diameter and with weight less than 18 kg.
- The system will be able to measure antenna systems that we couldn’t measure before due to their large size that required a measurement area of more than 10 meters and sometimes reaching 30 meters.
- The system is very accurate at all frequencies.
- The system covers frequencies from 0.75 – 110 GHz.
- The system doesn’t require an enclosure (faraday cage or absorbers) to achieve high accuracy measurements due to the software MARS that is also being purchased: this software will save us more than 60000$ (cost of enclosure).
Describe the due diligence made to locate other possible sources including communications with other universities, communications with similar providers, web searches, yellow page searches, review of advertisements and trade publications, etc.

We did not contact any other company because we don’t know of any companies in the US that makes this system. We checked google for:
- near field radiation pattern measurement system.
- Near field system.
- Radiation pattern measurement in the near field.

At the Antennas and Propagation Conference, the number one conference on antennas in the world, NSI MI is the only company that holds an exhibit showcasing near field systems.

Per NSI-MI Technologies LLC they are the only manufacturer of these specific systems in the world.

List the other vendors who were contacted. Please describe the specs/qualifications/criteria that the other vendors were unable to satisfy.

N/A.