### General Description:
The zNose is an Ultra Fast Gas Chromatograph, which uses the unique Surface Acoustic Wave detector (SAW). The instrument was designed as a laboratory analysis instrument, and is used for environmental sampling, food safety, medical applications (early signs of breast, lung cancer, and diabetes) and industrial etc.

### Technical Description:
The instrument is based on proprietary Surface Acoustic Wave (SAW) detector system, which enables it to perform chemical detection and diagnostic determination.

### Contact Information
Electronic Sensor Technology, Inc.
1125-B, Business Center Circle
Newbury Park, CA 91320
POC: Ifty Talib
italib@estcal.com

### Cost
- $40,000/system
- <$1.00/analysis

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<table>
<thead>
<tr>
<th>Field Use</th>
<th>Biological</th>
<th>Chemical</th>
<th>Radiological</th>
</tr>
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<tbody>
<tr>
<td>System</td>
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<th>Mobile Laboratory</th>
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<table>
<thead>
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<th>Analytical Laboratory</th>
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<tr>
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### Survey Source
Vendor Supplied Information
System scores are compared across the four scenarios and ranked from highest to lowest. Evaluation Criteria

Scoring Analysis

<table>
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<tr>
<th>Score</th>
<th>Field Use</th>
<th>Mobile</th>
<th>Diagnostics</th>
<th>Analytical</th>
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<tbody>
<tr>
<td>Highest</td>
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<td>Green</td>
<td>Green</td>
<td>Green</td>
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<tr>
<td>Score</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Lowest</td>
<td>Red</td>
<td>Red</td>
<td>Red</td>
<td>Red</td>
</tr>
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</table>

Impact Chart

The Impact Chart is a spider graph representing specific categories and designed to give the reader a visual depiction of how a particular system is expected to operate across the four different scenarios. The score for each of the seven categories is presented as the percentage of the total possible score. Higher category scores extend the spokes of a graphic toward the outer edge of the chart. The area graphed for each of the four scenarios relates to how well the system performed in that scenario. Graphics for each of the four scenarios are super-imposed for ease of comparison.

**Throughput:**
- 2 minutes or less for detection
- Multiple samples, multiple tests/sample per run
- 349-96 samples every 2 hours
- The system or device is currently semi-automated
- Device or system is intended for multiple detection assays
- 0-1 solutions, buffer, eluents, and/or reagents
- 1 component
- 5-10 minutes is required for set-up
- 3-5 steps are required for detection

**Logistics:**
- More than a day of training and significant technical skills are required
- Approximately the size of a carry-on luggage suitcase
- Between 5 and 25 kg
- Wireless and wired connections are available
- System or device uses batteries
- 4-8 hours battery life

**Operations:**
- Can be used from 4°C to 41°C
- Components must be stored at room temperature (27°C)
- Performance is not influenced by relative humidity
- Greater than 3 years shelf life
- Greater than 10 years expected life
- Results can be viewed in real-time
- The system or device is currently fully autonomous
- The system software is closed and not available for modification
- The system hardware is open but modification requires licensing

**Detection:**
- Less than 10 µL
- Excellent specificity. System has occasional false alarms under certain conditions (<2%)
- 1 ppb-1 ppm
- System currently can identify liquid chemical agent