Engineering Exploration Technologies
-Eng XT-

Aims to reduce damage by electrostatic over-stress/discharge (EOS/ESD) in industry through patent-protected technology that enables the detection of their precursors

November 22, 2008
Electronic products are frequently damaged by EOS/ESD

- **EOS/ESD is the overstress/spark between charged objects that**
  - Damages circuit boards, integrated circuits, disk drives, flat panels, etc.
  - Decreases product lifetime

- **EOS/ESD causes significant economic losses**
  - The damage in 30% of all returned electronic devices
    - Human handling accounts for 5-10% of EOS/ESD Damage
  - Equipment downtime and unscheduled maintenance

- **The charging that causes EOS/ESD is not adequately monitored yet**
  - Industry focuses on preventative procedures that are not routinely monitored
  - ESD precursors are not measured during production

- **The industry technology roadmap states that**
  - EOS/ESD protection is an unsolved problem for upcoming electronics
    - The sensitivity of electronics to EOS/ESD increases with miniaturization
TEFD™, an Unmet Need

Charge Accumulation → Potential Differences → EOS/ESD → Damage

<table>
<thead>
<tr>
<th>Current Approach</th>
<th>Prevention</th>
<th>Stop process</th>
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<tbody>
<tr>
<td>Eng XT Approach</td>
<td>TEFD™</td>
<td>Take preventive actions</td>
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TEFD™ reduces damage & equipment downtime

Time
Prototype already tested in industry
<table>
<thead>
<tr>
<th>Milestones</th>
<th>2008</th>
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<td>Test system in production facility</td>
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<td>Launch product and services abroad</td>
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Seed $500k → Support from sales and services
A large & growing market

Multiple potential exists in 3-5 years
- Expansion into other areas
- Acquisition by a large company

Seeking to:
- Hire experienced engineers
- Refine product
- Develop production
- Close deals with vendors & equipment manufactures
TEFD™
A New Approach to EOS/ESD Protection

• **Eng XT supplies**
  – patent-protected instrument, software, and TEFD™ database
  – Robust, fail tolerant devices
  – Centralized data bank and assistance

• *...strongly recommended by the ESD Association*
  – simple warnings, no need to stop production
  – reduces damage in automatic machines and by human handling
  – instrument cost recovered in a few months

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200 billion dollars/year industry

10s of billions of dollars/year lost in product damage

30% of products returned because of EOS/ESD damage

5-10% of the damage is caused by human handling
The team that will make it happen

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
<th>Description</th>
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<tbody>
<tr>
<td>N. Renno, PhD</td>
<td>Business Development Officer</td>
<td>Planetary scientist. Co-inventor of the UM sensor. World authority on the effects of electrostatics on particles. Has been leading the development of electric field sensors for environmental applications. Continuous funding from NSF and NASA since 1997.</td>
</tr>
<tr>
<td>S. Rogacki, Eng</td>
<td>Chief Technology Officer</td>
<td>Senior Engineer. Co-inventor of the UM sensor. 25 years of experience in instrument development and prototyping.</td>
</tr>
<tr>
<td>TBD</td>
<td>Acting CEO</td>
<td>Experienced entrepreneur. Background in growing technology companies.</td>
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Thanks!

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