



# NSF Center for GRid-connected Advanced Power Electronic Systems (GRAPES)

*Alan Mantooth – Executive Director*

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***“The mission of GRAPES is to accelerate the adoption and insertion of power electronics into the electric grid in order to improve system stability, flexibility, robustness, and economy.”***



# Marketing Center Research to Sponsors<sup>2</sup>

*GRIID-Connected Advanced Power Electronic Systems*

## **Our approach starts with our members...**

- Review technical status
- Review IP protections to be pursued or in place
- Assess interest within the membership for licensing

## **...then proceeds to other agencies...**

- Discuss with NSF first
- Make connections through NSF
- Use direct connections

## **...then to other companies:**

- Direct connections or through agencies (by invitation only webinars to start)
- Forum with portfolio of IP available?



# Non-Research Components

**The nature of the electric power industry lends itself to many opportunities to serve our members:**

- **Through consulting arrangements**
- **Through continuing education courses and lectures (technical, but impacting policy and regulatory)**
- **Hosting major symposia and conferences (IEEE Power Electronics in Distributed Generation 2013)**
  - **Venue to highlight members & developed IP**
  - **Venue for short courses**



# Promoting Commercialization

**GRAPES works with senior graduate students (mostly Ph.D. students and post-docs) to obtain funding with center backing/support in their startup efforts.**

**This has included:**

- **SBIR funding**
- **STTR funding**
- **Partnership for Innovation funding**
- **Eventually BAA funding**
- **Other agency program funding**

**By being a partner in these endeavors, the company can increase its probability of early project successes and eventually work independently of the home institution.**



# Entrepreneurial Factors

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*GRid-Connected Advanced Power Electronic Systems*

**Key factors that I have seen are this:**

- **Balanced emphasis on small business members**
- **Strong leadership team (technical, business) in the recipient**
- **Commitment on both sides (university and business) to make it work**
- **Resources to make the transition fly leading to diligence in the effort**

**For GRAPES, this is about to become a substantial effort led by our Managing Director. A NEW set of tasks. He has a strategy of working with both university TLOs, an IAB subcommittee, NSF, and faculty to actively market our portfolio.**