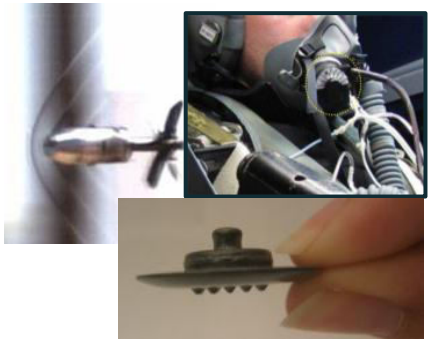
CleveMed
Cleveland Medical Devices Inc.

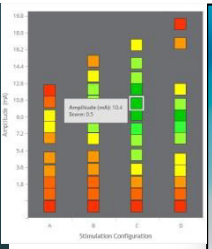
Orbital Research Inc.

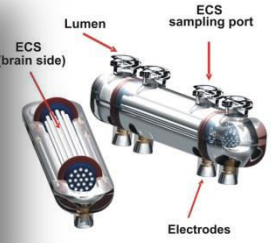
GREAT LAKES NEUROTECHNOLOGIES

NeuroWave
HARNESSING THE POWER OF EEG

Flocel







Beyond Phase II

Small Business Legislative Update

August 17, 2017

Robert N. Schmidt, PE, MS, MBA, JD
Chairman, Small Business Technology Council
rschmidt@CleveMed.com
216-374-7237

Inc. 500

THE INNER CITY 100 ICIC Inc.

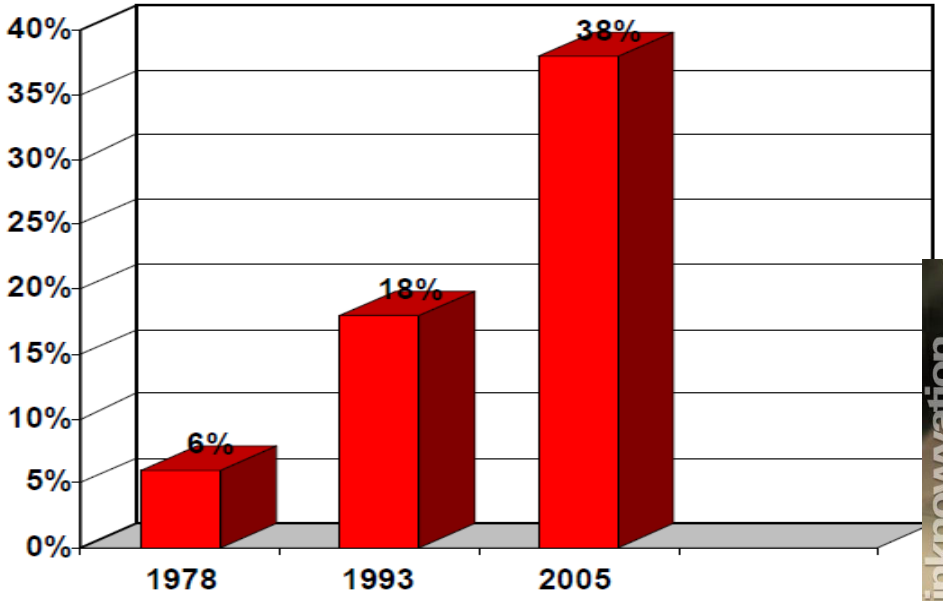
CleveMed Cleveland Medical Devices Inc. | Orbital Research Inc. | GREAT LAKES NEUROTECHNOLOGIES | NeuroWave HARNESSING THE POWER OF EEG | Flocel

Small Business in the Innovation Ecosystem

- Startups are to an economy what births are to a population
- Small Businesses are to the economy what children are to a population
- High Tech businesses create the most, highest paying jobs
- If you want jobs, you need to foster Small Business
- Patents allow Small Businesses to raise money to grow
- Small High Tech Businesses provide the food for growth for large businesses
- Devaluing patents hurts small businesses and the economy

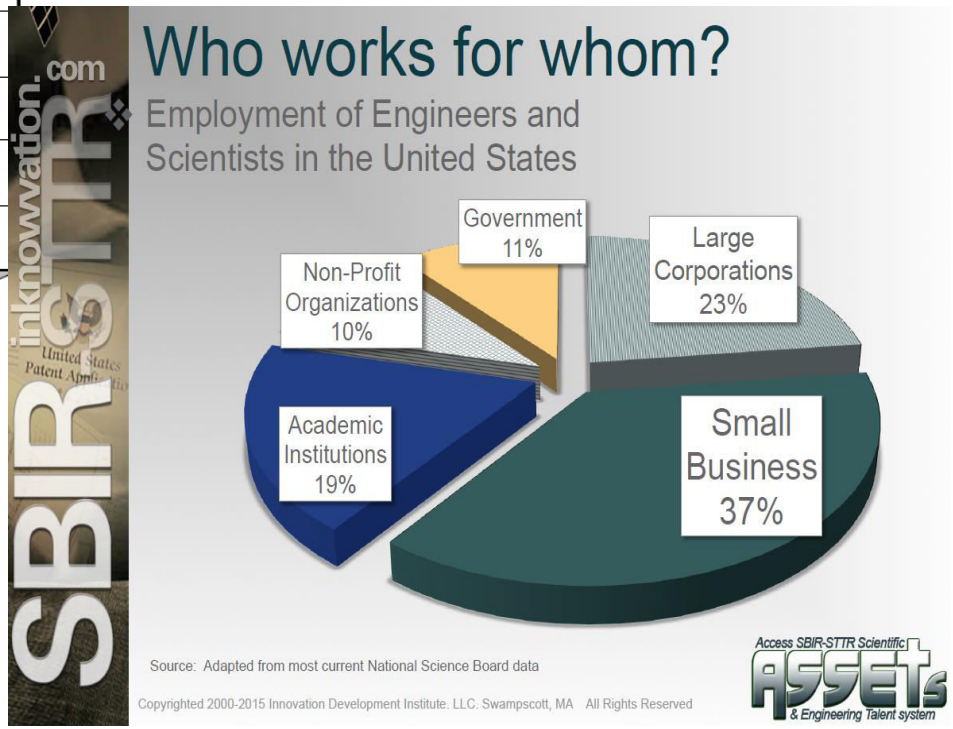
CleveMed Cleveland Medical Devices Inc. | Orbital Research Inc. | GREAT LAKES NEUROTECHNOLOGIES | NeuroWave HARNESSING THE POWER OF EEG | Flocel

Percent of U.S. Scientists and Engineers Employed by Companies with Fewer than 500 Employees



60% more engineers work for small business than for large business

Bell Labs Parking Lot



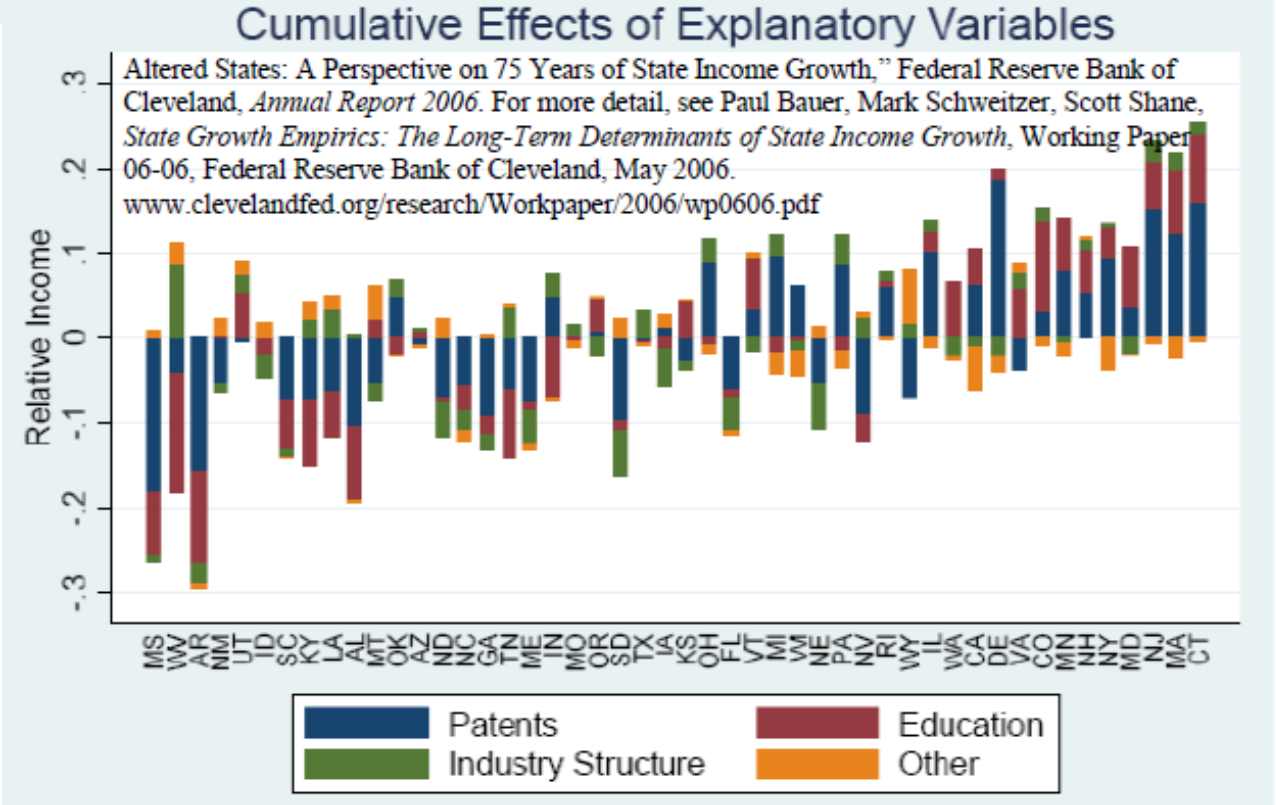
CleveMed Cleveland Medical Devices Inc. | Orbital Research Inc. | GREAT LAKES NEUROTECHNOLOGIES | NeuroWave HARNESSING THE POWER OF EEG | Flocel

Small Business is Where Innovation Happens

- Small businesses create 60-80% of the net new jobs over the last decade.
- Small businesses create ***16.5 times*** more patents per employee than large firms.
- SBIR firms have received over 136,000 patents.

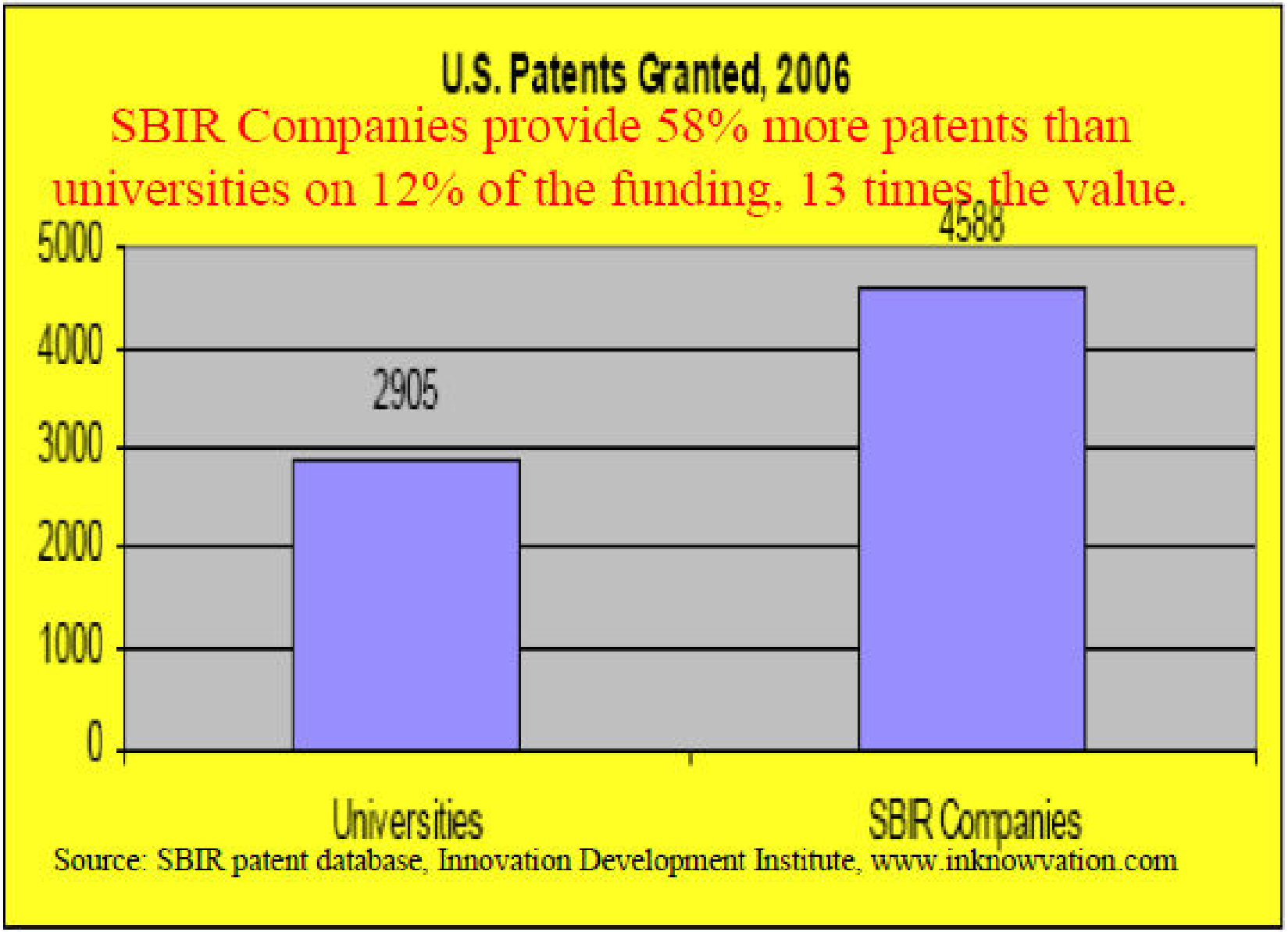
CleveMed Cleveland Medical Devices Inc. | Orbital Research Inc. | GREAT LAKES NEUROTECHNOLOGIES | NeuroWave HARNESSING THE POWER OF EEG | Flocel

Patents are the #1 Indicator of Regional Wealth



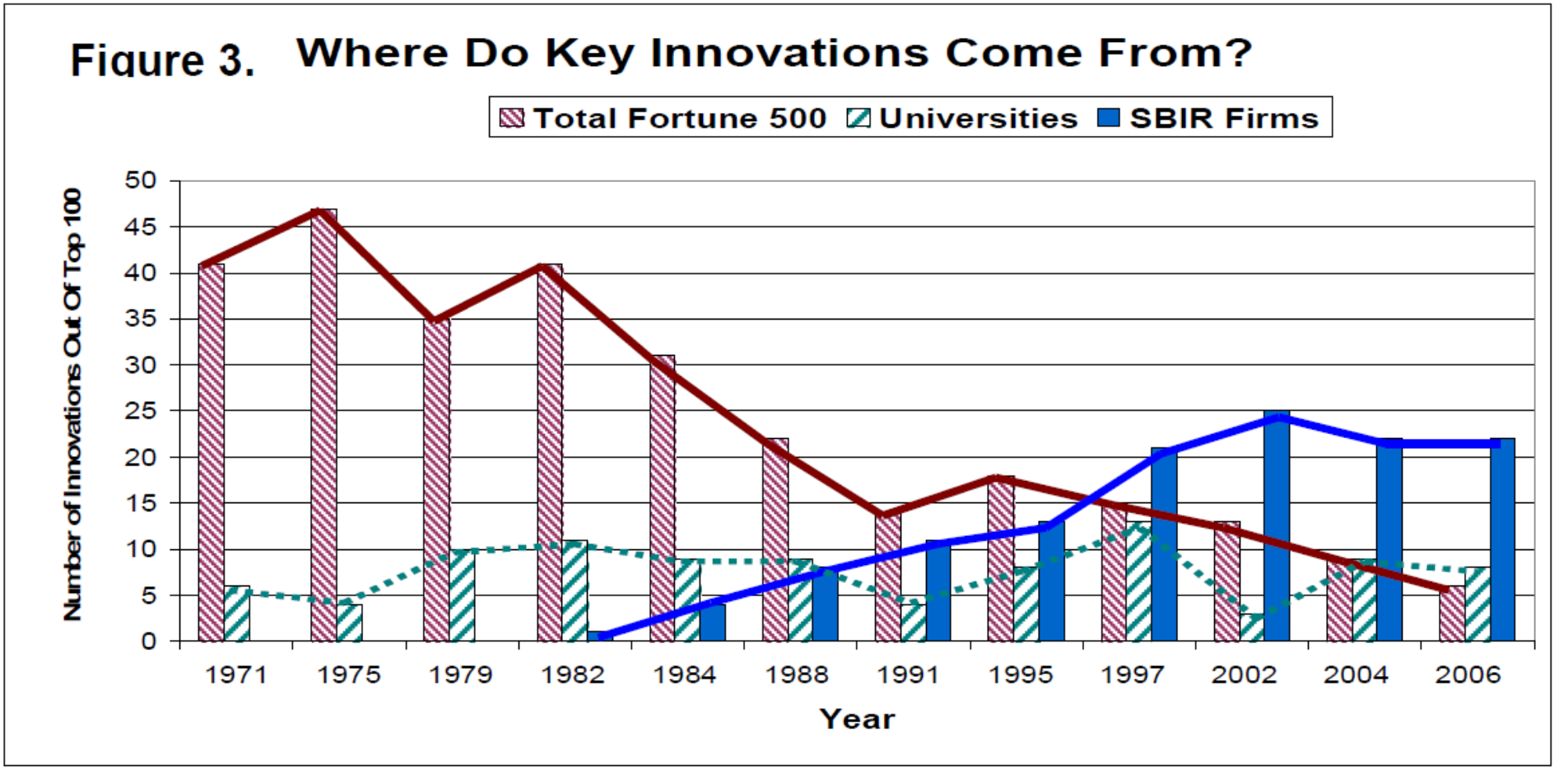
A low-patenting metro area could gain $4,300 more per worker over a decade's time, if it became a high-patenting metro area.

Patenting Prosperity: Invention and Economic Performance in the United States and its Metropolitan Areas, Brookings, Feb, 2013


U.S. Patents Granted, 2006
SBIR Companies provide 58% more patents than universities on 12% of the funding, 13 times the value.
5000
4000
3000
2000
1000
0
2905
4588
Universities
SBIR Companies
Source: SBIR patent database, Innovation Development Institute, www.inknowvation.com

CleveMed Cleveland Medical Devices Inc. | Orbital Research Inc. | GREAT LAKES NEUROTECHNOLOGIES | NeuroWave HARNESSING THE POWER OF EEG | Flocel

Who Creates the R&D 100, Best Patents



Fred Block and Matthew Keller, *Where Do Innovations Come From? Transformations in the U.S. National Innovation System 1970-2006*, Information Technology and Innovation Foundation, July 2008.

Patent rights are the weakest they have ever been in the 223 years of our patent system

Over the last decade, our government has damaged the investment grade value of patents in several critical ways.

- Elimination of Exclusive Right to an invention, **permanent injunction was denied:** eBay v. MercExchange.
- Deletion of **presumption that a patent is valid:** KSR v. Teleflex, Bilski v Kappos,
- Added costs to keep a patent America Invents Act (AIA)
  - Post Issuance Procedures, Patent Trial and Appeals Board
  - Multiple suits against **similarly situated infringers to be filed separately**.
- **A patent can take ten or more years of examination at the United States Patent and Trademark Office (USPTO) before it is allowed**.

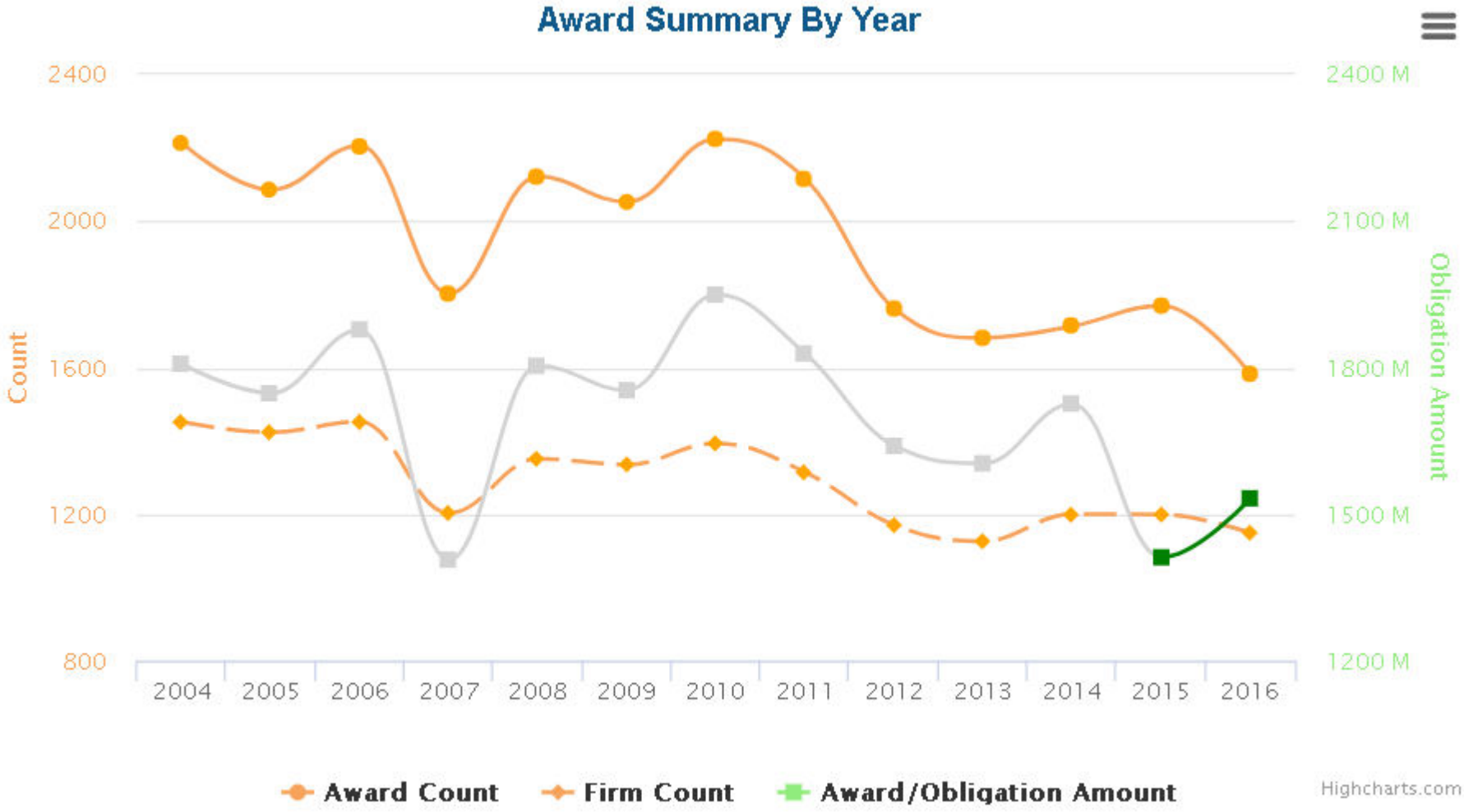
http://beforeitsnews.com/libertarian/2013/12/legislation-to-kill-the-us-patent-system-2543158.html

CleveMed Cleveland Medical Devices Inc. | Orbital Research Inc. | GREAT LAKES NEUROTECHNOLOGIES | NeuroWave HARNESSING THE POWER OF EEG | Flocel

America is Damaging its Invention Driven Economic System

- "**Regulatory Birth Control**" hampering new startups with SEC, Banking, and Patent hurdles.
- **Starving "Small Business Children"** with essentially the same regulations that are burdens for giant corporations, and with reduced R&D funding.
  - Reducing funding to small businesses
  - Reducing our investment in R&D
  - Overregulating small businesses
  - Reducing the value of patents
- We are shifting our economy from an invention-based economy to a market-dominance based economy
- By making patents weaker, Congress is legislating a Poorer America

Reduced Ph I SBIR Funding (2004-2016)



Source: https://www.sbir.gov/analytics-dashboard?phase_tid%5B%5D=105789&year%5B%5D=2016&year%5B%5D=2015&year%5B%5D=2014&year%5B%5D=2013&year%5B%5D=2012&year%5B%5D=2011&year%5B%5D=2010

CleveMed Cleveland Medical Devices Inc. Orbital Research Inc. GREAT LAKES NEUROTECHNOLOGIES NeuroWave HARNESSING THE POWER OF EEG Flocel

The Stronger Patents Act, S. 1390, Deserves our Support

- **Sponsor: Coons; Cosponsors: Cotton, Durbin, Hirono**

- **Makes It Easier to Get Injunctions and Prove Infringement**
  - **Treating patents like other property**

- **Improves Patent Trial and Appeals Board Proceedings**
  - **Same standards as District Courts**

- **Limits Challenges to a Patent**
  - **Limiting repetitive and harassing challenges against inventors**
  - **Requiring petitioners have a business standing**

- **Ends Diversion of Patent Fees**

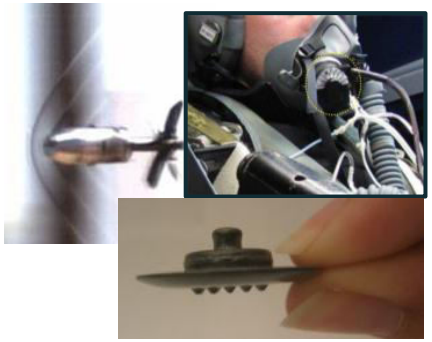
CleveMed
Cleveland Medical Devices Inc.

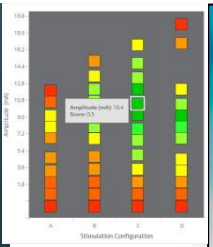
Orbital Research Inc.

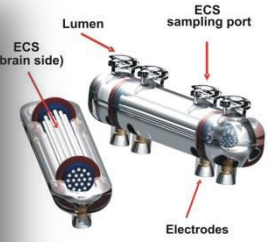
GREAT LAKES NEUROTECHNOLOGIES

NeuroWave
HARNESSING THE POWER OF EEG

Flocel







Beyond Phase II

Small Business Legislative Update

The Economic Impact and Value of Patents

Patent Policy: A Small Business Perspective

August 17, 2017

Robert N. Schmidt, PE, MS, MBA, JD
rschmidt@CleveMed.com
216-374-7237

Inc. 500

THE INNER CITY 100 ICIC Inc.