

The OAE presents:

# **IP Awareness Seminar**

& Software Protection

December 10, 2009



**Office of Academic Entrepreneurship**

# Meet the OAE

- **Dr. Christos Christodoulatos** – Associate Provost for Academic Entrepreneurship

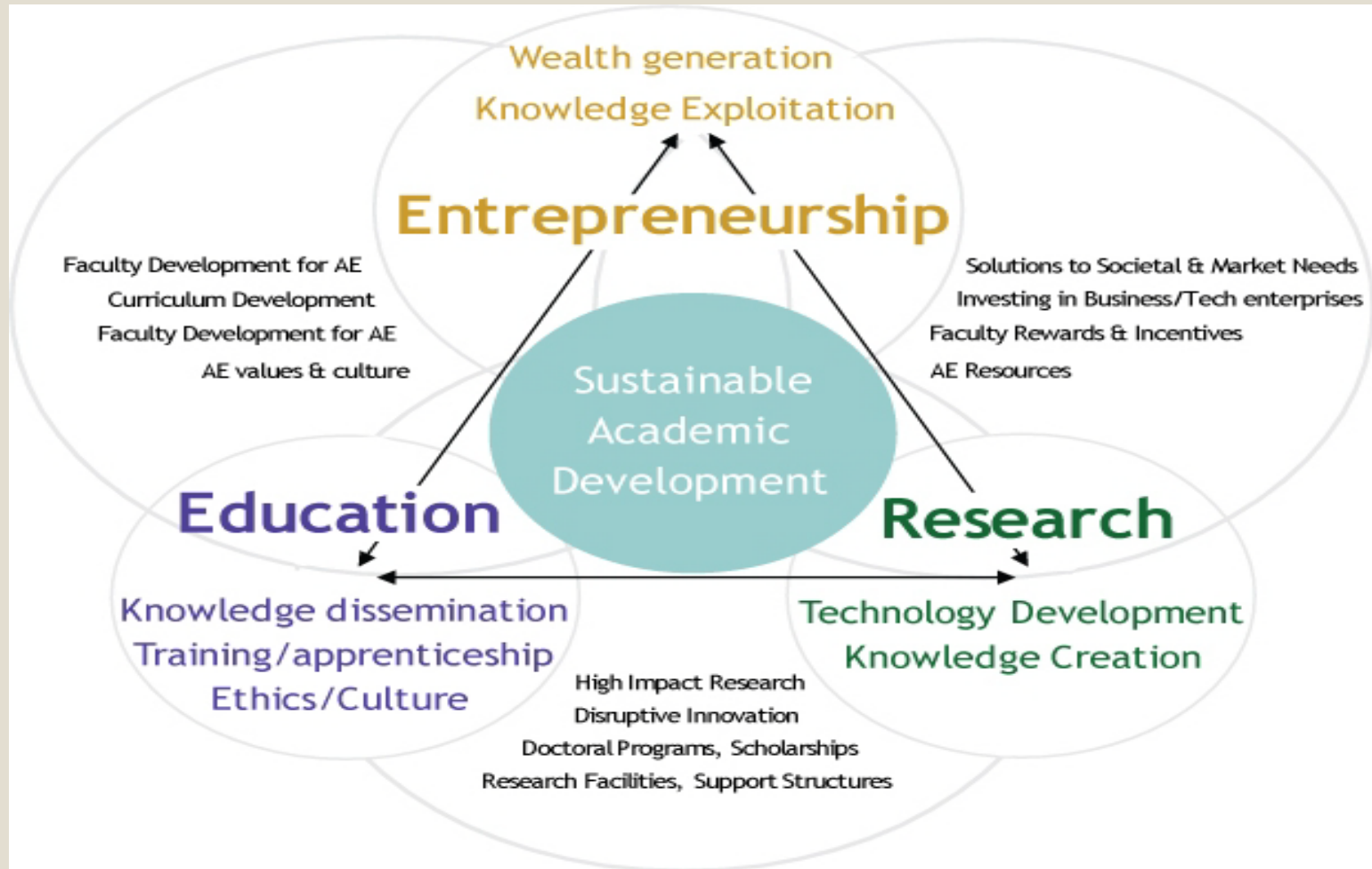
## Staff / Support

- **Malcolm Kahn** – Vice President for Enterprise Development and Licensing
- **Sandra Furnbach** – Coordinator of Academic Entrepreneurship Initiatives
- **Dr. Thomas Lechler** – Director of Academic Entrepreneurship Programs
- **David Peacock** – Director of Intellectual Property Management
- **Ralph Selitto & John Kim** – Patent Counsels, Greenberg Traurig, LLP

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**Office of Academic Entrepreneurship**

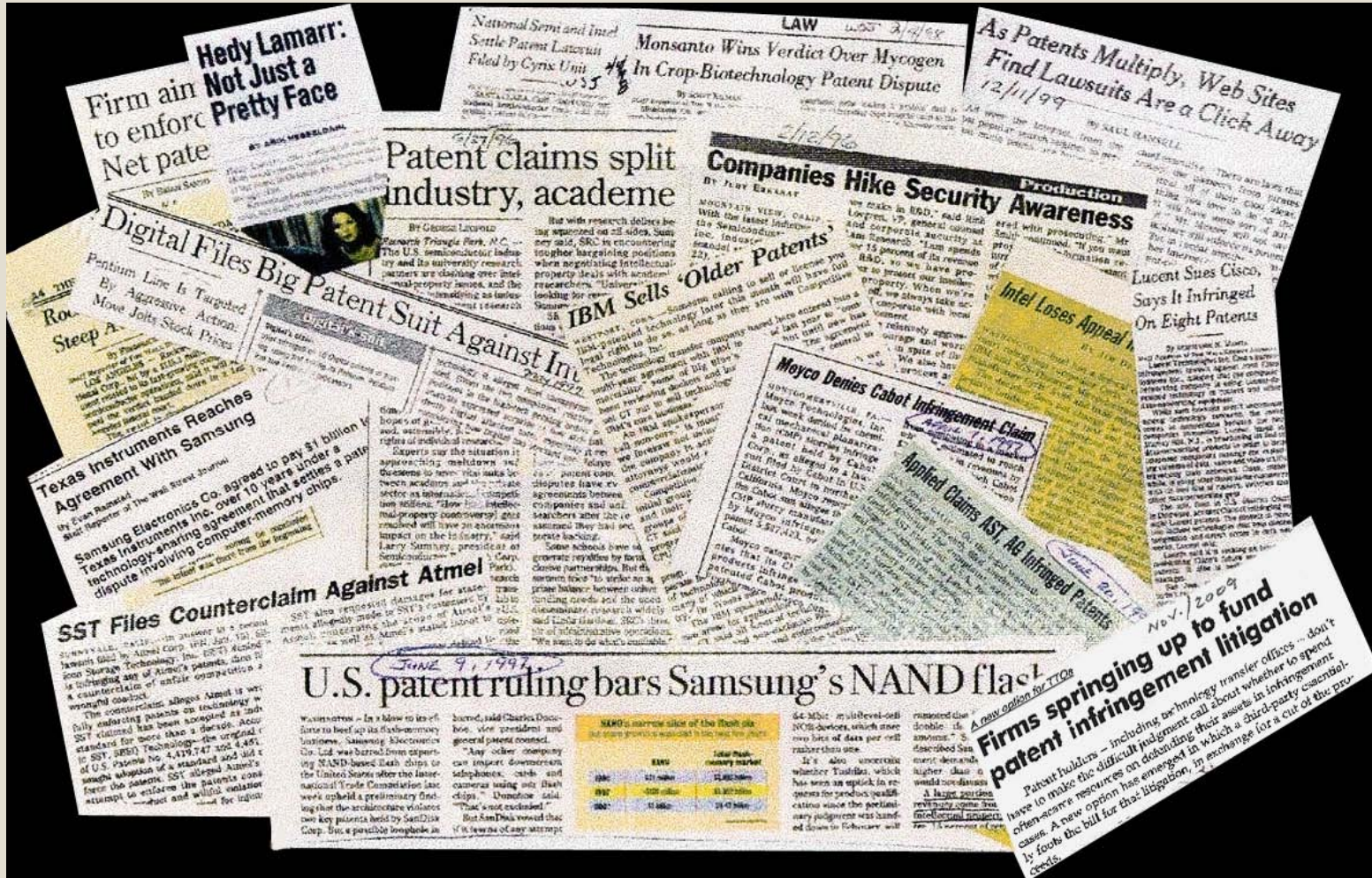
# OAE – Vision



# Today's Lesson



# IP In The News



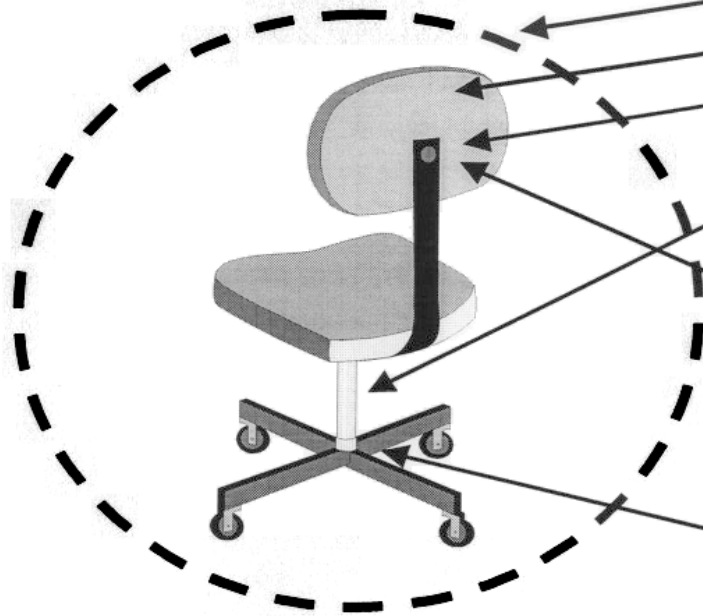
# What is Intellectual Property?

- ◆ Patents
- ◆ Copyrights
- ◆ Trademarks
- ◆ Trade Secrets



Where is the IP?

**NEW PRODUCT INTRODUCTION**



**PATENTS**

- Shape of chair
- Materials in chair
- Computerized back stress relief
- Method of assembly

**COPYRIGHTS**

- Chair marketing literature
- Chair design CAD
- Chair stress relief software

**TRADE SECRETS**

- Metal brazing temperature

**TRADEMARKS**

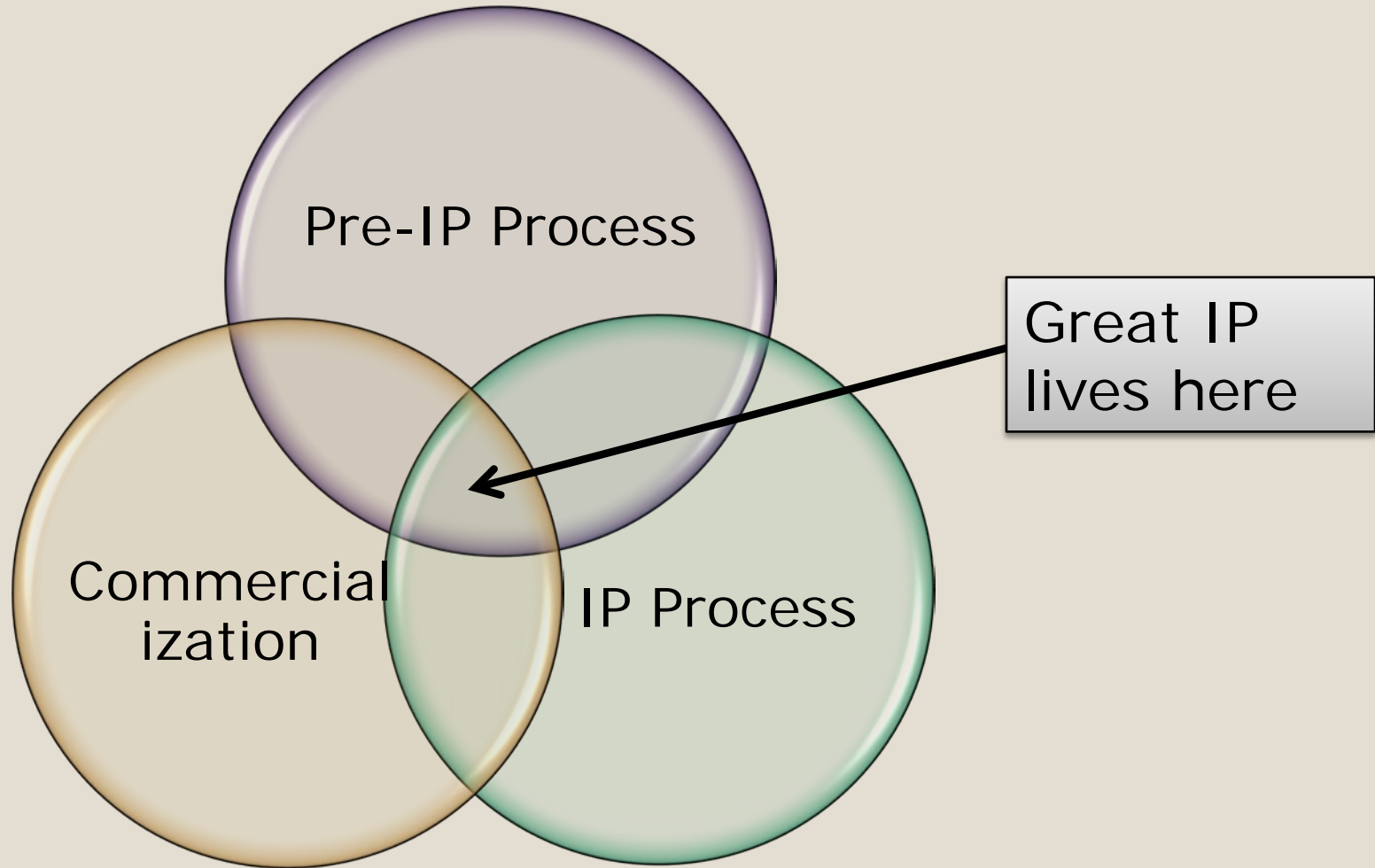
Chair Model No.  
042940  
*Stress reliever* ®

# Patent Value Test

- **Does it pass the “So What Test”?**
- **Must develop a Value Proposition**
- **Clearly articulating**
  - **Value e.g. reduce cost**
  - **Benefit e.g. faster, more efficient**



# Relationship of IP Processes



# IP/Patent Process at Stevens

Color Code Key

Inventor

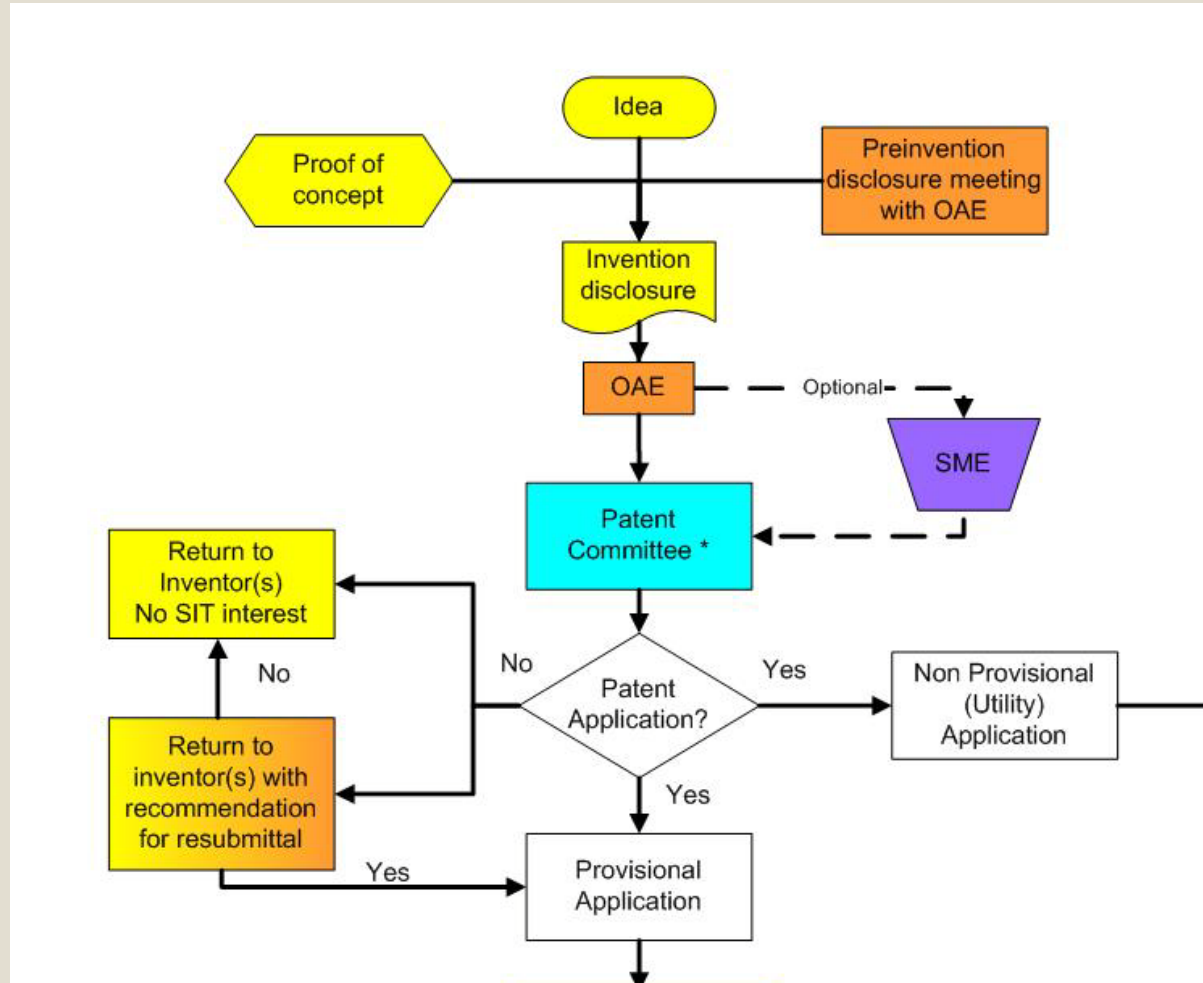
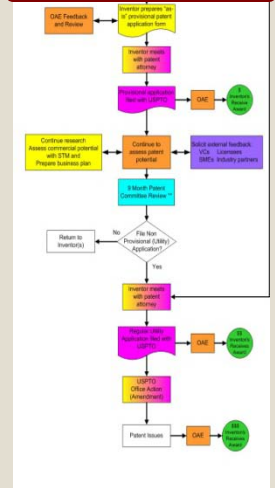
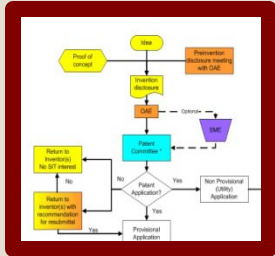
OAE – Office of Academic Entrep.

Patent Committee

Patent Attorney

External Feedback

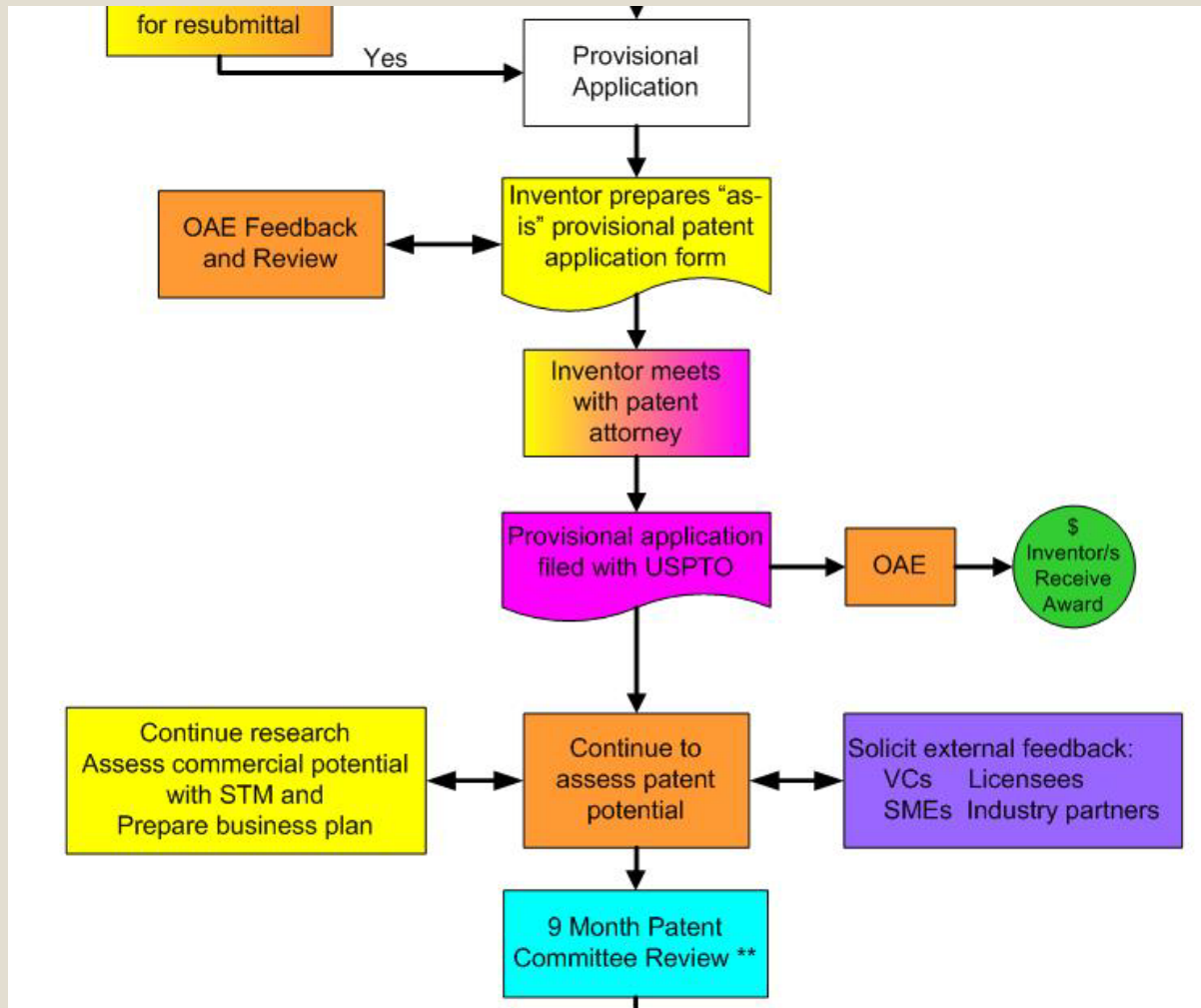
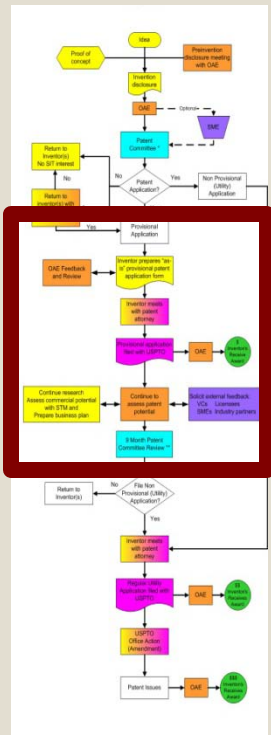
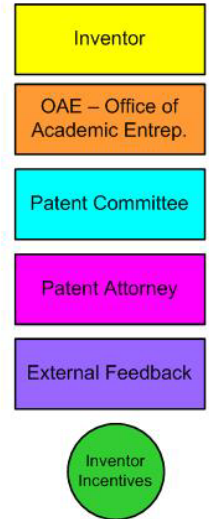
Inventor Incentives



Office of Academic Entrepreneurship

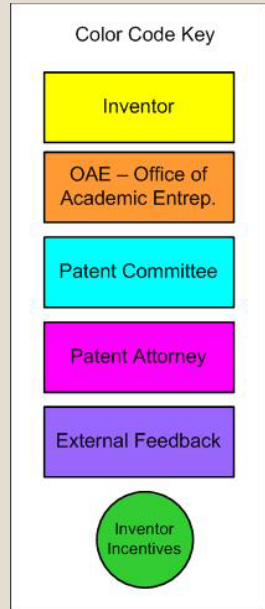
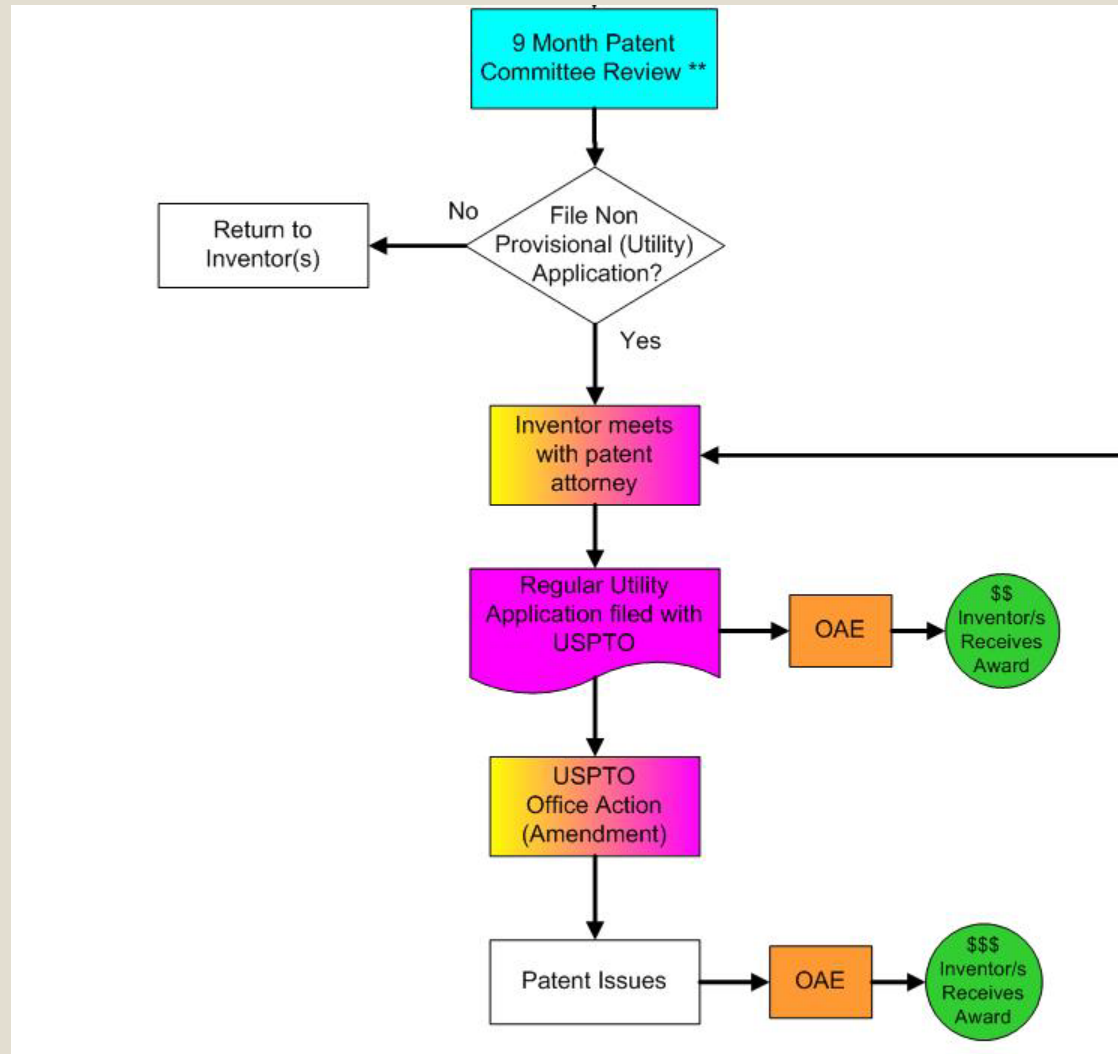
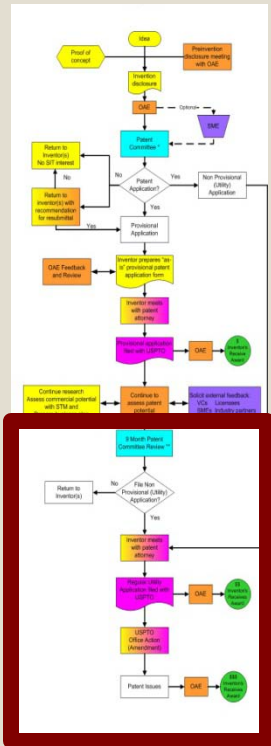
# IP/Patent Process at Stevens

Color Code Key



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# IP/Patent Process at Stevens



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# Software Patents

- U.S. Patent Statute, 35 U.S.C. §101:  
“Whoever invents or discovers any new and useful **process**, . . . , or any new and useful improvements thereof may obtain a patent . . . .”
- U.S. Supreme Court:
  - Process claim directed to a numerical algorithm not patent-eligible because “the patent would **wholly pre-empt** the mathematical formula and in practical effects would be a patent on the algorithm itself”. *Gottschalk v. Benson* (1972).
  - Law of nature or mathematical formulas are not patent-eligible, but their **application** to known structure or processes may deserve protection. *Diamond v. Diehr* (1981).

# Software Patents

- *State Street Case* (Fed. Cir. 1998)
  - Invention directed to a business method is patent-eligible if “it produces a **useful, concrete and tangible results**”.



# In Re Bilski

- New Test: Process claims are patent-eligible if
  - Tied to a **particular** machine or apparatus;  
or
  - Transforms a **particular** article into a different state or thing.

# In Re Bilski

Numerous uncertainties:

- Under review by the Supreme Court.
  - May confirm/modify the Machine-Transformation Test.
  - May rule software **not patent-eligible**.
- What is “particular” machine? – Is a general purpose computer sufficient?
- What constitutes a transformation of a “particular” article? – Is a transformation of electronic data sufficient?
- Differs from Examiner to Examiner even within the same technology center.
- More difficult and expensive to obtain patents on software and business methods.

# Patent Office Interim Instructions to Examiners

- Tied to “Particular” Machine.
  - Mere presence of a machine not sufficient, but a general purpose computer programmed to perform specific process steps may be sufficient (such programming creates a special purpose computer).
- Transforming “Particular” Article.
  - An article can be electronic data that represents a physical object or substance – however, the data must be more than an abstract value.
  - Mathematical manipulation *per se* not sufficient; however, transformation of electronic data may suffice when the nature of the data has been changed such that it has a different function or is suitable for a different use.
- The use of a particular machine or a transformation of a particular article must involve **more than insignificant extra-solution activity** (e.g., merely displaying calculated data on a computer screen not sufficient).

# Interim Patent Filing Strategies

- File provisional patent applications rather than non-provisional patent applications.
  - More time to wait for the Supreme Court's ruling on Bilski (expected by July, 2010).
- Consider other types of intellectual property, e.g., copyrights, trade secrets, etc., to supplement software patent protection.
  - Copyright applications are relatively inexpensive.
    - Copyright protection does not, however, cover the underlying functionality (i.e., competitors can independently develop competing software).
  - Trade secrets may be difficult to implement.

# Interim Patent Filing Strategies

- Take shotgun approach and include specific details on the software/business method invention. More is better - provides more options down the road.
- Consider practical applications for the invention, i.e., how the invention is applied in a real world product or a process, and not merely to the result achieved by the invention.
- Include specific hardware and computer systems for carrying out the software/business method. Be as specific as possible and include as much detail as possible (e.g., which unit performs which processing steps, etc.).
- If electronic data is transformed by the invention, include step-by-step details relating to such transformation.
- Consider whether the invention involves any significant extra-solution activity (e.g., opening a relief valve if a value determined by a computer with the use of a mathematical formula exceeds a certain threshold).

# OAE – Recognition / \$ Incentives

- Recognition Awards
  - Patent Issuance
    - 1<sup>st</sup> Patent Issuance Plaque
    - 2<sup>nd</sup> Companion Board & Plates / subsequent
  - Annual Recognition Ceremony & “Inventors Wall of Fame”
- **Inventor \$ Incentive – (New 1/1/2009)**
  - Provisional Application      \$250/Inventor      Team max \$1000
  - Utility Application            \$500/Inventor      Team max \$2000
  - Issue                                \$1000/Inventor      Team max \$4000

# Commercialization Model

*Engineering Tomorrow's  
Innovators...*

Technogenesis<sup>®</sup> II

**OAE**

Office of Academic Entrepreneurship

# Technogenesis II Approach

**Stevens**

**Design & Eng. Network**

In-House  
3rd Parties

**Capital Stevens Enterprise Angels**

**Stevens Innovations LLC + Virtual Incubator**

**Technology Sources**  
- Stevens  
- 3rd Parties  
- Other Univ.

**Access To Capital**

Angel Club

Quarterly Presentations To Investors & Alumni; Simulcast Over Internet; Draw People In

**Spin-Out Companies or Value Added Licensing**

**Innovations College; Real-World Experiences**

**OAE**

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# Stevens Invention Disclosure Form

<http://www.stevens.edu/entrepreneurship/guide/forms.html>

- Inventor Name(s)
- Date
- Title of Invention
- General Description of Invention
- Utility – useful purpose
- Novelty – difference from known uses
- Advantages
- Limitations
- Proof of Concept – experimental verification
- Prototypes/Samples
- Publications
- References
- Sponsorship
- Possible means of commercialization – markets & applications
- Potential partners / licensees
- Signatures

# Patent Search

- Google Patent Search
  - <http://www.google.com/patents>
- United States Patent & Trademark Office - USPTO
  - <http://patft.uspto.gov/>
- Literature and Patent Search
  - <http://www.scopus.com/home.url>

# Meet the OAE

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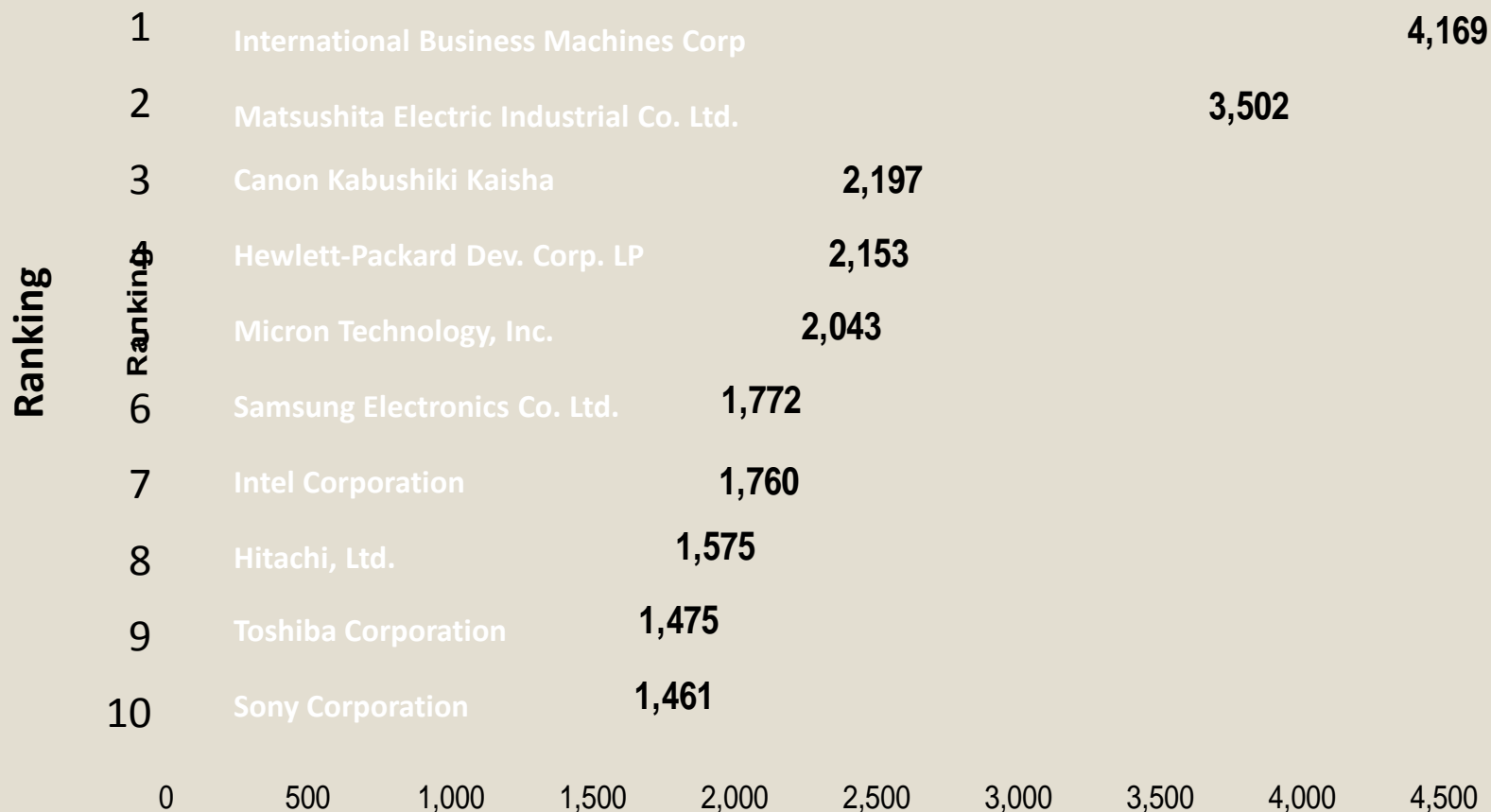
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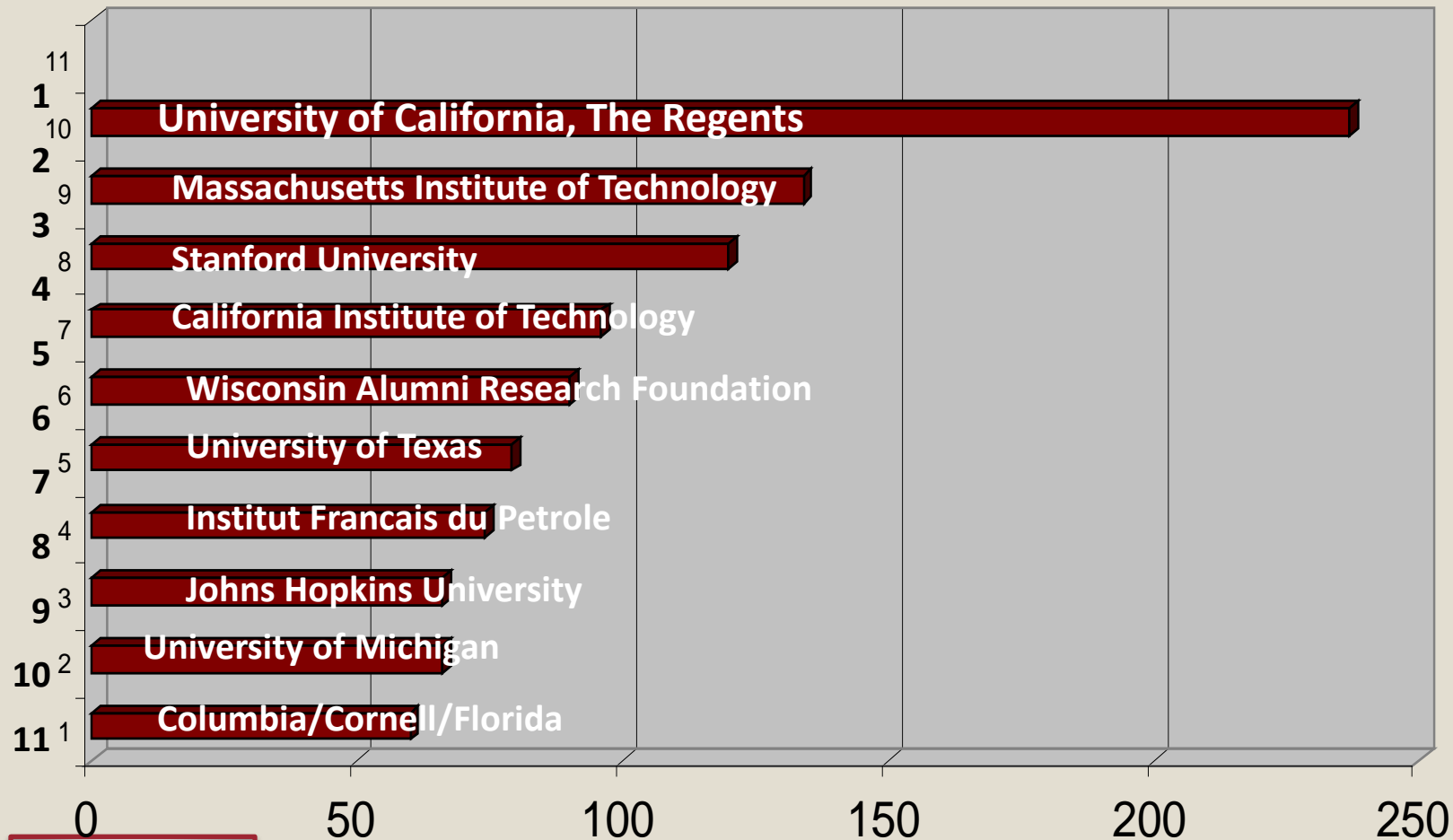
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# Top 10 Companies 2008 U.S. Patent Recipients

528  
U.S. Government  
(ARMY/NAVY/NASA/H&HS)

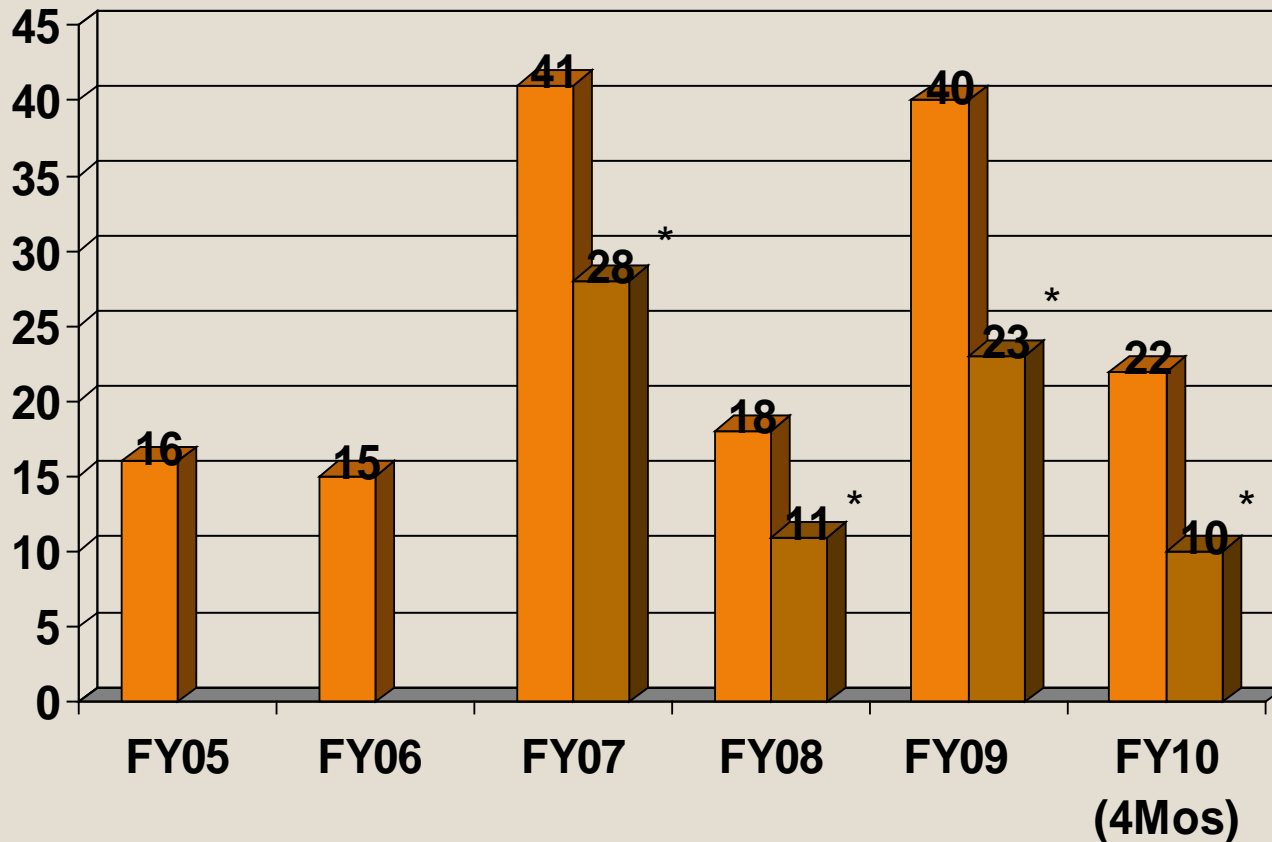


# Top 10 Universities 2008 - U.S. Patent Recipients



# Stevens

## Total Disclosures to Patent Committee

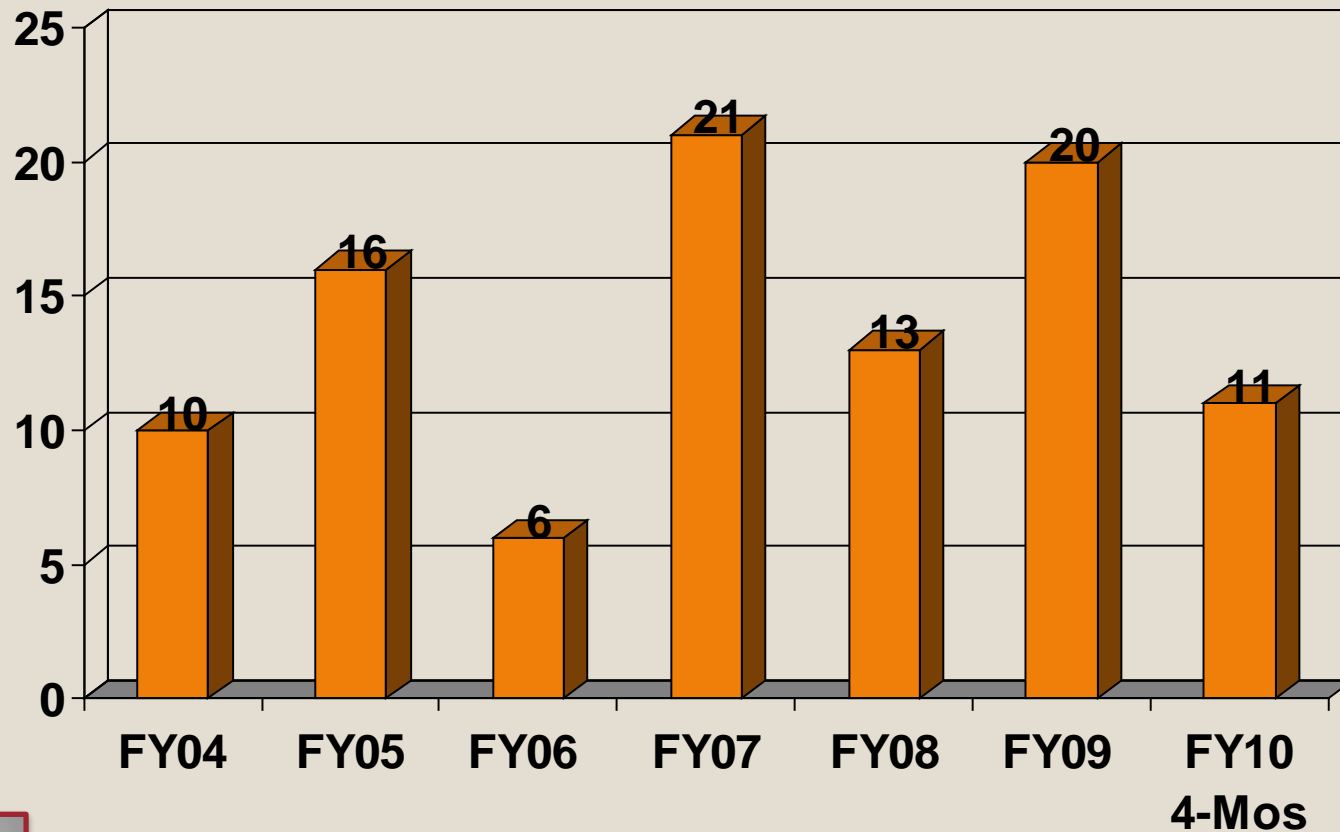


\* Approved for Filing – FY07 68%, FY08 61%, FY09 58%, FY10 45% - AUTM Trend ~60%

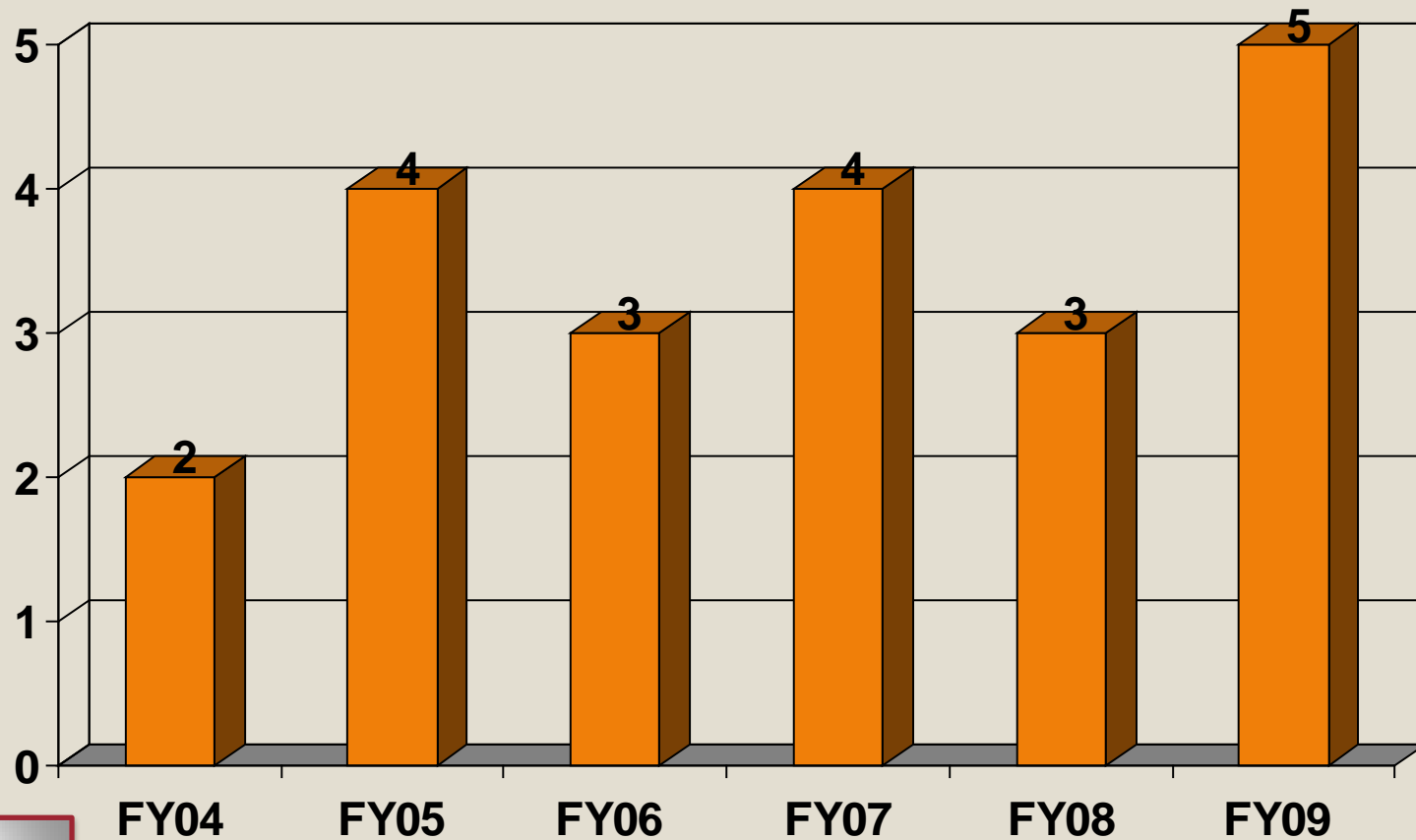
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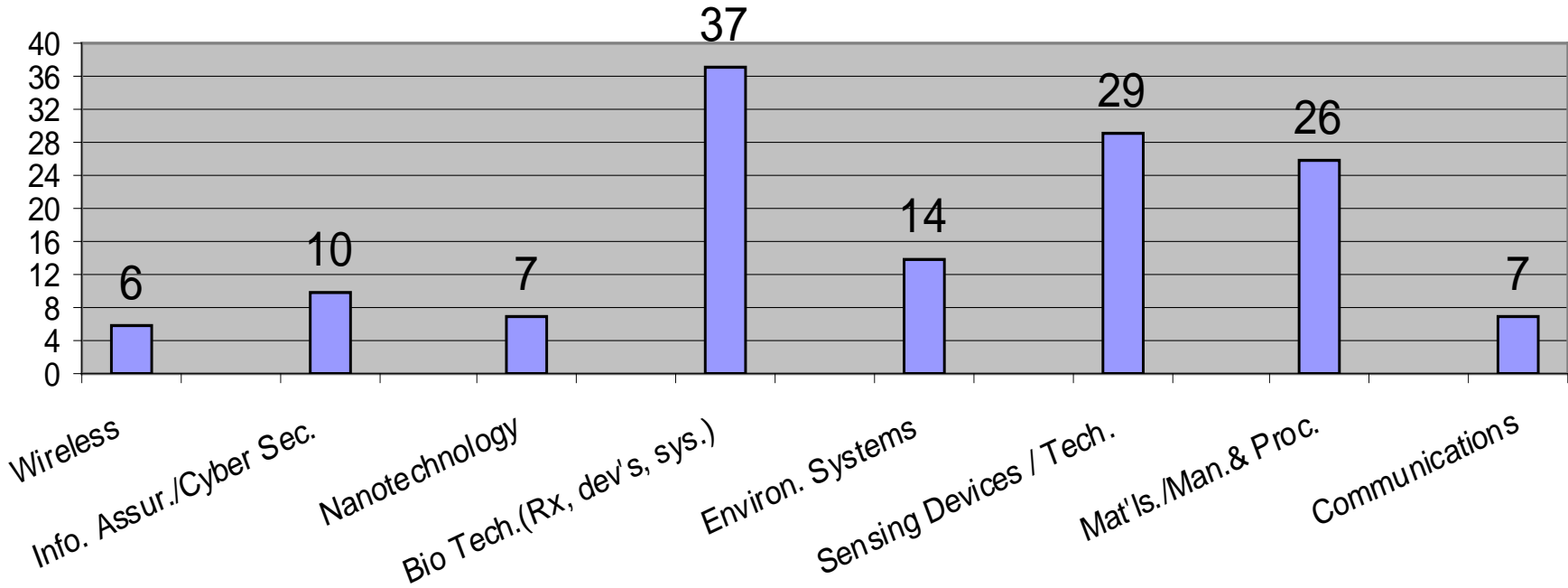
# Stevens Patent Applications Filed



# Stevens Issued Patents



## IP PORTFOLIO REFLECTS Growth AREAS



**Patent Statistics:** Total IP 136 Items (62 Issued / 69 Pending / 5 Open Disclosures)  
Licensed – 45 ( 33%)

## Oliver Wendell Holmes Jr.

**“ I wouldn't give a fig for the  
simplicity on this side of complexity,  
but I would give my right arm for the  
simplicity on the other side”**



# Question/Answer Session with Speakers

