

# Inventors' Network Volume 11

Of the Capital Area [INCA] Issue 7

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## Speakers:

**Dr Barbara Croft** has lived in a community of inventors and entrepreneurs both at home and at work. She directs the National Cancer Institute (NCI) within the National Institute of Health (NIH). NCI has increased its budget for 2004 by \$78 million. A significant portion of her total budget is exercised through Federally-funded grants. Her Grant-Issuing team sets standards of expectations for inventors and project managers.

**Mr Tom Brooke** will speak briefly about "The Intersection of patents and trademarks".

**Mr. John Nist** report to INCA is a continuation of PRO BONO emphasis by Nils Erickson and Richard Leshuk toward improvement of communication capabilities for the benefit of blind persons.

**Mr Herbert Wamsley** operates the headquarters office of the Intellectual Property Owners (IPO) Association. IPO membership includes corporations and individual inventors. He speaks on their behalf for Congressional issues such as Intellectual property (IP) law. Mr Wamsley was one of the charter group that initiated INCA's parent organization, Capital Inventor's Society. As one of our regular speakers, He has helped INCA members understand common ground they, as small business inventors, hold with major US corporation's growing interest in IP values and strategy.

MEETING: 3<sup>rd</sup> Monday,

**21 July 03**

5:30 Network w Pizza  
6:30 President, Maurice Daniels  
6:35 Program VP John Melius  
Dr. Barbara Croft NIH  
Mr. Tom Brooke Trademarks  
Mr John Nist Progress on  
Braille machines for the blind.  
Mr Herbert Wamsley IPO

8:00 Member & Guest Issues

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## HELP THE BLIND

Carl Schmitt, an electrical engineer, has experienced a continued deterioration in his eyesight. He overviewed characteristics of multiple visual handicaps of the blind and near-blind, and he helped define desired assistive technologies.

He briefly outlined his particular research project(s):

- (1) He currently represents a firm which makes a head-mounted visor-display, laptop-driven, TV system for magnifying text for the visually handicapped.

(2) Independently he is pursuing enhancement for tunnel vision and is seeking collaborators in this search.

Carl (and his seeing eye dog, Dell) captured and held INCA attention as he answered questions in a very professional manner. Volunteers to augment his search may get in touch with Richard A. Leshuk [rleshuk@aol.com](mailto:rleshuk@aol.com) (h) 301-279 - 2120 (o) 301-279- 2686 .

Our thanks to Richard Leshuk who is opening the vision of INCA to areas that merit inventive investment of our best.

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NEXUS suggests that Proctor & Gamble and other inventive firms may be looking for INCA-like talents. John Melius has relayed an article about innovation by Erick Schonfeld. [johnmelius@earthlink.net](mailto:johnmelius@earthlink.net).

**Outsourcing Innovation** By Erick Schonfeld [www.business2.com/articles/web/0,,49855,00.html](http://www.business2.com/articles/web/0,,49855,00.html)

A matrix is a network, but a nexus is a set of overlapping networks. The concept of the nexus, though, also helps in understanding a cutting-edge management technique taking root at companies that want to tap into pools of expertise outside their walls.

Think of these pools as **networks of intellectual capital**. One network could consist of inventors, another could be made up of entrepreneurs, a third of scientists, a fourth of retired executives.

Imagine trying to manage this nexus of networks and get them to help dream up a next killer product.

Procter & Gamble's **goal is to have at least half its new products originate from ideas generated outside the ranks of its employees**. This concept at P&G is a responsibility of Larry Huston, whose title is "R&D manager, innovation and knowledge leadership." He oversees their "Connect and Develop program"

Huston is trying to tap into networks of the smartest scientists and business folks around, [THIS WOULD INCLUDE INCA MEMBERS] putting out challenges for ideas and solutions, and paying for exclusive rights to use the best offerings.

Huston's goal is to replicate an earlier success P&G had with the SpinBrush, a \$5 throwaway electric toothbrush. That idea came from an outside entrepreneur named John Osher, who had earlier invented the Spin Pop -- a spinning stick with a lollipop on top. The SpinBrush is now the leading electric toothbrush on the market and represents a \$200 million business for P&G.

Brain management consultant Darrell Rigby calls the nexus approach "open-market" innovation. "Companies getting the most bang for their buck on innovation are not trying to do it all themselves," he says. "They're opening their borders to free trade."

The trick is tapping into the right brains. Huston does this by trying to **pick established network nodes**. A node can be a group of suppliers, a venture capital network, government labs, P&G alums, innovation fairs, or Web-based markets for intellectual capital like Yet2.com, Innocentive, or NineSigma. Those last two are like eBays for scientists - and other inventors .

Huston has put out chemistry challenges on the Innocentive website and gotten back solutions from a patent lawyer in Georgia, a grad student in Spain, and a chemist in Bangalore, India.

In the past two years, he's paid out as much as \$5,000 for an individual idea, but he'd be willing to go as high as \$100,000, depending on the solution.

Huston looks for "high-leverage nodes" where (1) a lot of smart people congregate and (2) contract mechanisms are in place. ED: ***This seems to be a "cash flow" situation to support a network of INCA people who are ready to build their own cooperative business plan and to amplify their creative invention spirit.***

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## New Patent Cafe

## Patent Search Engine

Andy Gibbs, CEO Patentcafe.com, Inc. Reports his Breakthrough Boolean Limitations in Patent Searching, Retrieving and Managing IP to Stimulate Innovation and Leverage an enterprises' Intellectual Assets.

<<http://patentsearch.patentcafe.com>>) announces the launch of Global Patent Search(tm) - of a new Web-enabled, enterprise-wide Intellectual Capital Office(tm) ("ICO") solution suite.

Now decision makers can be more empowered in their "due diligence" support of licensing and litigation analyses, M&A negotiations and other IP related business decisions.

Global Patent Search(tm) and the ICO suite offers:

- > Searching the FULL TEXT of the CLAIMS by clicking on the "More Like This" link for every patent.
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- > FIND MORE RELEVANT PATENTS that traditional Boolean patent search engines simply miss - Enhance capability in determining Patentability, possible Infringement, and Freedom To Operate.
- > quickly help FIND POTENTIAL LICENSEES across diverse and apparently unrelated industry segments.
- > SEARCH MORE CONFIDENTLY in unfamiliar areas of technology.

THERE'S MORE. ICO-GPS also introduces the industry's first Dynamic Search Thesaurus - a 2.2 million search term. breakthrough, user-selected search results preferences to speed patent relevancy analysis, multi-colored In-Context text highlighting or thesaurus and search keywords.

Try the advanced Concept + Boolean search technology now, at <<http://patentsearch.patentcafe.com>>

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## INVENTING on the Radio

Wednesday, July 9, afternoon on American Univ radio [fm 88.5]: Kojo Nnamdi interviewed Andy Gibbs of patentcafe.com and Glen Kotapish [[ipatent@aol.com](mailto:ipatent@aol.com)]. INCA member. Their messages included:

**Inventing is easy; bringing a product to market is much more challenging.**

When an inventor gets an idea that seems valuable, he, she or they need to perform a business plan before investing time and talent on getting a patent. Business plan includes result of research on:

- (1) Market segment(s) this product or process would influence,
- (2) Current money being spent for items attractive the customers of this market,
- (3) Anticipated competition, Its aggressiveness, its inherent attractiveness to customers
- (4) Probable costs of entering a specific portion of this market with a new product ,
- (5) Maker/Distributor attitude toward licensing from independent inventor(s)

Andy told of inventing a wide assortment of things. He remarked that the process made him become very knowledgeable about a product and its channels to customers before he was successful in marketing it.

Andy noted that anyone can apply for a patent, even without professional services of a patent attorney or patent agent. Instructions are to be found within USPTO.gov. People interested in inventing are well served to become active in an inventors organization if one is nearby.

Glen told the audience about INCA and gave its website: [dcinventors.org](http://dcinventors.org). He told of how he was staying aware of the status of his own patent application through the [www.USPTO.gov](http://www.USPTO.gov) Website.

Both Andy and Glen expressed very good will toward the services offered to inventors from USPTO.

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## The May 14 issue of Business Week OnLine Described **how Innovation companies offered free samples.**

Invent Resources (IRI) had a staff of scientists and engineers with backgrounds in research, applied technology, and business. They offered "Inventions on demand" as an outsourcing contractor. Their "idea factory" was met with interest but few contracts. Problem: How to compete with internal R&D of their clients.

The Solution: Invent Resources decided to "give away" innovative ideas free of charge as proof of their capabilities.

How: IRI participates in initial discussions to determine a potential client's needs. A confidentiality agreement goes into effect and work begins. If IRI can't solve the problem, the client pays nothing. However, if the business does develop a viable solution, the client buys the "first option" and licenses the new product or design from IRI. If the client opts out of a deal, the contract allows IRI to license its brainstorm to third-party outfits.

Pavelle, CEO: "Our clients can tap into our expertise with absolutely no risk. We get to do what we enjoy: inventing. If we succeed, everyone succeeds. Unapproachable companies have opened their doors to this approach."

The Expert's Verdict: "IRI has taken the classic marketing tactic of giving a 'free sample' to new heights," says Meg Goodman, a founding partner of the Performance Consulting Group,

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## **HOW TO MANAGE & PROTECT INTELLECTUAL PROPERTY** **AN INTELLECTUAL PROPERTY (IP) SEMINAR PACKAGE** September 8-12, 2003 Dodds & Associates 1707 N St NW Washington DC 20036

Dodds & Associates offers four seminars on protecting and managing intellectual property, and on the use of intellectual property in developing business relationships or building a new business.

**FOCUS will include** patents, trademarks, copyrights, trade secrets, trade dress and licensing issues. The seminars will help the participants to understand and appreciate IP-management as a tool to develop and create US and global business. The focus of the seminars is in the IP- practices and business strategies in the United States, and their place in an increasingly global IP scenario.

### **SEMINAR SCHEDULE AND TOPICS**

**Monday: How to develop, protect and market a product or service with a brand**

**Tuesday: Basics in invention disclosure and patent prosecution in the USA**

**Wednesday and Thursday: Intellectual property management in small organization**

Coverage: Types of intellectual property a small business may have; agreement and contract types, IP licensing, IP audits, freedom-to-operate strategies, IP valuation, notebook policy and strategies to manage IP portfolios.

**Friday: How to set up a new business, or public/private relationship and use IP as a tool**

Coverage: Types of business entities, tax issues, insurance, accounting, employee manuals, plus — how to find a venture capitalist, investment and partnership possibilities.

**WORKSHOPS CAN BE TAKEN SEPARATELY, However,  
A DISCOUNT IS OFFERED FOR THE ENTIRE PACKAGE.**

**Registration before July 15<sup>th</sup> \$260 /day or \$1250 for the week.**

**Registration after July 15<sup>th</sup> and before August 31<sup>st</sup>. \$310 / day or \$1450 for the week.**

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+1-202- 463 32 75 Fax: +1-202-463 32 78 Email: [j.dodds@doddsassociates.com](mailto:j.dodds@doddsassociates.com)

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**Ed: I have been thinking and reading about inventor's the range of preparation, execution and results. Lemelson shares some GREAT strategies!**

Many of our INCA members and friends acknowledge their status as amateurs (that is, we do creative and development work without pay, but for the joy of learning and trying out parts of the process). Many also anticipate bringing their creations to commercial markets (that is, we anticipate economic as well as psychological rewards for contributions we can demonstrate in the marketplace.) Fortunately, INCA includes professional inventors who experience business cash flows and many such cash flows are positive; some even grand.

For all of us, there are lessons to be learned from the recognized "GREAT" current inventors as recognized by an MIT grant sponsored by the Lemelson foundation. Inventors recognized by the Lemelson prize include Dean Kamen, inventor of break-through medical technologies as well as the Segway Human Transporter Raymond Kurzweil, developer of pattern recognition technologies; and Thomas Fogarty, inventor of the embolectomy balloon catheter.

This year's , MIT press release announced that the  
**\$500,000 Lemelson-MIT Prize was awarded to LEROY HOOD, M.D., Ph.D.**

Hood is Inventor of Automated DNA Sequencer which played a key role in the Human Genome Project. The annual \$500,000 Lemelson-MIT Prize is the world's largest single cash prize for invention.

Dr. Hood invented four instruments that have unlocked much of the mystery of human biology, including the automated DNA sequencer which is the key technology for large-scale, high-speed sequencing of human genomes.

Other notable instruments include a device for sequencing proteins, a machine for synthesizing proteins and an automated tool for synthesizing DNA.

Hood's life's work has been defined by two fundamental beliefs, instilled in him while a doctoral candidate at the California Institute of Technology (Caltech) by his mentor William Dreyer:

“Always practice biology at the leading-edge; and if you really want to change biology, develop a new technology for pushing back the frontiers of biological knowledge.”

Under Dreyer's direction, Hood learned how to sequence proteins, a process that determines the order of the 20 amino acids that make up a protein. Along with Dreyer, Hood sequenced antibody proteins found in tumors to study the problem of antibody diversity, the human body's ability to produce billions of different antibodies to fight disease.

This led to discovery of one of the most radical theories ever proposed in biology: --Antibody proteins are encoded by two distinct genes --, explaining in part the versatility of the immune system. This poised Hood to focus his future on applying cross-disciplinary solutions, biology and technology, to unravel the mystery of antibody diversity.

#### THE PROTEIN SEQUENCER and SYNTHESIZER

As a faculty member at Caltech, Hood and his team of biologists and technologists were dedicated to understanding the link between disease and the three major types of biological information: DNA, proteins and biological systems.

They developed a gas liquid phase protein sequencer technology that is 100 times more sensitive than its predecessors. It enabled the “reading” or sequencing of proteins that were previously invisible to biologists. Hood, and colleague Michael Hunkapiller, developed this tool. It enabled Hood's lab to discover the chemical makeup of important proteins, such as erythropoietin, a hormone that treats anemia by stimulating the production of red blood cells.

Hood's stated problem was to understand how proteins work. They created a new tool: the protein synthesizer. This instrument assembles long peptides from amino acid subunits, making it possible to produce high volumes of proteins in order to run experiments on them. One output synthesized a protein that they evolved into the most effective AIDS drugs, the protease inhibitor. [MERK]

#### THE DNA SYNTHESIZER and SEQUENCER

Hoods team with a third principal collaborator automated the process for synthesizing DNA gene fragments and developed the first DNA synthesizer. This machine made possible the polymerase chain reaction technique for amplifying DNA fragments one million-fold.

Hood, Hunkapiller worked with Lloyd Smith to complete the most sophisticated of the four instruments the DNA sequencer. This machine rapidly determines the order of the four letters across the 24 strings of DNA by labeling the four DNA letters with laser-activated fluorescent dyes in red, green, blue or orange. The DNA sequences are then interpreted by a computer. This machine, after 15 years of incremental improvements made DNA sequencing 3,000 times faster, facilitating the Human Genome Project, for which Hood was an early advocate and key player.

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The Seattle Times: Inventors need more than just a good idea --- Adapted from work by Jan Norman The Orange County Register Business & Technology: Sunday, May 04, 2003

### **HUMBLING ADVICE: An invention and a patent are not enough to create a viable business, let alone a profitable one.**

That's the hard truth California attorneys Ardelle St. George and Don Carnegie try to explain. As patent attorneys, "We try to get inventors to expand their understanding," St. George said. "Their intellectual property is just another asset for building a company. It's not the company by itself." While a business may be founded on an

invention, it also requires skilled management, financing, positioning in the marketplace, building a successful brand and more.

A common problem for the newcomers, Carnegie said, is that they tend to underestimate the value of a strong management team in creating a company that will outlast a fad.

The management attracts the money. Few inventors have enough cash to get their inventions to market and profitability by themselves. And investors are notoriously tight-fisted. Professional investors want to see a strong management team and a strategy for building a sustainable business, not just one product.

A good management team may also be able to attract strategic partners who may generate creative revenue boosts. "No one formula fits every client," It doesn't help an inventor team if we build a grand legal strategy, but they don't have the money to carry it through." A good management team will also understand the necessity for establishing policies and procedures to protect a company's ideas as trade secrets,

Even in the early stages, the inventor needs to list and track what competitors are doing. Too many startups think they're the only inventor in the field, only to find out after spending their money that others are far ahead of them. These attorneys encourage smaller firms to concentrate on one area and **build a family of patents** that will successfully repel competitors.

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## Creative Thinking

A THEORY ABOUT GENIUS Adapted from publication by Michael Michalko

How do geniuses think? What characterizes the thinking strategies of the Einsteins, Edisons, da Vincis, Darwins, Picassos, Michelangelos, Galileos, Freuds, and Mozarts of history?

Academics tried to measure the links between intelligence and genius. But intelligence is not enough. Marilyn vos Savant, whose IQ of 228 is the highest ever recorded, is a question-and-answer columnist for Parade magazine.

Nobel Prize winner Richard Feynman, a great American genius, had a measured IQ at a respectable 122. J.P. Guilford and other psychologists concluded that that creativity is not the same as intelligence. An individual can be far more creative than he or she is intelligent, or far more intelligent than creative.

Most people of average intelligence, given data or some problem, can figure out the expected conventional response. Typically, we think reproductively, or on the basis of similar problems encountered in the past. "What have I been taught in life, education or work on how to solve the problem?"

In contrast, geniuses think productively, not reproductively. They ask "**How many different ways can I look at this problem?**"

With productive thinking, the problem solver generates as many alternative approaches as he or she can. [ed. At least 8 good ones] Work out the less obvious as well as the most likely. It is the willingness to explore all approaches that is important, even after a promising one is found.

Einstein was once asked what the difference was between him and the average person. He said that if you asked the average person to find a needle in the haystack, the person would stop when he or she found a needle. He, on the other hand, would tear through the entire haystack **looking for all the possible needles.**

Whenever Noble prize winner Richard Feynman was stuck on a problem he would invent new thinking strategies. He felt the secret to his genius was his ability to disregard how past thinkers thought about problems and, instead, would invent new ways to think. He was so “unstuck” that if something didn’t work, he would look at it several different ways **until he found a way that moved his imagination.**

Feynman proposed teaching productive thinking in our educational institutions in lieu of reproductive thinking. He believed that the successful user of mathematics is an inventor of new ways of thinking in given situations.

Reproductive thinking fosters rigidity of thought. This is why we so often fail when confronted with a new problem that is similar to past experiences only in superficial ways, or on the surface, and is different from previously encountered problems in its deep structure.

The Swiss, who dominated the watch industry in 1968, invented the electronic watch at their research institute in Neuchatel, Switzerland. Swiss watch manufacturers believed it had no future. After all, it was battery powered, did not have bearings or a mainspring and almost no gears. Seiko took one look at this invention took over the world watch market.

IBM managers reported there were no more than five or six people in the entire world who had need for a personal computer. And along came Apple.

Nature creates many possibilities and lets the process of natural selection decide which species survive. In nature, 95% of new species fail and die within a short period of time.

Genius is analogous to biological evolution in that it requires the unpredictable generation of a rich diversity of alternatives and conjectures. The inventive culture retains the best ideas for further development and communication.

**GENIUSES LOOK AT PROBLEMS IN MANY DIFFERENT WAYS.**

DaVinci felt the first way he looked at a problem was too biased toward his usual way of seeing things. He would restructure his problem repeatedly. With each such move, **his understanding would deepen and he would begin to understand the essence of the problem.**

**GENIUSES MAKE THEIR THOUGHT VISIBLE.** The explosion of creativity in the Renaissance was tied to a parallel language; a language of drawings, graphs and diagrams. Galileo revolutionized science by making his thought visible with diagrams, maps, and drawings while his contemporaries used conventional mathematical and verbal approaches.

Geniuses seem to develop a skill in visual and spatial abilities which give them the flexibility to display information in different ways. Einstein formulated his subject in as many different ways as possible, including diagrammatically. He believed that words and numbers, as they are written or spoken, did not play a significant role in his thinking process.

**GENIUSES THINK IN OPPOSITES.** Physicist and philosopher David Bohm believed geniuses were able to think different thoughts because they could tolerate ambivalence between opposites or two incompatible subjects. Physicist Niels Bohr believed that if you held opposites together, then you suspend your thought and your mind moves to a new level. The suspension of thought allows an intelligence beyond thought to act and create a new form.

Thomas Edison’s invention of a practical system of lighting involved combining wiring in parallel circuits with high resistance filaments in his bulbs, two things that were not considered possible by conventional thinkers, because of an assumed incompatibility.



GENIUSES THINK METAPHORICALLY. Aristotle believed that an individual who had the capacity to perceive resemblances between two separate areas of existence and link them together was a person of special gifts. If unlike things are really alike in some ways, perhaps, they are so in others.

Alexander Graham Bell observed the comparison between the inner workings of the ear and the movement of a stout piece of membrane to move steel and conceived the telephone. Underwater construction was made possible by observing how shipworms tunnel into timber by first constructing tubes.

GENIUSES PREPARE THEMSELVES FOR CHANCE. Creative accidents occur when an attempt fails and something else is done. The creative accident provokes a question: What have we done? Thomas Edison, while pondering how to make a carbon filament, was mindlessly toying with a piece of putty, turning and twisting it in his fingers, when he looked down at his hands, the answer came: twist the carbon like rope.

#### SUMMARY

Creative geniuses are geniuses because they know “how” to think, instead of “what” to think.

**Fortunately, most inventors have come to appreciate many “Genius” aspects of their creative ingenuity. Even more such focus might be rewarding.**