

# Inventors' Network Volume 9

Of the Capital Area [INCA] Issue 1

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MEETING: 3<sup>rd</sup> Monday,  
**15 Jan,**  
5:30 Network w Pizza  
6:30 Jim Meisner,  
**Inventor Guidance, from  
Wright Brothers**  
7:30 Member Issues

## MAJOR ANNOUNCEMENT:

**Our regular meeting schedule is now the third Monday evening of each month.** We no longer need to schedule exceptions to match federal holidays. NIH security is located in the ground floor of building 31C and is responsive to the phone beside the door.

**In December, Joel Price's shared his wisdom from his experience of Feasibility management.** In February he will discuss the six steps of the product development cycle.

Joel was project manager for a medical "image intensifier" device whose sponsors wanted to "build product" without further research. One size of the product had been developed and initially made in Shanghai. The product was based on 3 utility patents. The United States appeared to a major market, including adaptations.

Target conditions for a feasible study include the following tests:

1. a large target market  
with realistic market penetration of 1 - 3% within 2 years.
2. a pre-established means of distribution  
with an existing external sales force or partnerships with viable distribution means.
3. sound financial assets  
of \$1-2 million per product.
4. a product champion  
preferably a single person who takes ownership and wisely manages expenditures during the product development cycle.
5. a product concept with distinct advantages  
in cost, performance or preferably both cost and performance.

Note: of the five conditions, number 5 is often given most attention by the technical and design community, although market success ranks it lowest of the 5.

Case: Four physicians and a Joint Venture manufacturer in Shanghai developed a business venture to bring the image intensifier device to the U.S.

They formed an advisory board and a company with initial \$1.7 million funding.  
Their business champion structured each selected product application to include:  
(1) Technical Analysis

- (2) Market Attractiveness
- (3) Economic Feasibility
- (4) Implementation Plan

The advisory board decided on issues that included anticipated market size vs development cost for multiple market concept that might evolve from their initial Shanghi product.

Their basis for judgment during a 6-month, 3-person feasibility study was strongly influenced by a concept scoring matrix. The matrix idea is to list customer acceptance criteria, such as Ease of use, Accuracy and Durability, plus Ease of Manufacturing and to apply a relative weight to each criteria. Then each competitive concept is given columns in which to cite a rating and to combine a weighted score. Example:

**Concepts of A, B & C**

**Selection Criteria**

		“A”	“A”	“B”	“B”	“C”	“C”
	Weight	Rating	Weighted Score	Rating	Weighted Score	Rating	Weighted Score
Ease of Use	10 %	4	.4	5	.5	5	.5
Accuracy	30 %	3	.9	4	1.2	5	1.5
Durability	20 %	2	.4	4	.8	5	1
Cost of Manufacturing	40 %	5	2.0	2	.8	1	.4
<b>Total Score</b>			3.7		3.3		3.4
<b>Rank</b>			1		3		2

Matrices are generated to provide objective measures for selection among concepts and competitive ideas.

Examples: (1) aspects of market attractiveness, (2) likely sales channels or techniques, (3) manufacturing techniques and (4) purchasable components.

Data inputs come from competitor contacts, subcontracted studies, focus groups and a lot of leg-work.

Joel’s feasibility phase found a technological limit that was outside the perception of good US marketability.

A scientific firm modified more than 25 variables (\$300,000.00) in a parallel 1-year effort to correct a “noise” issue. But that effort did not yield a fix. A focus group’s other main concern was a hard copy record from a portable application. The founder’s constraint of “no investment in further R&D” conflicted with remaining options to meet “winning product” performance.

Joel noted that completeness of an inventor’s work is a great aid to a viable feasibility study by a licensor or a production partner. Much of the information from initial development processes [Selection of inventor’s property concept and product disclosure] might be vital to a timely feasibility study of the inventor’s initial customer or partner.

Jerry Porter has commented to your editor that Joel’s objectivity to his prior project (and INCA audience) meets criteria that has been extremely useful in Jerry’s marketed products.

## **Our Jan 15 featured speaker and author is Mr Jim Meisner, Jr.**

His topic, “---The Wright Way” brings historic insight into the innovation process.

The Wright brothers were ordinary men who achieved the “unachievable”.

They mastered the impossibility of flight and forever changed the course of humanity.

The Wright brothers developed certain characteristics- including creativity, curiosity, confidence, dedication, and patience so effectively that they succeeded where everyone else failed. Their model for success can inspire creativity and innovation in others.

How the Wrights achieved the solution that eluded every other inventor in the world is the focus of his forthcoming book, “Soar to Success the Wright Way”. Mr Meisner will be explaining the twelve timeless principles and characteristics that guided the Wrights. He will show listeners how to recognize and cultivate the Wright characteristics in themselves and in others.

"By showing people how to apply the Wright characteristics in their own lives, I help them maximize their personal and professional potential and achieve extraordinary results, just like the Wright brothers,"

"The Wrights accomplished the first powered flight after less than five years of research,"

To contact Jim Meisner, Jr., call 757-566-0604 or e-mail him at [thewrightway@www.com](mailto:thewrightway@www.com).

## **Congratulations to Frampton Ellis**, recently appointed to the IPO board.

[He is replacing another INCA newsletter recipient, Richard Levy, who told INCA members of invention and marketing of the FURBY toy.]

Frampton was on our program to tell of his ten-year odyssey in inventing a new kind of sport shoe and bringing it to international market as a product licensed to Adidas. At his time of telling, Adidas was selling his shoes internationally at a rate of 7 million per year.

He will represent independent inventors for the Intellectual Property Owners board. Frampton commented that he considered himself to be outspoken regarding costs and patent coverage for an inventor's international interests. Since involvement of the PTO's efforts toward “harmonization”, he has been very concerned that the major strengths of our US patent system are in danger of severe contamination from accepting (and adapting) patent approaches used by other nations. Ellis characterized the difference between off-shore patents and US patents as “10 times more costly and 1/10th as effective” for the independent inventor.

During discussion about pre-application disclosure, Frampton confirmed that while a US-only patent could be used in protecting property that was disclosed as much as a year before an application date, the PCT application for multiple countries demanded that the inventor had permitted no public disclosure.

## **Hints about inventor's New Year Resolutions:**

1. I will start a fresh journal\* for my ideas and for those expressly shared by my inventor friends. I will obtain confirmation that my inventor friends understand my ideas, with their signature and the date examined.
2. I will also validate origin and source of my friends ideas by co-signing with them, the mutually-edited, most accurate expression of their ideas that might become patented intellectual property.
3. I will review my permanently-bound journal at least once per month, adding:  
references regarding how it might be made in prototype as well as in production;

resources that appear to have an interest in licensing, angeling, or managing;  
sketches for use, of parts and of testing or demonstration apparatus;  
facts about the invention, its competition, and possible cost factors; and,  
actions taken by me to show continual progress on the best 5 ideas in my book.

4. I will take some marketing-related action each quarter of the coming year for my patented property.

5. I will build my experience within development organization(s) for potentially strong intellectual property of others who recognize my strengths and my needs about intellectual property and its development.

## HOW TO THINK LIKE LEONARDO DAVINCI:

Gelb cites 7 characteristics of this most-famous historic inventor:

(1) Curiosity - drove his quest for learning.

This commitment - tested his new knowledges with real (self-defined) experiences.

(2) Persistence - illustrated his will to learn from mistakes.

Demonstration - helped make-the-most of learnings from his experiments.

(3) Sense-of-living - refined his use of human senses, particularly sight and perspective.

Delivering art and sculpture of the human body demanded research to capture "reality".

(4) Embracing ambiguity - expanded possibilities to deliver elements of paradox and uncertainty.

Military patrons included a need for surprising as well as combating an enemy.

(5) Balancing Science & Art - permits interaction of logic and imagination into "whole-brain" thinking

(6) Adapting to a culture of grace, dexterity, fitness and poise, - He got along with others.

Marketing his products and services to heads of royalty and church meant he must mingle.

(7) Recognizing an interconnectedness of all things and phenomena, he employed "systems" thinking .

Expanded from ideas of Michael Gelb Dell \ Random House, NY, NY 1998

## Eli Whitney's Patent for the Cotton Gin

The Constitution Community Lesson Plan: National Archives and Records Administration

### Need for an Invention:

Eli Whitney headed South in 1792, after graduating from Yale. He had debts to repay and got a job private tutor on a plantation in Georgia. Whitney quickly learned that Southern planters were in desperate need of a way to make the growing of cotton profitable. Long-staple cotton, which was easy to separate from its seeds, could be grown only along the coast. The variety that grew inland had sticky green seeds that were time-consuming to pick out of the fluffy white cotton bolls.

His employer, Catherine Greene, encouraged Whitney to find a solution to this problem. If he could invent a machine, he could apply to the federal government for a patent. If granted, he would have exclusive rights to his invention for 14 years (today it is 20 years), and he could hope to reap a handsome profit.

The patent act of 1793 gave the Secretary of State the power to issue a patent to anyone who presented working drawings, a written description, a model, and paid an application fee. Over time the requirements and procedures have changed. Today the U.S. Patent and Trademark Office is under the auspices of the Commerce Department, and working models are not required.

Whitney put aside his plans to study law and instead tinkered throughout the winter and spring in a secret workshop where he created the cotton gin. A small gin could be hand-cranked; larger versions could be harnessed to a horse or driven by water power. "One man and a horse will do more than fifty men with the old machines," wrote Whitney to his father. . . . "Tis generally said by those who know anything about it, that I shall make a Fortune by it."

**But patenting an invention and making a profit from it are two different things. Whitney and his business partner, Phineas Miller produced as many gins as possible, installed them throughout Georgia and the South, and charged farmers a fee for doing the ginning for them. Their charge was two-fifths (40%) of the profit -- paid to them in cotton.**

**Farmers throughout Georgia resented having to go to Whitney's gins where they had to pay what they regarded as an "exorbitant tax". Instead planters began making their own versions of Whitney's gin and claiming they were "new" inventions. Miller brought costly suits against the owners of these pirated versions but because of a loophole in the wording of the 1793 patent act, they were unable to win any suits until 1800, when the law was changed.**

**Struggling to make a profit and mired in legal battles, the partners finally agreed to license gins at a reasonable price. In 1802 South Carolina agreed to purchase Whitney's patent right for \$50,000 but delayed in paying it. The partners also arranged to sell the patent rights to North Carolina and Tennessee. By the time even the Georgia courts recognized the wrongs done to Whitney, only one year of his patent remained.**

**After the invention of the cotton gin, the yield of raw cotton doubled each decade after 1800. Demand was fueled by other inventions of the Industrial Revolution, such as the machines to spin and weave it and the steamboat to transport it. By midcentury America was growing three-quarters of the world's supply of cotton. At midcentury the South provided three-fifths of America's exports -- most of it in cotton.**

**While Eli Whitney is best remembered as the inventor of the cotton gin, it is often forgotten that he was also the father of the mass production method. In 1798 he figured out how to manufacture muskets by machine so that the parts were interchangeable. It was as a manufacturer of muskets that Whitney finally became rich.**

**Caney, Steven. Steven Caney's Invention Book . New York: Workman Publishers, 1985.**

**(Interesting case histories.)**

**Green, Constance M. Eli Whitney and the Birth of American Technology Reading, MA: Addison Wesley Educational Publishers, 1965. (Still available in paper.)**

**Mirsky, Jeannette and Allan Nevins. The World of Eli Whitney . New York: Macmillan Co., 1952.**

This Eli Whitney article was written by Joan Brodsky Schur, a teacher at Village Community School in New York, NY. [ The Constitution Community Page | The Digital Classroom ] National Archives and Records Administration URL: <http://www.nara.gov/education/cc/whitney.html> webmaster@nara.gov Last updated: July 24, 1999 This article was condensed by Ray Gilbert, editor, INCA newsletter

Subj: **Patent Auctions???**

Joanne Hayes-Rines, publisher of INVENTORS' DIGEST [[www.inventorsdigest.com](http://www.inventorsdigest.com)] is planning an article for the next issue of Inventors' Digest about online patent auctions and exchanges.

Have you listed your invention with any of these online services?

What has been your experience?

What site did you use and how much did it cost? Have you been contacted by anyone who is interested in your invention?

If you are a business person,

Have you used or considered using one of these online patent auction and exchange sites to locate a new technology? Please share your thoughts and we'll contact you for more details.

Have you ever used a service that prepared and distributed an infomercial about your invention/product? If so, let us know what you thought about the service and how effective it was. We've gotten complaints from some inventors and wonder if these complaints are valid.

## **DOW CHEMICAL CAPITALIZES ON INTELLECTUAL ASSETS** By Britton Manasco (w INCA edits)

**Dow Chemical, the \$21 billion company has elevated Gordon Petrash to the position of global intellectual asset director. This IP focus has heightened the value of its patents by more than 400% and will save in excess of \$50 million in related tax obligations and other costs over 10 years.**

**Dow's vision is to develop a management process that "maximizes the business value" of its existing intellectual assets and helps to create new ones. Dow, spends \$30 million a year maintaining and supporting its patent portfolio.**

**Five years ago a small team was chartered to reengineer its portfolio of 29,000 patents. They understood the need measure the value of those assets. They tools, processes and advocates to demonstrate how knowledge assets could be more effectively leveraged.**

**With an annual budget of about \$3 million they created Dow's new processes of Intellectual Asset Management. The group started with patents which had a high probability of success, could demonstrate obvious value, and could be implemented with new processes quickly.**

**All key stakeholders were gathered in a single room to map out existing patenting activities, roles and relationships. Then Petrash's group mapped improvements for the management of patents and helped stakeholders "buy-in" to a new Intellectual Asset Management Model.**

**The model involves six phases: (1)strategy; (2)competitive assessment; (3)classification; (4)valuation; (5)investment and (6)portfolio.**

**Under utilized patents brought initial focus to the (6)portfolio. The group identified each patent, determined if it was still active, and found if there was a business that would take financial responsibility for it.**

**The (3)classification phase for each business determined whether the business is "using," "will use" or will "not use" the patent. It also determined whether the patents were to be licensed or abandoned.**

**The (1) strategy phase was to define how knowledge will contribute to this company's success. The group integrated the patent portfolio with business objectives. It also identified gaps in the portfolio that needed to be addressed. Full integration included phases of (2)competitive assessment and (5)valuation.**

**Competitive assessment determined the knowledge, capabilities and intellectual assets of competitors. The team structured a "patent tree" of opportunities that includes the patents of Dow and its competitors. The resultant map displays factors such as dominance, breadth of coverage, and opportunity openings.**

**When integrated with evaluation, this tool helps visualize, analyze and explain these IP assets as know-how within a strategic context.**

Valuation quantifies total net present value of assets for licensing, opportunity-prioritization or tax. Their "Tech Factor Method" relies on industry-accepted methodologies to show a quick and inexpensive financial valuation of intangible assets that are part of each businesses total valuation.

The introduction of an objective means for patent valuation model brought immediate benefits. Dow cut patent maintenance obligations by \$40 million and reduced administrative costs by \$ 10 million or more over ten years. [It abandoned (or donated) patents that were no longer of value to the company.]

[Petrash estimates that the firm has increased its annual licensing income from \$25 million in 1994 to more than \$125 million today.]

[Sharon Oriel, management director of intellectual assets in new business development, notes that "we can use our intellectual capital in very creative ways."]

[New revenue becomes more likely through better coordination of the company's resources with its business strategy. Business people own the R&D – and the manufacturing. "We will have more hits than misses."]

--Originally appeared in the March 1997 issue of Knowledge Inc. Edited to INCA Newsletter style.

**Bill talked about year 2001 Dues that are due now. An envelope is included with our INCA address and the need for 34 cents in stamps.**

**Timely dues in 2001 will help insure continuation of each subscription to the INCA NEWSLETTER.**

**Bill, our CPA-qualified president also mentioned the necessary habit for adding a dollar to the "Pizza Kitty" for each slice used.**