

Inventors' Network Volume 9

Of the Capital Area [INCA] Issue 3

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In our February meeting, **JOEL PRICE** 301 656 1867 brought the portable x-ray system that he had developed through its initial stage of FEASIBILITY. His prototype was in working order to reveal the bones of his finger. He discussed the economics of acquiring tooling-design, tooling hardware and proof-test component parts. He revealed the considerations about assembly practice that had been invested in design of the system shell. Those parts were at hand for INCA examination.

We are particularly grateful to Joel for bringing his real and candid report of how to minimize new-product risks while processing a project from concept through marketing. His story revealed experiences that a developer may expect to face during acquisition and research into each component of a new high-technology system. His e-mail is productventures@aol.com

Our March speaker is Dr William D. Jackson, IEEE Fellow. He is President of HMJ Corp of Kensington, Md. His technical experiences have involved electronics, computer development bioengineering and energy. His personal contributions include roles as industry project manager, government program manager, academic leader, consultant and inventor.

Dr. Jackson brings his experienced inventor point-of-view through what has been called the R,D&D process: Technology Research, Development and Demonstration. He expects to share "what has to be done" by inventors and inventor-related teams to win support from Government and from Industrial resources. He has seen, and will share some stories about pitfalls that await the unprepared creator/inventor.

On May 21, our INCA will hear Mr Roger Flagg describe his interest in invention grow to include becoming a patent agent and then to operate a specialty firm EXPRESS SEARCH that employs high-technology talent to serve his clients for searching.

Congress has reauthorized SBIR. The SBIR Program provides up to \$850,000 in early-stage R&D funding to small technology companies (or individual entrepreneurs who form a company). See <http://www.acq.osd.mil/sadbu/sbir/>

MEETING: 3rd Monday,

19 March

5:30 Network w Pizza

6:30 Dr. William Jackson

**THE ROLE OF INVENTION
IN TECHNOLOGY
RESEARCH,
DEVELOPMENT AND
DEMONSTRATION**

7:30 Member & Guest Issues

The Inventors' Study Project - a Progress Report

View original on WWW.inventorsplace.com/survey

Ron Westrum, Ph.D

In 1999, Ed Zimmer approached me about doing a study on independent inventors. Ed, a retired industrialist who directs The Entrepreneur Network, wanted some reliable information on the chances of independent inventors making money from a patented invention. **One hears a lot of numbers bandied about, mostly very pessimistic, such as "only 1% (or 5%; or 10%) of independent inventors ever make money from their patents," etc. But nowhere did there seem to be any hard numbers that one could depend on, with a representative sample.**

Ed had in hand several lists of patentees from Michigan, Ohio, and Indiana. His data covered Michigan for about 10 years, and Ohio and Indiana for a lesser period. All the patentees on the lists had received unassigned patents. An unassigned patent was assumed to mean that the patentee was an "independent inventor." This was a quick and dirty definition, but the best we could manage. Ed had lists of unassigned patents, and so that was what we looked into. What Ed wanted to know was, a) what are the chances that the patent would be exploited, and b) would the inventor make some money from the patent? Since Ed spends a lot of time counseling independent inventors, this was key information for him. We decided to do a survey.

With Ed's lists in hand, we computerized the data, printed up about 7800 labels, and mailed out questionnaires. (we put aside about 12% of our sample for a more rigorous query) We had pre-tested the questionnaire, and found that the response rate to it was low, about 10%. So we substituted a large postcard with the key questions for the reply. The mailing was about a cubic yard of material. We got back, however, only **replies from about 790 of the inventors in the sample, or roughly 10% of the patents** sampled. This is not a very good response rate, and we suspected that more successful inventors were more likely to respond. What follows is excerpted from the preliminary analysis of this data.

The **first** thing we noticed is that **the method the inventor chose to use in exploiting the patent made a big difference in financial outcome.** For instance, for **one-patent inventors, deciding to manufacture was definitely more likely to succeed (49%) than trying to sell a license (13%) to someone else.** (This was less true for those who had received more than one patent, see below). Of course it is a lot easier for an inventor to manufacture a simple consumer product than, say, a city's community incinerator, or a fractionating tower for the oil industry. None the less, **manufacturing may indicate a higher degree of commitment of the inventor to the invention, if everything else is equal.** By the way, for the one-patent inventors, if **getting someone else to manufacture was also considered, the percentage successful drops to 6%.** We defined "success" as a situation where the inventor described making modest or substantial profits from the invention.

The **second** thing we noticed is that **success in exploiting the patent appeared to depend on the number of patents the inventors had.** Those with more patents tended to be more successful, no matter what method they chose to use in exploiting them. So, for instance, using the previous three categories, the **inventors with 6-10 patents who tried to make money through manufacture got at 75% success rate,** with licensing 38%, and even those who considered using another firm to manufacture got 42%. This pattern held good throughout, multi-patent inventors seemed more likely to succeed on all methods of exploitation. **Some multi-patent inventors who filled out several cards indicated that they were successful on most of the patents they reported on.** Furthermore, the multi-patent inventors tended to be surer about what method they would use to exploit the patent.

THIRD THING:

By contrast with these results, education seemed to have, at best, a curvilinear effect, with **those having a BA or BS being successful 52% of the time, while those with lesser or greater educational levels having success rates in the 33% range.** For one-patent inventors, those with associates degrees had the highest success rates. Associate degree holders were also those most likely to have only one patent.

So for this phase of our study, we found that **method of exploitation, the number of patents, and education all have impacts.** With the results we got, especially for those who decide to manufacture products based on their patent. Our results, however, are only suggestive, since we did not use a follow-up to boost the response rates. Our next phase will use a multiple-follow-up method on a smaller sub-sample to try for a higher response rate. This will provide a more accurate picture of the sample as a whole.

Ron Westrum, email ronwestrum@aol.com. (Professor of Sociology, Eastern Michigan University)
[Dr Westrum is now another complimentary receiver of the INCA Newsletter.]

Editor's Note: It is wonderful to find Inventors and associated professionals who are willing and able to perform the "homework" of getting and interpreting real data.

Joanne Hayes-Rines, publisher of Inventors' Digest is inviting inventors of TRAVEL or SPORTS -related products to write your story for her magazine and get some publicity. www.inventorsdigest.com

Our **Katrina Galway** is the seminar coordinator/moderator for the forthcoming **(May 5 - Saturday)** Smithsonian all-day Seminar with luncheon. The focus of this inventor-related program is "Product Design for the 21st Century" Four prominent product designers will speak and teach for this "Campus-on-the-Mall" event.

Ms Galway is the "total customer experience" consultant at Hewlett-Packard. She has drawn a theme of "How big thinkers look at Product Design": Usefulness — Ease of Operation — Aesthetic appeal — and reflections of the customer's sense of self.

For those inventors are actually thinking about customer's design environment, and considering how their intellectual property may be expected to get a customer reaction, Katrina may be delivering an intellectual product that is vital to timely commercialization.

Tickets are on a "space available" basis and cost \$130 for General Admission. Resident Associate members of Smithsonian get tickets at \$85. [The difference in price invites one to join the Smithsonian for this and other invention enhancement exhibits and programs.] Register through <http://residentassociates.org/com/product.asp> OR

Call 202-357-3030. This event to be held at the IMF Center, 720 - 19th St., NW, Washington, DC
[Between G & H street. Farragut West or Foggy Bottom Metro Blue/Orange]

Cynthia Warner of Cody, Wyoming invites Traveler-Inventors to a 2-day visit to a **new school for Innovation, Technology and Intellectual Property.** This school, Western Institute of Technology is planning a conference for May 18 and 19, where inventors and manufacturers will display their exhibits. The theme is "Wildware", and a special invitation is offered to inventors and producers having "neat exhibits". No website yet. Some material to be on hand for the April INCA meeting.

WWW.invent.org/ offers a free download: Patents: A step-by-Step Guide to Help You Protect Your Invention.

MIT Enterprise Forum has invited a few “seed stage startups” to describe their venture and pose a critical question to a panel of experienced local executives/angels. Well-prepared startup persons and the Angels will perform a **“Diagnostic Salon for Seed Stage Ventures”**. On **20 March**. This format also offers a question period for the audience. [Http://mitef.org/ForumLocation.htm](http://mitef.org/ForumLocation.htm) NREC Conf Center, 4301 Wilson Bvd, Ballston Metro.

The Elliott School of International Affairs at **George Washington Univ** offers a lecture by Professor David M. Hart, Kennedy School of Government, Harvard Univ, **“Antitrust and Technological Innovation: Past and Present”** **March 21**, Wednesday 5:00 - 6:30 at Stuart Hall, Rm 103 (Commons) 2013 G St NW Washington DC. (No fees)

License Royalty Rates by Industry

Our website includes a reference to work by John Dull of Deloitte & Touche about licensing. This fine piece of work merits a full read by serious INCA inventors. One highlight is its a well-researched distribution schedule of licensing royalties among major industries, based on net revenues

Industry	R O Y A L T Y				
	<2%	2-5%	5-10%	10-15%	>15%
Aerospace	50.0%	50%			
Automotive	52.5%	45%	2.5%		
Chemical	16.5%	58.1%	24.3%	0.8%	0.4%
Computer	62.5%	31.3%	6.3%		
Electronics		50%	25%	25%	
Energy		66.7%			33.3%
Food/Consumer		100%			
General Mfg	45%	28.6%	12.1%	14.3%	
Govt / Univ	25%	25%	50%		
Health Care Eqpt	3.3%	51.7%	45%		
Pharmaceuticals	23.6%	32.1%	29.3%	12.5%	2.5%
Other	40%	37.3%	23.6%		

Ranges of Royalty according to relative innovation of the licensed property

Revolutionary: Creates a long-felt need or whole new industry	7%	to	13%
Major Improvement: Significantly enhances quality or superiority	4%	to	8%
Minor Improvement: Incremental gain in existing product or process	2%	to	5%

From Daniel M. McGavock, David Haas & Michael Patin, “Factors Affecting Royalty Rates,” les Nouvdlles, June 1992

Ethan Nelson of www.bulkworks.com invites inventors to **test “how their products or prototypes are perceived by retail buyers”** in the market. Ethan cites an article written about him on http://www.localbusiness.com/story/0,118,SNA_483224,00.html. If an INCA person follows-up on this lead, please advise Ray 703 9719216 raybik@aol.com or Raoul our Web-Master at 703 573 6055.

A Howard University/USPTO program on patents and trademarks that was scheduled for Apr 5 has been rescheduled to Sept 26.

AMCOM show is at Baltimore Convention Center on March 13-14. Register through www.amconshows.com. 74 vendors and producers support morning lectures on Injection Molding, Aluminum and Plastic Prototypes, “Rapid” prototyping and Reaction Injection Molding. This is a powerful learning opportunity for inventors whose products must “do something”.

INCA is operated by VOLUNTEERS:

We have announced an election for our March meeting, and nominations from the floor will be sought. An initial comfort may be felt from a demonstration of the full spirit of volunteering:

Bill Kuntz, President is willing to continue for another year, as is Phill Shaw, Treasurer. Raoul Drapeau, WEBMASTER, and Ray Gilbert, Editor, also volunteer to continue their roles as confirmed by the group-elected President. We welcome those other current volunteers including Tom and George and Bryan. When each of us cites our favorite to-be-considered volunteer action, a back-up capability makes INCA even more effective.

In our February meeting a worksheet was distributed to show the kind of volunteer actions that seemed necessary to date in the effective operation of INCA. That worksheet included some space for members input about actions they would like to see within INCA. None of these worksheets have yet been collected into a “Volunteer Action Package” for use by the elected or reelected President.

This March is a good time to review our inventor-related New Year resolutions. Fontelle offers these three questions to help focus our lives:

- (1) Who am I at this time in my life?
- (2) What does that mean that my contribution could be?
- (3) What does it mean that I will be doing? - for INCA.

Based on the February worksheet, we have built a “2001 duty roster” showing group-needs and month first-letters. Please scan the task list and initial (or write your name) opposite each of the tasks you feel qualified to execute.

Also, please circle groups of months you would like to commit for the initialed tasks, if so requested.

For operations or tasks that have been omitted, please write-in their description and cite months that you would like to establish the practice. Then identify yourself with name, phone and e-mail at the bottom of the roster.

Most importantly, **hand the initialed copy of this duty roster to our door person**, or Bill or Ray.

Operation of INCA through voluntary Actions

The principal officer for INCA is the President.

An effective INCA president must have remarkable support from members.

The actual power of an INCA President is amplified by authorized volunteer actions by others.

Actions (Y)early, (M)onthly (S)pecial or (Q)uarterly Volunteer Name on line, Months Committed
 (M)arch (A)pril (Ma)y
 Schedule place to meet (Y) Ray Gilbert (J)une (Ju)ly (Au)gust
 Confirm Meeting Place, exceptions (S) Jerry Porter (S)ept. (O)ct. (N)ov
 (D)ec. (Ja)n (F)eb

Roster of Volunteers for INCA Executive Actions

Host Outside Door (M) _____ M A Ma J Ju Au
 _____ S O N D Ja F
Doorkeeper w Attendee List (M) _____ M A M J Ju Au
Dues & Name-Tag _____ S O N D Ja F

Set up Pizza Table & Drinks (M) _____ M A Ma J Ju Au
 _____ S O N D Ja F
Order Sufficient Pizza (M) _____ M A Ma J Ju Au S O N D Ja F
Pay Pizza delivery & supplies (M) _____ M A Ma J Ju Au
 _____ S O N D Ja F
Collect refreshment funds (M) _____ M A Ma J Ju Au S O N D Ja F

Collect Inventor info for website (M) _____ M A Ma J Ju Au S O N D Ja F
Research Inventor topics for website (M) _____ M A Ma J Ju Au
 _____ S O N D Ja F

Produce Newsletter (M) _Ray + _____ M A Ma J Ju Au S O N D Ja F
Write Columns (M) _____ M A Ma J Ju Au S O N D Ja F
Operate Video Camera (M) _George + _____ M A Ma J Ju Au S O N D Ja F
Report content of meetings (M) _____ M A Ma J Ju Au S O N D Ja F
Research Inventor Issues (S) _____
Edit e-mail content & mail (M) _____ M A Ma J Ju Au S O N D Ja F

Edit paper content (M) _____ M A Ma J Ju Au S O N D Ja F
Fold, Stamp & Mail (M) _____ M A Ma J
 _____ Ju Au S O
 _____ N D Ja F

Produce & Send Mtg-Notice Cards (S) _____
Conduct Press Announcements (M) _____ M A Ma J Ju Au S O N D Ja F
Maintain membership e-list (S) _____
Represent INCA in MITEF (M) _____ M A Ma J Ju Au S O N D Ja F
Represent INCA in Engr Societies (M) _____ M A Ma J Ju Au S O N D Ja F
Represent INCA in USPTO (S) _____

Actions (Y)early, (M)onthly (S)pecial or (Q)uarterly Volunteer Name on line, Months Committed

Organize & Schedule Program-speakers (M) _____ M A Ma J Ju Au S O N D Ja F
Recommend talent & topics (M) _____ M A Ma J Ju Au S O N D Ja F
Contact & Interview speakers (M) _____ M A Ma J Ju Au S O N D Ja F
Host & Introduce Speakers (M) _____ M A Ma J Ju Au S O N D Ja F
Produce a ppreciation media (M) _____ M A Ma J Ju Au S O N D Ja F
Present Certificates of Appreciation (M) _____ M A Ma J Ju Au S O N D Ja F

Build Speakers Bureau among members (S) _____
Publicize Inventor-Speakers for other Societies (S) _____
Host "Director Meetings" re INCA work (S) or (Q)uarterly _____
Offer periodic "Patent Application Audit" (Q) _____

Manage Annual Election of Officers (& Directors) (A)nnual _____
Build Candidate List for Officer Election (S) _____
Write voting issues for Elections (S) _____

Organize Sponsor-Base for INCA (S) _____

Manage INCA projects for Conferences (Q) _____
Manage INCA interface with new invention clubs (S) _____

Social Events

Organize mutual-interest social events (S) _____
e.g. Family picnic, Dinner-Dance etc

Educational Events

Commit time to Community-Inventor education (M) _____
Write and present program to support public school (S) _____
Integrate INCA projects with Entrepreneurial Classes (S) _____
Volunteer service days for Lemelson Youth Programs (S) _____
Work with TV projects about Invention (S) _____

Other ways I believe INCA members can help themselves and the invention community:

This input is from _____, tel _____,
e-mail _____ Date: _____ -

Congratulations Jack and Pat Merrill for getting US Patent 6,174,266. Playground Equipment.

Hammacher Schlemmer is again inviting inventors to make a product for their distribution. Their competition offers a \$5,000 reward.

[This may be as close as most inventors can get to a reward without “strings” attached.]

www.hammacher.com

Washington Techway of Feb 12 says

“Angel investors are pulling back, but money is still flowing to proven, well-connected entrepreneurs.

Dick Apley 703 305 9248 and Cathie Kirik 703 306 5568 of the USPTO Independent Inventors Office will be

“Celebrating the American Dream”. This is the theme for our **6th annual Inventor’s Conference on Aug 3 & 4 at the Doubletree at Chrystal City.**

Speakers include J Davis, inventor of the Eggserciszzer and Docie, author of the new Inventors’ Bible. These USPTO-sponsored events bring an excellent value toward meeting needs of independent inventors. Plan to be there!!!!!!

Get more specifics and sign-up at www.uspto.gov/go/iic2001 .