Ironman Inventing

Next Previous Contents

Researching Your Ideas -- Idea Development

Idea Development research covers myriad issues including concept prototyping, production design, manufacturing and sales channel identification, ongoing competitive research and more.

Last month we reviewed various methods of researching the important pre-development aspects of a new idea (invention). Assuming that the marketability, patent and non-patent prior art searches, patentability opinion, and the host of other qualifying data all indicated good commercialization potential for the new idea, the next phase of research begins. Now is the time for idea (product) development.

Just because the earlier research reinforced the success potential of the idea, the research is far from over. Throughout the product development phase, research must continue. Consistent confirmation from a variety of sources is important, especially since this phase can consume a lot of money and time. The reasons to continue research are many.

Consideration should be given to the fact that if development takes 6 months, much may have transpired in the "outside" world while the focus was on one's own product ideas.

New materials may have been developed that would allow the competitive "old technology" product your patent was to improve upon to be manufactured for a lower cost -- rendering your new idea less attractive commercially.

A patent that did not turn up during the preliminary search may have issued during the second month of development. In fact, your new product idea may now infringe on a newly issued patent -- and without continued research, you would have wasted considerable money only to learn much later that the patent issued.

A change in economics, political climate, consumer preferences or other market qualifiers may have changed; if your idea is sensitive to any such demographic or psychographic variables, constant monitoring is critical to success.

These are examples of factors that can change during the development

process.

Other research necessary during the development phase has to do with the development process itself -- information needed to properly develop a competitive technology or product. Development research may include many of the following:

Research of market segments to specifically determine marketable product features. Although most inventors "think" they know what the market wants in a new product, the reality may be quite different. Only research such as surveys, polling potential customers, dealers or other businesses that will be responsible for the distribution or sale will yield the actual sentiment regarding certain proposed product features.

Research regarding the best production methods. Although a product concept can be safely defined in loose terms, if detailed design is required to build prototypes and develop cost projections, the selection of the best manufacturing method can have a profound impact on design, features and costing. As an example, should a hollow plastic structure be designed as a blow-molded single piece item (such as a bottle), or as a high production injection molded part, built in two halves and joined using thermal or chemical welding? Only by researching the options with qualified technical references can the inventor arrive as a qualified decision.

Product or component sourcing for cost effective components during the development process is critical. Designing into the new product a part from an distributor's obsolete inventory, "making do" with a component simply because the inventor did not know where to properly source the component, or selecting the first workable component without consideration to long term cost or availability will drastically reduce the presentation value, actual value and negotiating value of the new product idea when presented to a potential licensee who can see through the lack of research by the inventor.

Funding/investment alternatives. If the inventor intends to manufacture and sell the product -- in lieu of trying to license the patent -- the need for future funding will be evident. Researching the various funding alternatives throughout the development process will significantly shorten the time required to develop the required business plan and evaluate the best funding alternatives. Delaying funding source research until one needs money will all but guarantee that the cash-starved project will wither before the funding arrives.

Potential licensee research. if the inventor intends to license the product/technology, the process of qualifying potential licensees should begin early in the product development cycle. A number of factors support this contention. Let's develop a simple scenario: Let's say the inventor develops a new disposable medical device.

Should the licensee be a plastic molder since they have the production technology?
Should the licensee be a medical products manufacturing company?
Should the licensee be a large medical products distributor?

Which of the above companies listed during the brainstorming session have a record of dealing with independent inventors fairly, have a record of successfully introducing medical products to the market, have the financial resources to dedicate to a speculative new venture, really do have the manufacturing and maintenance engineering capability to support long term product design, and product refinement?

Product compliance. Other research may include the identification of any governmental, environmental, fire and safety or other regulations that may affect the design, production cost, long testing and approval processes, or product liability issues. Overly burdensome regulatory compliance can bury a new product idea before it has a chance to reach the market. Understanding these obstacles early will prepare the inventor for the hurdles in obtaining approval and, hence, a marketable product idea.

Ok. So now that we have identified the importance of continuing research during the development phase -- and we understand the big picture regarding the information that needs to be researched -- where do we go to efficiently find the information?

With a virtual library available on the Internet at one's fingertips, we can quickly get into the thick of research data with little effort.

For product costing and production cost research, some good sources would be the Thomas Register of Manufacturers, that allows for free searching by keyword or manufacturing phrase. Contact the appropriate manufacturers or manufacturing engineering consultants and, after developing a light rapport, begin to get their advice and comments regarding design direction and cost alternatives.

The secret is to approach these companies as if you are a future customer (and you well may be). When the companies see future sales potential, they will share information. Another good source of manufacturers listings online is Kompass, Another source for product costing/material selection research is the trade association(s) most closely associated with your product or technology. The Society of Automotive Engineers (SAE), Society of Plastic Engineers (SPE) and literally thousands of other trade associations are invaluable in obtaining qualified information.

Most of these associations have Web sites, so simply search the Internet for "name + trade + association" on search engines such as HotBot, (currently one of my favorite search tools).

Of course, if you have a good local library, all trade associations are listed in Gale's Listing of Trade Associations -- the ultimate encyclopaedia of trade associations. You can then follow up "the old fashioned way" -- by mail or phone.

For research on funding sources, begin your search at the Inventor's Resource Funding site. From there, you will be able to quickly get into the meat of grants, venture capital, lending, private and government institutional sources of money. They all have different criteria, and each type of funding prefers a certain type of "investment" -- but that's part of the research to match up your requirements with their typical investment profile.

Need to conduct general research on competitive technologies? The tax-payer funded National Technical Information Service (NTIS), is a very good place to start. Other government supported sites include Fedworld (Federal Information Network), the Government Research Center, and the National Technical Information Service home page

Of course, routine searching of the patent databases is always a good idea to see what new patents in your field issue each month. There are a variety of free and fee-based patent database search engine listings on the Gibbs Group PatentCafe patent-search page. Once the inventor gets into the research mode, especially on the Internet, they will find links -- to links -- to links -- just full of useful information.

Spending a hour to understand how the search engines work, and how to best write a search query to quickly get the targeted results one needs, will be a skill that will forever be used. Get familiar with the search engines, try them all, and determine which ones provide the best returns to your search queries -- then research away. Suffice to say the Internet has made research so easy, the inventor who ignores its power and information is risking the entirety of his project. Use the Net!

We'll conclude this series next month with Idea Commercialization Research. This will focus on how to find, and implement, the resources necessary to take a competitive product to market and/or how to find and qualify a potential patent licensee. If the inventor has done the homework outlined in the first two sections of this series, part 3 will be the icing on the cake.

Next Previous Contents