



[www.AndyGibbs.com](http://www.AndyGibbs.com)

## **Technology Transfer: Intellectual Property & Business Development Alliances**

©1997, Andy Gibbs

Originally published [www.IPFrontline.com](http://www.IPFrontline.com), Saturday, August 16, 1997

<http://www.ipfrontline.com/depts/article.asp?id=101&deptid=3>

---

Introduction: Technology Transfer is one of the most mis-understood processes in American business today. Batted around as a "buzz word", most inventors, entrepreneurs and small business managers never spend the time to really consider how a commercial competitive advantage is right at their finger tips. They only need to reach out a tad further to grab the business benefits. This paper is intended to serve as a business primer for those who think they could put technology transfer to use, but have no idea about the process, options, or where to start.

### **HOW TECHNOLOGY TRANSFER WORKS**

Technology Transfer is that gray intersection where business, law, science, government and engineering meet.

For manufacturing, processing or service companies which will commercialize a particular newly technology developed by others, technology transfer means lower development or R&D costs, or shorter time to market. Technology transfer organizations can tell a company considering new product R&D whether the technology is under development by other companies or research groups, or whether the technology already exists, eliminating the duplication of R&D efforts and costs.

Technology transfer service organizations also help with technology and produce market assessment. With multi-disciplined, multi-industry expertise through an extensive network of field offices, engineers and research labs, a small business can quickly obtain a well-qualified market assessment for a proposed new technology or product. Without technology transfer organizations, the small business would not have this capability regardless of how much money it had to throw at the proposed product.

Technology transfer provides colleges and universities an outlet for their research. By licensing new technologies out to the business community which can adequately commercialize them, two parties benefit: the business gets access to technology they would not otherwise afford (or even be able to develop because of inadequate resources), and the universities receive licensing royalties which go back into further R&D or technology research efforts.

Commercialization programs, such as the one managed by the Jet Propulsion Laboratory (JPL) help to establish a working relationship between the R&D organization (such as JPL) and U.S. companies to transfer technologies developed for government programs to the private sector.

Inventors can also use tech transfer programs so transfer (or license) their technologies into organizations which can further develop or exploit the technology. The JPL is one of many organizations which have "Transfer In" programs available to inventors or independent R&D labs.

Technology Grants from NASA, the Department of Defense, Department of Energy, Department of Health and Human Services, and others, especially if the solicitations for development proposals sync up with the technology a small company is trying to develop anyway, could mean a financial R&D windfall for the small company's R&D budget. And this development could give the small company substantial competitive advantage in the marketplace which they would not otherwise have had.

Other organizations such as Competitive Technologies, Inc. (CTI) at Lehigh will help small to medium sized businesses assess their current technology against the international competitors, the Small Business Administration, through the organizations listed in this paper, and on the Web are almost unlimited.

- Transfer Technology from Government to Small Business (Transfer Out)
- Transfer Technology From University To Business (Transfer Out)
- Transfer Technology From Inventor/Author To Business (Transfer In)

## **TECHNOLOGY TRANSFER "OUT" FROM GOVERNMENT TO BUSINESS SECTOR**

(Case Study)

Wool Producers Were Not Counting Sheep As They Slept! They were counting the revenue they were losing (-\$XXX).

The quality of wool in the U.S. is below the New Zealand 100% virgin wool and, in an effort to establish a more solid international market position, the U.S. wool growers have to increase quality. One of the biggest quality problems is related to hay balers; when the polypropylene cord used to tie hay bales is tied around the bales and trimmed, small two inch pieces of polypropylene rope are thrown from the back of the baler. Once the rope unravels on the ground, the strands are separated. Later on, as the sheep roll and sleep on the ground, these small and almost invisible strands get lodged in the wool. It is not until the wool is dyed that these strands show themselves - they do not accept dye as the wool does.

Unless this problem can be intelligently addressed, U.S. wool producers will continue to have a difficult time delivering wool which competes favorably in the international market with Australia, New Zealand, Spain and elsewhere.

Dr. William Marmar, organic chemist at the USDA Hides, Leather & Wool Research Unit tried a number of technological means to dissolve the strands in the wool during processing, but to no avail. He contacted the National Technology Transfer Center (NTTS) which referred him to the Idaho National Engineering Laboratory (INEL), which brought another DOE lab in on the discussion. They also found trade associations representing wool and cotton producers (cotton, it seems, was picking up the polypropylene rope just as the wool was). This collaboration by and through the NTTS has resulted in a collaborative research funding effort which could reach to over \$30 million between the DOE, the American Textile Partnership (AMTEX) and the INEL.

Collaborators which develop the ultimate technology will own any resulting patents and trade secrets. Once a new technology or process is found, who will commercialize it? Not the Department of Energy, nor the NTTS, and not the INEL. Companies in the industry will make products, processes and service business from the this technology which they will license from the research organizations.

Manufacturers of hay balers, wool dyeing and spinning mills, cotton processing plants, polypropylene rope producers and others may all be potential future licensees of the resulting technology; they will all have access to commercially competitive technology, and will be able to produce competitive products and processes which they never could have afforded to develop on their own.

Becoming involved in the process early in the research process, and maintaining contact and contributing where they can with the research will assure that the "leading edge" producers get an early commercialization start once the technology is developed.

Using the funding and research resources of the U.S. Government for your private business enterprise is reason for any business outside the US to envy this capitalistic system. We often hear grumblings of "Japan Inc." through which a collective of business and government resources collaboratively deliver overly competitive products to the international marketplace. The grumbling should not come from those busicontinually develop new technologies in their classrooms and laboratories. Needless to say, the cost of this non-stop research is quite high, whether the university is a private or state funded institution.

The ability to generate revenues from this research allows continued investment in lab equipment, classroom space and faculty. Technology transfer from the college or university into the private business sector provides for the creation of this critically important technology license royalty stream. Engineering students have resources found only in the high-buck, high tech companies like IBM, Hewlett-Packard and others. Small business can tap into these R&D resources otherwise out of reach - this is how small companies can compete, at least on certain levels, with the advanced R&D capability of their larger competitors.

It would behoove every U.S. business to periodically contact all of the university technology transfer offices, especially local schools with a strong community interest, to review and assess the technologies available for license. If a technology matches the manufacturing processes, will satisfy the market niche it already serves, or compliments the R&D efforts of the business, it is only smart business to begin licensing discussions.

Some of the schools with well developed technology transfer programs include Stanford University, Northwestern University, M.I.T., University of Michigan, University of Washington, University of British Columbia, and the Indiana University.

The Association of University Technology Managers was established to help set legal, ethical and business guidelines for university technology transfer, and is a good resource for those businesses searching for appropriate technology to license in.

## **TECHNOLOGY TRANSFER "IN" FROM INVENTOR TO BUSINESS OR GOV'T**

Knowledge is power. Without the knowledge, independent inventors do, and will continue to get scammed by invention marketing companies. In fact, the ultimate objective of the independent inventors is to license their technology into a group which will commercialize it. Consequently, the inventor will (hopefully) receive royalties from the sale of "his" patented products.

IF INVENTORS BETTER UNDERSTOOD THE PROCESS OF TECHNOLOGY TRANSFER AND DEVELOPED RELATIONSHIPS WITH THOSE LEGITIMATE ORGANIZATIONS WHICH SPECIALIZE IN (AND HAVE A SUBSTANTIAL, VERIFIABLE SUCCESS RECORD) IDENTIFYING, COORDINATING THE CONTACTS, NEGOTIATING AND CLOSING TECHNOLOGY TRANSFER RELATIONSHIPS BETWEEN DEVELOPERS AND LICENSING ORGANIZATIONS, THERE WOULD BE NO INVENTION MARKETING SCAM COMPANIES TODAY. INVENTORS ... GET THE KNOWLEDGE!

Research Corporation Technologies, one of the two largest technology transfer organizations in the world, has a large contingent ready to help assess inventors' patents and technologies for patentability and commercial viability. They also house a Life Sciences Group which works with pesticides, bib-tech, veterinary products, monoclonal antibodies and plants, and a Physical Science Group which has

expertise in industrial processes, optics, electronics, instrumentation and chemical processes. If the small company or technology.

Of course, the inventor can simply approach various companies which appear to have the product line, manufacturing process, design expertise or distribution channel necessary to advance the patented technology or product. This process involves contacting the hundred or so manufacturers within a particular industry and presenting the product or technology for sale or license. Without proper legal guidance, this can be a challenging and daunting task, one which can even lead to litigation. This Here is a scenario of one of the simplest concepts of technology transfer for the small entity / independent inventor:

- Inventor patents a new plastic product for the kitchen,
- Inventor develops a business plan with revenue projections and outlines the sales and distribution methods,
- Inventor finds a local plastic molder with excess manufacturing capacity
- Inventor and molder strike a joint development deal in which the inventor transfers ownership in the patent or technology (for a cash or in-kind fee) to the molder,
- The molder manufactures the product,
- The inventor sells the product, Both win.

But if the inventor wants to expose their technology to large organizations which may have a keen interest in transferring the technology in, other organizations like EKMS and others published or promoted by the Licensing Executives Society may be just the ticket to future wealth and happiness.