

Managing Intellectual Property

(Results of a very express DE in the IP area)

IP in the informational era

In the informational era, IP share is constantly increasing to the point its volume overgrows other types of assets. (we believe Jim has mentioned that at the end of the 1990s in the high-tec area, IP had reached about 75% of an overall company asset.

It is quite obvious that IP management has to become the most important issue in managing company resources. However, today in the majority of companies IP is being created and managed using outdated tools and processes (compare with planning, management and amount of people involved in the management of other assets like finances, real estate, etc.).

For universities, IP creation and licensing and launching start-up companies are gradually becoming an important source of self-financing. It is reasonable to expect that in 10-15 years this source can become the main one as it is happening today with certain R&D centers.

Given the above, the old methods of IP creation and management have to be replaced with the modern ones. What could that be?

Passive mode of work of today's IP departments

Most of IP departments today are working in a stand-by mode – waiting for invention disclosures to be brought to them as a result of spontaneous haphazard unorganized innovation process. This mode of work lead to the following negative scenarios:

- R&D fails to create valuable IP for the following reasons:
 - R&D efforts are applied in the direction that is not promising from the point of patterns of evolution of technology and/or marketing.
 - Low level of creativity did not permit for valuable results
- R&D has produced valuable results, however, no invention disclosures have been originated because of:
 - The researcher does not understand the full potential of his/her work
 - The researcher does not have time or wish to deal with patenting
 - The researcher prefers open publication
 - The work results have been disclosed by mistake
- An invention disclosure was created, however is not valuable for the following reasons:
 - The invention essence is not fully and/or correctly described
 - Possibility of commercialization are not clear or real because the author does not see it or does not think it is important
 - Poor communication between the inventor and a patent lawyer

- Patent is not granted because of:
 - Insufficient novelty
 - Insufficient argumentation process in communication with the US Patent Office
 - Other reasons
- Patent is not licensed because of:
 - Original estimation of the invention's commercial value was inaccurate or incomplete
 - Market situation unexpectedly changed
 - The inventor does not see commercialization of the invention as his/her prime priority.
 - The inventor left the job or switched to another area of interest, etc.
- The patent does not benefit the inventor and/or owner but rather paves the pathway for competitors because:
 - The patent discloses opens an area with too many evolutionary resources without adequate protection.
 - Important applications are not protected

Active mode of work of IP departments – the next step in their evolution

It is quite clear that in the future IP organizations have to change their style of work from passive to active one capable to provide generation of the most valuable IP on demand.

This new work mode should include:

- Utilization of Express DE methods for identifying the most promising directions for the research in the areas relevant to the organization's R&D profile.
- Evolutionary analysis of the main (ideally all) R&D projects revealing their technological and market potential before their start or at the early stage.
- Providing creative support to R&D personnel and inventors, including:
 - Educating in the most efficient methods of innovation
 - Offering them innovation software packages
 - Providing innovation consultations in the course of work
- Providing recommendations on integration of certain directions of research of different departments and individuals within the same organization, establishing links and organizing fruitful collaboration between them.
- Helping unveiling promising potential inventions in on-going R&D projects.
- Helping with licensing

To ensure the function described above, the following recommendations could be made:

- Subordinate IP departments directly to the University President or other top executive within the organization
- Increase the size of IP department and qualification of their staff
- Introduce new special tools (methods and software) to support main activities

IPBI could provide:

- Perform the most of the described /recommended activities for various organizations.
- Develop new and enhance existing tools for the purpose and train how to utilize them.

Additional thoughts

Besides IP departments, emergence of the informational era will bring serious changes to various organizations and universities in particular. It means that conducting DE on evolution of universities can become of significant scientific interest and have commercial value.

We have already made certain works on the subject, including:

- Since 1982, the following areas have been addressed in our research:
 - Evolution of social systems and organizations
 - Evolution of scientific systems (theories, hypotheses, experimental methods and equipment) and methods of solving scientific problems.
 - Education in innovation and creativity
- In 2001 we conducted a vast research on DE of D. Bonner organization – Polymer Technology Center (PTC). In this research PTC represented a typical R&D organization, and the results of work included:
 - General history of evolution of research and R&D organizations
 - Influence of the overall technological evolution on methods and approaches to research.
 - Influence of social evolution on evolution of R&D organizations
 - Development of a description of the Ultimate R&D organization and ways to approach it.
- IN 2002 we spent a great deal of time developing the Research Workbench (RWB) Software. In the course of this work we have conducted vast research and collected materials related to the methods and tools for conducting R&D activities, including:
 - Discovering new effects and phenomena
 - Create scientific hypotheses
 - Improvement and further development of scientific hypotheses
 - Verification of scientific hypotheses
 - Developing experiments and measurements systems
 - Development of applications for a given phenomenon
 - Methods of accelerated system study and analysis
 - Group creativity facilitation

Based on completed work, we could conduct DE and develop effective models of evolution for universities as educational, research and social centers in the informational era.

It would be ideal to obtain such project from a university for 200-300 K.



Using materials we already have we could rather quickly (in 1-2 months) prepare a book about the evolution of R&D organizations and their future together with you. We mean that the authors of the book could be:

- Daryl - bringing the university IP experience
- Jim - experience in IP protection
- David - IP management in industrial corporations
- Zion - IP business
- Alla and Boris - evolution specialists

We can also find a good writer to make the book attractive and becoming a good market opener.