◈ 세미나(10. 26) ◈

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Ⅰ. Title: Research on the Management of Intellectual Property Rights at Universities and Higher Education Institutions

Ⅱ. Introduction:

In the 1983 report by the US Presidential Campaign Committee (committee member Young), a recommendation to strengthen the protection of industrial property rights and a pro-patent policy was proposed, as a crucial measure to enhance the global competitiveness of U.S. industries. Furthermore in 1996, Dr. Joseph Nye, former Assistant Secretary of Defense for International Security Affairs, indicated that information management is becoming an essential element for national security, not to mention for its military needs.

Meanwhile, since Japan's opening of production and sales to the international market. Japanese enterprises have been implicated in numerous disputes involving intellectual property. It is now apparent that a lesson has been learnt by enterprises, as seen in their move to improve their management of intellectual property. In addition, the protection of patents is gradually being provided for by the industrial world.

In contrast to this change in perception by enterprises, universities and higher education institutions in Japan have traditionally held that research and development (R&D) should be conducted independent from economic concerns and that the results of R&D by national public institutions should be shared with the public without receiving compensation. For this reason, movement to legally protect research findings through the procuring of patents has been lacking in this sector.

However, the expense of R&D is stupendous and there is also a limit to the funding available from within an institution. This is the context to the recent establishment of university-industry-government affiliations and the basis of the argument for advocating this relationship, rather than looking towards the market economy for research funding.

Herein lies the conflict on how to allow for the economic worth of research conducted at universities, etc. While allowing for the research to benefit society and the industrial sector. As a means to this transfer of technology, the inclination of universities today is to fully utilize policies concerning intellectual property rights and patents. However, in a 1994 survey, it was found that

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the number of patents held by Japanese universities were only one-fourteenth of the number held by American universities. Also apparent was the considerable difference in university-industry relations, as seen in the recent years appearance of Japanese enterprises, such as Toshiba and Hitachi, in the top ranking category for the number of U.S. patents held.

Therefore to promote intellectual property activities at Japanese universities, I gave surveyed and researched the past 20 years of cooperative mechanisms between U.S. universities and industry (preferential taxation systems for R&D, various agreements and intimate ties between universities and venture businesses, etc.). Based upon my findings, I plan to research the present condition of intellectual property management at universities in Japan. Following, I would like to propose a methodology for intellectual property management that I will call, "Japan-style."

Ⅲ. U.S. Case Study

1. Historical changes and the background of technology transfer at American universities

The U.S. plays a particularly important role in understanding the problems brought forth in the above chapter. Here I would like to discuss historical developments surrounding technology transfer, placing particular emphasis on the U.S., and then discuss the special conditions of th U.S. in relief of this context.

1) Historical changes: Based upon economic conditions and the regulations that were established in result of conditions, I have decided to divide history into three (3) general periods.
   (1) Before 1980 (previous to the Bayh-Dole Act)
   (2) 1980s (follwing the Bayh-Dole Act)
   (3) 1990s (developments in the U.S. and globally)

2) conditions that brought about these changes: Special circumstances at American universities
   (1) Internal circumstances regarding American universities: Research funding procurement method utilized by professors
   (2) External circumstances regarding American universities: Industry demands and the military presence

2. Technology transfer at American universities

U.S. model cases were reviewed based on individual precedent. I will argue that their sucess were due to the special characteristics of the region and period. This will be followed by a

criticism of the mythology that the introduction of industry-style reasoning (which I believe universities and government should not handle) to the university-industry-government framework is the cause of the U.S. success cases.

(1) University technology transfer system: Arrange according to style

(2) Policies for the promotion of technology transfer-Legislative system: An overview of legislative systems as represented by the Bayh-Dole Act

(3) Technology transfer success cases: Analysis of unsuccessful cases: Development of a matrix of functional conditions

(4) Merits and demerits of technology transfer policies in the U.S.: Development and technology due to regionalism and the reverse phenomenon of the sciences

Ⅳ. Japan Case Study

1. Examination of university technology transfer policies in Japan

Recently, in the midst of a boom in popularity of technology licensing offices (TLO) and a string of university reformation and demands for economic policies, Japan appears to be indiscriminately adopting the American success myth. A critical examination of this trend will be prepared.

(1) Policies based on government guidance: General statement on recently systematized policies and legislation.

(2) Systems based on the objectives of the individual university. The systems of national universities, such as Tohoku University, Tokyo institute of Technology, University of tokyo, tsrkuba University, etc.: and the systems of private universities such as Waseda University, Keio University, Ritsumeikan University, and Tokai University, etc. will be organized and arranged as much as possible.

(3) Problems with Japan's university-industry relations: Based on the above analysis, an evaluation of Japan's situation will be made in contention with research costs, ownership rights, technology evaluation, commercialization, etc.

Ⅴ. Conclusion - Proposal for a "Japan-type" intellectual property management system at universities

Based on the above argument, I will conclude this thesis paper with a proposal for a Japan-type system that incorporates the ways of Japanese society with the mission of universities.

THE BAYH-DOLE ACT

The Bayh-Dole Act (P.L.96-517. Patent sod Trademark Act Amendments of 1980) created a uniform patent policy among the many federal agencies that fund research, enabling small businesses and non-profit organizations, including universities, to retain title to inventions made under federally-funded research programs. This legislation was co-sponsored by Senators Birch Bayh of Indiana and Robert Do8e of Kansas and was enacted on December 12,1980.

Some of the major provisions of the Act include:

- Non-profits, including universities, and small businesses may elect to retain title to innovations developed under federally-Funded research programs.
- Universities are encouraged to collaborate with commercial concerns to promote the utilization of inventions arising from federal funding
- Universities are expected to file patents on inventions they elect to own:
- Universities are expected to give licensing preference to small businesses:
- The government retains a non-exclusive license to practice the patent throughout the world: and,
- The government retains march-in rights.

* The Act encouraged universities to participate in technology transfer activities. Prior to Bayh-Dole, fewer than 250 patents were issued to universities each year, In the past few years, U.S. universities participating in the Survey have averaged almost 1,500 patents annually.
* There are now more than 200 universities engaged in technology transfer, eight times more than in 1980, as evidenced by the membership of AUTM.
* Technology transfer - specifically the licensing of innovations - adds more than $21 billion to the economy and supports f 80,000 jobs each year. It huts helped to spawn new businesses, create industries and open new markets.
* Furthermore, a 120% in U.S. patent applications and a 68% increase in licenses from FY 1991-1995 indicate that the transfer of technology from academic institutions to the private sector will continue to grow in the next decade, generating future economic growth and health benefits.