

A Survey Of Aerospace Industry Inventor Incentive Awards

By Henry Fradkin and Allen Vaughn

Introduction

The Aerospace and Transportation Committee of LES (USA & Canada) was founded in 1998 to provide member companies an opportunity to network and exchange best practices for those involved heavily in manufacturing goods and products. As such, members have found their Committee to be valuable in enhancing their own licensing and technology commercialization efforts. To that end, the Committee has been conducting monthly teleconferences to provide a forum for discussing current opportunities and challenges outside of scheduled LES meetings.

The purpose of this article is to present the findings of a survey conducted among the aerospace members dealing with how these companies provide incentives and rewards to their employees for innovations and appropriate IP protection. This need to understand such incentives was a topic at several teleconferences, and the members agreed that a survey to lay out various practices could provide an important learning tool for not for this Committee, but perhaps for companies in other industries.

Setting The Stage

It certainly is no “secret” that all industries worldwide are being challenged by today’s adverse economic conditions. Based on discussions at our teleconferences and with companies and consultants outside of the aerospace industry, “carrot” licensing and sales of IP have become increasingly difficult. On an anecdotal basis, the market clearly is favoring “buyers” who are demanding and receiving lower fees and prices than those for deals in the past. Additionally, buyers are demanding IP and technologies that are close to or ready for commercialization versus being willing to accept projects that require significant development.

Accordingly, this situation puts a high premium on the capability of licensing and technology transfer executives to have a portfolio of attractive technologies available for commercialization. In turn, this means that there needs to be a continual and even increasing flow of innovations that not only improve the business, but also can be monetized on the outside through licensing and other arrangements (e.g., joint ventures).

There are two key factors that contribute to this necessary innovation flow:

1. Companies providing the necessary resources in terms of money (i.e., budgets), facilities, and time, and
2. Motivated employees to “fabricate” the innovations.

In their premier issue of *IP Matters* in April 2009, Thomson Reuters summarized the necessary responses to the current financial crisis all of us are facing in an article “A new set of rules for innovation in times of economic uncertainty.” In particular, they recommended that companies “should focus their IP and Intellectual Asset management strategies on resource optimization and innovation. They pointed out that IP portfolios can become a “fresh source of untapped value” where “forward-thinking executives need to establish new rules to promote innovation.

In essence, this is the challenge seen by the Committee member companies, and we conducted our survey to examine one aspect of promoting innovation...i.e., how companies reward and provide incentives to their inventors.

The Survey

The Committee agreed on a set of questions that would provide a good indication of what member companies were doing to provide both monetary and non-monetary incentives...with the objective of each company reviewing the survey results to determine whether practices by others could improve their own innovation flow. Survey participants included such companies as Boeing, Lockheed Martin, Northrop Grumman, Textron and United Technologies. In order to protect each company’s identity, we allowed the respondent to submit a blind response. Admittedly, our survey is not “statistically significant” based on the relatively small sample size of six companies, but

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we believe it still provides important information on which companies may consider incentive and reward systems.

As discussed below, the questions covered a wide range of innovation incentive situations and the amount of monetary rewards:

- Patents...for grants in the home country only, divisions, continuations-in-part, design patents, and foreign countries;
- Patent Applications where rewards were made for supporting the filing of an invention, both in the home country;
- Trade Secrets.

Questions also included non-monetary rewards, including various means of recognition. The next sections will provide the results of this survey.

Disclosures

In this first section, we looked at the incentives related to rewarding company inventors for their supporting company patent initiatives via submitting invention disclosures. Responses ranged widely in that 50 percent of the respondents did not provide any rewards for submitting a disclosure but 50 percent did as shown below and in Table 1:

1. Company 1 provides an award in the range of \$100-1,500 reflecting the quality of the invention and the number of team members; i.e., up to a maximum of two people and a maximum team award of \$1,500.
2. Company 2 provides an award of \$1,000 per person up to a maximum of two people and a total

award of \$2,000 per team.

3. Company 3 provides an award of \$100 but with no limitation on the number of team members and total team award itself.

Patent Applications

For applications, all but one company provides an inventor reward, and again the range varied widely as shown in Table 1 below. The key conclusions are:

- Supporting company efforts to apply for a patent is important, particularly in the “home” country.
- For the most part, incentives are not given to inventing teams for all other aspects of patent applications, which include such actions as Divisionals, CIP, Continuations, provisional patents, and foreign patents... with the following exceptions:

–One company rewarded its inventors for supporting filing of Divisionals, Continuations and CIPs...the same amount as the original home application of \$500 per member of the inventing team.

–Two companies provided a reward for foreign filings...but only if the foreign subsidiary has priority over the “home” country.

Patent Grants

Similar to the Disclosure rewards above, half of the companies provided some form of monetary award if a utility patent is granted while the same other half did not...see Table 2. In one case, a company did not provide a reward for the patent issuing but did so for

Table 1. Responses for “Original” Application

	Company 1	Company 2	Company 3	Company 4	Company 5	Company 6
Per Person Amount per person (if range specify range)	0	1,000	2,000	\$500-\$1,000	\$500 and an Invention/New Technology Award Certificate to each named inventor/originator if and when a patent application is filed in the United State	\$1,000 individual inventor
Additional People Eligible for Same Amount	0	2	1		Unlimited	\$2,500/N employees if more than one employee is an inventor
Maximum Per Application Maximum amount for multiple inventors (if range specify range)	0	3,000	4,000	1 inventor = \$1,000, 2 inventors = \$2,000, 3 inventors = \$2,100, 4 or more inventors = \$500 x number of inventors	No Maximum	

Table 2. Responses for Patent Grant

	Company 1	Company 2	Company 3	Company 4	Company 5	Company 6
Per Person Amount per person (if range specify range)	0	1,000		200	Up to \$1,000	\$1,000 individual inventor
Additional People Eligible for Same Amount	0	3		Yes	Unlimited	\$2,500/N employees if more than one employee is an inventor
Maximum Per Application Maximum amount for multiple inventors (if range specify range)	0	3,000 Elements at their discretion grant awards to former employees		No Maximum	No Maximum	

any Divisionals, Continuations, and CIPs.

As a general conclusion, companies that did reward their inventors for a patent or Divisional, etc. grant provided a monetary award no more than equal to that for the patent application and for the most part less than the patent application award. This recognized that the “real” inventor contribution to the patenting process was in the early stages of submitting an invention disclosure and then supporting the filing of the application.

Looking at a “special” case...i.e., design patents...only one company provided an incentive for its inventors...up to \$1,000 per person, with no limit on the number of team members and on the maximum team award. The range exists because the company will pay the reward based on what it considers the inventions quality and contribution to the company’s business.

Trade Secrets

Again, we found that there was a split among the respondents on whether or not incentives were provided to the inventors for “filing” a trade secret within the company. Of the half that did:

- The monetary award was less than those for filing a patent application, and for a patent grant for two of the companies:
 1. \$500 per person or up to \$1,250 split among the number of team members.
 2. \$100-1,000 per person with no maximum number of team members and award total... with the payment within that range conditional on what the company believes is the importance and quality of the trade secret.
- The third company strongly supports trade secrets and awards \$2,000 per person up

to \$4,000 if two people are on the inventing team.

Royalty Sharing

Only one company does not provide a monetary incentive to its inventors; however, it makes up for this by providing the capability for the inventing team to receive a share of royalties if the technology is licensed out to an unrelated third party. In this situation, the team can share a monetary award 10 percent of 3rd party royalty revenues up to a maximum of \$50,000 per year.

Other Monetary Awards

Four of the responding companies provide an additional form of monetary compensation over paying for inventors supporting the patenting process. These include:

1. An award of \$5,000 per team member presented at a banquet for each employee member and his/her spouse.
2. An award of up to \$10,000 per person for extensive use internally, plus if there are royalties generated through licensing out the rights to use the invention.
3. A varying amount of money per team member as a bonus based on the invention’s significance to the business as determined by corporate management and the vice president of the affected business unit.
4. Up to \$15,000 per team that could take the form of cash and/or company stock as determined by the company’s top management.

Non-Monetary Incentives

Virtually all of the companies provide some form of non-monetary awards. These are similar in their capability to provide material recognition to their

inventors...recognition that others in the company can appreciate; e.g., by the inventors displaying such items as:

- Plaques
- Crystal
- Letters of recognition from top management or certificates of appreciation.

Often, recognition and awards are made at various company functions, such as technical forums, banquets, and/or luncheons.

Some Other Considerations

As we noted above, Committee members are considering the survey results to determine whether practices by other companies would be effective in their corporate culture. But, in addition to our providing the results, we would like to offer some other considerations to improve innovation flow:

- **Activity Incentives**...based on both experience and past benchmarking, support from innovation-generating activities occurs best when the “right” incentives are provided by the corporation. This is particularly true to support more than “bare” patent deals where technical support enhances technology transfer. This results in licensees and buyers being able to commercialize IP faster through knowledgeable use of the know-how and thus being willing to pay a higher royalty or purchase price. In turn, by rewarding the activity, it can promote a continual stream of new inventions and provide organizational support for the activity’s inventors. The question is “what is the right incentive,” and virtually all companies have found that money...in the form of payments to profit centers or budget relief to cost centers...works best. For instance, Marshall Phelps, Corporate VP and Deputy General Counsel, Intellectual Property, Microsoft Corporation, once said:

“At IBM, we went from a net payer for IP in 1991-92 to a net IP licensing revenue of U.S. \$1.7 billion to U.S. \$1.9 billion when I left in 2000. We didn’t treat this money as profit, but circulated it back to the developers to encourage their cooperation with the licensing program.”

- **Defensive Publications**...There was one other initiative that we forgot to address, and that is a reward scheme for those involved with crafting a defensive publication. The authors are aware of some companies that provide a modest reward...e.g., \$500 per inventing team member...if the company chooses to go this route rather than creating new IP; i.e., a patent, copyright or trade secret.

- **Expansion of Usage Awards**...referring to the “Other” category above, only one company rewards its inventors based on usage in the business plus significant royalty income generated from the IP/technology. Based on his experience at Ford where many inventions and patents were not used in the business, author Fradkin expanded the definition of “usage” from internal business purposes only to include all contributions the technology or invention made to the bottom line; e.g., license royalties, sales, patent donations (when they were done), etc. Ford inventors enthusiastically appreciated this wider definition and were fully supportive of commercial initiatives while working on new innovations.

Summary

All of the participants indicated that their incentive reward system is working well. Some thoughts to take-away from this article include:

- An incentive or reward system for inventors is desirable to ensure both a flow of new innovations and support for IP commercialization initiatives.
- Companies need to devise the system to be congruent with their corporate culture; e.g., sharing royalties may only work in selected situations.
- Both monetary and non-monetary rewards should be used as forms of recognition.
- Non-monetary rewards, such as plaques and even dinners, are reasonably low-cost, highly appreciated forms of reward and always should be part of an inventor incentive system. ■

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