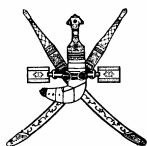


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WORLD INTELLECTUAL  
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## **WIPO NATIONAL WORKSHOP ON INNOVATION SUPPORT SERVICES AND THEIR MANAGEMENT**

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**RELATIONSHIP BETWEEN EMPLOYED INVENTORS AND EMPLOYERS:  
LEGAL, CONTRACTUAL AND FINANCIAL QUESTIONS**

*Document prepared by the International Bureau of WIPO*

## INTRODUCTION

1. All inventions are the result of human creativity, curiosity, and ingenuity. The authors of the first modern intellectual property laws recognized that inventive creativity had to be encouraged and rewarded, since it contributed to the technological and economic progress of society. The first IP laws, drafted and adopted in the late 18<sup>th</sup> and early 19<sup>th</sup> centuries, were designed to be an incentive for creative and entrepreneurial individuals through offering inventors the privilege of exclusive rights in their invention in exchange for the disclosure of its essential content. Many such inventions were at the origin of new products and services and indeed whole industries.
2. If we look today at patent statistics, we will find that the great majority of applications for the protection of inventions are filed by companies, organizations and corporations, and only a few by individuals. There is a shift in the ownership of inventions from individuals to companies and corporations, indeed some studies show that over 80 % of patent applications in industrialized countries originate with employed inventors, while for patents actually granted the figure is even in excess of 90 %. One cannot therefore overlook the question whether, since employed inventors receive a salary, they need to be stimulated to create the inventions that they do create, and if so how it should be done.
3. A good solution that will encourage employees to create new inventions will have many benefits for a country, its research and development organizations and its industrial companies. Today legislators in many countries recognize the powerful role of the IP system in stimulating investment in R&D and new product development on the part of companies and corporations. At the same time they see the need to encourage and reward individual inventors, and in particular the employed inventors who are creating and developing such inventions.
4. The provisions concerning inventive and innovative activities and inventors' rights contained in national and international laws and treaties are very useful and necessary for securing the protection of rights and interests of inventors, in particular employed inventors and innovators. What is the basis for such a statement?

## ENCOURAGING EMPLOYEES' INVENTIVE AND INNOVATIVE ACTIVITY

5. Today it is obvious that so-called non-material or intangible assets or property have a very high value that generally exceeds that of material assets. They comprise not only inventions, innovations, patents, know-how, marks and industrial designs, but also all forms of organization and potential methods of implementation, quality assurance, training programs and methods, advertising campaigns and methods, distribution networks and so on.
6. In many countries employers and employees can determine by employment contract whether inventions made by the employee in the course of his or her work, under certain conditions which are usually freely agreed, become the property of the employer - in most instances even without any substantial remuneration of the employee. The German "Law relating to Inventions made by Employees" provides that inventions made by employees first of all belong to their creators, and may become the property of the employer only by a special act of transfer of rights and against special

remuneration. The US Patent Law requires each patent application to be signed by the inventor, who may be bound under his labor contract with his employer to assign his rights in the invention to the latter.

7. There are great differences in the ways in which the various countries handle employees' inventions (also called service inventions) – ranging from very detailed regulations contained in special laws (as in Germany) to no regulations at all (as in the USA). National legislation rules this specific legal field under different laws and with large differences in the depth and detail of the provisions. Some examples that illustrate these differences are:

|   |                                      |
|---|--------------------------------------|
| <u>Patent law</u><br>(United Kingdom, France) | <u>Contract law</u><br>(Switzerland) |
| <u>Special law</u><br>(Germany, Norway)       |                                      |
| <u>No law at all</u><br>(USA)                 |                                      |

8. The purpose of most of the legal provisions on inventions created by employees is to encourage such employee-inventors not only to make the inventions, but also to notify them to the employer as soon as possible so that the company can make use of them. In order to make such a procedure attractive to inventors, the principle of specific remuneration for inventions made by employees is also introduced.

9. The international conventions in the field of industrial property emphasize the rights of inventors in relation to their inventions (without distinguishing between employed and independent inventors; see Article 2 of the Paris Convention for the Protection of Industrial Property, Articles 2, 4 and 22 of the Patent Cooperation Treaty and Article 60 of the European Patent Convention). In the international conventions and treaties, questions related to rights and obligations in this legal field refer mostly to national law.

10. Employed inventors and innovators can be treated in very different ways, more often than not depending on the personal attitudes of the owner of the company, its top management or existing company culture (which is not always favorable). In many situations the employed inventors and innovators are not aware that they have any rights in their inventions and creations. Appropriate laws and correct implementing regulations will facilitate the application of provisions on inventors' rights and ultimately contribute to the establishment of a regulatory and economic environment that is supportive of invention and innovation. This will bring benefits to all actors involved in the innovation process (and not only its financial aspects), in particular the inventors and the companies for which they work, but also society as a whole.

11. In countries where employee-employer relations are regulated by law most companies do not have internal, company-specific rules and regulations: they apply the relevant laws directly. A number of companies have introduced specific rules to ensure that IPRs are identified and reported to the management and that proper IPR management procedures are applied. This will guarantee that property rights, including

IPRs, are closely monitored to secure their maintenance and diligent use in the various activities of the company.

12. At the company level, we can observe that innovative companies and market leaders have in the large majority of cases developed and implemented company-specific innovation and invention-promoting schemes. Larger firms or major multinational corporations usually have experience of reaping the benefits of their employees' creativity. This is also one of the reasons why such companies adopt a corporate culture that features an innovation reward scheme as a mandatory component, the aim of which, in every case, is the continuous improvement of processes and products using the innovative creativity of employees.

13. In principle there are two types of innovative and inventive activity on the part of employees that will benefit their companies:

(i) improvements to existing products and processes that are not patentable by law but have a favorable economic effect (e.g. by reproducing third parties' experience, or developing new solutions that are not patentable), proposals concerning new ways of organizing work, the creative development of software applications, creative sales and publicity campaigns and so on;

(ii) inventions that are patentable, and other novel solutions for which legal protection can be obtained (original industrial designs, trademarks, works protected by copyright, etc.).

14. The innovative potential of human resources can be enhanced also by positive management and stimulating leadership. Today innovation promotion forms an integral part of competitive management systems like *TQM* (Total Quality Management) or national and international awards and distinctions, such as the EFQM Excellence Model (European Foundation for Quality Management), the Japanese Deming Prize, the American Baldrige Prize or other similar prizes and distinctions.

#### LEGAL FRAMEWORK GOVERNING THE RELATIONS BETWEEN EMPLOYED INVENTORS AND EMPLOYERS

15. In many countries the relations between employed inventors and their companies are regulated by laws or internal company rules or both, which may be very brief (leaving room for broad interpretation) or detailed and descriptive, imposing specific procedures, rights and obligations.

16. The legal area that has to do with invention and innovation activities is situated just on the borderline between patent law and labor law, and for that reason in some countries (Germany, Norway) the treatment of employee-inventions and inventors' rights is regulated by special laws while in others it is governed by provisions in the trade law or business law, with a third group of countries having opted for provisions written into their IP laws.

17. One of the main differences between the various national laws turns on the question whether any compensation is payable (to the inventor) if a specific right relating to an employee-invention (or service invention) is assigned by law or by

contract to the employer, and if so how much; this is a material question, so controversy can be expected. Where a specific law exists, it will generally include some specific rules for resolving possible disputes.

18. There have been lively arguments between legal experts over whether the “monopoly principle” or the “extra service principle” should be applied. The question should be looked at as the two sides of a coin. There is a work result aspect and there is a monopoly aspect, and both have to be taken into consideration. From a practical point of view reasonable compensation for inventors is obviously the best way of enhancing inventiveness.

19. A set of specific definitions is necessary to avoid misapprehensions or the application of a one-sided understanding. First a definition is needed of what shall be considered a “service invention” or “employee-invention.” It is necessary also to establish rules concerning the rights and obligations in the relationship between the employer and the employed inventor.

## RIGHTS AND OBLIGATIONS OF EMPLOYED INVENTORS AND EMPLOYERS

20. As already mentioned, most of the legal regulations dealing with employee-inventions (or service inventions) are based on the principle that the invention is created by the employee or employees and owned by him or them as with all related rights, subject to later transfer to the employer under certain conditions. The same principle is the legal basis for contractual arrangements, which are common practice in many countries.

21. Some of the main rights and obligations of inventors and employers in relation to service inventions are given below, using the example of the German law, which goes into great detail:

- Obligation (on employee) to notify every invention;
- Requirement to claim the “service invention” designation;
- Claim of limited rights (employer);
- Filing obligation - for Germany (employer);
- Option for employer to file for protection abroad;
- Obligation (on employer) to reassign (to inventor) before abandoning;
- Specific right to keep confidential (subject to ... );
- Employer obligations terminate after “full” compliance;
- Certain options with “free inventions”;
- Compensation obligations (including for own use);
- Arbitration rules.

22. The law obliges employed inventors to notify any invention to the employer. However the employer is not always obliged to wait for the notification from the employee-inventor: he may also claim and acquire title to an invention when he has received information on it from another source. The law provides also for the possibility of claiming only limited rights in the invention, but this only a theoretical possibility, as it carries considerable disadvantages for the employer. In practice, therefore, the employer will always claim unlimited rights.

23. The law obliges the employer at least to file a patent application in Germany. In practice there are just a very few exceptions, which include waiving the rights in the invention subject to compensation, treating it as a trade secret on the ground that it is not patentable and assigning ownership to a third party against immediate compensation.

24. The employer has the option of filing for patent protection in other countries, and under the law the inventor may also, independently, file applications in other countries. Today this principle is outdated, and in many cases unacceptable to the employer in view of his international business relations. Usually the employer will overcome the problem by offering additional compensation to the inventors, and statistically there are only very few patents owned by employed inventors. The same is also valid for national patents, in spite of a general obligation by law to offer reassignment of a patent to the employee-inventor before it is abandoned.

25. In fact it would be really surprising if the inventor were to make an easy profit from owning a patent abandoned to him by the employer because of costs, risks or other disadvantages. However, an inventor who left the company with a reassigned patent could sometimes interfere with the latter's business.

#### Definition of Invention

26. Inventions in terms of the German law are only technical inventions, which can be protected by patents or as utility models (a lesser invention covered by registration). The law does not refer to other employee creations, which may be protected by design, copyright or other legislation, so those kinds of creation are not subject to the binding regulations of German law. For that reason copyright creations, for example, could be subject to provisions of an employment contract under which the rights in all such creations made by the employee in the course of his employment belong de facto to the employer, without any specific remuneration being payable for instance.

#### Definition of Employee

27. German law covers only employee-inventions. Employees are persons engaged by an employer in the sense of the country's Labor Law and legal practice. Accordingly executive or managing directors, or other high-level personnel, who occupy employer-like positions, are not considered employees, with the result that the law on employee-inventions does not apply to inventions made by such persons.

28. Also, if the employment is not governed by German law, particularly in all cases where one party, namely either the employee or the employer, is not a German national or resident in Germany, the national legal provisions may not be applicable to inventions made by the employee.

#### Service Inventions and Free Inventions

29. Not all inventions made by employees are subject to the law, which makes a distinction between "service inventions," which are compulsorily regulated by it, and "free inventions," which may or may not be treated in accordance with the law on employee-inventions.

30. Service inventions are inventions that either originate in the day-to-day work that the employee is doing in a company under a regular employment contract, for instance when a chemist working in R&D for a pharmaceutical company invents a new drug, or one that is essentially based on his experience within the company. All other inventions are free inventions, such as where the same research chemist in the pharmaceutical company invents a new toy.

#### Obligations of the Employee after Invention

31. In the case of service inventions, the employee has the duty immediately and completely to notify any such invention in writing to the employer. At that time the invention is still the property of the employee, and even notification to the employer does not change the position regarding ownership and title. The notification must be complete: it must provide the

employer with knowledge of the invention, including the prior art on which it is based, the problem that it purports to solve, the solution proposed, the degree to which internal knowledge within the company contributed to its creation and also the contribution of possible joint inventors.

32. In case of free inventions, or what the inventor believes to be free inventions, the employee has to inform the employer in such a way that the latter can make up his own mind about whether a free or a service invention is involved. Such information is only unnecessary if it is obvious that the invention is of no interest to the employer.

#### Acquisition of Ownership by Employer

33. On receipt of written notice of a service invention the employer has a limited period of four months within which to accept the notification and express interest in acquiring the rights in the invention. If the employer does not react within the period specified in the law, the inventor can dispose of the claimed invention at his discretion. An invention so released, whether expressly by the employer or de facto, remains the sole property of the employee, who can sell or license the invention without any further rights accruing to the employer in relation to it. Obviously, the employer will exercise this option only where it is absolutely certain either that the invention is not patentable at all or that it is of no interest to him whatever.

34. When the employer receives written notice of a free invention, he has a period of three months within which to dispute the invention's "free" status and claim instead that it is a service invention.

35. The employer will usually claim unrestricted interest in the invention throughout the four-month period. By virtue of this unilateral act the ownership of the invention accrues to the employer, and from that moment on it no longer belongs to the employee. Claiming unrestricted interest in the declared invention is the only means whereby the employer can secure full control over an invention made by one of his employees and prevent the inventor from retaining any rights, such as the possibility of using the invention independently, for instance by licensing it to third parties.

36. In order to protect the interests of the employer, German law lays down a detailed procedure for cases of incomplete information and other anomalies. The employer also has the possibility of declaring a limited claim on the invention, which has the effect of the ownership of the invention remaining with the employee, giving him the right to protect the invention, for instance by filing a patent application at his own expense and in his own name, and to make use of it by licensing it to a third party or otherwise. In that case the employer retains the non-exclusive right to use the invention. The advantage of such a limited claim for the employer is that he has no costs to bear, such as for patent protection, but the drawback of course is that, in the absence of full ownership, he cannot prevent third parties like competitors from using the invention should his employee decide to make use of it in that way.

## OBLIGATIONS OF EMPLOYER AFTER ACQUISITION OF OWNERSHIP

### Protection of Invention

37. After acquiring full ownership of an employee's invention, the employer has the duty immediately to file a patent or utility model application in Germany. According to recent case law such an application in Germany can be replaced by a European patent application designating Germany or by a PCT (Patent Cooperation Treaty) application designating Germany either directly or via the European Patent Convention (EPC). The employer is obliged to inform the inventor of any details of such an application, and to keep him informed of its eventual fate.

38. The employer is obliged, well before the end of the 12-month priority period under the Paris Convention for the Protection of Industrial Property (the period is 12 months from the date of first filing, during which time additional patent applications can be filed in other countries party to the Paris Convention with the benefit of the same filing date), to inform the inventor of his intention to seek protection in other countries, and at the same time to give him the possibility of filing foreign applications within the priority period at his own expense and in his own name. In such a case the employer is entitled, at the same time as he gives the information to the employee, to retain the right to use the invention non-exclusively in foreign countries in which the inventor may have filed a patent application in his own name.

39. Should the employer intend at any time to abandon a domestic or foreign application in respect of the invention, he must inform the inventor accordingly, thus giving the employed inventor the possibility of taking over the application or patent, as the case may be, by assignment, for further prosecution in his own name.

40. Should the employer not wish to file a patent application for an invention duly communicated to him by an inventor, he may decide, at his sole discretion, to keep the invention as a company secret, in which case he has to inform the employee of his decision. At the same time however he has to declare that in principle he does not deny the patentability of the claimed invention, with the consequence that the employee-inventor will have to be paid remuneration as if the invention actually were protected by patent. If the employer wishes to keep the invention as a company secret but does not consider it patentable, he has the possibility of applying to the Arbitration Committee for Employee-Inventions at the German Patent Office for an opinion on the invention's patentability. The Arbitration Committee will examine the patentability of the invention in a secret procedure.



## Remuneration for Invention

41. The second duty of the employer, after he has acquired unrestricted rights in and ownership of an employee's invention, is to pay the inventor reasonable remuneration for it. The principle here, according to the law, is that the inventor is entitled to equitable participation in the specific advantages that the employer derives specifically from the invention.

### (i) Methods of Determining Remuneration

41. German law provides three methods of calculating an inventor's remuneration. One method consists in what is known as the license analogy, where the inventor is given a certain percentage, based on the net sales made by the employer, which is calculated in relation to a reasonable royalty that the employer would have been receiving from a third party had a license been granted to that third party. This method is by far the most widely used in Germany.

42. Another possibility, specifically used when an invention relates to a certain kind of manufacturing process that does not modify the end products sold, but rather improves the in-house operations of the company, is for the employee to receive a certain percentage of the internal cost savings that the employer achieves by using the invention.

43. A third and final possibility is the free estimation of the value of the invention, in which the inventor is entitled to participate. This method is used for instance in cases of cross-licensing without real royalty income or purchase price income for the employer.

44. In general, the first step in determining appropriate remuneration is always to work out the value of the invention, using either the license analogy, the internal advantages or savings method or the free estimation. Then an individual percentage is calculated for each inventor, known as the "share factor," which is based on the relationship between the position of the inventor within the company and his invention. For example, a research chemist, who is expected to develop new chemical formulas and compositions, would receive very modest remuneration, while if the invention were made by a person not being paid to invent, in other words an ordinary worker in a chemical factory, he would receive almost as much remuneration as an independent third party licensing the same invention to the employer.

### (ii) License Analogy in Practice

45. The first step in such a case is to find out what the reasonable royalty rate in the industry sector concerned would be. For example, in mechanical engineering the common royalty rates are around 4%, based on net sales.

46. The second step is to determine the personal share (contribution) factor of the inventor. This does not mean the personal percentage ownership of an invention accruing to a certain inventor where there are more than one, but rather the fact that, even where the invention is made by a single person, that person is not, being an employee, entitled to the full remuneration that a third-party licensor would usually negotiate from the employer.

47. The share factor is determined on the basis of three parameters, namely:

- (i) the contribution that the company or employer makes towards identifying the problem to be solved by the invention,
- (ii) the contribution that the company or employer makes towards solving the problem, and
- (iii) the position and duties of the employee in relation to the company or employer.

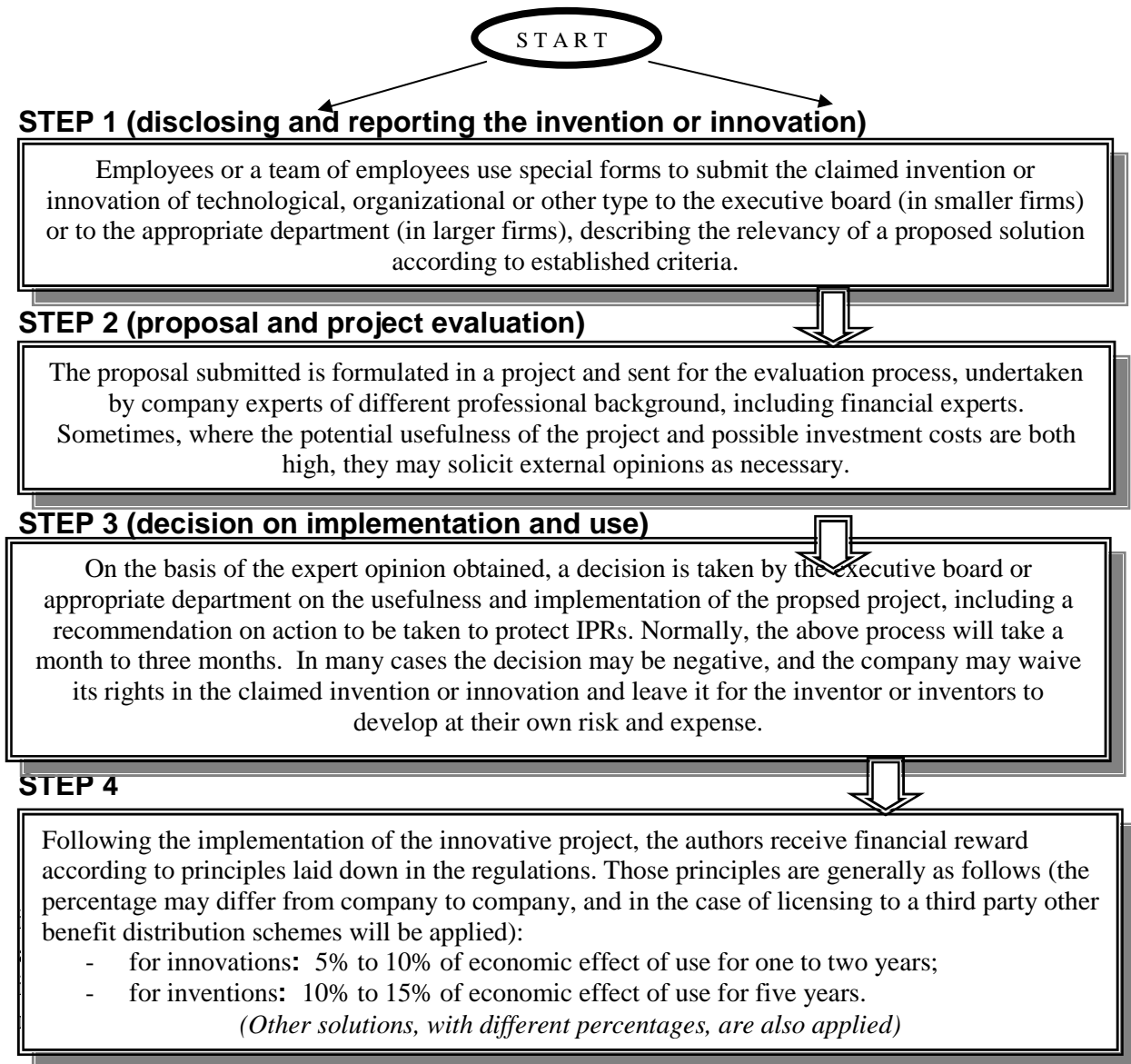
48. Without going into the details of the rules laid down by German law, the above three parameters would lead to a remuneration rate of 0.4% of the employer's net sales of the product deriving from the invention to be paid to an employee-inventor who is a senior chemist in a research department. This is based on a share factor of around 10 %, which means that the employee is paid 10% of the 4% royalty reasonable for the specific industry sector, namely 0.4% of the employer's net turnover (meaning the accumulated turnover achieved as from the first use of the invention by the employer, not the annual turnover).

49. In the case of high turnovers, the turnover achieved by the employer is devalued before the share-factor-reduced royalty rate is applied, so that beyond a turnover of about 1.500.000 € a reduction of 10% occurs, and further reductions follow with increasing effect until, at turnover levels in excess of 50,000,000,00 €, the royalty is reduced by 80 %. In other words, for turnovers above 50,000,000,00 €, the employed inventor in the above example would no longer receive remuneration of 0.4 %, but only 0,032% of the employer's turnover.

50. Finally, it should be noted that, after notification of an invention, the agreement between employer and employee could even provide for complete renunciation of all remuneration on the part of the employee; he does however retain the right, up to six months after the termination of any employment agreement, to object to any remuneration deal that he may have concluded earlier as being seriously unfair, and certainly such circumstances will be considered by the courts in such cases as where inventors have renounced remuneration that would have been considerable if payable.

## PROCESSING INNOVATION PROPOSALS IN COMPANIES

51. The following diagram shows the most usual way of handling invention and innovation proposals within industrial organizations:



52. In some companies the procedure of adapting and implementing innovations and inventions has been extensively simplified: the manager can decide himself whether any new idea can be profitably implemented and financially supported, even without any formal assessment or documented evidence. However, this can have an adverse effect on inventors' and innovators' rights and interests.

#### Dispute Settlement

53. German law provides a unique possibility of solving disputes between employees and employers in relation to inventions made by employees.

54. A special Arbitration Committee has been set up for the purpose at the German Patent and Trademark Office, consisting of a member with a legal background (similar to a judge) as chairman and two members with technical experience (usually examiners from the Patent Office, chosen for the specific case according to the subject matter involved).

55. Whenever an employee and an employer, during a still-pending employment agreement, have a difference over claims based on the Law on Employee-Inventions, they are obliged, before going to court, to put their case to the Arbitration Committee. The Arbitration Committee then makes a proposal (in many cases relates to the level of remuneration). If the parties do not object to the proposal within a month after notification, it becomes binding. Otherwise the proposal is null and void and the parties can go to court.

56. Even after termination of an employment agreement the parties still have the possibility of submitting their case to the Arbitration Committee rather than going straight to court, but they are no longer bound to do so.

57. The Arbitration Committee also plays an important role in determining whether or not certain inventions that the employer wants to consider company secrets are patentable.

#### WHAT IS THE PRACTICE IN HANDLING EMPLOYEE INVENTIONS?

58. The procedure and practice of dealing with inventions created by employees depends largely on the size of the business, the type of activity (research-intensive, fast or slow product replacement cycle, competitive or monopolistic market, vision of the management, etc.). Large companies represented in many countries and facing strong competition understand the power of innovation, and will pay compensation under incentive plans of their own, even without any obligation under local law to pay compensation to inventors. Medium-sized companies will opt for minimal to average patent protection for inventions, and sometimes will maintain patent applications without deriving any benefit from them and even pay compensation to inventors, believing that they would not otherwise be entitled to use the inventions. In the worst case, as with many small companies, the words “invention” and “patent” do not convey anything either to the employer or to the employed inventor, who at best might believe the concepts to be something important to larger companies or organizations.

59. In practice the relationship between employers and inventors varies considerably depending on the size of the company, the type of industry and the country. The following summary is based on the experience of some countries of the European Union:

- Small employer (1-5 employees) Does not know about rights of employee-inventors, uses an invention, never files a patent application and does not pay compensation to the inventor;  
     The inventor Does not claim anything (rights or compensation);
- Medium employer (up to 100 employees) Does what he likes, files a patent application as an exception rather than as a rule and in the home country only (and only if he uses the invention); gives some incentive to the employed inventors;

The inventors: Accept compensation in the same way as other bonuses offered by the employer;

- Major employers: Follow the home-country law, try to protect inventions abroad (at minimum cost if needed to protect markets), pay employed inventors under own (company-specific) incentive system or apply national legal regulations (where they exist, e.g. Germany, Norway, Finland);

The inventors Are interested in developing and reporting inventions, which represent potential value to the company, and they receive recognition (company, public) and in some cases attractive remuneration.

## CRITICAL OBSERVATIONS ON THE USE OF INNOVATIVE REGULATIONS

55. Experience has shown that the profits from innovative activity in industrial and R&D organizations are unquestionable. However, in the practical application of established rules there are also some shortcomings, particularly in connection with the activity of employed inventors, which provide grounds for critical comment:

- (i) very bureaucratic and slow processing of proposals, especially when the innovators are in lower positions, like ordinary workers;
- (ii) unethical approaches of managers towards subordinates who independently present common innovative projects;
- (iii) in some cases persons are added, mainly from the senior and top management level, to the individuals or teams proposing inventive or innovative projects;
- (iv) disproportionate distribution of financial benefits according to managerial position rather than according to intellectual contribution to projects;
- (v) general disregard for people of lower rank who may have contributed much to the definition and completion of various innovative projects;
- (vi) very protracted consideration of some innovative projects, particularly when the original inventor does not agree to add other persons as joint inventors or to modify the calculation of possible benefits (that add to personal financial rewards);
- (g) lack of motivation in some administrative departments (envy, working often without commitment or even professional competence and willingness).

## THE EUROPEAN CONTEXT AND THE FUTURE

56. As already mentioned, the provisions of German law as partly discussed above are unique to Germany, where they are considered valuable assets, not only by companies

and trade unions but also by the Government. Most European countries are engaged in a process of harmonizing laws and regulations in many sectors such as environment, transport and energy, but also in the field of business, social security and labor at the European level. In the course of this process many provisions are discussed, and some are adopted that are similar to those existing today in German law.

57. It is difficult to foresee what the final outcome of the harmonization efforts will be. Given the present state of discussions between the various member countries of the European Union, it may be expected that some middle way will be found to balance the interest of industry in having wide and easy access to innovations and inventions and that of employees in receiving due recognition and reasonable remuneration for their innovative efforts. The intellectual property system will no doubt play an important role, but also the attitude of companies and corporations towards the intellectual property generated by their employees.

#### CONCLUSIONS AND INDICATIONS FOR THE FUTURE

58. Creativity and inventiveness are at the heart of continuous improvement, higher quality, productivity growth and increased corporate competitiveness. Inventions and innovations are important elements that, combined with entrepreneurship, will contribute to the reduction of unemployment through the establishment of different kinds of new company and business, mainly SMEs and spin-off companies. Inventions and innovations are for the most part generated by researchers or inventors from R&D environments, but also by employees working in other company departments (e.g. manufacturing, marketing). Companies and countries should provide the necessary regulatory framework for giving due recognition and adequate remuneration to inventive and innovative employees and collaborators. This will significantly influence the competitiveness of companies and customer satisfaction, and contribute to economic growth.

59. The social impact of inventive and innovative activity is also very important, as it leads to the creation of new companies and industries and, last but not least, will also bring about a substantial reduction in local or regional unemployment, or both.

60. On many occasions, the social effect of small and incremental innovations and inventions, and the need for due recognition of their authors, is often overlooked or not considered owing to a natural human dream about fantastic inventions, intended to effect a huge leap in the development of mankind, to solve all people's preoccupations and problems in one instant. But this is not possible. Magic and unlimited skills exist only in the legends and fables of national folklore. However, the power human dreams is one of the driving forces of all inventors, creators and innovators, in all areas of life and at all intellectual levels. They should be encouraged and recognized, as the practical results of impossible ideas are those that will drive technology and the economy forward.

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