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E N H A N C E M E N T

S T R A T E G Y

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Two workshops on technology transfer contracting and negotiation were organized by the TAN Section in April under the African-TIES programme's human resource development component. These were held in Conakry, Guinea, in cooperation with the Ministry of Industry and in Douala, Cameroon, in cooperation with the Ministry of Industrial and Commercial Development on 6 - 9 April and 13 - 16 April, respectively.

The workshops were aimed at creating awareness on general and specific issues of technology transfer as they affect the development process particularly emerging trends and developments which impact on national technology policies and strategies; appraising negotiators on contractual provisions and principles as they influence the success of the technology transfer process; and providing know-how and information on the preparation and structure of various types of contracts that will cover the specific concerns of developing country recipients

African-TIES workshop series in April

The workshops followed the methodology evolved by the TAN Section to provide a systematic and professional approach to the execution of its capacity-building programme, i.e., substantive consultation with the counterparts on the content of the workshop programme as a means of ensuring a fit with the specific areas of need and interest of participants and the country in general, use of visual aids during presentations, use of teaching materials in the form of the finished chapters of the Manual on Technology Transfer Negotiations consisting of a basic text with an in-depth treatment of the subjects covered, a set of instructions for trainers, handouts and visuals and their subsequent circulation to the work

shop participants; use of case studies as a means of illustrating real situations and stimulating an analysis of such situations in the context of theories learned; use of national and regional experts in the training team as a means of imparting the skills and knowledge on negotiations to potential trainers of negotiators who could subsequently be able to conduct similar courses in their country on a self-sufficient basis; and a one-day advisory service programme to provide an opportunity for one-on-one consultations and direct advice on specific problems and issues arising from specific technology transfer transactions.

The recommendations, in both instances, emphasized the importance of continued sensitization and awareness-building programmes in the field of technology acquisition and negotiation in Africa. As these were the first workshops of their kind organized in both countries, these are viewed as laying the groundwork for future training workshops under a systematic national capacity-building programme.

UNIDO Capacity-building programme in Senegal

A training programme for a team of national experts and potential trainers set up to implement advisory service on technology transfer and conduct regular courses on technology transfer negotiation was organized by UNIDO in Dakar, Senegal on 19 - 23 April 1993

Under a programme of assistance to Senegal for capacity building in the field of technology acquisition and negotiation, a package of elements leading to the establishment of national capability in the delivery of advisory

services to local entrepreneurs and technology users is under execution. These consist of training of a team of national experts, establishment of a library of reference materials, and evaluation and documentation of case studies including the preparation of a video film. At the same time, efforts are also being undertaken towards the creation of a model course on technology transfer negotiations, which can be run on a regular basis

This capability building programme is being pursued through the Industrial Property Service of the Ministry of Industry, Commerce and Handicrafts, SONiPI (Societe Nationale d'Etudes et de Promotion Industrielle) and CESAG (Centre Africain d'Etudes Superieures en Gestion)

UNIDO/Brazil tackle future collaboration in technology field

The Fourth Meeting of the Joint UNIDO/Brazil Committee was convened in Vienna Austria on 12 - 14 May 1993 to discuss the elements of a UNIDO/BRAZIL technical cooperation programme for the period June 1993 - December 1994. The programme is aimed at increasing international competitiveness of Brazilian industry.

One of the highlights of the Meeting was the extensive discussion relating to the implementation of the Working Arrangement between UNIDO and the Financing Agency for Studies and Projects (FINEP) agreed upon in 1992. The agreement provides for guidelines that will govern cooperation between the two organizations in all areas where their functions are complementary and mutually supportive. Among the areas of cooperation identified are: training

courses; programmes in establishing/strengthening technological information networks, technology transfer and technology management environmental aspects, technology parks, promotion of industrial joint ventures; joint project identification missions; and preparation of studies. As a result of the aforementioned discussions, the concept of a capability building programme on technology transfer negotiations in Brazil was formulated.

The programme will be aimed at the creation of regular and self-sustained training capacities and advisory services on technology transfer issues and the building up of the capacity to follow-up and to react strategically to the new trends affecting international technol-

ogy flows. The elements of the programme would consist of training of trainers, elaboration of teaching materials, short-term courses for managers, regular courses for specialists, preparation of case studies and development of consultancy services. The programme would address, besides the traditional issues of technology transfer, the current trends in technology business such as cross licensing, strategic alliances, licensing of R&D, access to new technologies and environmentally sound technologies.

FINEP is a federal agency in Brazil responsible for financing and promoting research and development. It is a public enterprise attached to the Ministry of Science and Technology and acts like a development bank for technology. For scientific research, FINEP provides grants, and for research and development, it makes available different loan mechanisms providing for concessional rates. It may also provide venture capital for said activities. Among its objectives include the promotion and execution of studies, research, projects and programmes for the socio-economic, scientific and technological development of Brazil.

UNIDO BOT programme gets boost at CAMI meeting

On the occasion of the Eleventh Meeting of the Conference of African Ministers of Industry held at Port Louis, Mauritius on 31 May to 4 June 1993, a presentation was made by UNIDO on the BOT (Build Operate-Transfer) scheme as an alternative method for expanding and improving physical infrastructure particularly those needed to support industrial development programmes.

Under a BOT scheme, private investors, both local and foreign, are invited to build an infrastructure facility, operate the same on a commercial basis for a certain period of time during which fees may be charged to cover the project and

operating costs and to achieve a return on investments. At the end of the period, the facility is transferred to the government on agreed terms. This scheme is most attractive for countries experiencing budgetary constraints, particularly to finance large infrastructural projects, for instance, energy, water supply, telecommunications and transportation projects.

At the meeting, the UNIDO programme on BOT was presented and discussed. The delegates noted that the application of the BOT concept in Africa has to be encouraged as one means of expanding and improving much

needed infrastructure and industrial facilities. However, there is a need for policy-makers and negotiators to gain deeper understanding and familiarity with the concept and its implications. A recommendation was made for UNIDO to work out guidelines for BOT strategies and standard provisions for BOT packages with special regard to the needs and interests of African countries, including the establishment of an advisory service to inform governments about the BOT concept and assist in the development and negotiation process.

UNIDO-LES committee on Manual meets in Vienna

The UNIDO-LES Committee on the Manual on Technology Transfer Negotiations, organized as another cooperative undertaking between UNIDO and the Licensing Executives Society (LES), met in Vienna on 23 - 25 June 1993. The Committee, composed of members of the LES, experts from developing countries and UNIDO staff members, was tasked to assess the concept of the Manual, review the existing chapters, and formulate recommendations concerning the remaining work that will lead to its finalization. The UNIDO secretariat, with the assistance of consultants, will implement the recommended work and the result will

be submitted to a second meeting of the same group at the end of 1993.

The Manual is intended to be a sound professional tool for application by entrepreneurs, project promoters, managers and professionals of industrial enterprises, consulting firms, financial institutions, government institutions and officials dealing with the acquisition and negotiation of technology, whether in developing or industrialized countries; and by institutions conducting training programmes for negotiators. In its final form, it will be the pillar of UNIDO's capability-building programme in the field of technology transfer negotiations

LES is represented in the Committee by Messrs. E. Astolfi, M. Burnside, R. Goldscheider, P. Passley and A. Wolff. UNIDO experts working in the team consist of Messrs. V.R.S. Arni, C. Correa, O. El-Kholy and G. Markos. The TAN Section of the Technology Development and Promotion Division is spearheading the work from the side of UNIDO. The joint engagement of UNIDO and LES in the project is meant to provide an assurance that with the envisaged innovative and normative features, international acceptance and quality will be optimally achieved.

Philippines eases technology transfer rules

With effect from 15 March 1993, further liberalization of the rules applicable to foreign technology transfer arrangements in the Philippines took place. Under amendments to the rules of procedures of the Technology Transfer Registry (TTR) of the Department of Trade and Industry, technology transfer agreements with royalties/fees not exceeding five per cent (5 per cent) of net sales will be automatically approved providing there is transfer of technology through patents, know-how and trade secrets.

Other highlights of the amendments include

- 1. Increase of the permissible contract duration from five (5) to ten (10) years
- 2. Easing of the confidentiality period after contract termination from five (5) years to "a reasonable period".
- 3. Delisting from the list of restrictive business clauses those provisions that limit the scope and volume of production and pricing

of products, those that require the use of personnel designated by the technology supplier, and those that require the granting of exclusive sales and representation rights to the technology supplier.

Agreements that are royalty-free or amend previously registered agreements will be processed in two (2) working days and all other types of agreements, within thirty (30) working days.

(Additional information may be obtained on request from the TIFS office at UNIDO headquarters)

NEGOTIATING TECHNIQUES AND STRATEGIES

by *Dr. Branko Vukmir*
UNIDO Consultant

Introduction

Until recently, teaching how to negotiate was not considered a worthy subject. It was thought that how to negotiate may come only from experience and that it cannot be taught. However, tremendous discrepancy between experienced negotiators from transnational corporations (TNCs) and from developing countries has contributed to the expansion and articulation of the subject matter. Now methods and strategies have become legitimate subjects of research and teaching, while literature on the subject is increasing rapidly.

Discrepancy in negotiating strengths between TNCs and developing countries

Ever since the TNCs spread their operations on a global scale, the difference in negotiating strengths between the TNCs and developing countries has been so evident that many institutions and organizations, sometimes including the TNCs and their governments, have decided to correct the imbalance. The reasons for this discrepancy can be detected in several factors:

Strength of TNCs

- Best manpower available: Teams of experienced negotiators who negotiate the same types of contracts throughout the world. As a rule, teams are composed of all profiles.
- Knowledge of the whole range of technologies — the best and the

worst from the profit point of view and from the individual countries' points of view;

- Thorough knowledge of the issues involved in negotiating certain types of contracts;
- Close supervision by the top and medium management levels;
- Communication facilities are always available and never the problem of their costs;
- Best equipment available (computers, secretaries, databases, literature, etc.);
- Advantage of fluency of the language in which the negotiations are being held;
- Last but not least, lawyers are always involved in the negotiation of contracts.

Weaknesses of developing countries

- Manpower and experts are available only from their own limited resources;
- Experts are often inexperienced in negotiating complicated contracts and agreements;
- Communications with headquarters are often restricted by expense or poor equipment;
- Medium and top management often even less experienced than the negotiators, who can rarely receive proper guidance from them;
- Insufficient insight into available technologies or alternative solutions and insufficient knowledge of the problems with existing technologies under negotiation. Experts

often live in isolated societies without access to the outside world and to information that may otherwise be available;

- Teams of experts do not have sufficient knowledge of intricate issues involved in negotiating certain types of contracts. The teams are often not composed as required. Unnecessary people are involved in the negotiating process. Costs are therefore high and efficiency is low;
- Insufficient knowledge of the TNC with which negotiations are being held and no access to proper sources of information;
- No advance preparations for negotiations and lack of clear strategy towards achieving the aims. Key officials often have other more "important" things to attend to and are not constantly available to the team to give them guidance and instructions;
- Language proficiency is not always adequate. In particular, insufficient language proficiency in drafting tricky legal documents where words, legal terms and knowledge of legal and technical language play a decisive role.

Mutuality and conflict of interests

Every agreement is an expression of the mutuality of interest of the contracting parties. However, at the same time the same agreement is also an expression of their conflicting interests.

On the basis of agreements they make, parties gain rights and obligations. The measure of these rights and obligations depends to a great extent on the parties, on their knowledge of the subject and very often on their negotiating skills.

Parties who approach negotiations with the belief that the mutuality of interests with the other contracting party will automatically take care of their contractual position, are sooner or later going to be deeply disappointed. In contractual negotiations parties are positioned to influence their future relationship and the party who misses that opportunity will suffer before it obtains another opportunity to correct the mistake, if ever.

Of course, the best agreements are those where the interests of the parties, as expressed in their rights and obligations, are in balance. How to achieve this balance is partly dependent on the knowledge of how to negotiate, or on what we call the methods and the strategy of negotiations. Of course, this knowledge must also be accompanied by specific knowledge of the type of contracts the parties negotiate as well as on the overall knowledge of the subject matter.

Negotiating joint venture agreements is often compared to a "marriage". This is very far from the truth. No — it is a business negotiation. Mutuality of interest exists on a long-term objective, but not necessarily the art of achieving it. That is, the aim and cost of achievement should never be forgotten. The parties' interests should only go to a certain point — after which everyone should re-evaluate. For example, the result of a joint venture agreement may be entirely different for each of the parties. One party may have all the gains and benefits, while the other may be left with all the work and losses.

The joke about the pig and the hen is better suited to joint ventures than the marriage comparison. (The hen proposes to establish a joint venture with the pig to produce ham and eggs — "I will invest my eggs and you your ham") In reality that is how it sometimes ends.

Essential stages in the negotiating process

There are three essential stages in the negotiating process:

1. The **Preparatory stage**, which includes the determination of objectives and collection of necessary information;

2. The **Negotiating stage**, which is narrowed to direct contacts between the parties;

3. The **Drafting stage**, will be the subject of a separate article in a later issue of the *TIES Newsletter*.

PREPARATORY STAGE

Determining objectives

Well before starting to prepare any written draft of an agreement, each party should determine the objectives of the intended deal, i.e. what do we really wish to achieve by concluding this contract?

TNCs almost by definition pursue a global strategy, whereas the host country's strategy is limited by its borders — and a domestic enterprise — to its own limited objectives. A TNC's objectives in entering into a particular joint venture can only be understood in the context of its global strategy.

A basic check list of objectives of a TNC within a global strategy might be as follows:

1. Access to raw materials, labour and infrastructure;
2. Expanding, preserving, expanding or entering markets for its products;
3. The same for raw materials, energy, and plant and equipment;
4. Integrating the production chain, forward and backward linkages;
5. Acquiring the know-how and limitations of national, state, laws and regulations; and
6. Taking advantage of incentives, subsidies and credit available in the host country.

A basic check list of a local partner will be different. Such a check list will most probably include the following aspects:

1. Acquisition of modern technology and new machinery;
2. Access to foreign financial resources;

3. Expected increase in productivity and work efficiency;
4. Modernization of the production process;
5. Acquisition of modern management skills;
6. Access to international markets;
7. Increased employment.

The problem is to be sure of a TNC's strategy in a particular negotiation. It is necessary to understand why they are present and what they really want, how much they value it, and what their alternatives are. It would be a simplification to always assume that the real and only objective is to make financial profits in a joint venture; other benefits may also be sought.

Basis for discussions (the platform)

For all the parties engaged in negotiations it is of prime importance that they have a clear tenet of what is actually being discussed and what are the aims of the discussions. This can best be defined in a written proposal. A document of this kind may save a lot of time and effort because it will reveal the intent of the party who drew it up, while the other party will be able to make a clear response to these aims. The proposal will define the basic legal relationship and its nature.

Sometimes this cannot be done at the first meetings of the parties because they may not yet have a clear idea of how they really wish to structure their future relationship. However, after one or several exploratory meetings, the time will eventually come when one party should present the proposal in writing.

The party who receives a particular proposal should study it very carefully. Discussion of the proposal should not begin until the group of experts has had a chance to study it. Ideally, it would be better to receive a proposal well in advance of the meeting. The studying of the proposal should be done systematically and carefully. All experts should read the text by themselves and present their individual comments independently. The group of experts should then have an opportunity to discuss the proposal openly. This

stage becomes very important for the party receiving the draft, because in the process of discussing it, the negotiating team and experts will at this point have a chance to establish a working relationship, mutual confidence and, above all, a spirit of open and free discussion.

The group should agree on matters requiring clarification in the proposed draft and should not hesitate to ask the other party for further explanations, simplifications, etc.

Already at this stage, all important questions should be put on the table: what are the sources of financing? what are the features of the technology to be used? what alternative technologies are available? what is the cost of the technology to be used? what are the advantages/disadvantages, etc.? All this information should be on hand before actual and serious negotiations commence with the other party. Information on these facts may substantially influence the general tone of the negotiations. Existence of an alternative technology and knowledge of its availability will give an important advantage to the other negotiating party, because it will always be able to make a meaningful comparison and be able to place itself accordingly in the negotiations.

Information

TNCs almost always have an advantage before they even come to the negotiating table. They know their business, they know their company, and they know the competition. They have all the information they need in the area of technology, law, marketing, etc.

To redress this imbalance, it is necessary for developing countries to obtain the relevant information before the start of negotiations. The supply/demand curves of an industry and its marketing patterns must be understood. The sources of supply, transportation possibilities, pricing policies, etc., should all be known.

Before dealing with a particular TNC, its history and corporate structure — its family tree — need to be understood. Its record of dealing with other

companies and in foreign countries should be determined. Any problems with transfer of technology, financing and other corporate behaviour should be ascertained. Its strengths and weaknesses need to be investigated.

There are many sources for such information, including trade publications and journals, and international organizations such as the World Bank and the United Nations Centre on Transnational Corporations (UNCTC). There are also companies and consultants whose business it is to provide information and whose services can be obtained by direct contact or through the international organizations.

A major objective at the information gathering stage should be the development of a short list of alternative companies with which to negotiate. It is very helpful in negotiations to know that if a deal does not work out with one company, there are others who could be interested. A deal does not have to be done at any price.

To know the other party before the start of negotiations is very useful. This relates both to the other team members as individuals, and above all, to the legal entity with whom negotiations are being conducted. The corporate record is not so difficult to assemble and there are many international organizations which can help. UNCTC, the United Nations Industrial Development Organization (UNIDO), the World Intellectual Property Organization (WIPO), to name a few from the UN System. Dun & Bradstreet, different chambers of commerce and other similar institutions, from the private sector. In collecting such information, much useful material may be discovered. Of particular interest is the past record of the other party in dealing with their former clients or customers. Their court record may also be most revealing.

Financial soundness and credibility of the other party is essential for the intended project. Try to learn as much as possible about their past record, their reputations in other countries, including their home country.

The Negotiating Team

In negotiating joint ventures, the size of the negotiating team is usually quite considerable. A TNC negotiating team usually consists of several specialists: a technical person, a financial analyst, a lawyer, and a team leader if not included in the above. Three to five people is the usual size. Some specialists may not be immediately obvious, but are kept as support staff away from the negotiating table.

Government negotiating teams, unfortunately, tend to be somewhat larger, partly because it is frequently necessary to ensure that the interested agencies, departments, ministries and the like are represented. This is a form of bureaucratic insurance, as to leave them out might result in their criticising the deal, no matter how good.

Negotiating teams have to be appointed well in advance of actual negotiations. They should be relieved entirely or substantially of their other work. They should be given every opportunity to acquaint themselves with the subject they are going to negotiate and should collect all necessary information to strengthen their knowledge. They should be briefed by other experts who are not part of the team and should have an opportunity to formulate the essential objectives of the party on whose behalf they will negotiate.

The Team Leader

The chief negotiator's role is special. He or she can be likened to the conductor of an orchestra. Someone who knows their score, has a good ear and understands what the sound should be, who can command the respect of the other players and who is articulate and patient. Governments make mistakes when they assign this role as a matter of course to the senior official involved in the project. The choice should be made on an *ad hoc* basis, i.e. the person best able to deal with the particular TNC across the table. In this connection, an understanding of the culture of the TNC's country, the language in which the negotiations are to be held, and the cul-

ture of the company itself, is a decided advantage for a government chief negotiator. He or she must also have the character and strength to be able to control a meeting and win the respect of the TNC's representatives. The chief negotiator must have self confidence, be able to lead and be able to count on the support of superiors. It must be a person who thoroughly understands the subject, who is broad minded enough to listen to opinions different to his own, who appreciates arguments and is not offended when someone contradicts him, and above all, it must be a person who is able to make decisions when needed. He or she should not be vain but be sure of themselves and not succumb easily to flattery. They must have experience in the business.

The other experts should also have their specific characteristics. The technical expert should know the technology and must understand where the advantages and disadvantages are of what is being offered. They must have the knowledge of the alternative technology or technologies.

The financial expert should be familiar with security instruments, and the various types of financing available. He must be informed of the current rates and cost of financing. The financial member of the team obviously does not have to be the person who actually runs the computer programs, but that person will have to understand enough to give instructions and interpret the results.

The lawyer's role needs to be emphasized. In some countries lawyers have larger influence than in others. For example, American lawyers have a tremendous influence, while in many other countries lawyers have much less. If negotiations are to be held with an American company, a good lawyer on the other side is essential. Many European and other companies have accepted the American way of doing business with lawyers. American lawyers are a combination of counsellor, businessman and advocate, and frequently act as team leaders in negotiations. They usually come in two varieties -- the "inside lawyer" or "house counsel" who is a full time employee of the company, and the "out-

side counsel" who is hired for a specific purpose. The outside lawyer usually has expertise and experience deemed useful enough to warrant payment of their usually high fees on an hourly or daily basis. The agreements drafted by such lawyers in financing arrangements, large-scale construction, mining and petroleum projects and the like, have become models used throughout the world.

In the nature of the profession, "inside" and "outside" TNC lawyers are experienced negotiators. They know the range of possibilities in structuring joint ventures. More important, they appreciate the consequence of using certain terms and even words, which may have special meanings in the trade or in their legal systems. It is useful, if not vital, to have a lawyer on the host side of the table as well. Do not wait to use a lawyer as a scribe to put it into "legal language" once an agreement is reached. That may be too late. The time to get advice is before the deal is done and the time to challenge the formulation or the language of the deal is at the negotiating, not at the drafting table.

The legal expert should have a perfect knowledge of the written and spoken language in which the negotiations are being conducted. This is absolutely essential for the lawyer, because the written and spoken language is his main weapon. The lawyer must be present from the very beginning, when the team was formed. The lawyer must understand the technology in order to realize which are the crucial points in order to be able to take care of the liabilities and responsibilities. He must be familiar with the negotiating process and must have the ability to formulate in writing what the parties have orally agreed. He must be able to give quick alternative solutions to what has been proposed in writing from the other parties. Lawyers are trained to know and judge in advance the effects of certain oral or written statements. Therefore, they should be present during the whole process of negotiation, because only then can they truly understand what the parties wish to achieve, what is their intention and have an influence on that process.

The main duty of a lawyer is to structure the agreement and specific formulations in such a way that they reflect what the parties have agreed orally and to watch for unfavourable formulations for his side. He must be able to detect the dangers of the proposed formulations.

Of course, on top of it, -- and it is almost superfluous and needless to point out, -- the lawyers employed must be sound. This means they must understand the legal institutions used in the agreement, such as *force majeure*, hardship, arbitration, penalties, liquidated damages, etc. and they must have a certain amount of experience in international negotiations. They must be familiar with different legal systems. They must be so profiled that they have the authority to influence other members of the team, and this they can best achieve if they possess the relevant knowledge.

Each member of the team has a specific role to play. The chief negotiator is usually the main spokesman. The other members should speak only when the chief spokesman invites them to do so, but who at the right point will say that which is really something the team should orchestrate according to their natural roles. It is not good that only one chief negotiator speaks, because that may put all the other members to sleep and may distort the sense of responsibility. The Team Leader should try to engage all the members of the negotiating team into active participation, but should maintain his authority over the team as a whole.

Terms of Reference

Once the team is assembled, then it can be very useful to prepare a negotiating brief, or "terms of reference". This is somewhat analogous to the military order of battle. It sets out the objectives, the priorities, the opening positions, the fallbacks and the non-negotiable points. The exercise should be gone through twice, for as in military situations, it is necessary to anticipate the other side as well, so as to be able to prepare answers and to areas in which trade-offs can be made at minimum cost to one's own side. The brief

is particularly useful for internal purposes to ensure that the negotiating team is taking the position that their superiors want them to take and to ensure that the team has their full support.

The preparation of such a brief is a method of rehearsing the team, especially if they are unfamiliar with one another and have not acted in concert before. This, of course, is another advantage that TNCs have at the negotiating table. Usually their negotiating teams have been together for a long time and are familiar with the TNC's strategies, the roles that each of them will play and the tactics that will be used. They are experienced and well rehearsed.

Preparations for Negotiations

Preparatory meetings of the negotiating team are necessary in order to develop positions and allocate the speaking parts. In principle, nothing should be said by any team member unless it has been agreed upon in advance. If something untoward comes up in the course of negotiations, then the team leader should call for a recess so that the team can agree on how to handle that particular point. The team is a team; they should support one another and act in concert.

In preparing for negotiations, a TNC of any size will usually have prepared a series of computer runs analyzing the results of taking different positions and possible trade-offs, taking into account time factors and use of money concepts. These are frequently shown as curves on charts so that the consequences of changing the size of a plant, varying the loan/equity ratio, the granting of various tax incentives, agreement on the preferential or differential sharing of profits or cash flows, can all be seen in advance. Sophisticated programs will include sensitivity analyses. TNC negotiators hate surprises and they try to anticipate what government negotiators might offer across the table and calculate the consequences. They do not like negotiating in the dark; neither should host governments or enterprises.

Host negotiating teams too should carefully organize computer programs so that the consequences of any compromise or trade-off can be appreciated in advance. No benefit should be offered unless the cost to the government is first understood. The larger the project and the larger the amounts of money involved, the more important such preparation becomes.

The most usual analysis is the discounted cash flow in which all of the cash going to the foreign party is taken into account, regardless of how it is labeled. This means adding to projected joint venture dividends (not the profits); such items as management fees, marketing commissions, buying charges, recruitment fees, technical assistance and consulting charges, allocations of home office expenditure, transfer pricing possibilities, the profits made on the sale of plant materials, supplies, etc.; by the foreign investor, license fees for patents, trademarks and know-how, and all other payments going to the foreign investor. This is compared to the cash value of the actual contributions to the joint venture. The time value of the use of money is crucial to these calculations.

The cash going to the host side should also be calculated, including income taxes on the enterprise as well as its employees, import duties, export duties, license fees and the like. This too is compared to the cash value of the government's contribution to the joint venture. The most important aspect of the negotiating game for each side, is of course, to minimize the cash outflow and maximize the cash inflow, taking the time value of money into account.

A TNC and a host government will calculate differently. A TNC seeks maximization of profit and the minimization of risk in accordance with its global strategy for the utilization of its assets (capital, technology, management, personnel, etc.). It will seek what it considers an appropriate rate of return for its contributions and may also establish a minimum discount factor, or threshold rate of return, below which it will not do a deal.

A host government's discount factors are ordinarily lower than those of a TNC. It does not require the high

competitive rate of return required by the opportunity costs of alternatives. In addition, because it is a government, it should also make a social cost/benefit analysis to determine the economic as well as the financial consequences of a particular project to be sure that the benefits outweigh the costs — possible pollution for example, or the costs of infrastructure operation and maintenance.

A host enterprise may also have a lower discount factor than a TNC because of other anticipated benefits, such as new technology, plant modernization, and access to overseas markets.

It will then be necessary to order its priorities and determine its opening and final positions, its fall-back positions in between, the non-negotiable points and its alternatives if negotiations are not successful.

Experienced government negotiators frequently find that the internal negotiation (negotiating the government positions within the government), are the hardest part of any international negotiation. Frequently, the conflicts within and between the interested government agencies, departments, ministries and the like, are greater than those between the TNC and the host government.

It is essential that the negotiating team identifies the commercial, technical and financial objectives. They should know the "border line" of what is acceptable and what is not, what is favourable and what is not favourable to them. In other words, they should know what they are aiming at.

NEGOTIATING STAGE

Conduct of Negotiations

To a TNC the process of negotiation is part of its risk assessment. They will judge the opposite team, their knowledge and their understanding of the problems. Although they will use all the advantages they can, they will also appreciate all the reasonable opposition they get.

The most the TNC's negotiators will look for in the other side is reasonableness, and this can be achieved only if all the aims are supported with solid argu-

ments. Solid arguments can be put forward only if there is understanding of the subject matter.

The balancing of risk and reward is a major part of management, hence government officials in negotiations carry the burden of establishing trust and confidence. They need to reassure the TNC that its investment will be safe, that they are dealing with reasonable people, that they are in a predictable situation. The greater the unpredictability, the uncertainty, the perceived risk, the greater the return demanded by the TNC and the higher becomes its discount factor. Establishing a positive negotiating climate, which makes the TNC negotiating team feel comfortable and secure, should be a major preoccupation of the host team. Rituals should be observed, i.e. the introduction of all team members, the inquiries about travel and accommodation, making appropriate arrangements, etc. These are part of the orchestration. In some cultures, this is more important than others, but will anyway be appreciated by all TNC negotiators.

It is more difficult to be a government negotiator than a TNC negotiator, because almost by definition a TNC has alternatives — it can go to other countries. Even a decision not to carry out a project may be considered a success by senior TNC managers and officials. Government negotiators seldom have such a luxury. They are usually under pressure to "do" projects and their alternatives are fewer, except in particular sectors, usually involving natural resources.

Government negotiators should look reasonable, predictable and trustworthy. Very often the reasonableness and the logic of the arguments, the way they are presented, says more about the company or even about the country, than any verbal assurances the government may give. If a mistake is made, it is essential to correct it and no action should be taken that could lead the TNC negotiators to decide that the people on the other side of the table are untrustworthy, unreliable or unreasonable. The most important thing is sincerity and personal integrity. As

someone once said, if you can fake that, chances for success are excellent.

When a government decides that it is necessary to substantially change its position in the course of negotiations in order to minimize the impression of going back on the deal and have its negotiators appear untrustworthy or unreliable, that may be the time to consider changing some of the team members, particularly the chief negotiator. The new negotiating team may then find it less embarrassing to deal with this change and it may be easier to explain why the change was made by personalizing it. Obviously, this has its risks and the better practice is to have a consistent negotiating position throughout. But this is not always possible.

There is no doubt that a negotiating team needs some internal discipline. The worst that can happen to a team is that they fight each other in front of the other party. This must be avoided by all means. The friendly and cooperative atmosphere within a team is solid proof to the other party that it is dealing with a respectable opponent. A clever party will immediately use the division within a team to its own advantage.

Team members must be disciplined and not show their disagreement with other members of the team, even if they do not agree with what has been said. Such situations must be resolved at internal meetings of the team and not in front of the other party.

A certain friendliness is bound to develop between the members of the opposing negotiating teams. This is very useful and the team leaders should see to it that members of the team have an opportunity to meet outside the negotiating room. To know each other personally increases confidence and eases tensions. It helps the negotiating process. However, too much familiarity may not be good either. Never ask for personal favours, unless they are insignificant. Never accept gifts before the end of negotiations, unless they are of trifling value. Never say in private anything against other team members. Always be loyal to your other teammates — say nice things about them.

Physical organization of the negotiations

To organize negotiations also requires certain experience. Negotiating parties need a place where they can be undisturbed to conduct negotiations. They do not wish to be interrupted by telephones all the time, and they do not want other people to pass through the room in which negotiations are taking place. Negotiations should therefore be conducted in a special room, if possible a conference room. A secretary outside or inside the meeting room, should at all times be in attendance. She/he should take notes if necessary, carry messages for the members of the negotiating teams and pass them on when appropriate. She/he should take care of all documents to be photocopied and generally relieve the members of the negotiating teams of any secretarial chores. Members of the team should concentrate on their negotiations.

Other secretarial help should always also be available. Typists, translators, photocopying machines, facsimile machines, telephones, etc., should all be easily accessible to all members of the team, and particularly to the visiting team. A good organization of negotiations leaves a positive effect on the visitors since they must conclude that the host company is well managed and well organized.

Sometimes it facilitates matters to put one team on one side of a rectangular table and the other on the other side. In some countries, informal arrangements using a round table or meeting in a lounge with scattered sofas and chairs is a preferred arrangement. This makes communication, as well as privacy, more difficult.

Refreshments (tea, coffee, juice, etc.) should always be on the table and no alcoholic beverages should be served until the negotiations are finished for the day. Short business lunches, or even sandwiches, will suffice at intensive negotiations. Big lunches should be offered only if the parties have reached a conclusion or at the beginning or end of negotiations.

Members of the host's team should devote all their time to negotiations.

They should not carry on their daily business as usual and disappear from the room every once in a while to tend to their other office duties. This obstructs the atmosphere and undermines the visiting team. Members of the host team should devote all their time to negotiations while the visiting team is there.

Organization of the visiting team's sojourn also implies good organization of their hotel accommodation, easy and punctual transportation facilities to and from the hotel and back to the negotiating table, and possibly entertainment in the evening. Excessive entertainment is sometimes practiced as a strategy to exhaust the visiting team and leave them with little energy left for the negotiations.

It is essential to create a physical atmosphere permitting free and full discussions. Tape recording only inhibits such discussions. Secret tape recording is even worse, for if a TNC ever discovers it, all the efforts to establish trust and confidence will be vitiated. Similarly, monitoring of telephone conversations and telex and cable communications will have the same result. Some sophisticated TNCs have programs to monitor their own communications to discover such interventions. Others communicate in code in any event, because they simply do not trust any government, not excepting their own.

Where to negotiate ?

Some people prefer to negotiate as visitors, while others prefer to negotiate at home. Both solutions have advantages and disadvantages. While travelling is strenuous, negotiating at home may be less stimulating. While host teams have the advantage of being at home and therefore of not being impatient with the outcome of negotiations, the visiting team is actually in a position to dictate the duration of negotiations because they set the date of their arrival and departure.

Many feel that there is always an advantage in negotiating at home. There is no jet lag, no change in food and water, no anxieties about families and jobs while away — and the beds

are comfortable. A less obvious advantage is that the host can usually control the agenda and the timing, and this can be of some significance during negotiations. Determining the points to discuss first and their sequence, when to meet and when to stop, can give one side an advantage. Of course, experienced negotiators know this and they will negotiate an agenda and negotiate a timetable so that they are not at a disadvantage when away from home.

Some negotiators prefer to be the visitor rather than the host. They say that they have a timing advantage, for they set the departure date and hence can force the pace of a negotiation. This "deadline" tactic is well known, and most hosts have devised methods to deal with it — patience being the usual one.

How to negotiate ?

It is extremely difficult to say how the actual negotiations should be conducted. That, to a great extent, depends on the personalities and character of the parties. Some people are kind, others are tough. Some people feel that they have an adversary in front of them, others feel them as potential friends. Some people are nervous and cannot take opposing arguments lightly, others are patient and tolerant. All of these character traits will leave a mark on the atmosphere between the parties.

In our view, the most sought after and desired qualities of a negotiator are the knowledge of the subject matter and tolerance. Knowledge and understanding of the matter with which the negotiations deal, commands the respect of the other party, while tolerance allows the hearing of opposing views. These two qualities alone could make a good negotiator. Whatever accompanies them, such as wit, good manners, pleasant appearance, experience with different cultures, friendliness, honesty, interest in other people, ability to listen, patience, etc., only improves the picture and makes an even better negotiator.

The best results in negotiations, with the least effort and pain, can be achieved when the parties come to ap-

preciate and respect each other. This stage is often reached after negotiations have lasted for some time and after the parties have met several times. The building up of mutual trust and confidence is the best way to reach an agreement. When such a stage is reached, parties can be confident that their negotiations will bear fruit.

There are also certain rules all negotiators should observe.

The first is to **respect the opposing party**. Respect starts with patient listening to what the other party has to say and in calmly reacting to what has been said. This also implies that arguments will not be taken personally and the other party should never feel that an allusion or imputation is personal. To claim that "we are reasonable people", or "we are not savages" may imply that the other party maybe is unreasonable or savage. Great care should be taken that offensive language or offensive implications are not uttered.

The second rule, is to **stick to the arguments**. That means that ample opportunity will be given to the other party to vent its views and that response will always concentrate on the essential argument and not on the way it was presented. To defeat an argument is much more important than to make remarks on the presentation or on the motives of why the argument was presented. Parties often misunderstand certain proposals and requirements. Some clauses have very logical reasons and argumentation behind them and it is most important to know what the arguments are. Whatever is demanded must be explained and supported with logical and valid reasons. If a demand or a view is arbitrary, it makes it unacceptable.

If the reasonableness of the demands is admitted as the most important feature, it implies that the reasonable arguments of the other side will also be respected. The ability to recognize a valid argument of the other side, is also the hallmark of a good negotiator. Nothing flatters and satisfies other negotiators so much as when their arguments are admitted as being reasonable and justified. They are often quite happy to return the compliment. If such a spirit can be built

up between negotiating teams, half of the problem of reaching a solution is likely to be solved.

The third rule is that **one should never give concessions lightly**. There must come a time during negotiations when obvious and difficult questions will remain unsettled. Whenever, a party is faced with demands to be yielded to, this should be done in a balanced and orderly way, allowing for a counter-concession for every concession ceded.

Team Supervision

It is essential that the team is not left on its own. The team has to know they are being constantly monitored by the higher echelons of their company, as is the case in TNCs. Before they leave for negotiations the team has to meet with their supervisors (members of the Board) and present their terms of reference and the aims they intend to achieve. During negotiations the team leader has to report regularly how the negotiations are progressing. At the end of a negotiating stage the team has to present a report to their supervisors.

Before the joint venture agreement is signed, the whole team has to make a presentation of the draft agreement and its implications to the Board of Directors. Such procedure places the team in an atmosphere of responsibility and helps them to formulate their achievements. At the same time it serves as a controlling mechanism for the team itself. It helps them to put their thoughts together and to summarize the results of negotiations.

Tactics in negotiations

Some TNCs and experienced teams of negotiators have developed techniques aimed at creating false impressions and appearances. One such technique is known as the **"bad guy/good guy"**. If a team decides to use this technique, members of the team will create a "bad guy", who does not want to yield on any issue, who proposes unacceptable demands, and a "good guy", who makes reasonable proposals and acts moderately. In fact,

the "reasonable" proposals of the "good" guy may also be unreasonable, but they appear better and the other party may accept them, not because of their merits but only because they were induced to believe that his proposals are more acceptable.

The **"divide and rule"** gimmick is to select an opposing negotiator whose views are more acceptable than the views of the other opposing negotiators. This negotiator is then supported by the other party and treated as a reasonable man. This technique provokes a division in the opposing ranks because the negotiators are treated differently. They are hereby incited to fight among themselves.

The **"walk out"** or cessation of negotiations is a threat that negotiations will be a failure. Some parties are sensitive to such an outcome either because their superiors do not follow the negotiations and do not understand what is happening, or they fear that it will be difficult to explain the "walk-out" of the opposing party. The threat sometimes yields a concession or two, but the gimmick should not be used consistently.

"Last minute demands" are sometimes successfully forwarded because the other party may be sick and tired of the negotiations and wants to get it over with. The other party may, therefore, accept a demand proposed at the last minute only to finally close the deal.

Invoking "standard commercial practice". Experienced negotiators carefully follow what goes on in various international bodies and fora. They may be in possession of documents composed by different international bodies or associations made up of interest groups, who naturally produce such "customs", "customary rules", "standard conditions", "general conditions" or similar documents favouring one party. The other party may be impressed by the "international" character of such documents and may not have sufficient power and knowledge to analyze them from the point of view of its own interest. Proposing such documents may yield concessions where in normal negotiations they would never be forthcoming. Such

documents are also sometimes presented in "small print", which often makes it even more difficult study.

In some countries negotiations are viewed as an endurance test: start early and keep them at the table until very late. This is usually not productive, because when people are tired it is harder for them to be imaginative and find new solutions. It also fosters impatience and personality clashes, which should always be avoided. Leave plenty of time. Two sessions of three hours each, divided by a coffee break, is a very long day. It is much more difficult to sit and listen than it is to talk, and one must listen carefully in negotiations. Allow plenty of time for informal talk away from the table such as coffee breaks, luncheons, dinners, etc. where "trial balloons" can be launched, clarifications obtained and ideas tentatively suggested — just for a reaction.

Two to four days of meetings at a time are usually enough. The parties will then have exhausted their negotiating briefs and it will be time to reassess and think of new solutions for the tough problems. Allow at least a week or two between sessions for reworking or massaging figures, thinking of new solutions and structures, and getting fresh instructions and clearances.

The cost of time should be monitored. If the negotiations are too time consuming, then the TNC will expect that it will take a long time to obtain the necessary licenses, permits and consents. It will build this into its computer program. They will require a higher rate of return or use a higher discount factor to compensate for the time element, and in these inflationary days, the longer the time taken to negotiate, the higher the project costs will become. It is useful in major negotiations for a government to monitor the cost of time by keeping a running net present value projection of the project.

"Caveat emptor" — to what extent?

In spite of all the mutual trust and understanding the parties may build among themselves during negotiations, each one of them nevertheless has their own interests and is negotiat-

ing to their own advantage and gain. If one party is ignorant of the pitfalls, traps and hazards or a certain deal or a certain document, is the other party obliged to warn them or not? The negotiating parties are in pursuit of their own interests and the presumption is that they are equal. It is very hard to expect that a party may negotiate on its own behalf and at the same time be an advisor to the other party. Parties should have the ability to judge their experience and if they feel they are lacking it, should be able to procure an independent expert advice in order to strengthen their negotiating position. Here, private and international agencies may help.

Cultural differences

Although cultural differences should not be over emphasized, they do exist and care must be taken that they are observed. Avoiding irritations frequently requires an understanding of cultural considerations. Humour is particularly risky in this regard and should only be used with caution. What is funny to a German, may not be to a Japanese. However, when correctly used, it can be very effective in establishing a positive negotiating climate.

When a Chinese speaks about "mutual benefits" he means that the other party will take care of fairness in the balance of the contractual obligations. When an American speaks about "mutual benefits" he really thinks about his own profits. None of these approaches is "good" or "bad". These attitudes are the results of cultural differences and must be understood and taken into consideration.

When a Japanese says "hai" meaning "yes", it most often means that the other person has heard you and that he is contemplating a reply. It would be rude to keep someone waiting for an answer without giving an immediate response. For instance, in a television scene, a feudal lord married his sister to another feudal lord. He then decided to destroy his new brother-in-law. Before attacking, he sent his spy to look around and discover how his sister was. The spy returned, and the lord

inquired eagerly "How is my sister — is she safe"? The spy bowed and replied, "Hai", and continued, "to my regret she has fallen on her sword together with her husband". The word "hai" was just the expression of intent to comply with the other's intent, even if the true reply is in the negative. "Hai" is merely a confirmation that we understand your wish — but, unfortunately — Japanese is a language of implications, and sometimes it is polite not to explicitly state the negative. Maybe the words "sodesu" ("it is so") or "soshimasu" ("I will do so") are more similar to our "yes" than "hai".

Entertainment

One must also be cautious about the use of entertainment. Some TNCs entertain aggressively. One group does the negotiating and the other group does the entertaining, trying to keep most government negotiators up as late as possible so that their physical condition the next morning will reflect the entertainment of the night before. Discretion is the better part of valour.

Negotiation, like politics, is supposed to be the art of the possible and that means what is economically, financially and politically possible. In the final analysis, it boils down to the ability to say "yes" and the ability to say "no" when you have to, and the strength and confidence to maintain the position.

Once a deal of any magnitude is done by a TNC, it is usual that a formal presentation is made to the management to obtain the formal approval of the Board of Directors. At these presentations, cost/benefit projections are presented and the justification for the project is explained. Then, not infrequently, questions are asked. One chairman of an American TNC always asked three questions:

How much will it cost us?

How much can we make?

How do we get out of it?

Literature on negotiations

Lately, a rich bibliography is emerging on the conducting of negotiations. One of the best known books is by two Harvard professors Roger Fisher and William Ury, *Getting to Yes*, or as the subtitles tells you, *Negotiating Agreement Without Giving In*.

They have tried to develop a set of principles how negotiations should be conducted. Here are some of the principles they promote and recommend:

- SOFT or HARD BARGAINING — PRINCIPLED NEGOTIATIONS (both hard and soft, i.e. to decide issues on their merits and not on your positions).
- NEVER ARGUE OVER POSITIONS — CONCENTRATE ON YOUR INTEREST (reconcile interests not positions). The Library story — To get fresh air and avoid draughts open the window in the next room.
- INVENT OPTIONS FOR MUTUAL GAIN — INSIST ON OBJECTIVE CRITERIA
- SEPARATE PEOPLE FROM THE PROBLEM (all negotiators are interested in the substance, and also in the relationship).
- CONTROL YOUR REACTIONS — DO NOT REACT TO OUTBURSTS
- BUILD A WORKING RELATIONSHIP (sincerity, fairness, understanding their point of view, competence, intelligence)
- UNDERSTAND THE INTEREST OF OTHERS AND NOT ONLY YOUR OWN
- BE HARD ON THE PROBLEM AND SOFT ON THE PEOPLE
- BE OPEN TO PERSUASION (for example: "Please, correct me if I am wrong")
- GIVE CREDIT WHERE IT IS DUE (For example: "We appreciate what you have done for us").
- ESTABLISH FACTS CORRECTLY AND OBJECTIVELY

Some further advice:

- NEVER ASK FOR SOMETHING UNREALISTIC (Sulzer)
- NEVER LOWER YOUR PRICE TOO FAST (Sulzer negotiations)
- NEVER GIVE CONCESSIONS FREE
- NEVER SAY NEVER because most things have their price.

MEXICO: LAW PROTECTING INDUSTRIAL PROPERTY

(last of a series)

(Translation of the Spanish original published in the official Federal Journal of 27 June 1991, and effective as of 28 June 1991)

(Continuation of part entitled "Administrative Procedures", Chapter I, General Rules Governing Procedures)

Article 183. The petitioner shall indicate in every communication an address for service within the national territory, and shall notify the Ministry of any change thereof; if a notice of change of address is not given, all notifications will be deemed to be legally served at the address appearing on record.

Article 184. The terms established in this Law in days, shall be computed on the basis of business days only; in the case of terms referred to in months, the computation shall be made from date to date, including non business days. The terms will begin to run the day following the respective notification. Publication in the Gazette will be effective as notifications on the date indicated therein, or otherwise on the day following that on which it is put into circulation.

Article 185. The files for patents and registrations in effect, as well as those relating to published trade names and appellations of origin, shall be always open for every type of consultation and communication.

Article 186. The files for pending matters can only be consulted by the

applicant or his representative or by the persons authorized by him, except when said files are cited as a reference to another applicant.

The staff of the Ministry intervening in the several actions required under this Law and its Regulations shall be obligated to keep strict confidence regarding the contents of the files for pending matters, otherwise, they will be sanctioned in accordance with the Federal Law on the Responsibilities of Civil Service Employees, besides any penalties that may apply.

An exception to the foregoing is the information of an official nature or information required by the judicial authorities.

CHAPTER II

Procedure for the Declaration of Nullity; Lapsing and Cancellation

Article 187. Petitions for an administrative declaration of nullity, lapsing and cancellation, pursuant to this Law, will be based on and resolved according to the procedure set forth in this chapter and the formalities provided for in this Law, where not in the opposition, the Federal Code of Civil Procedure will be supplementarily applicable.

Article 188. The Ministry, *ex officio*, or the person who has a legal interest and can prove his grounds may initiate the procedure for an administrative declaration

Article 189. The petition for an administrative declaration shall contain the following:

1. Name of the petitioner and, in such case, of his representative;
2. Address for service;
3. Name and address of the counterpart or his representative;
4. The object of the petition, in clear and precise terms;
5. The description of the facts; and
6. The legal grounds.

Article 190. To be filed along with the petition for an administrative declaration, in original or duly certified copies, are the documents and records on which the action is based, offering the respective evidence. Evidence filed at a later time will not be accepted, unless it were supervenient.

Article 191. If the petitioner fails to satisfy the requirements referred to in **Article 189** of this Law, the Ministry will require him, one time only, to remedy the omission or to make the relevant clarifications. A term of eight days will be granted for such purpose, and should the requirements not be complied with during such term, the petition will be rejected.

Petitions will also be rejected if they lack the document showing the legal capacity of the petitioner, or when the patent, authorization or publication which constitutes the grounds for the action is no longer in effect.

Article 192. In the procedures for an administrative declaration, all types of evidence will be accepted, except for depositions and testimony, unless the deposition or testimony is contained in a document, nor will evidence that is contrary to morals and to the law be admitted.

Article 193. Once the petition for an administrative declaration has been admitted, the Ministry will so notify the affected holder, granting him a term of one month to assert his rights in writing. Such notice will be served at the address indicated by the petitioner of the administrative declaration.

Article 194. When it has not been possible to notify the affected holder because of a change of address, both at the one indicated by the petitioner and the one on record in the respective file, and when the new address is unknown, the notification will be made at the expense of the person bringing the action through a publication in the Official Journal and in one of the newspapers having a wide circulation in Mexico, for one time only. The publication will contain an abstract of the petition for the administrative declaration and will set forth a one-month term for the affected holder to assert his rights.

Article 195. In the procedure for an administrative declaration, incidents of prior and special resolution will not be tried, they will be rules upon when the respective resolution is issued.

Article 196. When the Ministry brings the procedure for an administrative declaration *ex officio*, the notice to the affected holder will be sent to the address shown in the respective file, and should such address have changed without any notice having been given to the Ministry, the notice will be made by a publication in the terms of article 194 of this Law.

Article 197. The communication in which the affected holder asserts his rights shall contain:

1. The name of the affected holder and, in such case, of his representative;
2. Address for service;
3. Objections and defensive arguments;
4. Answers or objections to each one of the points contained in the petition for an administrative declaration, and
5. Legal grounds.

The provisions of Article 190 of this Law will govern the submission of the communication and offering of evidence.

Article 198. When the affected holder cannot submit all or part of the evidence within the term granted to that end, since such evidence is not in Mexico, an additional term of fifteen days may be granted to submit it, provided he offers such evidence in his communication and points out such circumstance.

Article 199. At the expiration of the term granted for the affected holder to assert his rights and, in such case, of the extension referred to in the preceding article, and following a review of the relevant background and after having heard the necessary evidence, the administrative declaration will be issued, which will be notified to the interested parties at the address on record or, in such case, by publication, in the terms of Article 194 of this Law.

CHAPTER III

The Reconsideration Remedy

Article 200. The reconsideration remedy will be accepted only in respect to a resolution that rejects a patent, it shall be filed in writing with the Ministry within a term of thirty days from the date of serving notice of the respective resolution. The documentation evidencing its legal basis shall accompany the same.

Article 201. Once the allegations contained in the remedy and the documents submitted have been analyzed, the Ministry will issue its resolution, which shall be notified in writing to the person bringing the remedy.

Article 202. If the resolution issued by the Ministry rejects the legal basis for the remedy, the person bringing the remedy will be notified in writing and such rejection will be published in the Gazette. When the resolution is favourable to the person bringing the remedy, the procedure set forth in Article 57 of this Law will be followed.

INSPECTION, ADMINISTRATIVE INFRINGEMENTS AND SANCTIONS, AND CRIMINAL OFFENSES

CHAPTER I

Inspection

Article 203. To verify compliance with the provisions of this Law and other provisions derived therefrom, the Ministry will carry out inspection and vigilance activities pursuant to the following procedures:

1. Requisition of reports and information, and
2. Inspections.

Article 204. Everyone will be required to provide the Ministry, within fifteen days, with the reports and information requested from him in writing, related to compliance with the provisions of this Law and other provisions derived from it.

Article 205. Inspections will be conducted on business days during business hours, and only by personnel authorized by the Ministry, who shall identify themselves and show the respective official commission.

The Ministry may authorize inspections to be conducted on non-business days and hours, so as to prevent infringements from being committed, in which such authorization will be set forth in the official commission.

Article 206. Owners or persons in charge of establishments where products are manufactured, stored, distributed or sold or where services are rendered, will be required to allow the authorized personnel access to the establishment to conduct the inspection, provided the requirements established in the preceding article are complied with.

Article 207. Understood as inspections are those conducted in places where products are manufactured, stored, transported, sold or marketed or where services are rendered, to examine the products, the conditions under which the services are rendered and the documents related to the activity in question.

Article 208. A written record will be made of each inspection in the presence of two witnesses proposed by the person before whom the inspection took place, or by the inspector who performed it, in the event the former refuses to propose the witnesses.

Article 209. The following shall be set in the record:

1. The time, day, month and year in which the inspection took place;
2. The street, number, city or town and state where the inspected establishment is located;
3. Number and date of the commission which gave rise to the inspection;
4. Name and title of the person before whom the inspection was carried out.

5 Name and address of the persons who acted as witnesses, whether they were named by the inspected party or by the inspector.

6 Statement to the effect that the inspected person was given the opportunity to exercise his right to make comments to the inspector during the course of the inspection.

7 Information about what occurred;

8 Statements by the person inspected, in the event he wished to make a statement.

9 Statement to the effect that the inspected person was given the opportunity to exercise his right to confirm in writing any comments he may have made at the time of the inspection and make other comments with respect to the written record, within a term of five days; and

10. Name and signature of the persons who took part in the inspection, including the inspector.

Article 210. When making comments during the inspection or written comments, the inspected persons may offer evidence in connection with the facts contained in the record

Article 211. If during the inspection, *bona fide* evidence is found of the commission of any of the acts or facts provided for in Articles 213 and 223, the inspector will secure, in a precautionary manner, the products with which said infringements or criminal offenses are presumably committed, preparing an inventory of the secured products, which will be made of record in the inspection act and the person in charge or the owner of the establishment where they are will be appointed as custodian thereof, in the case the establishment is a permanent one, if not, the products will be impounded in the Ministry.

In the case of criminal offense, the Ministry will notify the Federal Prosecutor of the facts and put the secured products at his disposal.

Article 212 A copy of the record of the inspection will be left with the person before whom the inspection was carried out, even if he refused to sign it, which will not affect its validity.

CHAPTER II

Administrative Infringements and Sanctions

Article 213. The following constitute administrative infringements

1 To carry out acts contrary to good uses and customs in industry, commerce and services, that imply unfair competition and that relate to the subject matter governed by this Law.

2 To purport unpatented products as patented. If the patent has lapsed or if it was declared null and void, an infringement will occur one year after the date of lapsing or, in such case, of the date when the nullity declaration became final.

3. To put products up for sale or in circulation, or to offer services, stating that they are protected by a registered mark when they are not. If the registration of the mark has lapsed or has been declared null or canceled, an infringement will occur one year after the date of lapsing or, in such case, of the date when the respective declaration became final.

4. To use a mark confusingly similar to another registered mark, to cover the same or similar products or services as those protected by the registered mark;

5 To use, without the holder's consent, a registered mark as an element of a trade name or a corporate name or denomination, or *vice versa*, provided said names relate to establishments that deal with products or services covered by the mark.

6. To use, within the geographic region of the effective clientele or anywhere within the Republic, in the case mentioned in Article 105 of this Law, a trade name identical or confusingly similar to another which had been used by a third party to cover an industrial, commercial or services establishment engaged in the same or a similar activity.

7. To use as marks, the names, symbols or initials referred to in Article 4 and sections 7, 8, 9, 12, 13, 14 and 15 of Article 90 of this Law.

8 To use a previously registered mark as a corporate name or denomination, or as part thereof, for a corporate entity whose activity is the

production, importation, or trade with products or services equal or similar to those to which the registered mark is applied, without the written consent of the holder of the registered mark or of the person to whom a license has been granted by said holder.

9. To perform, during the exercise of industrial or commercial activities, acts which confuse or lead the public to confusion, error or deceit, by making it believe or presume, without any foundation:

a. The existence of a relationship or association between one establishment and that of a third party;

b. That products are manufactured under specifications, licenses or the authorization of a third party.

c. That services are provided or products are sold under the authorization, licenses or specifications of a third party;

10. To try to or to tarnish the prestige of the products, services or establishment of another. Not included in this provision is the comparison of products or services covered by the mark for the purpose of informing the public, provided said comparison is not misleading, false or exaggerated, in the terms of the Federal Law on Consumer Protection; and

11 All other infringements of this Law that do not constitute criminal offenses.

Article 214. The administrative infringements of this Law or of other provisions derived from it will be sanctioned by:

1. A fine of up to ten thousand times the general minimum wage prevailing in the Federal District.

2 An additional fine of up to five hundred times the general minimum wage prevailing in the Federal District, for each day during which the infringement subsists.

3 Temporary shutdown for a period of up to 90 days.

4. Final shutdown;

5 Administrative imprisonment for up to 36 hours.

Article 215 The investigation of infringements will be conducted by the Ministry, *ex officio* or at the request of an interested party, and in both cases

the inspection provided for in Chapter I of this Part is to be conducted

Article 216. If the nature of the administrative infringement does not warrant an inspection, the Ministry will notify the alleged infringer, providing the elements and evidence upon which the presumed infringement is based, granting him a term of five days in which to assert this right and submit evidence.

Article 217. When the term referred to in Articles 209, section 9, and 216 of this Law has elapsed, the Ministry, based on the record of the inspection and, in the absence thereof due to the nature of the infringement, using the elements on record, and taking into account the statements and evidence of the interested party, will issue its resolution.

Article 218. In the event of recurrence, the previously imposed fines will be doubled, but the amount thereof shall not be more than three times the maximum set forth in **Article 214** of this Law, depending on the case

For the purpose of this Law and the other provisions deriving herefrom, understood as recurrence is each one of the subsequent infringements of a single precept, committed within two years following the date on which the resolution relating to the infringement was issued

Article 219. Shutdowns may be ordered in addition to a fine or without the imposition of a fine. A final shutdown will be in order when the establishment has been shut down temporarily two times and within the span of two years, if there is recurrence of the infringement within said period of time

Article 220. The following shall be taken into account before determining the sanctions

1 The deliberate nature of the act or omission that constitutes the infringement,

2 The economic situation of the infringer, and

3 The seriousness which the infringement implies with respect to the trade with the products or the supply of services, as well as the damage to those directly affected

Article 221. The sanctions established in this Law and in the other provisions derived herefrom will be imposed without detriment to any indemnification that may apply for damages to the affected parties, in the terms of the common legislation

Article 222. If from an analysis of the file related to an investigation of an administrative infringement, the Ministry discovers acts that could constitute any of the criminal offenses provided for in this Law, it shall notify the Federal Prosecutor, delivering to him all the elements in its possession.

CHAPTER III

Criminal Offenses

Article 223. The following are criminal offenses:

1 To manufacture or make products covered by a patent of invention or by a registration of utility model, without the consent of its holder or without the respective license.

2 To offer for sale or place in circulation the products covered by a patent of invention or by a registration of utility model, knowing that they were manufactured or made without the consent of the holder of the patent or registration or without the respective license.

3 To use a patented process without the consent of the holder of the patent or without the respective license.

4 To offer for sale or place in circulation products that result from the use of patented processes, knowing that they were used without the consent of the patent holder or of the person having a license to exploit the same.

5 To reproduce industrial designs covered by a registration without the consent of the holder thereof or without the respective license.

6 To use a registered mark without the consent of its holder or without the respective license, on products or services equal or similar to those to which the mark is applied.

7 To offer for sale or place in circulation products equal or similar to those to which a registered mark is applied, knowing they are being used without the consent of the holder;

8 To offer for sale or place in circulation products to which a registered mark is applied, and which have been altered;

9 To offer for sale or place in circulation products to which a registered mark applies, after having fully or partially altered, replaced or deleted said registered mark;

10 To continue using an unregistered mark which is confusingly similar to another registered mark, after the administrative sanction imposed for this reason has become final.

11 To offer for sale or place in circulation products, or render services, with the mark referred to in the preceding section.

12 To use, without the respective authorization or license, an appellation of origin;

13 To disclose to a third party a trade secret, which is known to the person disclosing the same as a result of his work, position, duty, professional exercise, business relationship or by virtue of the granting of a license for the use thereof, without the consent of the person who keeps the trade secret, having been informed of its secrecy, in order to obtain an economic benefit for himself or for a third party, or in order to adversely affect the person who keeps the secret.

14 To appropriate a trade secret without the consent of the person who keeps it or of its authorized user, to use or disclose it to a third party, in order to obtain an economic benefit for himself or for the third party, or with the purpose of causing a prejudice to the person keeping the trade secret or its authorized user.

15 To use the information contained in a trade secret, which has become known to a person as a result of his work, duty, position, professional exercise or business relationship, without the consent of the person who keeps it or of its authorized user, or which has been disclosed to him by a third party, knowing that such third party did not have the consent of the person keeping the trade secret or of his authorized user, in order to obtain an economic benefit or cause prejudice to the person keeping the trade secret or his authorized user

Article 224. A sentence of two to six years in prison and a fine in the amount of one hundred to ten thousand times the general minimum wage prevailing in the Federal District will be imposed upon the person who commits the criminal offenses set forth in the preceding Article, except for those set forth in sections 10 and 11, in which case the sanctions will be from six months to four years in prison and a fine in the amount of fifty to five thousand times the general minimum wage prevailing in the Federal District.

Article 225. The preliminary inquiry related to the criminal offenses referred to in Article 223 will be initiated by the Federal Prosecutor as soon as he is informed of the facts that form the elements of the same and, during such preliminary inquiry, he may order that the precautionary measures established in the Federal Code of Penal Procedure be taken; but, in order to prosecute the criminal action, the Federal Prosecutor must have the technical opinion issued by the Ministry for such purpose, which will not make a prejudgment upon the appropriate civil or criminal actions.

Article 226. Besides the taking of criminal action, the person adversely affected by any of the criminal offenses referred to in this Law may bring actions against the one or more perpetrators for payment of damages suffered as a result of said offenses.

Article 227. The courts of the Federation will have jurisdiction over the criminal offenses referred to in this chapter, as well as over any commercial and civil controversies and the precautionary measures that arise as a result of the application of this Law. When said controversies only affect particular interests, the courts of common pleas may hear them, at the election of the plaintiff

TRANSITIONAL

Article First. This Law will enter into operation as of the day following its publication in the Official Federal Journal.

Article Second. The following are repealed:

1. The Law on Inventions and Trademarks, published in the Official Federal Journal on 10 February 1976, as well as its amendments and additions, but it will continue to apply with respect to the criminal offenses committed during its term of effect, without detriment to the provisions of Article 56 of the Penal Code for the Federal District in Common Pleas and for the entire Republic in Federal Pleas; and

2. The Law on the Control and Registration of the Technology Transfer and Use and Exploitation of Patents and Trademarks and its Regulations, published in the Official Federal Journal on 11 January 1987 and 9 January 1990, respectively.

Article Third. For the purposes of Article 24, section 11, of the Income Tax Law, it will not be necessary to show evidence of recordation with the National Registry for Technology Transfer of the deeds, contracts or agreements related to technical assistance, transfer of technology or royalties.

Article Fourth. Until the Federal Executive issues the Regulations of this Law, the Regulations of the Law on Inventions and Trademarks, published in the Official Federal Journal on 30 August 1988, will continue to be in effect, insofar as they are not contradictory to this Law.

Article Fifth. The Federal Executive will issue the decree for the creation of the Institute referred to in Article 7th of this Law.

Article Sixth. The patents and registrations of industrial drawings and designs granted based on the Law that is being repealed, will maintain their term as granted, until their expiration, but they will be subject to the provisions of this Law and its Regulations.

Article Seventh. Registrations of marks and authorizations for use of an appellation of origin granted based on the Law on Inventions and Trademarks which is hereby repealed, will continue to be effective. In all other concepts, they will be subject to this Law and its Regulations.

Article Eighth. The effects of the publication of trade names made prior to the effective date of this Law will continue in the terms of the Law on

Inventions and Trademarks, which is hereby repealed, this Law being applicable to all other concepts.

Article Ninth. The provisions of the Law on Inventions and Trademarks, which is hereby repealed, will apply to certificates of invention granted under said Law, until the expiration of the term granted to them in the respective certificate.

Article Tenth. The patent applications and the applications for a certificate of invention pending on the effective date of this Law will not be subject to the publication of the application provided for in Article 52 of this Law, and only the patent will be published in the terms of Article 60.

Pending applications for a certification of invention will be converted into patent applications.

The applicants for pending patents and certificates of invention on the effective date of this Law shall request in writing to the Ministry, within six months following said date, the continuation of their prosecution, based on said applications, with the object of obtaining the corresponding patent in the terms of this Law. Should the applicants fail to make this request to continue the prosecution to the Ministry within the established term, their respective applications will be deemed to be abandoned and their prosecution will be considered concluded.

Article Eleventh. Pending applications for a certificate of invention and patent applications related to processes to obtain directly a product which was not patentable under the Law on Inventions and Trademarks, hereby repealed, but which is patentable under this Law, may become product patent applications, keeping their filing date or the recognized priority date, provided they comply with the following:

1. That the conversion be requested with the Ministry in writing by the applicant for a certificate of invention or patent, or by his assignees, within 12 months following the effective date of this Law;

2. That the applicant has the product patented or has applied for a patent on the product in any country which is member of the Patent Cooperation Treaty;

3. The publication of these patent applications in the Gazette will be made as soon as possible after 18 months following the date the conversion is applied for; and

4. Patents granted on the basis of this provision will be in force for 20 years from the filing date of the application for a process certificate of invention or patent.

Article Twelfth. Patent applications filed before the effective date of this Law, in any country which is a member of the Patent Cooperation Treaty, relating to inventions falling into sections 8 through 11 of Article 10 of the Law on Inventions and Trademarks being repealed, will keep in Mexico the priority date of the first application filed in any of said countries, provided that:

1. A patent application is filed with the Ministry for the mentioned inventions, by the first patent applicant in any of the countries identified in the preceding paragraph or by his as-

signee, within twelve months following the effective date of this Law;

2. That the patent applicant shows before the Ministry, in the terms and conditions provided for in the Regulations of this Law, to have filed a patent application in any of the countries member of the Patent Cooperation Treaty or, in such case, to have obtained the corresponding patent; and

3. The working of the invention of the importation of the patented product or the product made according to the patented process, at a commercial scale, had not been initiated by any person in Mexico prior to the filing date of the application in this country.

The term of the patents to be granted under this Article will expire on the same date they do in the country where the first application had been filed, but in no case will the term exceed 20 years as of the filing date of the patent application in Mexico.

Article Thirteenth. Administrative declarations pending on the effective

date of this Law will continue to be processed and will be resolved according to the provisions of the Law on Inventions and Trademarks, which is hereby repealed.

Article Fourteenth. For the purpose of compliance with the provisions of **Article 174** of this Law, in the case of an appellation of origin, a term of three years as of the effective date of this Law will be granted. The Ministry will publish, within the term of three months from this same date, the provisions and guidelines to guarantee the quality of the product and the manner of its packing or packaging that the authorized users and the persons distributing or selling their product must comply with, based on this Law, in a gradual and reasonable manner, during the three-year term of adjustment granted in this Article.

PHILIPPINES: Revised Rules of Procedures on Technology Transfer

Pursuant to the provisions of Executive Order No. 133 Reorganizing the Department of Trade and Industry and its attached agencies and Section 79-B of the revised Administrative Code, the following Amendments to the Revised Rules of Procedures of the Technology Transfer Registry are hereby promulgated:

Section 1. The definition of a technology transfer arrangement under Section 1(b), Rule 1 is hereby amended as follows:

"Technology Transfer Arrangements" shall refer to contracts or agreements entered into by and between

domestic companies and foreign companies and/or foreign-owned companies involving the: the transfer of systematic knowledge for the manufacture of a product or the application of a process; rendering of a service including management contracts; licensing of computer software, and the transfer, assignment or licensing of all forms of industrial property rights including marketing/distributorship agreements involving the license to use foreign trademarks, tradenames and service marks and other marks of a proprietary nature.

Section 2. The definition of packag-

ing cost under Section 1(g), Rule 1 is hereby amended as follows:

"Packaging Cost" shall refer to cost of materials incurred in the process of placing the licensed product in container(s) necessary for transporting products to specific areas of destination.

Section 3. Section 2(a), (b) and (c) of Rule 11 is hereby amended to read as follows:

(a) Formulate policies that would promote the inflow of appropriate technology into the desired/preferred sectors of activity with focus on the developmental role of the Government

in the field of technology transfer.

(b) Establish general and equitable standards on which to base the relationship between/among the parties to the technology transfer arrangements, taking into consideration their legitimate interests, and giving due recognition to the special needs of the country for the fulfillment of its economic and social development objectives.

(c) Encourage technology transfer arrangements between/among the parties to the technology arrangements under conditions where the bargaining positions of the parties to the technology transfer arrangements are balanced to achieve mutually satisfactory arrangements.

Section 4. Section 7, Rule IV is hereby amended, taking into consideration their legitimate interests, and giving due recognition, amended as follows:

The Registry shall render action on application to the specifications for registration in accordance with the following schedule:

1. Within two (2) working days for the fulfillment of the following technology transfer arrangements:

- i. agreements involving the transfer of its economic and of technology through the licensing of patents and/or know-how and trade secrets with a royalty fee not exceeding 5 per cent of net sales;
- ii. agreements which are royalty-free; and
- iii. amendatory agreements to TTR registered agreements involving minor changes such as addition of new products involving the same technology under the same terms of a TTR registered agreement or change of technology supplier/technology recipient or change in corporate name of technology supplier/technology recipient.

2. Sub-section 2 is duly deleted in its entirety.

3. Sub-section 3 shall now become sub-section 2 of Section 7.

Section 5. Section 10 (1) Rule IV is hereby amended as follows:

In evaluating technology transfer arrangements, the Registry shall take

due consideration for agreements where:

1. The use of the technology/industrial property right(s) will lead to substantial contribution to the national development objectives and goals.

Section 6. Section 11, Rule IV on the evaluation of royalties/fees is hereby amended in its entirety to read as follows:

Royalties/fees not exceeding 5 per cent of net sales shall be granted automatic approval provided the technology transfer arrangement involves the transfer of technology through the licensing of patents and/or know-how and trade secrets, otherwise, the technology payment shall be assessed using the following criteria:

1. Technology cost in relation to the benefits that will be derived by the technology recipient and the national economy such as the following:

- (a) employment generation;
- (b) export earnings;
- (c) use of indigenous raw materials and local equipment and services;
- (d) efficiency improvements;
- (e) spill-over of technology to local industries; and
- (f) programmes for the transfer, adaptation, and assimilation of technology.

2. equitable and fair sharing of the profit from the licensed activity between the technology supplier and the technology recipient.

In addition to the foregoing and if applicable, the following factors will also be considered in the determination of the reasonableness of the technology payments:

- (1) scope, complexity and pioneering nature of the technology; and
- (2) level of priority of the licensed activity.

Minimum royalty shall not be allowed, unless the requested minimum royalty is proven to be less than the royalty payments due based on historical sales and/or sales projection of the licensed product(s).

For uniformity, royalty base shall be expressed in terms of net sales whenever applicable.

A bonus royalty of 2 per cent of net foreign exchange earnings, as herein defined, may be allowed if the technol-

ogy supplier commits to assist the technology recipient in the export of the licensed product(s).

Section 7. Section 12(1), (5), (14), and (15), Rule IV are amended as follows:

Restrictive business clauses shall not be allowed in any technology transfer arrangement; specifically, the following clauses shall be prohibited:

1. Those which restrict directly or indirectly the export of the licensed products under the technology transfer arrangement, unless justified for the protection of the legitimate interest of the technology supplier such as export to countries where exclusive licenses to manufacture and/or distribute the licensed product(s) have already been granted;

5. Those which provide free of charge that major improvements made by the technology recipient shall be communicated to the technology supplier; and/or shall be patented in the name of the technology supplier, and/or shall be exclusively assigned to the technology supplier;

14. Those which require the technology recipient to keep part or all of the information received under the technology transfer arrangement confidential beyond a reasonable period; and

15. Those which exempt the technology supplier from liability for non-fulfilment of his responsibilities under the technology transfer arrangement and/or liability arising from third party suits brought about by the use of the licensed product or the licensed technology.

Section 8. Section 12(9), (12) and (13), Rule IV are hereby deleted in their entirety.

Section 9. Section 13, Rule IV is hereby amended as follows:

Requisite Provisions. The following provisions shall be required in technology transfer arrangements.

2. A fixed term not exceeding ten (10) years with no automatic renewal. However, an indefinite term may be allowed for royalty-free agreements and arrangements for the outright purchase of technology.

4. That, on the date of the signing of the technology transfer arrangement, the technology supplier shall warrant, to the best of its knowledge, that it is not aware of third parties' valid industrial property rights or similar protection which would be infringed upon by the use of the technology provided by the technology supplier to the technology recipient under the technology transfer arrangement.

6. In the event the technology transfer arrangement shall provide for arbitration, the Procedure of Arbitration of the Arbitration Law of the Philippines or the Arbitration Rules of the United Nations Commission on International Trade Law (UNCITRAL) or the Rules of Conciliation and Arbitration of the International Chamber of Commerce (ICC) shall apply and the venue of arbitration shall be the Philippines or any neutral country.

Section 10 Section 13(8), Rule IV is hereby deleted in its entirety.

Section 11. Section 14, Rule IV is hereby amended to read as follows:

In the event the technology transfer arrangement shall provide for the rendering of related technical services by foreign national(s) under the registered technology transfer arrangement, the rate of fees shall be determined based on the following factors:

1. Qualifications of the technician/engineer rendering the services (background in terms of education and experience, current field of specialization, level of expertise)

2. Scope of work,

3. Actual salary scale for a particular level of expertise in the country where the supplier of technology is based, and

4. Time required to efficiently cover the various services to be rendered

Section 12 Section 22, Rule VIII is hereby amended as follows:

	Fines for non-registration	Basic Fee	Daily Fine	Start of Penalty Period
(a)	New Technology Transfer Arrangements	P500	P25	After the 30th working day from the date of execution or effectivity, whichever is earlier
(b)	Renewal of Technology Transfer Arrangements	P1,000	P25	Date of effectivity of the renewal of the technology transfer arrangement
(c)	Amendatory/Supplemental Technology Transfer Arrangements	P200	P10	After the 30th working day from the date of execution

	Fines for late or non-submission	Basic Fee	Daily Fine	Start of Penalty Period
First Violation		P100	P15	1 April of each year
Second Violation		P150	P25	1 April of each year
Third Violation		P300	P35	1 April of each year

Technology Recipients failing to register their technology transfer arrangements, as required under Section 4 of Rule III hereof, shall be subject to the schedule of fines as above.

Section 13 Section 23, Rule VIII is hereby amended as above.

The following schedule of fines for late or non-submission of Annual Progress Reports shall be imposed as follows:

Section 14. Section 30, Rule XIV is hereby amended to include the following:

The following fees shall also be collected by the Registry:

- (a) Rules of Procedure/Primers - P30
- (b) Preliminary Review - P300
- Amendments (COR) - P200

Section 15. Section 27, Rule XI is hereby amended as follows:

These amendments to the Revised Rules of Procedures shall not have retroactive effect on all technology transfer arrangements existing and registered or pending registration with the Technology Transfer Registry before the effectivity of this Administrative Order. The provisions of these amendments shall cover agreements with effective date of 15 March 1993.

Section 16 Section 32, Rule XII is hereby amended as follows:

This Administrative Order shall take effect on 15 March 1993.

Approved
(Signed) Rizalino S. Navarro
Secretary of Trade and Industry

THAILAND: Science and Technology Development Plan

1. Results of past development in science and technology (S&T)

Success in this regard may be measured by a greater sense of awareness and heightened consciousness about the importance of science and technology. This is particularly the case among high-level public officials and national administrators, who have given priority, and supported increasing application of science and technology in national economic and social development.

1.2 *Promotion of research and development in the public and private sectors as follows:*

1.2.1 Within the public sector, several organizations have been set up to formulate policies and support research and development in science and technology. These national organizations have been set up to support science and technology development in three major fields: biotechnology, metal working and material technology, and electronics and computer technology.

1.2.2 Within the private sector, incentives have been offered by the Government to encourage research and development, including the provision of soft loans, grants, tax privileges for certain types of machinery and equipment, privileges regarding corporate taxes, dividends, and other research and development activities of companies granted promotional privileges, etc.

1.3 *Preparation of S&T personnel*

Development of high-level manpower in science and technology has increased to enable these personnel to serve as university professors and researchers. Extensive scholarship programmes at the bachelor, master and doctoral degree levels, both in Thailand and in foreign countries have

been offered in the three major areas mentioned above, together with other engineering and science degree programmes.

2. Important issues that continue to be constraints hindering prospects of long-term sustainable development

2.1 *Limited application of technology to enhance productivity*

2.1.1 Despite an increasingly diversified industrial production structure into more modern and high-level industries, the process and stages of production are still largely labour and resource intensive since these are comparatively cheap. Within the agricultural sector, increase of output was usually accounted for by extension of farm land and use of cheap labour to reduce production costs. In future, both the industrial and agricultural sectors will no longer to the same extent be able to employ these factors, which Thailand used to have comparative advantage over some other countries. This is because Thai wages have been rising, and the country has reached the end of the land frontier, causing land prices to rise rapidly.

2.1.2 Another important factor, which has played a part in delaying the application of modern technology to increase industrial productivity, is the high level of protection that the Government gave to the industrial and commercial sectors, such as import tariff barriers, import bans and bans on the establishment of some types of industrial plants, etc.

2.2 *Limited capability in the acquisition and transfer of technology*

2.2.1 Thailand continues to rely on imports of technology in various forms, costing an increasing amount of money annually. But the capability to acquire technology is still limited as the small-

and medium-scale industries tend to be at a disadvantage in terms of pricing and other business constraints. This is because they lack sources of data and information on technology, as well as bargaining power and appropriate financial support.

2.2.2 Diffusion of technology and technical know-how is still limited. Normally, parent companies will transfer technology or technical know-how only to clients or subsidiaries in foreign countries. Therefore, small- and medium scale companies in Thailand will generally not receive the benefits of the technology transfer, and will not be able to act as sub-contractors in producing the desired parts. As a result, imports of parts and necessary materials from foreign sources continue to be a necessity. In some cases, it is also necessary to bring in foreign companies to act as sub-contractors in producing some parts.

2.2.3 Large-scale industries and state enterprises, which import equipment and materials, and which rely on high technology from foreign countries, do not sufficiently recognize the importance of building up local capability in acquiring, selecting and absorbing technologies imported from foreign countries.

2.3 *Manpower in science and technology is inadequate both in terms of quantity and quality*

2.3.1 The rapid economic expansion, and the changing production structure, which is increasingly oriented towards the industrial, services and modern agricultural sectors, have led to severe shortages in science and technology manpower, particularly engineers, technicians and skilled craftsmen. During 1987-1989, shortage of engineers alone was estimated to be 5,000. During the Seventh Plan period it is estimated that demand for such manpower will be even greater.

2.3.2 There have been increasing problems of "brain drain" of personnel from the Government and State enterprises to private business and industry. Particularly acute is the problem of the "brain-drain" of university professors in science and technology, who are key "producers" of new generations of scientists and technologists. Furthermore,

entists and technologists. Furthermore, given the greater needs in research and development activities, demand for highly qualified personnel in science and technology can only increase, thereby exacerbating the existing problem of shortages further.

2.4 Research and development activities and basic facilities and support services for development of science and technology are still not strong enough to readily absorb foreign technology, or to have a sufficient degree of self-reliance for indigenous technological development

2.4.1 Most of the research and development activities are conducted by the public sector, and are scattered in various places. Research results have generally not been effective in solving basic problems. Newer areas of research activities tend to be carried out in isolation, and are unrelated to the industrial sector. Therefore, research results are not applied commercially. With regard to the private sector as users of research results, they are still not sufficiently aware of the importance of research and development because of the lack of positive measures and incentives from the Government to encourage them to invest in this field.

2.4.2 Other supporting services, such as metrological service, analysis and testing standards, and product quality accreditation, are provided by several agencies, which still lack capability and efficiency to offer speedy services in response to the increasing demand.

3. Targets for science and technology development

In order to promote application of appropriate technology to enhance productivity, increase international competitiveness, strengthen capability to acquire and transfer technology from foreign countries, develop science and technology manpower in shortage areas both quantitatively and qualitatively, and develop basic services in science and technology to be conducive to indigenous technological development, the following targets have been set.

3.1 Develop and use technology to increase productivity in agriculture and industry

3.1.1 Increase productivity of the industrial sector at an average rate of 2.6 per cent per year during the Seventh Plan period in order to support the target growth rate of 9.5 per cent of the industrial sector.

3.1.2 Increase productivity of the agricultural sector from an average of 1 per cent per year during the Sixth Plan period to 1.8 per cent per year during the Seventh Plan period in order to support the target growth rate of 3.4 per cent of the agricultural sector.

3.2 Expand capacity to develop manpower in science and technology in various fields to achieve targets by the year of the Seventh Plan in the following fields

3.2.1 The proportion of engineers to increase from 9.8 per 10,000 population to 14.9 per 10,000 population.

3.2.2 The proportion of scientists to increase from 7.2 per 10,000 population to 10.2 per 10,000 population.

3.2.3 The proportion of agricultural experts to increase from 6.7 per 10,000 population to 10.5 per 10,000 population.

3.2.4 The proportion of technicians to increase from 141.5 per 10,000 population to 221.5 per 10,000 population.

3.2.5 The proportion of researchers in science and technology to increase from 1.4 per 10,000 population to 2.5 per 10,000 population.

3.3 Increase budget for research and development to 0.75 per cent of GDP by 1996. The public sector will account for 0.50 per cent of GDP, representing about 2 per cent of annual budgetary allocations, while the remaining 0.25 per cent of GDP will be accounted for by the private sector

4. Guidelines and measures for the development of science and technology

4.1 Stimulate the industrial sector to intensify application of technology to increase productivity, via the following measures

4.1.1 Create a competitive environment by reducing protection to domestic industry, including readjusting protection level, removal of ban on new entrants to selective industries, relaxing import control and reducing the high levels of customs duties, etc.

4.1.2 Create a favourable atmosphere by reducing tariff rates for equipment used in laboratories, measurement and testing instruments, and computer-aided manufacturing (CAM) to similar levels as rates on machinery.

4.1.3 Encourage and promote wider use of important technologies for industry, such as management technology, computer-aided design and computer-aided manufacturing (CAD/CAM), energy conservation, waste management and quality control, together with provision of information services and calibration service of measuring instruments, and product testing under international standards.

4.1.4 Amend Government rules and regulations to enable technological promotion organizations of the public sector to have flexibility and operate in an efficient manner as in private organizations, including permission to keep income from provision of services to purchase other necessary equipment and permission to offer other services, etc.

4.1.5 Support development and technological application in specific fields in order to enhance production efficiency of the so-called target industries in the following ways.

(1) Machinery and metal working industry. Emphasize development of metal working technology to strengthen capability to undertake sub-contract work, such as in production of parts. Promote the use of high precision technology to increase the efficiency of the mould and die industry and production of machine tools. Develop knowledge and designing skills of machinery and machine tools, as well as set up centres of excellence in each area of metal work.

(2) Electronics industry. Encourage investment in application of high technology, such as integrated circuit fabrication, and production of automatic branch exchange (PABX). Support joint public and private research and development activities in producing prototypes, which do not involve high technology, but which have high market potential, such as personal computers, mobile telephones, and application-specific integrated circuits. Promote skill acquisition and knowl-

edge in product design, together with setting up of a centre of excellence in electronics technology.

(3) Textile industry. Support the use of modern machinery to reduce production costs of the spinning and weaving industries. Promote development of finishing technology, especially in bleaching and dyeing for high quality products, as well as develop modern management technology.

(4) Food industry. Support research in basic knowledge concerning raw materials, post harvest technology, processing technology, food formula. Improve quality of food to ensure hygienic, sterilized and contamination-free food, and promote quality control and production management, together with research on industrial waste recycling.

(5) Plastics industry. Promote development of compounding technology to support development of intermediate and engineering plastics for industrial use, as well as enhance efficiency of machinery.

(6) Iron and steel industry. Support development of melting quality, cost reduction in melting, efficient use of melting furnace, as well as technological development of alloyed steel casting.

(7) Gems and jewelry industry. Promote research on precious materials for the jewelry industry, as well as issue gem colour and clarity certification.

4.2 Promote use of modern technical know-how, together with efficient use of resources to increase productivity and reduce production costs of the agricultural sector, via the following

4.2.1 Formulate measures to maintain stability of commodity prices, and to keep price on an increasing trend, as well as set quality standard and commodity prices to induce agricultural workers to make use of technology to increase productivity.

4.2.2 Support agricultural cooperatives and agricultural groupings in various forms to promote quality development, and cost reduction to raise awareness about the importance of technological application.

4.2.3 Improve the organizational structure of agricultural technical services to ensure that Government person-

nel have adequate capability to supervise and solve the technical problems of agricultural workers in each locality.

4.2.4 Increase the private sector's role in developing and transferring technology to agricultural workers by encouraging business activities in the form of contract farming and joint ventures in the agro-industry to enable agricultural workers to benefit from newer forms of technology.

4.2.5 Formulate measures to develop and transfer technology to increase agricultural productivity as follows:

(1) Farming. Support use of new technologies, such as genetic engineering and tissue culture to improve the quality of plants. Promote appropriate and correct use of agricultural technology, plant protection and harvesting methods, emphasizing the correct use of chemical products, utilization of biological products and biological control, development of agricultural tools and equipment suitable to each locality, as well as carry out studies about system or process of preservation, processing and packaging.

(2) Livestock. Improve artificial insemination technology and embryo replanting of beef and dairy breeds to ensure maximum efficiency at minimum cost for stocks and feed production. Furthermore, provide basic knowledge on imported pureline cattle breeding for small-scale agricultural workers as well as improve slaughter processes, control of waste water treatment and maintenance of hygienic slaughterhouse conditions.

(3) Fisheries. Formulate plans and lay down measures to conserve aquatic particularly marine, resources. Carry out research and development in artificial insemination of fish and other aquatic creatures. Develop post-fishing technology and processing technology for aquatic living resources to attain the quality levels demanded by the market. Finally, develop the technology to protect as well as rehabilitate the environment from adverse impacts of the fishing industry.

4.3 Increase efficiency in the acquisition and transfer of technology, via the following

4.3.1 Increase bargaining power in the acquisition of technology.

(1) Formulate plans to promote foreign investment in projects beneficial to technological development in the country. Promotional privileges will be given to activities whose development is desired together with systematic transfer of technology.

(2) Designate an institution with potential to become a centre of information on sources of technology, quality, prices, purchase conditions, as well as provide advice, disseminate knowledge on the assessment of technological value, selection of technology, negotiations, and promote the private sector to seek their own sources of technological information.

4.3.2 Promote widespread diffusion of imported technology, via the following.

(1) Promote Thailand to become a sub-contractor of selective industrial production, by providing a centre to link various industrial production units, creating an information system on vendors, sub-contractors and their clients, both within and outside the country, as well as attempting to match demand with supply.

(2) Provide financial support to small- and medium-scale industries on improving the application of technology and to relocate to industrial estates in order to benefit from technology transfers among one another, as well as from larger-scale industries.

(3) Encourage industrial estates, or industrial zones to provide land and central instrument and equipment institute, with facilities, such as testing equipment and computer-aided design for small- and medium-scale industries so that they can be more conveniently linked with large-scale industrial plants. These promoted industrial estates and industrial zones should also receive financial assistance.

(4) Formulate measures to disseminate knowledge and technology generated from promoted foreign firms to Thai enterprises and educational system, such as the use of consultants and foreign experts as resource persons in the conduct of research and development activities, etc.

4.3.3 Encourage State enterprises which purchase hardware and materials from abroad on a regular basis to develop capability in the selection and learning of foreign technologies, via the following.

(1) Support provision in purchase contracts requiring vendors of technologies to transfer important aspects of technologies to the Thai side.

(2) Allocate a budget for research and development concerning specification of types and patterns of materials and hardware to be purchased, together with assessment of new technological development in order to enhance capability to acquire technologies.

4.3.4 Monitor results of technology transfers, particularly from large-scale projects, by designating an appropriate agency and mechanism to set targets and monitor results.

4.4 Develop science and technology manpower to support economic growth and self-reliance in technology by carrying out the following measures

4.4.1 Accelerate development of engineers, scientists, mathematicians, and technologists in areas of high demand. The following measures are proposed:

(1) Encourage public educational institutions to speed up manpower development in fields of high demand, including mathematics, mechanical engineering, electrical and electronics engineering, metallurgical engineering, petrochemical engineering, agro-industrial engineering and industrial design, etc.

(2) Devise measures to enable temporary hiring of qualified personnel from the public and private sectors as well as from abroad to relieve existing shortages of teaching personnel in higher education.

(3) Encourage the private sector to develop manpower in areas of shortage by relaxing Government controls and revising rules and regulations to give flexibility in the administration and management of private education services.

(4) Encourage the private sector participation in educational planning, manpower production, curriculum development and skill training to ensure

that graduates will have the quality and qualifications more consistent with the labour market demand.

(5) Support measures to expand opportunities of basic education to enable as many children as possible to complete lower education level during the Seventh Plan period, which will provide a substantial pool of with better quality students to pursue higher education in science and technology.

4.4.2 Accelerate development of technicians and skilled workers in areas of shortage to ensure adequate supply of manpower at a quality acceptable to the market, via the following:

(1) Upgrade the status of technicians and skilled craftsmen to attract capable students to these fields of studies

(2) Encourage close cooperation between educational institutions and industrial enterprises to improve teaching methods to keep up with technological progress and to respond to the needs of the labour market.

(3) Encourage schools to undertake some industrial projects to increase experience and enable a wider field of work for the students in industrial factories.

(4) Expand the scope of cooperation between educational institutions and industrial establishments to encourage more technical education for factory workers and more practical training in actual factory settings for students.

(5) Support a system for testing skill levels to enable technicians and skilled craftsmen to have long-term professional development.

4.4.3 Speed up production of university professors and researchers in shortage areas, via the following:

(1) Increase the number of post-graduate students at master and doctoral levels at leading universities in foreign countries.

(2) Support increase in the number of officials and Government employees in science and technology who are in short supply.

(3) Develop domestic higher education institutions to enable them to produce graduates in science, mathematics, and technologies at internationally acceptable quality levels, emphasizing cooperation with well-

known foreign educational institutions.

(4) Encourage utilization of foreign experts or Thais living abroad to teach, conduct research and development activities, and to act as instructors or resource persons in training programmes. Incentives will be provided in the form of relaxation of personal income tax and facilitation of granting of work permits.

4.4.4 Place high priority on training by implementing the following:

(1) Establish a system of public and private sector cooperation in the provision of skill training programmes to respond to the needs of the industrial sector, as well as stimulate the private sector to organize their own training programmes by setting up a skill development fund.

(2) Invite foreign governments, multinational companies, and leading foreign institutions to organize special training programmes for Thai personnel in areas facing critical shortages, such as research administration, research supervisors and researchers.

(3) Encourage science and technology personnel to have training opportunities and to regularly participate in technical seminars to keep up with advances in technical knowledge.

4.4.5 Improve the working environment of the technical professions, particularly teaching, research and development to maintain high quality personnel within the Government system, via the following measures:

(1) Improve the administrative system and operational procedures of research institutions, higher education institutions, public agencies and State enterprises to encourage flexibility in the management of finance, personnel and procurement of supplies.

(2) Improve salary scales or grant special compensatory rewards to engineering and science faculty members, together with personnel in crucial fields in shortage areas.

(3) Encourage higher education institutions and research organizations to have more regular interchanges or secondments of personnel across organizations or institutions to increase experience and enhance efficiency of research personnel. Furthermore, con-

sider measures to allow personnel of public agencies to carry out projects of technical a nature with private organizations without violating Government rules and regulations.

(4) Encourage cooperative efforts among high quality research personnel to jointly undertake challenging work, which will enhance their skills as well as benefit the country, for example the organization of national research and development projects, specialized research institutions, science and technology parks, etc.

4.5 Rearrange the research and development system to support national development, particularly in industrial development in the following ways

4.5.1 Formulate policies and research and development programmes to be consistent with the stages of industrial development as follows:

(1) Emphasize the importance of research and development activities for the selection, modification and improvement of imported technologies, particularly design and product development technologies.

(2) Encourage frequent reviews of policies and research and development programmes to increase efficiency and consistency with industrial development.

(3) Encourage the setting up of an accounting system for research and development activities in the public and private sectors and State enterprises for effective promotion and monitoring results.

4.5.2 Improve efficiency of public research and development institutions in order to effectively solve technological problems in industry.

(1) Encourage research institutions to operate in closer connection with industrial and business enterprises by inviting private sector representatives to serve as executive committee members. Establish a joint mechanism with the private sector to identify research topics and formulate operational plans, and to persuade the private sector to use these services.

(2) Improve the organization of public research institutions to have more specialized functions in order to ensure increasing support in terms of personnel and equipment to enable

the institutes to become "centres of excellence" capable of providing technological support to industry in specialized areas.

(3) Amend rules and regulations to encourage operational flexibility and attract highly capable personnel to join research institutions and reduce taxes for research and development related equipment within public institutions.

4.5.3. Encourage research activities in educational institutions to enable them to become national centres of knowledge in science and technology.

(1) Promote greater research and development activities within higher education institutions by providing support from public funds for the promotion of research and development.

(2) Support research and development activities of master and doctoral degree students by following the guidelines of the National Research and Development Plan, and by publicizing research results leading to their commercialization.

4.5.4 Promote the private sector's role in research and development

(1) Provide tax incentives, such as permission to deduct expenses incurred in research and development activities from corporate tax calculations. The deductible amount may be as high as one-and-a-half to two times the actual expenses, together with a deduction of depreciation costs of research and development equipment at progressive rates. Furthermore, provide tax exemptions or reduce import duty rates on machinery, measuring instruments, parts, raw materials and other materials, together with sample products used in testing analyses and other research and development activities, etc.

(2) Provide financial incentives to encourage private sector participation in technological development, such as low interest loans and counterpart funds for research and development activities. Support the establishment of venture capital to encourage the use of research results of new technologies for business operations. Finally, support the establishment of a joint public and private sector fund for research and development.

(3) Provide other incentive measures, such as the improvement of pro-

curement and employment contracts of public agencies and State enterprises to open up new markets for domestically produced goods, together with protection of intellectual property rights.

(4) Expand the scope of research and development in technology to cover quality control, improvement of factory plans and application of research and development results for commercial use.

4.5.5 Promote development of the research and development profession.

(1) Improve career prospects of researchers to the highest positions comparable to top administrators in the bureaucratic system. In the academic setting, researchers should also be ensured of promotions to top academic posts while continuing to conduct research.

(2) Researchers and inventors with socially beneficial achievements and inventions should be publicly recognized and awarded with citations and praise for their work. They should also be given official promotions in their work.

(3) Scientists, inventors and those involved in research and development activities should be considered as engaged in independent employment as stipulated in the revenue code in order to benefit from expense deductions in the calculation of personal income tax.

4.6 Other basic infrastructural development to support the application and development of technology as follows

4.6.1 Develop a metrology system, product standard and increase efficiency analysis and testing.

(1) Speed up the development of a metrological system in science in order to gain international acceptability by supporting agencies, which have been assigned responsibilities, with resources including equipment, manpower, and upgrading of the quality of personnel. Formulate joint long-term plans of agencies engaged in research and development of metrology and provide investment promotion in the import substitution production of measuring and testing instruments.

(2) Speed up product standard specification to ensure adequacy and consistency with domestic industrial

development, consumer demand, and testing equipment. Furthermore, the Government should also set up a nationally unified system, which will include both testing and quality accreditation system consistent with operational procedures, and which conforms with international standards.

(3) Encourage and speed up public and private sector operations involving the enhancement of productivity of analysis and testing, development of a system for testing laboratory accreditation, calibration procedures of test instruments, as well as various analysis and testing instruments. These standards should be made internationally acceptable and capable of providing services demanded by industries. Fi-

nally, there should be tax reductions on equipment used in analysis and testing.

4.6.2 Develop information and data systems in science and technology by setting up a system of extensive networks capable of providing information services required by users, as well as dissemination and utilization of data and information, particularly information on patents.

4.6.3 Enhance the capability of engineering consultancy services by providing financial assistance and relevant information to Thai engineering consultancy firms to enable them to compete with foreign firms in bidding on important national projects.

4.6.4 Create an environment and awareness conducive to development of science and technology.

(1) Promote the role of associations related to science and technology in creating appropriate understanding and obtaining the cooperation of people from various professions, together with disseminating knowledge and creating an environment for the development of science and technology.

(2) Revise the curriculum and teaching as well as learning methods in both formal and non-formal school systems to encourage a greater application of technology in daily life. Students should be encouraged to take an active interest in pursuing science as a subject by improving the learning environment in schools through the increased provision of scientific instruments for experimentations, etc.