

# Technology Transfer to Eastern Europe

*Although licensing in Eastern Europe is different than licensing in market economy, western licensors have much to gain*

BY L. J. LAMM\*

Modern telex and television make oral and visual communication throughout the world practically instantaneous. Jet planes make east-west travel commonplace and rapid. With instant communication and jet travel shrinking the world we are all virtually next-door neighbors. After the "Cold War" we were amazed to determine that Americans and East Europeans have a tremendous reservoir of mutual respect and good will. In fact, American technology is preferred over all other, although we usually ask a higher price. I have even heard East Europeans refer to Japanese and European technology as secondhand and somewhat out of date U.S. technology. The questions of why, when, where, and how to capitalize on this interest immediately present themselves.



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## 1. WHY LICENSE IN EAST EUROPE?

Probably the most pragmatic reason for licensing is that we cannot prevent the transfer of technology to East Europe. We could only delay its transfer. Engineers like to publish, and the rest of the world would reverse-engineer our products.

The most important and probably the only reason for being in business is for profit, and since we cannot prevent the same or equal technology being transferred, why not get a financial return for its transfer.

### A. Financial Returns

We all know that the same know-how may be sold many times over to different licensees in different areas. We at Clark consider East Europe as two primary license areas. One is the U.S.S.R. and the other is all other East European countries. A license sometimes is limited to a single country.

License fees must be sufficient to compensate the licensor for engineering time and money spent in contemplation of profits from the licensed area. These fees must also be sufficient to compensate the licensor for the risk of

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creating a potential future competitor and, of course, compensate for the time and expense involved in the transfer of the technology. This fee, therefore, varies with the potential markets, the risk of future competition, and the effort required for its transfer.

From the licensee standpoint the fee must be sufficiently small to make it preferable over developing an equal product. There are, of course, many intangibles involved and it boils down to what the licensor is willing to take and what the licensee is willing to pay. However, with all these factors taken into consideration, licensing in East Europe can give good cash income to pay for future research and development.

## Licensing Country

Speaking for my own company, we have been able to get much larger fees in East Europe than we have in Western markets, but we are in effect licensing an entire country instead of merely one company. In East Europe the end-product market surrendered may, however, be quite small and the market gained for components and other products of the licensor quite large.

In East European countries the licensee usually insists on rights to all improvements made by the licensor over the term of the agreement and is willing to pay a royalty based on production volume for these improvements.

However, the fringe benefits in increased sales in the licensed country will still probably be much more profitable than the cash returns from the license.

### B. Increased Sales

Manufacturing goals in East Europe are usually based on quantity of finished product and only to a lesser extent on profit. It is, therefore, not unusual for a licensee to produce over a long period of time with high purchased content. The licensor may in many cases expect to furnish 50% or more product content for several years and perhaps 15 to 20% on a continuing basis throughout the life of the license. Sales from these components can and usually do represent a tremendous amount of business which a licensor would not otherwise obtain.

In our case, we found that after three years with one licensee we were still furnishing 50% of the product content and probably will be furnishing 10 to 15% over the life of the ten-year agreement. This has resulted in several million dollars in sales of components to this one licensee alone.

In addition to the licensor having an exclusive position on the sale of components, he also has a preferred position for the sale of other products in the licensee country. East European purchasers of end products are quite sensitive to their vulnerability on obtaining spare parts. In the U.S.S.R. for example, it is not unusual for the equipment

purchase contract to include five or more years' supply of spare parts. Due to this vulnerability on spare parts any U.S. company having a license relationship in East Europe will be trusted more as a supplier of spare parts and, therefore will have a definite edge for the sale of non-licensed equipment.

There is no such thing as nondiscrimination in East Europe. The development of trust as a trading partner and particularly that of trust in individuals is as important as product reputation. Large sales contracts are not obtained on a competitive bid basis even though bids are solicited. The bids are only a vehicle to obtain basic price and equipment availability information. Negotiations begin with the three or four leading candidates and if you have a license or cooperation agreement you will probably get preferred treatment.

#### C. Licensee will Honor Agreement

East European licensees are very scrupulous in honoring their license agreements. If a fee is due on a certain date you will find the money waiting at the bank on that date. They will honor the agreement to the letter. Their government has signed the agreement and no employee of the government will intentionally violate it. On the other hand, they will normally not go beyond the agreement. This would be considered unauthorized action. As a corollary to that, however, they will expect their licensor to obey the agreement to the letter.

We must always remember, agreements written in English are in the East European partner's second language and, therefore, must be clear, concise and complete, plus being readily understandable in Webster's English not lawyer's English. Therefore, our license forms may be thrown away. The agreement must be carefully written so as to be completely understood by both parties.

Misunderstandings due to business practices and language usage may occur but my experience has been that these are honest misunderstandings and not attempts to change the contract. In fact, although most all agreements include an arbitration clause, cases which have gone to arbitration are indeed hard to find. All agreements, however, should contain an arbitration clause or other provisions for settling possible disagreements.

#### D. Reverse Technology Transfer

No one company, one nation, or even one family of nations has a monopoly on ideas or know-how. People are pretty much the same throughout the world, except they grew up under different cultures and were exposed to different environments. For this reason one of the fringe benefits of a license agreement can and probably will be reverse technology. East European countries have, over the past several years, placed great emphasis on academic training in the sciences. For this reason improvements to your product may come from the young engineers, who, although not having practical manufacturing knowledge, do have considerable academic training. One of the obvious sources of reverse technology could be in the conversion of U.S. products to the metric system. This may seem quite simple, though we have just signed an agreement with a company in Romania to jointly develop metric power shift transmissions for industrial tractors. We have the transmission technology and know-how while our Romanian partner is well versed in industrial tractor technology as well as being knowledgeable in

metric components and design requirements. We, like most American companies, have been moving at a near zero velocity in changing to the metric system and, under this agreement, we may speed up our metric conversion. East European construction equipment regulations are somewhat different from those in U.S.A. and, in the case of another of our East European licensees, we have received technology to change our licensed equipment so that it would have a greater safety factor in meeting European regulations.

## II. PRODUCT LICENSE NEEDED

In order for any license agreement to be practical, the licensee must need the technology more than the financial considerations required to obtain that technology. Likewise, the licensor, must value his financial return more than he values any adverse effects of giving up that technology. The chances of success in selling a license are in direct proportion to the prospective licensee's need for the product and in inverse proportion to the availability of the same or similar product in the geographic area involved. In making this evaluation, we must consider the entire East Europe area as one market area.

The East European economic community buy all equipment available from each other and, for this reason, a licensee in one East European country is in a preferred position to furnish the entire East European community. We must, therefore, consider the entire community as one area when we calculate the potential volume to be produced under license.

#### A. To Develop Resources

The entire East European community has tremendous resources requiring development. Equipment in astronomical numbers has been purchased for the development of these resources. The industrial areas are developing facilities to produce this needed equipment and are looking to the highly developed industrial western areas for technical know-how and aid. Some of the equipment needed is for mining and processing minerals, including coal; harvesting and processing timber into end products; and petroleum exploration, recovery, and transportation.

#### B. To Increase Efficiency

The East European community has a philosophy of total employment. This philosophy has certain advantages over that of unemployment insurance, welfare, and direct aid without work. It does present a problem, however, when searching for employees to man new facilities in a rapidly expanding economy. Therefore, the philosophy has been changed from allowing inefficiency to grow so as to promote total employment to one of promoting efficiency to make workers available for newly created jobs. An indication of this emphasis on efficiency came out of the just-concluded meeting of the Polish Communist Party Congress in Warsaw to approve the new five-year plan. At that Congress a party spokesman stated that 400,000 Poles were being used to handle material which added no value and that equipment must be introduced to reduce the number of material handlers by at least 100,000 to make these employees available for production work.

This is only an example of the emphasis now being placed on efficiency in East European communities and a maximum effort is being made to obtain licenses to

manufacture labor-saving devices.

### C. *High Technology Status Equipment*

The emphasis in East Europe seems to be on high technology in an effort to leapfrog over technology which may be more applicable to the problem at hand. New plants have a large proportion of numerical-controlled machine tools and other equipment of high sophistication. Due to the scarcity of highly skilled maintenance personnel, equipment with lower sophistication might, from a practical standpoint, be more feasible.

The next step following the purchase of highly sophisticated equipment is its manufacture. Therefore, the opportunity for licensing highly sophisticated equipment is growing rapidly.

### D. *Basic Industry Equipment*

With industrial development, the expansion of basic industries is required. Licenses for the development and processing of raw materials are needed.

## III. RESTRICTIONS IN LICENSING

### A. *East European Restrictions*

Certain unpublished and quite nebulous policies regarding the subject matter on which licenses can be taken is prevalent throughout East Europe. Just as there are preferences there are also subject matter "no-nos" in the East European community.

One of the first of these is a definite reluctance to take any license which does not include the licensor's highest technology in the product license. Frequently an American licensor does not want to license his latest products and this can be quite a stumbling block in negotiating an agreement.

Also, any agreements negotiated usually must contain a provision for including all improvements to the product made by the licensor during the term of the license.

It is also very difficult to sell a license on any product where a similar product of equal technology is available in adequate quantities in another of the East European countries, or where the material required to manufacture the product must be imported.

### B. *U.S.A. Restrictions*

On our side of the pond we also have licensing restrictions.

The U.S. export administration under the Bureau of East-West Trade has responsibility for granting technology export licenses. While the technology which may be licensed to different East European countries varies, there is a definite "no-no" on any technology which is of military importance. Judgment is made on the sophistication of the technology, on whether it is readily available in West Europe and, therefore, can be easily obtained in East Europe, and on whether it is suitable for military use.

The question of approval for exporting technology becomes quite complicated when its sophistication is high and it is primarily for civilian use. A computer for logistic control of airline passenger and freight which can also be used to control troop and military supply movements may run into export license restrictions, as may airport traffic control systems which can also be used for fighter and bomber directing.

Heavy trucks and construction equipment, including cranes, which can be used for military purposes, but are not of high technical sophistication are almost routinely approved for East European licensing.

## IV. LICENSING BUREAUS

### A. *Bare License*

Most of the East European countries have foreign trade organizations which are concerned only with buying and selling licenses. They are experts in the field. Examples of these bureaus or foreign trade organizations are Licensingorg of U.S.S.R. and Poleservice of Poland. These organizations are the ones you deal with on a bare license agreement whether you are buying or selling. However, you will find there are very few bare licenses bought in East Europe. In fact, U.S.A. companies buy at least twice as many bare licenses from East Europe as they sell. You can probably count on the fingers of one hand the bare licenses annually sold by U.S. companies in East Europe and on two hands those which are bought by U.S. companies.

Of course, when we consider licenses as part of a broader agreement including know-how, or, as one of my friends put it, "show-how", the statistics are far different.

### B. *Licensing Plus Know-How and Other Aid*

When a license includes know-how or other aid from the U.S. licensor or includes provisions for commercial cooperation between the licensor and licensee, the agreement is the primary responsibility of the foreign trade enterprise connected with the licensee industrial facility.

However, in all cases the licensing foreign trade organization is a behind-the-scenes advisor to the prospective licensee but will very seldom appear at the negotiation table. The negotiation will be primarily with the commercial foreign trade organization with participation by the industrial facility and the ministry involved plus their legal advisors.

The agreement is normally not one to use your patents but one to make and sell your product. If you have patent protection you can usually get higher fees.

Commercial considerations are paramount in practically all license agreements in East Europe and they are very insistent on provisions for selling the products either through your sales organization or direct to areas having convertible currency. East Europe purchases of products and licenses from Western countries must be paid for with a convertible currency and all East European countries have an unfavorable balance of trade with the West. This unfavorable balance of trade results in a critical shortage of Western currency.

If an American licensor can either buy from the licensee for resale in the West or is willing to give the licensee rights to that market they have a definite plus in negotiating any agreement.

## V. TYPES OF LICENSES

### A. *Turnkey Plant*

You will still find a first approach from an East European trading company to be one requesting a "Turnkey" plant. However, with inflation in the price of manufacturing equipment and the increased availability of machine

tools in East Europe, turnkey plants as such are less and less being insisted upon except for processing plants where the process and the equipment are so intertwined as to be inseparable. Also, turnkey plants are still of considerable interest where the processing equipment is so interdependent as to make it desirable to buy all the equipment from a single source. For example, food processing plants.

#### *B. License Plus Aid*

Probably well over 90% of all license agreements in East Europe are neither turnkey plants or bare-license agreements. Most all of them involve the licensor aiding the licensee in the manufacture of the licensed product. Many of these agreements require a guarantee that the equipment as specified is capable of producing a specified quantity with a certain manpower. These agreements may also require that the licensed product can be made from material available within the licensee country. Each East European country has its own particular requirements with regards to the aid and guarantees which must be given by the licensor but they are all patterned to maximize local content of raw material and export of finished product. Also, most of them require that the licensee has a right to turn over the use of the technology to third parties in the same country without consent from the licensor. Some of the peculiar provisions will work to your advantage against competitors and others will be to your disadvantage but each country's license regulations must be considered when negotiating an agreement. For this reason we can throw away our license forms, because each agreement is different and must be individually written.

### VI. METHOD OF PAYMENT

There is considerable variation between the East European countries with regard to the preferred method of payment for licenses and I will not try to cover all the combinations of cash, sales, purchases, etc. used for compensating licensors.

#### *A. Lump-Sum Payment*

The paying of a lump sum for a paid-up license simplifies the allocation of funds and fits well into the East European philosophy of centralized planning. Therefore, this method of payment was formerly preferred in almost all European countries and is still preferred in some of them particularly Bulgaria. However, the policy is now changed in most areas from buying present technology to buying present technology plus all improvements over a period of years, usually eight to 12 years. With this interest in future improvements you will no doubt be able to get an initial disclosure fee for present technology plus royalty fees for continuing technology.

#### *B. Initial Disclosure Fee Plus Royalty*

While the payment of initial disclosure fees plus royalties is now fairly well accepted in East Europe, you will find they are quite optimistic about large production quantities. Therefore, they will request a declining royalty based on quantity of annual production or a cut-off of royalty fees after a certain quantity is produced during a single year.

#### *C. Sale of Licensed Product to Licensor*

During the last few years there has been increased insis-

tence that U.S. licensors take licensed products in payment for fees. The reason for this is twofold. One, to improve balance of trade and the other is to avoid the necessity of the East European partner having to request additional hard currency funds from the government for the payment of royalties. However, the most pragmatic reason is probably the fact that the foreign trade organization employees usually get a bonus based on volume of sales to hard-currency countries. The capitalistic incentive is quite apparent in a socialistic economy.

#### *D. Purchase of Licensed Product from Licensor*

It may be easier for the foreign trade organization to obtain funds for the purchase of products which have a definite international price than for it to obtain funds for buying intangibles, such as licenses. The trend now is to purchase licenses by agreeing to buy a predetermined quantity of products from the licensor. Somehow or other they seem to assume we make 10% on sales and instead of paying us a million dollars for a license they will agree to buy \$10 million in products from us. While no one will say so publicly, you get the feeling that East Europeans expect you to boost your selling price a little in order to be compensated for your license. Another new development is for the East European licensee to request that you employ some of their personnel in your plant at a very low wage so that these employees can learn about the product and how to make it without cost to the licensee. I don't think this will be very widely adopted as we run into U.S. working visa problems and U.S. worker unrest and union problems. Actually, I think it is just a suggestion that will never have any real use.

#### *E. Trends in Method of Payment*

Most of the East European countries are buying for hard currency much more than they are selling and this unfavorable balance of trade has resulted in considerable foreign debts. For this reason the purchase of Western products and licenses for cash has been drastically curtailed. The trend is now to attempt a sort of barter system where the Western partner buys from the Eastern partner an amount equal to that which he sells.

### VII. COMMENTS ON SPECIFIC COUNTRIES

#### *A. Czechoslovakia*

Czechoslovakia has relatively few cooperation agreements with Western companies, but the U.S.-Czechoslovak trade has grown substantially over the last five years. The trade has been mostly in farm products, electronic equipment, and a certain number of office machines. The C.S.S.R. has large trade surpluses with other East European countries and, therefore, will be reducing its purchases from Western countries and buying from their East European partners wherever possible.

However, Czechoslovakia has a very good technical infrastructure and, therefore, may be considered a very desirable partner for license agreements.

#### *B. German Democratic Republic*

The GDR with its growing trade deficit has been placing increasing emphasis on conserving hard currency and requiring Western licensors to take local products in payment for license fees. The GDR, however, has a very high level of industrial technology and is giving more attention

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granted back to the licensor is a breakthrough invention or a truly important invention, it might be required that the licensor pay royalties back, or rebate royalties, to the licensee.

#### D. Cross-licensing and Patent-Pooling Agreements

Cross-licensing, or an arrangement under which all or part of the consideration for licensing a particular patent is the licensing back of another patent, raises no threshold antitrust problems. Problems of anticompetitive conduct can arise, however, in terms of the use of cross-licensing in conjunction with licensing restrictions which have been discussed above.

Cross-licensing, in those situations which combined patents are licensed to others, can develop rather easily into illegal patent pooling. The *National Lead* case illustrates the illegal domination of a market by patent owners. Similarly, the *Singer* case, under which Singer conspired with two foreign competitors to exclude Japanese sewing machines from the United States through cross-licensing agreements, was an occasion for the Supreme Court to condemn this practice, under the Sherman Act. In the *Line Material* case, the Supreme Court found that any price fixing limitations contained in cross-licenses were beyond the bounds of the patent grant.

It is apparent that cross-licensing increases the risk of determining that a licensing practice is illegal, because it involves the reciprocal licensing between licensor and licensee and thus automatically raises the question of whether there is a possible group boycott involved vis-à-vis the rest of the industry.

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Patent pooling differs from cross-licensing only in that with patent pooling there are more than two parties involved. In patent pooling, more than two companies agree to mutually share their patent properties with one another. Thus, a patent pool can be created where three or more companies agree to place their patent rights into a common pool in which each has the freedom to use the patents of the other. When a patent pool is created within a given industry the risks of an antitrust violation are multiplied. About the only safe way today to insure that a patent pool is operated under the rule of reason is to make the pool open to all persons desiring a license at a reasonable royalty rate. A closed pool between competitors would pretty clearly be a *per se* illegal violation under the Sherman Act.

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to consumer needs and, therefore, represents not only a good market for U.S. licenses but also a good source for technology.

#### C. Hungary

Hungary is increasing its interest in Western technology and particularly is interested in computers, pharmaceuticals, food processing, and agricultural machinery. The aluminum and chemical industries will probably find a very good market for their technology in Hungary. We have a licensee in Hungary for the manufacture of refrigerated display cases of the type used in supermarkets. Our experience with this licensee has been excellent; in fact, it has been superior to that of our average Western licensee. The aid required has been minimal, the licensee has paid its fees on time, and it has cooperated in every way. The licensee built a new plant to manufacture these display cases and will soon expand this plant drastically to keep up with the current East European boom in supermarket construction.

#### D. Poland

Poland is rapidly expanding its industrial base, spending about 30% of its gross national product for expansion of industry, farming, etc. As an example of this expansion, one of our licensees will build forging and casting facilities at a cost of well over \$150 million. Forgings and castings are in short supply in East Europe, just as they are in U.S.A. Poland suffers from a shortage of hard currency but they have a very great appetite for American technology. The people-to-people relationship is extremely good and we have been highly satisfied with our license in Poland. Our licensee there built a new plant and it is now in full production. We advised the licensee on the facilities to be used and aided it in setting up the plant. Poland's economy was given a substantial boost by recently discovered copper resources and expanding enormous coal and sulfur mining operations. Poland offers a very good licensee route to the East European market.

#### E. Romania

Floods caused Romania to suffer a severe economic blow. It, however, has a very rapidly expanding economy and I am personally very enthusiastic with regard to cooperation agreements in Romania. We recently signed our biggest license ever in Romania and during my last two years of visiting this country, I have become convinced that it has the technical infrastructure to rapidly grow industrially. The emphasis here is on farm machinery, oil refining capacity, machine tool industry, and petro-chemical plants. While they do not have sufficient oil resources for export, they are almost self-sufficient. This gives them considerable independence from external domination. Romania also has laws permitting joint ventures.

#### F. Soviet Union

The Soviet Union is by far the largest and also the most difficult market for U.S. licenses. Its automotive and construction vehicle industry is expanding rapidly and it now has a new truck plant on the drawing board which will

equal in size the famous Kama River Operation. One of the largest activities in the Soviet Union is extracting oil and transporting it by pipeline across the vast expanses of the Soviet Union and to neighboring customers. It is also modernizing airport equipment. The greatest benefit from a license in the USSR is probably the preferred treatment the licensor would receive to participate in the enormous purchases of equipment now being made.

#### G. Bulgaria

Bulgaria expanded its foreign trade drastically the past several years and recently started emphasizing the purchase of Western technology. Statements have been issued by Bulgaria that as a matter of policy it will expand its economy and avoid development delays by purchasing Western technology. Bulgaria, therefore, represents a very fertile field for licensing efforts.

#### H. Yugoslavia

Yugoslavia is a participating nonmember of the East European community. It is a socialist country having its own type of socialism. For example, the exchange rate of its currency floats much as Western currency does. Yugoslavia has had inflation much greater than other East European countries, but it does not have shortages. Yugoslavia's substantial foreign purchasing has resulted in a balance-of-payment problem which I believe will be minimized by the recent emphasis on increasing exports and decreasing imports. Yugoslavia offers a very good base for entering third-country markets through licensing.

### VIII. SITUATION WHERE EAST EUROPEAN LICENSE DESIRABLE

Licenses in East Europe are very desirable in those cases where a license can be combined with economic cooperation. For example, a East European licensee can be a very good, economical source for supplying the licensed product to a licensor's West European, North African and Middle East customers. Most East European companies do not have the potential to market products effectively in West Europe or other free-economy areas.

If you have a product that is well accepted in U.S.A. and the product is not manufactured in West Europe or the Middle East, you might penetrate the East European market with the product through a licensee and then use the licensee to supply your potential market outside East Europe.

### IX. LICENSE CAVEATS

Licensing in East Europe is different than licensing in a market economy country and license regulations in each of the East Europe countries differ considerably from each other. This difference is a result of local policies and lack of sufficient licensing experience to promote uniformity. Each license agreement must be negotiated paragraph by paragraph since they must be tailored to a particular regulation and need in a particular area. We must be careful as penalty clauses will be enforced and other clauses insisted upon by regulation are quite different than we use in U.S.A. We can, therefore, leave our contract forms at home and be prepared for many visits for frustrating negotiations. Two years is par for negotiating a license in East Europe. I feel, however, that the effort and

time is well worthwhile and that the vast market of East Europe will be dominated by those Western companies which have cooperation agreements making at least part of their technology available to East European industry. The greatest benefit of these licenses will probably be increased sales.

## Making Money Through Licensing

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quasi-government agencies, such as the Institute of Agricultural Machinery, which is independent from the government, but the government pays 100 percent of the bills. All of these people are involved in the decision-making process and it takes a long, long time to convince them all.

We first tried to sell our fans to citrus farmers. However, our Japanese people told us about tea. The economics of tea are very interesting. Tea is harvested three times a year. Because the first cutting is so tender, it provides the farmer with 50 percent of his gross income. He receives about 30 percent for the second cutting, and 20 percent for the third. The first crop is subject to frost, and so, a grower whose tea survives when other growers' tea does not, can get 5,000 percent of his normal gross annual income off the first cutting. Now think what our wind machine could do.

We looked for a joint-venture partner in Japan. We were approached immediately by representatives of a multi-billion-dollar Japanese major machinery builder who wanted to work with us, but they assumed we were much more innocent than we were. Together we explored the market for tea, but became worried about our associates. We brought them to the table with a proposed secrecy agreement. They were not ready to talk joint-venture. So we said fine. We don't talk to them anymore. They were flushed out of their true intentions by a well-drawn secrecy agreement.

At present, there are several good prospective joint-venture partners, but our man in Japan recommends that we go it alone by forming our own company. We're in the process of doing just that. We are building the machines in California and shipping them to Japan, and within a year or two we expect to joint-venture out of this wholly-owned subsidiary. As you know, this wasn't possible before the 100-percent realization of trade by Japan. We think it's the way to go. We think it's an interesting way to develop a product in a market where they claim they don't need the product.

We feel we have benefited from the overall broad-form of licensing attitude in our company. We have a very successful aircraft license agreement in Japan, and in the first three years of this agreement we have brought back a million and a half dollars. For a company our size, those are substantial numbers of dollars to bring home.

We also are negotiating a cross-license in our construction equipment business. Environment considerations have forced 1,800 forging companies out of business in the United States. We all will have to buy forgings outside the United States. We fortunately have developed an excellent source of forgings in Japan.

We at SSP Industries have made mistakes. We brought a hydraulic pile driver to the United States. It worked well in the Japanese wet soil, but it didn't work well in our soil