INTERNATIONAL PROCESSING INC.

A Constructed Mini-case Reflecting

Transnational Tax Issues Involving Intellectual Property

Prepared for Presentation and Discussion
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Company Background

International Processing Inc. ("IPI") is a synthetic high technology multinational corporation that possesses many of the characteristics of large global companies that produce, license, and use on a worldwide basis technology based products and services that are subject to intellectual property rights. It produces advanced materials that incorporate innovative technologies as well as developing new processes and production software that represent major advances in current practice. Its current global revenues are in excess of $5 billion per year on which it earns after tax about $500 million, and it invests about 12% of sales per year in R&D to develop new materials, processes, and software. In addition, it works closely with some of its major international customers to develop innovative materials processing solutions that solve their specific problems. It has a physical presence in some twenty countries, and international sales and earnings represent approximately 50% of the corporation's operations but are growing 15% per year compared to domestic sales of 9%. The two largest and most profitable overseas affiliates are in Japan and the EEC where they have been for more than twenty years.

Because of its large financial and product commitment to technology and technology based competition on a global basis as part of its basic corporate strategy, IPI is constantly working to both access the latest technologies and to protect its own technological interests. At the same time, it has limited resources and cannot produce and market all of the technologies that its researchers and applications engineers develop. For this reason, it is constantly reviewing its technology in terms of its corporate goals, and some of it they license or cross license and others they retain on a proprietary basis for their own use. It also licenses complementary technologies from other companies.

The time and effort, however, it takes to patent, introduce, and manage a new technology in another country, much less several countries, means that IPI approaches its international technology issues within a more considered and integrated framework than its domestic product and technology introductions. Indeed, many technologies that do not succeed in the domestic market are never introduced abroad. Thus it is only the more successful technologies in the US or elsewhere that migrate on a global basis to exploit additional profit and market opportunities.
This selection process in turn explains the higher profitability of IPI's foreign subsidiaries compared to both the US parent and foreign competitors rather than any special transfer pricing policy for its technology. That is, it is a logical consequence of IPI's technological development and its global competition. Further, this late introduction sequence allows them under Section 861 to deduct most of their R&D against their US revenues according to an 80%/20% split combined with an allocation according to sales. Conversely, the IRS expects the transfer of more successful technology should lead to higher profits. Royalty rates should then be commensurate with this higher income and reflect the oligopolistic nature of IPI's global markets.

IPI's major competitors in most markets for its products and technologies are other MNCs whether their nationality is US, Japanese, or European. It is with them that IPI compares itself in terms of profitability on a global basis. This is logical because only such competitors can bring to bear the same resources and internal synergies to compete with IPI and can generate similar cash flows to sustain the competitive pace globally. That is, in this industry, the totality of each successful firm is in fact greater than the sum of its parts. Globally, IPI thus competes in a technically and performance differentiated oligopolistic market. A perfectly competitive world is not IPI's reality. Indeed, it would probably be extremely difficult for IPI to exist in such a world since they would not be able to compete abroad while at the same time covering the additional costs and risks of operating in a foreign environment against local competitors who are just as productive and efficient. At the same time, they rely on their foreign affiliates to adapt, market, and service their products and technologies in their respective markets. Often these contributions combine with the unique features of the foreign market relative to a specific process or technology to result in unusual profit opportunities. It then becomes difficult to establish whether the technology or the foreign office is responsible for the higher profits than earned elsewhere.

In this regard, IPI faces an economic, business, and tax environment similar to other MNCs which usually exist in industries where technology, size, or other barriers create a global oligopolistic situation similar to that found in the computer, information processing, chemical, petroleum, and materials processing industries. Thus, when IPI considers its relations with its foreign affiliates and looks at the purpose of sections 482 and 861 of the Tax Code as they relate to the transfer pricing for its products and technology and examines the illustrative examples given by the Service, IPI can see that the IRS is in fact trying to capture some of the oligopolistic returns they believe might have been improperly transferred abroad. Therefore, the very premise of 482 and 861 as they might apply to IPI and its international activities imply oligopolistic competition and differentiated returns.

**Corporate Development**

In turn, IPI's current situation with respect to taxes and intellectual property rights has evolved from IPI's investment history abroad which has followed a fairly typical pattern for a large internationally based company competing with other large international players in the global marketplace. It first invested abroad about twenty five years ago to extend its base products' and technologies' commercial life and to respond to profit opportunities that were as high or higher than what they could find in the US. In fact, because the basic product development had already been paid for in the US and foreign sales were thus incremental revenue, the returns were very attractive. Yet since they did not have a lot of overseas experience at that time, its first activity was to establish a sales and marketing office in Europe and then
export product from the US. This was followed quickly by an office in Japan where they
developed a close relationship with a local distributor.

Once their foreign sales developed, though, and could justify a local operation, IPI made
its first real foreign investment as it added service personnel and limited local manufacturing in
order to better adapt their products and technology to the local market. This involved IPI in the
actual transfer of some of their product and process technology to the foreign operations and the
negotiation of royalty and licensing agreements, often with local governments concerned about
tax and foreign exchange effects. The foreign operations then began to take on an economic
existence and justification of their own which led to greater local manufacture, R&D, and finally
even exports and technology licensing by the foreign affiliates to other IPI related entities and to
third parties.

Therefore, IPI was in fact able to successfully enter various foreign countries because of
its technical, organizational, or other commercial advantages which local firms did not share
unless they were also MNCs. If the local firms had fully shared those advantages, could contract
for them, or had a superior position, then the profit opportunities would not have been there and
the cost, time, and effort for IPI to enter the market would have acted as an effective barrier. No
market penetration much less substantial investment and sales growth could have developed. In
addition, IPI would clearly not have been compensated for the higher risks involved in dealing
outside the US or in developing the expertise necessary to handle these other markets in terms of
factors like foreign exchange exposure, different customer requirements, or lack of political
influence. It was the higher profit opportunity combined with the absence of effective local
competition that assisted its foreign market penetration, increased foreign investment, and the
commitment of corporate resources on a long-term or strategic basis which were now starting to
pay off in greater international sales and earnings.

New Situation

In the past, IPI's market entry abroad usually took place after the product or technology
had had a successful development in the US and the US market was just starting to mature. That
is, IPI tended to exploit the US market first where entry was easiest and less costly. Then it
exported, and finally invested abroad once the product launch and technology were clearly
successful. With this type of evolution, as already noted, IPI logically tended to sell abroad those
products in their portfolio where they retained some technical or other advantage. Thus, they
generally sold a more limited line of higher profit products than they did in the US. Indeed, the
losers or less successful products generally got weeded out domestically and never made it
abroad. Therefore, it was almost inevitable that IPI over time was going to report higher earnings
overseas than at home.

Further, because most local competition in their products were playing "catch-up", such
local competitors generally had lower profits than IPI's foreign subsidiaries since they had to
compete on price, bear the high costs of imitation and start-up, and take time to develop
comparable quality. In addition, as local producers, they had a higher share of mature or non-
competitive products in their product portfolio just as IPI did in the US. In addition, IPI had the
advantage of an established technical, product, and quality position worldwide as well as the
necessary infrastructure, management, and technology to produce, market, and improve it.
Therefore, IPI's foreign operations in most countries were able to build experience and market share quickly and to stay more profitable than its foreign counterparts. This was, however, purely the result of the workings of IPI's global competitive environment and corporate decision making in response to changes in the international product cycle and actual profit opportunities. It was not through some corporate policy to transfer earnings overseas. That is, IPI believed they had fully valued the technology they transferred to their affiliates over the entire life of a product or technology and were receiving good returns both in the form of profits (dividends) and royalties set according to a company wide norm. Before entering a country, they had frequently had extensive negotiations with local governments before the latter acceded to the proposed rate, as in Japan. However, the fact that they charged one common rate for their technologies globally made these negotiations much easier. Further, by establishing their global presence, they had prevented the development of potential new competitors or the strengthening of existing ones, thus protecting the company's long term survival and profitability.

In this manner IPI seems to have received value just from establishing a prior market position via foreign investment. In fact, profit comparisons of the affiliates with IPI's local foreign competitors in almost all countries show superior results of at least 3 to 4% on sales.

One reason for this advantage is that IPI can manage its various manufacturing plants globally in order to achieve certain operating efficiencies. This is a function provided by its multiple overseas affiliates which is a valuable part of its global reach in that it would otherwise be unavailable to the corporation. In turn an affiliate sometimes provides unique access to certain situations such as particularly demanding and technically sophisticated customers or certain types of technology in which that country is preeminent. This situation has clearly helped IPI since it has enabled them to use that knowledge and experience to sell that technology or solution to other companies globally. This type of strategic orientation is something IPI's management has become more aware of recently due to Michael Porter's *Competitive Advantage of Nations*. The intangibles provided by IPI's overseas subsidiaries on a global basis have therefore gotten bigger and more important over time and are likely to get even larger. IPI now therefore often launches new products or technologies abroad at the same time it introduces them in the US, particularly in the case of Japan and Germany. It is also currently considering launching a major new technology in these countries prior to its introduction in the US.

This is because it has diversified its R&D globally in order to keep abreast of competitors' developments and to work better with its major foreign customers. Therefore, while their primary R&D center is in the US, they also have centers in Japan and Germany. These centers both develop their own technology, and improve or modify for local use the technology developed in the US. In addition, IPI's sales and applications engineers located in each of their twenty overseas affiliates are constantly working with their customers on new solutions. These often result in improved products and services as well as new applications for existing technology. Some of these are subsequently licensed by other affiliates or to the parent for use by their customers. However, the parent has a blanket license entitling it to receive any technologies developed by any affiliate on a royalty free basis since all of IPI's business is considered to have evolved from the basic technologies developed and distributed initially to the affiliates. This is not true of the affiliates, though, which must pay their brother and sister companies for their intellectual efforts according to the established corporate rate of 12% for tangible technology, i.e. incorporated into products, and 30% for intangibles such as processes and software.
Naturally, IPI has an active patent (new products and processes) and copyright (software) group that both files for protection and monitors competitors. They also have a group that handles third party licensing of new technology both to and from others. Indeed, over a period of years, due to their very active and aggressive R&D, they have succeeded in building a technology portfolio that returns about $600 million in net royalties a year of which about $250 million come from third parties and $350 million from affiliates, the latter of which washes out in consolidation. The revenue from affiliates in turn is $150 million from tangible and $200 million from intangible property with the former growing at 10% and the latter at 20% per annum respectively, reflecting IPI's increasing emphasis on process and software R&D.

**Royalties and Transnational Taxes**

Finally, they have a tax group that is concerned about the licensing arrangements for proprietary technology between affiliates and the $350 million in actual payments. This is because when IPI's US parent provides technology to its foreign subsidiary, it must charge the foreign affiliate a licensing fee. Even if they chose not to do it, the IRS would insist. This is because for a high technology company like IPI, a technology contribution to its foreign affiliate represents a capital investment on which IPI should be earning a return in the form of a royalty in the same way as if they had made a cash investment or a loan. This is because the technology is an asset which will enable the affiliate to earn more money since their customers will pay for it. Therefore, a return should be paid to the parent on technology just as the subsidiary would pay interest or a dividend on a loan or equity.

The IRS is also concerned that the royalty charged be appropriate, just as they pay close attention to intercompany interest charges, dividends, or goods sold. Valuing the technology and establishing the appropriate royalty rate is of course relatively straightforward in the case of licensing technology either from or to third parties because this is basically an arms-length transaction in the market. In turn, to establish the rate between related parties under section 482 of the US tax code, the proposed easy and sensible solution is to then just find a similar market based transaction to use as a proxy. This will of course work with IPI's affiliates to the extent that IPI is licensing its generic technology that it licenses to everyone else. The practical problem, though, is that the technology which really makes IPI's affiliate distinctive, competitive, and profitable in the market is the proprietary technology which by definition is not licensed and is therefore likely to be more valuable than that which is licensed. The question then is how much more valuable and how do you value it, especially at the time it is first introduced and its true potential is essentially unknown?

In order to deal with this issue, to simplify its worldwide licensing task, and to not bias its resource allocation decisions, IPI for many years has been charging its affiliates a flat rate of 12% of sales on technology that is incorporated into a tangible or physical product and 30% on processes and software where there is no product that already includes its own profit margin as in the case of tangibles. These rates have in turn been grandfathered in Japan and some other countries due to the technology licensing arrangements they negotiated with the government when they entered the Japanese market in the late 1960s. However, the IRS is now challenging this approach and is requiring IPI to justify its royalty rate according to the facts and circumstances surrounding each technology in each country and to attribute or split the profit due the parent or the affiliate respectively. Given the number of process, technologies, and
proprietary software programs, as well as the numerous contributions made over the years by various affiliates, plus the wide swings in economic use and performance in each country, the differing rates of technological evolution, and the occurrence of chance events affecting technologies, this new requirement seems to be a monumental and perhaps unworkable task. It could also involve them in endless debates and negotiations with various tax regimes as they seek to change under IRS pressure the already established and accepted rates which in turn affect their reported income and tax in these countries.

More particularly, IPI as a whole has recently benefited from some major developments in its Japanese R&D center for which they have not had to pay any royalties given their historical arrangements with the Japanese government. However, if they have to change their royalty rate with their Japanese affiliate to accommodate IRS requirements, the Japanese government could use this situation as an excuse to renegotiate the overall royalty arrangement to properly reflect their Japanese operation’s technical contribution to IPI over the years. Other countries could then use this as precedent to force similar negotiations recognizing their contributions too. While this whole process would clearly be onerous and time consuming for IPI, it is not clear whether the end result would actually lead to more or less royalty income to the US parent and thus to the IRS. This is because up until now IPI has been benefiting from a one way royalty flow due to the parent’s free licensing rights under the existing agreements.

R&D Investment

While these are issues that IPI is presently having to grapple with daily as it licenses its proprietary technology to its affiliates, licenses from them, and they license to each other, IPI has a more immediate problem as well. That is, it believes there are some important emerging coating technologies in advanced materials processing for which they need to perform basic research. It is therefore planning to invest $100 million in expanding their R&D facilities and in building a specialized research team. This research could provide the foundation for a new multibillion dollar business. The question is where to locate it. While historically IPI would have broken ground immediately in the US, there are business arguments for looking overseas.

Some of these coatings have significant uses in the electronics industry where being in Japan near major customers and the customers' technology base would be advantageous. Also, if they locate in certain depressed areas, various Japanese government incentives are available. However, some of the best chemical and optical scientists are in Germany, and there are major incentives available there too if they were to locate in East Germany. They could also access inexpensive Russian software engineers. However, a key factor in the decision will also be the likely tax treatment of the royalty income that will flow to the US, German, or Japanese operation over a twenty year period as the technology expands and develops. This is because the tax will affect the total cash available to the company for reinvestment as well as the overall after tax rate of return to the shareholders.

From a transnational tax viewpoint, questions about the likely valuation and tax treatment of IPI's new technology over an extended time horizon is therefore critical to them. That is, if the R&D and patents are US based, such royalties are booked as income in the United States and as an expense to the affiliates. It is therefore taxed as income in the US, which is why the IRS wishes to maximize its flow. Conversely, if it is a deduction for the foreign affiliate, it represents
a revenue loss for the foreign taxing agency. Nor is IPI indifferent to this process, depending on whether the tax rate is higher or lower in the foreign country than in the US. So while corporate rates in Japan and Germany are usually much higher than the US, this could be significantly mitigated by the cheap government financing, the tax holidays, and other concessions currently available. In addition, unlike the IRS, these governments may be willing to lock in the terms and conditions with respect to setting the long term royalty rates. This would allow IPI to avoid complicating its valuation problem given the fact that both the IRS and the foreign tax agencies recognize that the foreign affiliate may add value to the existing technology. Thus some return is due to their own efforts which should be compensated accordingly. This has been especially true for IPI in Japan and Germany where their R&D centers have developed their own innovative technologies that they have then licensed to other parts of IPI.

Panel Analysis and Recommendations

A basic question for IPI is thus what role the possible tax treatment of royalty income should play in their location decision. Based on such transnational tax considerations, the panel will advise us what their location and negotiating recommendations would be to IPI's top management from a tax standpoint. Could they suggest ways of improving the existing template in this de novo situation? At the same time, IPI has existing licensing and technology arrangements with its affiliates and continues to produce new technologies and software for these businesses at a rapid rate. IPI will therefore also need the panel's expert advice on how from a tax standpoint it should organize itself to best deal with its existing proprietary technology transfers and royalty stream payments.

That is, using IPI's situation as a springboard and an illustration of the tax complexities surrounding the payment streams for intellectual property use across borders, the panel will address how transnational tax issues affect intellectual property flows and development. Sections 482 and 861 hit royalty income and technology exchange between affiliated entities particularly hard but their impact will vary by country. The possible effects on the location and the pursuit of R&D are therefore especially critical.

Some important issues on transnational tax the panelists will try to cover in their review of IPI's situation are listed below, but based on their experience they may raise other issues too. However, in doing so, they will begin to convey an appreciation of the size, complexity, and the importance of the problems arising from governments' desire to either tax or minimize royalty income depending on their situation. On a worldwide aggregate basis, billions of dollars are involved. Additional points can be covered in the question and answer period. An initial issue list includes:

- There are difficulties in valuing proprietary intangible technology, especially software, so that the method of valuation is acceptable to all the relevant taxing authorities and the company does not pay any excess tax as it transfers or licenses such property to offshore affiliates. IPI's management would like to resolve these issues in advance in the new location and to work towards a more realistic solution in their existing arrangements too.

- IPI needs a commonalty among national taxing agencies due to its technology transfers among multiple countries combined with the additions (modifications, research, etc.) by affiliates in different countries that may contribute to the overall technology available
globally. This commonalty would be best served by the acceptance of a common rate for all such property if it could be justified or at least for broad classes of property by type and/or industry.

- IPI also needs relief from the IRS's 1986 "look back" provisions or twenty-twenty tax hindsight by the tax authorities when particular technologies either gain or lose value over time due to income variations that result from wide acceptance, technological obsolescence, or some other event unforeseen at the time the technology was first licensed. Being allowed to set and fix a royalty at the beginning within specific parameters would permit IPI to transfer technology without worrying about future perceived changes in the "value" of a particular technology compared to the actual "uncertainty" at the time of development and initial licensing. Further, it may be that while the IRS is focusing on capturing "extra" revenues from IPI's unanticipated blockbusters or super products that in fact these are largely offset by the products whose revenues do not meet expectations. Therefore, by establishing an average rate over a period of time that included the expectation of a certain number of super successes, IPI could both simplify their royalty procedures and meet IRS requirements.

- IPI would prefer to avoid having tax considerations play a role in the global allocation of its R&D resources and to instead put research in the best place for the science or in terms of developing and improving the technology. However, current regulations and tax rates affecting licensing and royalty income could impact IPI's decision on where it should expand its R&D facilities and locate its new advanced materials processing team. If this affects other MNCs equally, this also has implications for the nation's R&D base.

- Given that it is producing hundreds of new technologies a year and has an intellectual property portfolio perhaps ten times that, IPI also faces serious computational and valuation difficulties if it is expected by the tax agencies to value each technology, process, or piece of software separately as an individual item on an annual basis instead of establishing or developing values for various classes or all intangibles together based on corporate or industry experience and fixing them at this historical rate over the life of their licenses. Projecting and discounting highly probabilistic cash flows for all these different technologies is neither practical nor likely to approximate any future reality. In turn, waiting for events to simply unfold is unworkable as well. Therefore, does the panel have any advice for IPI on how it should handle this issue under the new IRS 482 or 861 regulations, and in turn any predictions on how the other two major tax regimes, Germany and Japan, are likely to react under different possible circumstances?

- On the surface, evaluating the merits of IPI's uniform across the board internal royalty system compared to a profit split or other proposals, it seems the easiest to administer both for IPI and between countries. It is also the lowest cost approach and the least likely to raise political problems since everyone is treated more or less equally. However, can it be justified on theoretical as well as practical grounds so that IPI could persuade the IRS and the IRS could in turn justify it to a Congress hungry for more revenues?

- Given that IPI has been able to internalize certain externalities that help it compete in the international marketplace, it would not seem to make sense to try to disaggregate IPI into
its corporate components for tax purposes. Indeed, if one tries, one is going to end up with a residual which must be allocated among the parts. Therefore, if an across the board royalty rate solution is impossible, would the panel recommend a profit split approach instead as the next most logical alternative, and if so, how does the panel suggest IPI implement it? For example, since the profit split analysis applies only to self developed intangibles and must be elected in advance, would you suggest that IPI elect the profit split method? This choice does present difficulties for IPI because to manage the process after the new regulations are implemented in 1994, IPI will need to begin now and will probably have to aggregate for tax purposes some of its foreign operations. In turn, they must prove to the IRS that their aggregation rule works completely and that the profit split is accurate in terms of the investment or contribution at risk by each entity. Otherwise, they could face as much as 40% penalties on top of additional tax and interest. Thus, detailed record keeping is necessary and extremely important, but also potentially very costly. Therefore, IPI needs advice on how a system could be established to do this simply and efficiently. This will be especially critical in those cases involving spectacular successes in specific countries where the contribution by IPI's local operations are arguably large, such as in Japan. Further, how would the panel advise handling those cases where the intangibles have been licensed from third parties, but IPI has then made its own improvements and changes domestically and overseas?

- As either a complementary or separate approach to this issue, would the panel recommend to IPI that it negotiate an APA (Advanced Pricing Agreement) with the IRS, Japan, Germany, Canada, and perhaps Australia? Though this agreement would probably last only five years and would be conditional on the facts and circumstances of IPI's situation remaining roughly the same, it would buy time, would establish a precedent and could form the basis for negotiations with other countries. If the agreed conditions primarily specified meeting an expected average, anticipating the emergence of some surprises, blockbusters or failures, this could accomplish several of IPI's goals.

- Given the normal competitive and management evolution of IPI, which is quite similar to other MNCs, an IRS position that attributes "higher than normal profits" differentials abroad to improper transfer pricing for technology instead of the natural result of the competitive selection of products for foreign markets seems inappropriate. Does the panel feel they may be missing the reality that it is in fact the foreign competitors' profits which are lower than normal than the other way around? The foreign competitors are in turn willing to accept this situation in order to get into a new technology and market or to defend their existing market and customers against a powerful foreign MNC. They may even get government support for this strategy.

- Since the IRS approach to revisiting global royalty rates clearly affects IPI's overseas subsidiaries' profitability, it raises a budgetary zero sum game among the taxing authorities in countries where IPI operates. Given IPI's relative size and visibility in these countries, serious and complex tax treaty negotiations could easily follow. Does the panel have views on whether the IRS has thought through the implications of its revised policies for its relations with these other taxing agencies? Does the panel have any recommendations on how they think the IRS should approach these questions in order to achieve its objectives of raising revenues and preventing royalty rate abuse without
encouraging IPI to locate its new R&D facility elsewhere or creating tax treaty problems with other governments?

• The Clifton Administration has submitted a major tax revision proposal that will affect the treatment of royalties from both related and unrelated parties in terms of being passive or active. The possible net affect of this proposal could be to penalize firms that are successful in increasing their royalty incomes. This "stick and stick" approach appears somewhat contradictory. Does the panel have a view on this program; why it has been proposed; how it would affect IPI, how IPI should respond; and how it might affect IPI's future R&D decisions?