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U.S. - CHINA AEROSPACE COOPERATION

A Research Project by Colonel Laurence W. Mitchell, III, USAF

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Research Report:

US-CHINA AEROSPACE COOPERATION

Prepared For:

United States Department of State SENIOR SEMINAR
Foreign Service Institute

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FORWARD

From 1978-1981 I served as the Assistant Air Liaison Officer (Assistant Air Attache), American Consulate General, Hong Kong, and from 1983-1987 served as the China Policy Officer, Headquarters United States Air Force, Washington, D.C. During both assignments I had continuing opportunity to work with the U.S. aerospace industry as the China market began to open in the late 1970's, and as the opportunities for great advance appeared to present themselves in the 1984-1985 time period. During the post-1978 period the US aerospace industry, as a segment of the broader business community, initiated large-scale efforts to move into China and capture this new market of enormous potential. This market, in many ways, has turned out to be an enigma, and it has yet to live up to its potential.

This research project was undertaken to explore the views of a representative "slice" of the US aerospace industry engaged in, or attempting to engage in, business activity with the People's Republic of China (PRC). In particular, industry views were sought to assess the prospects for long-term US-PRC collaboration in the aerospace field. To accomplish this exploration I met with more than 140 industry personnel, ranging in position from corporate chief executive officer and company presidents, to senior executives, to program managers and technical staff members, in all representing 22 aerospace companies and major operating divisions. During the course of travel in February/March 1988 I traveled to 16 of these corporate entities throughout the United States for briefings and discussions. The remainder of the interviews were conducted in Washington, D.C.

The objective of my interviews and discussions was to provide a vehicle for the business sector, on a non-attribution basis, to relate their experiences, assessments and comments on a broad range of issues. I have carried this non-attribution to the point of not including a list of the specific firms contacted for this study because of the frankness of views and proprietary information which was shared. This compendium of views and information will be of value not only to the business sector, but to government policy makers and others dealing with China issues. I have made every attempt to fairly consolidate the mass of data and comments received into chapters 1 through 6. Not all of the comments are complimentary, especially in regard to some aspects of U.S. Government policy and operations, and corporate lackings in conducting planning and executive business operations. Please don't shoot the messenger.

My own thoughts and recommendations are registered in the final section, Chapter 7. For those comments I do accept full responsibility.

EXECUTIVE SUMMARY

"American industry's romance with China is coming to an end" states one US businessman. A new era of more considered and realistic appraisal of business opportunities appears to be the emerging theme in the US aerospace industry. The initial rush by the US aerospace industry to enter the Chinese market, with all its accompanying enthusiasm, has diminished as the realities of doing business in the Chinese context have become more apparent.

Within the past two years a major rationalization process has begun to take shape in response to difficulties encountered in developing the China market. Exhorbitant (most say "rip-off") costs of doing business in China, the general lack of profitability, the inability to repatriate scarce profits from joint venture operations, the frequent lack of Chinese hard currency to fund major purchases, and the great uncertainties associated with doing business in a system in which it is very difficut to determine the end-user, much less the responsible purchasing organizations and decision making locii, have led US industry to reconsider the "how," "where," "why," and "when" of doing business with China.

Despite a general lack of widespread success and business profitability, the US aerospace industry remains widely optimistic about the longer term possibilities of doing large-scale business with China. China's continuing modernization program spurs business opportunities for sales in infrastructure development areas (transportation vehicles and facilites, power generation, support services), while providing the means for creation of the capital wealth needed for likely future Chinese programs and purchases, particularly in defense-related areas.

At present only those large companies with sustained staying (and paying) power can afford the expenses associated with market development costs and expenses to sustain even a modest in-country representation. While the vast majority of small US firms (across the business spectrum) have been driven out of the China trade by exhorbitant costs, a few smaller US aerospace firms with specialized products or capabilities have been successful in business efforts, providing relatively low-cost, high-quality solutions to high priority Chinese requirements, particularly in the defense sector.

The difficulties and complexities in doing business with China has led to the creation of a new generation of "China Traders," individuals with extensive knowledge of the country, language, and business environment -- to include the Chinese negotiating style. These traders are assuming greater importance as long-term associations with the Chinese, growth of respect, and access to important Chinese contacts are undertaken in a traditional Chinese manner as interpersonal ties ("guanxi") are woven and interwoven. To do business in China a long-term perspective (read decades) and commitment must be made to the relationship. Without that real, considered commitment to a long-term business relationship, the probability of success is considerably lessened, if not altogether eliminated. Vision becomes a critical factor in the long-term development of the US aerospace industry's interaction with China.

International politics play a large role in shaping the tone of business contact. In a political sense China, in the eyes of US business, badly damaged its image as a responsible entity through its arms sales efforts in the Persian Gulf area. The objection is not so much that of being opposed to the arms sales, per se, but rather, to the consistent Chinese denial of such sales. US business views this Chinese policy as hypocritical and extremely damaging to the long-term relationship because of the fundamental distrust which such a position engenders. Similarly, Chinese attempts to covertly acquire US equipment and technologies and to "use" US citizens of Chinese descent, risking greater US political repercussions, are viewed as short-sighted, stupid and extremely offensive. In US business eyes the US also has its problems: US policy towards China remains tightly pegged to current events in the relationship, suffering sine wave movement as short-term contentious issues are allowed to impact heavily on seemingly more fundamental US interests and longer term perspectives; USG munitions licensing is rife wih problem areas and inconsistency and is branded as a system which is too personality dependant.

At the real-world level, there are many detractors to doing business with China beyond those already enumerated. Underdevelopment of the Chinese infrastructure, lack of trained and knowledgeable personnel across the entire aerospace spectrum, lack of qualified aerospace materials which could be used in production, lack of understanding of technology and Western business practice, and a myriad of other issues fundamentally affect commercial activity at the point where "the rubber meets the road."

Despite the detractors and problems inherant in doing business with and in China, it is the broad concensus of virtually every company interviewed that the China market represents, for the future, great potential for the US aerospace industry. There is a widespread belief within the US aerospace industry that the Chinese view the US's position in this critical development area as that of world leader -- now and into the out-years -- but that the reality of the US fulfilling that role is in question until long-term perspectives of the bilateral relationship are shaped and come to the fore. In the interim, the US aerospace industry will seek to position itself for the future, seize available near-term business opportunities, and work to prevent foreign capture of the market.

CHAPTER 1

VISIONS OF THE AEROSPACE MARKET

General

The broad concensus of US aerospace officials contacted during March/April 1988 is that the large Chinese aerospace market that US business anticipated several years ago has largely not yet materialized. While some US firms have enjoyed significant sales and moderate success in market penetration, the American industry experience has by and large not been a favorable or profitable one. Despite the lack of movement at a rate US business would prefer to see, virtually all corporate representatives agree that there is a large aerospace/defense market extant for the future. The potential is there; the question is when.

"Aerospace" covers a wide spectrum of activity and goods. There are at least three major categories of "aerospace" goods and services which apply to China's growth and advancement within the "Four Modernizations Program:" 1) support of China's economic infrastructure; 2) support of China's own defense modernization; and, 3) support of China's efforts to earn hard currency to further undertake efforts in 1) and 2). The "when" for support of China's economic infrastructure is well underway, however underfunded the ongoing efforts may be. The "when" for defense modernization is more problematic. While a few significant programs have been proposed on a government-to-government and on a commercial basis, little real movement has taken place due to low levels of funding. The "when" for support of China's efforts to earn hard currency is ongoing and appears to enjoy relatively high priorities.

Infrastructure Development

Infrastructure development is a high priority, particularly in the aerospace areas of air transport aircraft, air traffic control systems, air navigation aids, airport facilities, passenger and cargo handling, and power generation equipment. The market potential for commercial aircraft remains large; however, foreign aircraft manufacturers are posing highly significant competition to US products (Airbus Industrie, Brazil).

- This market is likely to expand in scope to include more commercial cargo airlift aircraft, additional buys of medium lift helicopters, and the first buys of true heavy lift helicopters capable of carrying out difficult infrastructure-building tasks unachievable with other resources.

- Joint programs to coassemble or coproduce commercial aircraft will remain high priorities of the Chinese aerospace industry; however, this manufacturing industry priority is in direct conflict with the priorities of Chinese end-users who need lift capability yesterday.

- There is a broad requirement for a country-wide navigation aids system and a modern air traffic control (ATC) system for heavy traffic areas (primarily China's populated eastern seaboard). China requires extensive upgrades to airfields, related facilities, traffic control and passenger handling.

- Power generation equipment using derivative gas turbine engines are of high value to infrastructure development. The high output ratings of these units permit their use as either primary or supplemental power supplies to urban areas, factories and other facilities.

Defense Modernization

The "when" of significant defense sales is, by general concensus, probably at least 3-5 years away, perhaps closer to the end of the century. The key element in this equation is a general feeling within part of the US industry with long business relations with the PRC that China does not now feel threatened. The lack of a perceived threat permits China to concentrate resources in general economic development to provide the large modern industrial base which will support a future military.

- Military modernization efforts will largely be those which are directed at upgrading indigenously produced equipment with selected foreign technologies and components. Program cost will continue to be the critical element affecting Chinese decision-making. The Chinese will, however, continue to make selected purchases in the defense field. High-priority requirements which can be fulfilled at relatively low cost with high quality equipment will be negotiated for and purchased by the military with little hesitation or delay.

- As a generality, the military wants to buy a broad range of defense articles and equipment; however, foreign purchases are in direct contradiction to the needs and desires of PRC defense industry to produce equipment, turn profits, and seek to import foreign technology. And, like most other potential Chinese buyers, the People's Liberation Army (PLA) has little hard currency available to it.

Aerospace Sales to Earn Hard Currency

Until the general collapse of oil prices, oil exports were a prime earner of Chinese foreign exchange. Increasing Chinese growth of exports in other areas (except for textiles) and a rapidly growing tourism industry have been important. Within the last few years a growing and very significant earner of hard currency has been Chinese export of arms around the world, with most recent attention fixed on the Persian Gulf area and reported sales of Chinese Silkworm missiles to Iran. Various estimates place the value of Chinese-produced arms (aircraft, missiles, tanks, artillery, small arms, ammunition, etc) at billions of dollars. In another area, China has made aggressive efforts in the space launch area; actively seeking to provide launch services for international customers as a foreign exchange earner.

- China actively markets a wide variety of aircraft, aircraft components and associated weapons systems. This marketing activity has been openly undertaken for several years by the China Aero-Technology Import and Export Corporation (CATIC), the buying and selling organization for the Ministry of Aviation (very recently consolidated with the Ministry of Astronautics). CATIC has offered for sale weapons systems (like the F-7 interceptor, for example) which are or will be upgraded with foreign-derived technologies and equipment.

- To date it appears that foreign sales programs have taken priority over modernization of China's own military forces and that export sales for hard cash are the major objective. China is increasingly seeking Third Country transfer approval as a condition of sale for imported equipments. This is a trend which is likely to grow.

- In the launch services area it is likely that the Chinese perceived a golden opportunity before them as the Space Shuttle, Delta and Arianne launch programs came to successive halts in the wake of a series of launch disasters. Aggressive movement to capture US policy decisions which would allow China to provide such services, without the transfer of rocket and satellite technologies, brought forward movement and some promising signs. China is investing heavily to upgrade launch facilities and provide needed support infrastructure, to include insuring of launch vehicles and payloads. Whether this Chinese investment will pay off is difficult to predict with US and French launch programs coming back on-line and the Soviets now also heavily in competition.

CHAPTER 2

AEROSPACE COOPERATION

Potential for Cooperation

According to one US aerospace industry executive, the key to aerospace sales in China is the answer to the question "what can the infrastructure support?" Despite Chinese desires to leapfrog to an advanced technological and development state, there is a long, slow, expensive infrastructure-building process which will be underway for decades. The ability of the Chinese to assimilate technology, equipment and other services will undoubtedly move forward; however, the Chinese system can only accept change and growth at a finite rate. Chinese purchase of excess commercial aircraft is meaningless, for example, if the aircraft cannot be effectively used because of physical inability to handle passengers, baggage and cargo. Expensive idle resources will drain Chinese financial gains and the induced enmity will come back to haunt the seller.

This situation argues in favor of the precept that you profit most when your customer profits most. In the Chinese context, establishment of a long-term relationship is critical to doing business, as the concept of <u>Guanxi</u> (interpersonal relations) is paramount in a societal context of building trust and interdependency. Long-term cooperation yielding good results forms the basis for mutual trust and confidence. As that process takes place you increasingly enjoy a predominant role. The Chinese prefer to deal with old, trusted friends, generally shying away from the new and untested if there exists an option to do so.

- Creation of the climate in which to conduct business with the Chinese is not magical or a black art; but it does require an overabundance of patience and a willingness to err on the side of humility. Fast moving flim-flam may on occasion win a contract, but when the true situation is discovered, the fast win almost inevitably becomes a Phyrric victory.

- The company, company leadership, and program managers must have an eye to the long haul and must work to keep short-term oscillations from adversely affecting the fundamental basis of the relationship. Long-term association and commitment creates the environment within which trusted friends can maintain a continuing association and relationship. Business activity tends to <u>flow</u> rather than having to be sought out and seized. Each party uses the other to his advantage.

The degree to which companies have devoted time and effort to corporate market analysis, planning functions, development of a structure to pursue business operations, and brought on board capable manpower resources has a direct bearing on the ability of the company to undertake business efforts. The degree to which the company is willing to pursue this activity, expend resources, exert "active patience" and maintain constancy in policy and orientation will largely determine long-term success or failure.

Appropriate planning, market research, and business efforts will often identify those areas which offer potential for cooperation. Companies must recognize that, while pushing a standard product line may be the traditional method of operation, it may, however, be totally inappropriate in the Chinese context if China has no current need for those products. Blind marketing of products will be costly and largely nonproductive. Some companies which are not extensively diversified, particularly in the defense production field, will be particularly frustrated if they stick with traditional sales approaches because of the oversophistication of their available systems, USG licensing problems, and Chinese near-term inability to fund high cost purchases. Companies must read Chinese requirements, motives, financial abilities, and politics correctly if they hope to be successful. This requires extensive information-gathering and long-term meaningful contact with potential buyers and end-users. Long-term corporate approaches to the market and commitment to doing business with China will be key to success.

US Business Commitment

Representatives of many US aerospace companies cite great corporate difficulty in determining the ideal degree of corporate commitment to the potentially large, but perpetually problem-ridden China market. Many companies have, either intentionally or unintentionally, committed themselves to a long-term market development approach. Others took a short-term "try it and see" approach. Some of these companies are largely out of the China market, are currently evaluating their positions, or have replaced the original short-term appproach with a longer view. Nearly all of the companies have been unsuccessful in realizing profits in their business with China. Most, if not all, have rationalized this lack of profitability as a sacrifice made to "get a foot in the door."

US aerospace, however, is increasingly keying on the requirement to make a profit in China. The growing view is that business must show a profit; that the sales or programs must be big enough in size to get corporate attention and justify the risk of participation. China is in danger of losing its attraction to US industry for a variety of important reasons above and beyond the near-term fiscal shortfalls restricting sales of US goods and services (discussed later in Chapter 5, "Detractors From Aerospace Cooperation"). The implication is a potential decreased commitment to doing business with China in the near-term (until China measureably improves the business climate) and a resultant movement to develop other, more profitable, business ventures which are widely available on the world market. Corporate leaders are under increasing pressure to show why their companies are pouring large amounts of scarce money and manpower resources into developing a market which is not producing revenue, when those same resources applied almost anywhere else would produce profits. This more traditional view was expressed by one executive as the company's desire to do business in China that makes sense for it to pursue; but at the same time, the company would not give in to Chinese demands, and the company won't enter into any joint ventures until the Chinese legal system and profit repatriation issues solidify.

How, then, does a company do business in China? There are great conflicts at hand. On the one hand, the continuing specter of relative non-profitability. On the other hand, the need (if the company is looking long-term) to maintain a presence and activity level which permits development of the long-term linkages and associations needed to ultimately do significant business, <u>and</u> to deny the market to competitors. There are formal and informal government pressures from each side encouraging business and other relationships for national level political and commercial reasons. Frequently, personal ties and commitments made at all levels of company management and operations ultimately drive company decisions and commitments, often in illogical business directions where individual and collective ego predominates.

Chinese approaches contribute to the problem. Small Chinese buys (driven primarily by limited foreign exchange and a continuing national objective to be self-sufficient) and the desire to obtain the maximum in technology transfer, support services, participation and offset trade (to name a few) pose great problems for large US corporations whose very largeness requires large-volume, high-value business. Exhorbitant costs of doing business in China (many in the US aerospace industry describe as "rip-off") have driven out the vast majority of small US firms with specialized products or capabilities which could have provided relatively low-cost solutions/alternatives for many of China's modernization requirements. The flexibility, innovativeness and ability to move quickly which characterizes these smaller firms has been largely supplanted by large corporate entities which have the staying (and paying) power to continue to be represented and operate in the China business environment. Unfortunately, however, these large companies cannot afford to put long-term high-value potential programs at risk with more immediate low-cost direct application solutions to specific Chinese needs. Neither are they particularly interested in or well-equipped to handle small relatively low-value programs.

The Chinese have also been blind to the emotionalism which surrounds this business cost issue. There is a perceived difference in US industry between "expensive" and "rip-off" costs of doing business. US businessmen understand that conducting business in some locations will be "expensive" for a variety of reasons; however, a strong emotional response and bad feelings of ill will ensue when the costs are unreal and the methods of exacting those costs are arbitrary and transparent. Chinese efforts to soak foreign businesses for every hard currency dollar available has turned out to be a textbook example of short-term thinking, thinking which over the long-term is likely to cost China many-fold the near-term revenue results.

These factors all have a bearing on how companies do business in China. For their part, it appears that the Chinese, as a cultural entity and as a business group, work over time to establish rapport and develop linkages. Their continuing association with various segments of the industry is an extensive effort to find out the technical and other strengths within the industry. They typically seek to visit all potential competitors to evaluate their capabilities and attempt to discern and assess their corporate strengths and staying power -- to feel the "vibes." As an end result they hope to know who has the best product and who offers the greatest potential as a cooperative business partner. This process has been ongoing in recent years and will continue, becoming more sophisticated as the Chinese understand more of Western business culture and practice.

This approach calls for patience on the part of US business. As the Chinese go through this exploration process the most valuable approach a US company may undertake is a conscious decision not to push a product line, but rather, to assist the Chinese side in defining their requirements and proposing workable avenues to meet requirements, keeping in mind the realities of the Chinese situation. Companies which can provide objective, honest, forthright assistance may not, as it turns out, have the appropriate product or service available and therefore no prime role in a given project; however, that objective effort will be remembered (as an obligation) and is likely to be rewarded at some time.

The point was made at the beginning of the chapter that building mutual trust and confidence is key to developing the long-term relationship. Without that trust and confidence in place, any business dealings undertaken will be tentative and potentially volatile until a condition of respect and trust is established. Several US companies have made a corporate dedication to "patience," accepting at senior levels within the company that some things cannot be forced, that there will be no "hard-sell" approach, and dedicating the organization to a long-term effort to establish a firmly based working relationship with the company's potential customers. These companies have also purposely assigned/recruited personnel with long experience in the Pacific to undertake their China business efforts.

The uniqueness and demands of doing business with China has led to the reappearance of a new generation of "China Traders," individuals with extensive knowledge of the country, language, and business environment -- to include the Chinese negotiating style. These traders are assuming greater importance as long-term associations with the Chinese, growth of respect and understanding takes place, and access to important Chinese contacts are undertaken in a traditional Chinese manner as interpersonal ties ("Guanxi") are woven and interwoven. The Trader must be successful in preaching and selling the long-term view to his home office. To do business in China a long-term perspective (read decades) and commitment must be made to the relationship. Without that real, considered commitment to a long-term business relationship, the probability of success is considerably lessened, if not altogether eliminated.

The Trader walks a continuing tightrope between the Chinese on one side and a corporate entity on the other, both ends of a spectrum continually in a state of flux. While dealing with the Chinese is always challenging, the greatest challenge to the trader often is that of attempting to be heard. A major task of his is to evangelize to the corporate leadership the long-term view, articulating the need to dampen out sine wave hot-cold tendencies and "short-termitis." For example, senior corporate leaders visit China, become enamored with the country and quickly become "China experts," reach a high level of enthusiasm and expectation, and in the spirit of the moment, make verbal commitments to the Chinese. This enthusiasm and high level of expectation often begins to erode with the passage of time as expected follow-on proposals or contracts sit in suspended animation, go to other competitors or dissolve entirely. To the trader goes the unenviable task of working the problem, a problem now further exacerbated by the reduction or disappearance of senior level interest and support.

The situation described is not a spurious, lightly stated situation, particularly in companies enjoying degrees of success. The traveled, involved senior corporate leaders have a tendency, because of their new-found interest, to become heavily and directly involved (unbidden) in business operations and marketing. International sales directors and program managers find the limelight placed on them. Weekly briefings for the corporate center, "what have we done TODAY?," "what is the status TODAY of program X-Y-Z?" Those working the direct issues, like the Trader, attempt to moderate the views of the corporate center through education of the reality of the market place. Unfortunately, relate many of the expert middle level corporate management, there is little senior corporate recognition of the long-term nature of most business dealings with the Chinese. Corporate leaders may press for results today; however, often the US company cannot drive the action, must use patience and wait for the Chinese to decide and act. When setbacks do occur, often the same corporate leadership will lose interest and a rapid loss of healthy senior level support and backing suddenly takes place, throwing the China effort into a tail spin. In short, many corporations have not yet inculcated a long-term view.

CHAPTER 3

US AEROSPACE PLANS AND GOALS

As I began this project I had what turned out to be a major misconception regarding the way US businesses conducted their business. Coming from a military culture where intensive planning is the fundamental basis of survival and success, I was quite unprepared for the tremendous disparity between business groups in regard to planning. I encountered companies who expended considerable time and resources on planning, achieving results which I (personal view) felt to be excellent and enlightened, to situations at the other end of the spectrum which I felt to be wholly inadequate. As one executive I interviewed mused, the real value of building a plan is not to have it on the shelf. On the shelf it does you no good and is constantly being outdated by change. The real value of a plan is the forcing function which requires that concrete objectives and goals be formulated and tested for adequacy, that the underlying assumptions be questioned and examined, and that the resources needed to carry out the plan are available and adequate. In short, building a plan requires a conscious focus on goals, objectives, means, risk-taking, rewards, and consequences.

The following are a sampling of US aerospace company approaches regarding planning for the China market:

- Long-term strategy: "Keep on pushing."

- Marketing plan is simple: "Get the sale and see where it leads."

- General, not detailed, structural plan extending out 3 years.

- No strategic plan; reactionary; watch what USG willing to do, then take action.

- No strategy; no clear sense of how to proceed; will pursue near-term big winners.

- Strategic plan; dismantled bureaucratic corporate planning system to be more responsive; uses plan as general direction.

- Clear list of strategies and specific implementation plans from which to pursue business in coordinated effort.

These approaches cover the full spectrum from "we're lost" to another extreme where the company had well prepared, researched and workable plans to achieve specifically articulated goals. More than outlining just what they planned to achieve, the planning process had also revealed those things which the company felt it could not achieve or should not engage in.

Some of the strong points in planning processes I observed during company visits are outlined here:

- Eliminating a bureaucratic, overly-structured planning process in which the process becomes the end in itself.

- Replacing a bureaucratic planning process with a concept plan written at the "expert" level, circulated to and reviewed by senior corporate leaders, revised with their comments or differences between views of corporate leaders and "experts" settled before the plan is implemented.

- Company establishment of a division dedicated to dealing with China (with all required major areas of expertise included) which undertakes both planning and implementation functions.

- As a result of planning process, established an informal network among principal corporate leaders/managers dealing with China issues. Result: powerful tool.

The biggest difference between planning and non-planning companies which I observed was, simply, that the planning companies had a much clearer (but not transparent!) view of where they were going and how they were going to get there.

As a result of the planning functions accomplished by several of the companies a significant number of business requirements were identified for the companies to effectively pursue their defined objectives. A few of these follow:

- The critical need for good information. Who are the players, end-users, decision-makers? What are the real requirements?

- Requirements for continuing in-country representation.

- Requirements for in-country program support.

- Assessment of Chinese capabilities in specific areas.

- Corporate strategy on offset trade and profit-making.

- Risk-taking in business operations.

- Identification of competitors, competitor efforts.

- Possible corporate initiatives.

Once the parameters and information gaps had been determined, companies were much more successful in effectively moving forward. The succeeding paragraphs will discuss in greater detail the requirements areas listed above.

Good information is critical to effective business operations, particularly in China's still relatively closed society. Businesses find operating extremely difficult because of the unknowns surrounding who they are dealing with, the frequent secretiveness, and the verticalized structure of the Chinese bureaucracy which itself often has little lateral insight and vision. Despite the lack of knowledge, most companies dealing in China do not effectively use their own resources to piece together the Chinese environment. Company travelers often do not keep good records of who they meet, Chinese organizational affiliation and their superiors, Chinese requirements, stated interests, etc. Worse, when they return to the home office, most companies do not have a knowledgeable mechanism in-place to debrief the travelers and incorporate the newly-obtained information into company holdings. Each traveler frequently becomes his own information stack, and often very little of it circulates into the corporate memory.

The question of in-country representation is probably one of the biggest headaches for US business. Out-of-sight costs have driven the US business community presence down markedly in the last two years. More than a few companies have eliminated their US personnel presence altogether, leaving a caretaker office in the hands of Chinese nationals, or leaving representation altogether in the hands of an agent or a trading firm. Unfortunately, these options are far from ideal. Chinese nationals, obtained through FESCO (Foreign Employment Service Company), generally have some English language capability but are unlikely to have much business experience. Their function is largely to keep the office warm, support company team visits into China, and maintain links and lines of communication with Chinese organizations and personalities. Use of agents, consultants and trading firms all have an inherant drawback as well. By and large the Chinese do not like to deal through intermediaries and do not want to pay the extra ("unneeded") middleman's costs.

Costs of maintaining a Beijing office are great. The following general figures show the cost spectrum from a sampling of corporate experiences (Note: Manning: one US person. Includes cost of office, salary, housing, benefits, Chinese taxes, administrative and entertainment costs, and small local staff):

- Low end: $250,000/yr
- Medium: $300-400,000/yr
- High: $500,000/yr

Companies are faced with basic decisions regarding the degree and extent of commitment to build and develop their business cooperation and at what cost. As a representative of one large corporation stated, however: "We can't afford NOT to have a body on board in Beijing" regardless of the cost. Unfortunately, not every company has the financial power to make that determination.

Reportedly, foreign investment in China declined 55% in 1986 and a further 15% in 1987. As a result, many companies are reducing their in-country presence to the absolute minimum to maintain on-going programs and provide representation. Some of this movement is not only in response to high costs, but to the "hostage" situation in which some of the companies perceive themselves to be; that is, the more in-country personnel and their dependants, the more leverage the Chinese have (to control rents, taxes, impose conditions on contracts, etc) because any reaction by the company could be very expensive. Some of the companies withdrawing from Beijing are also bypassing Hong Kong to avoid this problem of being a "hostage" in China and the further ambiguity of the 1997 turnover of Hong Kong to Chinese control. As discussed briefly earlier, these conditions are impacting heavily on corporate groups, resulting in cost-cutting ad lessened representation in China.

Development of in-country programs requires considerable corporate attention to details of the company's involvement. Again, like a representative office in-country, establishment of a program support base is extremely expensive to establish and maintain. The Chinese often attempt to obtain support services as a no-pay adjunct to negotiated contracts. The cost of these services can break the company's financial back if not properly anticipated and cost-controlled.

As a part of business planning the company must correctly assess Chinese capabilities to use the products which are sold. The degree to which this assessment is accurate will, like support services, have the potential to soak up resources if the company must pour in funding and support to prop up Chinese technical, facility or personnel training deficiencies. Most US companies interviewed were very strong in their commitments to see on-going and projected programs succeed. But, failure to assess the environment can cost the company dearly.

US companies are becoming more heavily involved, not just in China but worldwide, in offset trade requirements as a condition of sales. Reportedly, more than 900 US companies across the commercial spectrum are now so engaged. The degree of success which the aerospace companies achieve in this area is going to be directly tied to their capability to organize effectively, plan realistic business operations, and execute those operations. At present, most companies view offset requirements as a detractor to business efforts. (Note: for further discussion of offset trade, see Chapter 5). In addition, companies must take deliberate, studied views regarding requirements for business profitability. Most companies have found themselves in an unprofitable position (sometimes big time) without having duly considered in advance the go-no go limits for their commitment. In many cases this has been a result of lower than normal sales prices to get the foot in the door; in other cases, the unexpectedly high costs of doing business and the unnegotiated contract "extras" have caught them short.

Not everything can be known about doing business in China and, in fact, the opposite is more nearly the truth. Risk-taking is a big element in the China market. What will the company sunk costs be at the point of doing real business, and then, if the business does materialize, will the then-year profits be big enough to recoup the intervening costs and still produce an overall profit? Risk-taking goes beyond the profit statement. It also is present each time a business initiative or program is anticipated. Is the company able to foresee all the important aspects that play. There is considerable risk in most current Chinese programs, because there is yet only a shadow-thick veneer of Chinese experience and exposure to Western methods and a great number of unknowns on the Chinese side.

Business effort in any commercial environment must take into account the activities of the competition. China does not offer a unique environment in this regard; however, the degree of secretiveness and the relatively closed nature of the society make it more difficult for business to assess well the nature of competition, especially from foreign sources. As an element of a market denial tactic, the US business must be aware of the movements of competitors. This is particularly important because of the Chinese practice of playing off competitors against one another. Knowing the existence of the other players makes it more possible to successfully avoid becoming a pawn in the middle.

A final issue that I will address in this section is that part of corporate planning which results in a company's selection of initiatives which will supplement the core business operations; that is, efforts to highlight the company's existence, technical excellence and responsiveness to the China market. For instance, the following list represents a compendium of types of initiatives which a wide variety of companies have implemented for these purposes. They are:

- Chinese engineers working at US company to learn management theory/skills and gain practical work experience.
- Chinese engineers working in US on new aircraft programs.
- On-site training programs (1-2 year duration).
- Cooperative interchanges with PRC organizations.
- US company-provided scholarships to study in US.
- Technical lecture series conducted by US specialists at Chinese universities.
- Consulting programs.
- Free training as a part of all proposals.
- Corporate management training programs.
- Sponsoring Chinese senior leadership/management visits.
- Organizing high tech fairs.
- Include PRC as a partner in international collaborative projects.

While these initiatives provide considerable visibility to the company, it is not yet clear whether any of these initiatives have had a clear, significant impact on business. Several companies interviewed expressed that such programs have proven to be largely a one way street and costly to implement and maintain. The irony is that, often the Chinese want to expand the scope of these programs! Despite the lack of indication of clear advantage to the US company, some companies continue to maintain the programs for the purposes of maintaining the company's image of commitment to doing business in China on a long-term basis, and to keep from creating the waves of Chinese reaction that could ensue from a decision to cancel an existing commitment.

CHAPTER 4
AEROSPACE MARKET

This chapter will address a large body of collective thoughts, presented in "bullet" format, that impact heavily on the China market. These points, or issues, represent a broad cross-section of activity in the aerospace field and, therefore, are rather free roaming and wide-ranging in nature. They are:

<u>The Market</u>

- One company draws a black and white corporate distinction between commercial and military sales
  - Defines their dealings with communist countries:
    - Commercial: business with a "central planned economy"
    - Military: sales to a "communist country"

- Corporate sensitivity to doing business with China
  - Most companies have largely overcome basic reluctance in doing business with a communist country
    - However, corporate senior-level opposition/resistance is occasionally still a factor

- One company: formed a company registered in China to handle business

- Many US aerospace companies have product lines which limit sales potential:
  - Top of the line US/NATO sytems
    - Too sophisticated for China
    - Too expensive
    - Not exportable to China
  - Technology advancing so rapidly these systems under constant upgrade
    - Decrease in number of "older" versions which will realistically be available for export

- Military and space areas have declined somewhat in recent past
  - Market for C3I large, but unsophisticated
    - Chinese leadership enamored with "big screens" (a comment that senior-level decision makers are caught up with the flashiness of modern technology, rather than practical needs based on actual requirements)

- Sale of military equipment will continue to be an uphill battle
  - China wants tech transfer
  - US policy must permit
  - Chinese will increasingly want Third Country sales approval

- As a result of problems and lack of business in defense areas:
  - Some US defense companies now selectively seeking to get into non-defense sales arena

- Much of China's buying is randomly accomplished by a multitude of entities
  - Little or no thought given to standardization to permit eventual integration of systems
  - Chinese tend to build from bottom up
    - Need to develop master plans first

- Because of huge investment required and technical levels needed it will be virtually necessary for China to team with foreign countries and companies in many areas
  - Requirement for partnerships
    - However, China brings weak technological base and is not considered a full partner in this area
    - And, because of lack of financial resources, is not seen as a full partner because cannot make necessary financial contribution

- China's loan rating very good
  - For example, 747 transport aircraft purchases
    - Lots of financing opportunities available
    - Chinese have some of best finance people in world
    - No problem getting financing

- General view that Chinese uphold their end of contracts well
  - To the letter, and demand the letter and more

- PRC closely examining US methodology/organization -- copying
  - Making widespread institutional changes based on interaction with industry

- US companies increasingly willing to accept smaller, non-majority holdings in joint ventures
  - Percentage isn't as important as ultimate payback, and offset credits which are obtainable
    - This approach promises to decrease friction concerning Chinese sensitivity to foreign holdings in China

- US company with high visibility program:
  - Willing to put whatever it takes into program to put out superior product, see program succeed
    - Big name/face opportunity
    - Use as foothold into business and Chinese structure
  - Must establish solid reputation
    - <u>Deliver what you promise</u>

- One company proposes a distributorship program
  - Parts, support for a particular type aircraft
  - Program will phase in to correspond to build up of system in China
  - Provide training to Chinese
  - Likely company push for offset credit for training provided, initial parts supply inventory, etc
  - Part of PRC's investment in distributorship is tooling, etc
  - Eventually requires transfer of blueprints and specs
    - USG licensing will be required

  - Potential program trap: requirement for far more training of Chinese personnel than is currently anticipated or funded

- Some US companies believe in concept of developing PRC manufacturing relationships early
  - Don't wait for specific offset requirements to be raised
    - Instead, take offensive to assist in developing Chinese subcontractors, who, in turn, will produce revenue (hard currency)
      - Can eliminate requirement for offset trade

- China advertises low labor rates as an incentive for cooperation
  - However, China frequently becomes non-competitive by the time an add-on wrap-around rate (funding support for entire factory infrastructure instead of simple direct product labor cost)
    - Some Chinese enterprises, however, have become competitive
      - Especially when US company doesn't cave in to Chinese demands for concessions, "extras," etc

- Military deals with Poly Technologies present generally moved quickly
  - Good Chinese compliance with contracts, on-time payments

- One company: 2 tech reps on direct hire by PLA

- Foreign Military Sales (FMS)
  - One view: don't see customer wanting to go other than FMS
    - For large defense programs:
      - See as indication of feeling more comfortable dealing with USG
      - PRC not yet comfortable in the international market
      - Can beat on USG when not satisfied
      - Industry can also use USG as shield
  - Another view: Chinese do not like FMS because they feel:
    - System too slow, cumbersome, bureaucratic
    - Continuity is bad because of frequent personnel turnovers
      - By contrast, Chinese often assigned to a program for life
    - Do not yet truly trust contracted-for results
    - FMS programs tied, and vulnerable to, day-to-day swings in the bilateral atmosphere
      - Chinese fear US will cut them off from spare parts, etc, for systems, weapons sold to China by US

- Growth of a hard-core group of US businessmen with an extensive knowledge of, and experience in working with, China
  - Modern day "China Traders"
    - Preaching profitability, firm dealing, to parent companies
  - Chinese will increasingly encounter this group

  - Contradiction: often in-country reps ignored or not consulted by corporation center/leadership.

- Probable corporate trends geared toward making each contract profitable
  - If contract won't be profitable, company mentally prepared to walk
  - Each deal should stand alone
  - Maintain business balance
  - "Bottom line"

<u>Negotiating with the Chinese</u>

- Chinese are tough negotiators, but are often unrealistic
  - Concluding a contract is only the first part of the Chinese negotiation
    - Chinese attempts to get "add-ons" at end of negotiations, or after negotiations are complete, contract signed
    - Chinese don't give anything away; expect give-aways

- Chinese plan extensively for meetings
  - Very structured in approach

- Chinese meaning of a word is what the dictionary says

- Regardless of claims, PRICE still seems to be the greatest driving factor (to the Chinese)

- Chinese view negotiations as a "package"
  - Will negotiate the contract 99.9%, then add additional requirements or insist on ancillary concessions, training, other "soft" areas
    - Many times constant re-review of points thought by US company to have been completely settled
      - Now brought up again in context of larger aspect of contract being negotiated: new iteration
    - "When a deal is a deal, is it a deal?"

- In any negotiation, the US company should/must have a pre-established bottom line
  - Must be prepared mentally to walk out of a bad business situation

- One company: policy is not to "give" things away in China
  - Labeled by Chinese as "arrogant"
    - Chinese unhappy
    - Long-term impact
  - However, over long term company's policy may be successful in supporting profitability

CHAPTER 5

DETRACTORS FROM AEROSPACE COOPERATION

This chapter is dedicated to highlighting a large number of issues which fall into the general category of "detractors;" that is, conditions or practices which are not beneficial to cooperation in the aerospace field. I have laid these issues out in a "bullet" type format for readability. My purpose is not to make it sound as if the China market and environment is "the pits;" rather, to bring to light problems and areas of concern surfaced by US business operating in China, for the consideration of business and government. Where appropriate, I have added comments.

General Comments

- Many US businesses went into China with genuine interest to assist in China's modernization through effective commercial programs
  - Establish long-term business relationships
  - However,"immediate Chinese greed and short-sightedness have killed the goose"
    - Chased off the small US business which could have made highly substantive input and contributions

- China represents a big unknown for most US companies:
  - Not enough indications to know what to "tool" up for to do business with the PRC
- Chinese bureaucracy complex, secretive
  - Chinese structure, relationships, responsibilities unclear
  - Difficult to define who the ultimate customer is
  - What the needs are/how does product line fit?
  - How to get proposed program into the Chinese budget
  - How does the budget program work?
  - US business largely does not know who it should be dealing with
    - Much wasted time, effort, money
  - Don't know who players are, how they relate
  - Don't know who decision-makers are, who has funding authority
  - Chinese bureaucracy verticalized -- it too often doesn't know laterally what is going on

- Senior Chinese decision-making
  - Concern in several US companies that large PRC purchase programs will be political decisions, not decisions primarily decided on economic or technical grounds

- Chinese lackings:
  - Incapable of real and extensive reverse engineering
    - Looks same, but ...
  - Lack of appreciation for quality control (QC), etc
    - "Stainless steel is stainless steel"
  - Lack of appreciation/understanding of "why"
  - Lack of supporting infrastructure

- Chinese still often work to cover up what they can't do
  - Further behind in manufacturing than technology

- Chinese viewed by US business as very short-sighted in their approach to commercial relations with US companies
  - Chinese viewed as "constantly on move to get anything free"
    - View foreign firms as having unlimited resources
      - Chinese feel that company's profits from other areas should support company efforts to do business in China
      - No reluctance to "commercially steal" anything felt to be of value
        - "What's yours is mine"
  - Seek lowest price, greatest concessions, push foreign companies beyond profit-making threshhold
  - Will exploit to the limit the naive company or those who seek a deal at any cost

- Younger generation with greater technical skills may begin to change short-sighted Chinese approach in dealing with foreign companies ("grab and squeeze")
  - More Westernized, aware, longer-term view
  - Better able to understand that companies must make profit

- Chinese have expensive tastes
  - Always look first at the high tech end
  - Tend to overlook older, more reliable, less expensive alternatives
  - Willing to buy high-tech even if not applicable to the requirement

- Factors (almost uncontrollable) in a sale:
  - Changing Chinese requirements
  - Slow USG licensing
  - Blocking actions (internal) by other Chinese organizations, interested parties

- US companies highly resent assumed PRC intelligence operatives placed within their work staffs in China offices
  - Severely erodes development of trust and confidence
  - Very short-term simple-minded thinking on part of Chinese

- US companies greatly enraged by Chinese efforts to obtain technology, corporate proprietary information, and tunnel into company organizations
  - Chinese efforts to pressure and exploit company US citizens of Chinese descent in companies is resented

- High awareness of Chinese arms sales abroad, particularly in Persian Gulf
  - Belief that arms sales profits are providing hard currency that is being used to make some few purchases of western military arms and equipment

- Except at some technical working levels, Chinese have extremely limited knowledge and understanding of systems/systems approach

- China: good theoretical knowledge, but not good in translating theory into actual hardware

- Severe lack of trained personnel in all areas
  - Personnel who are trained at great expense and effort for a program disappear and are replaced by unknown new, inexperienced personnel
  - Problem of persuading Chinese of need for pre-training, effective support once system is fielded

- Great lack of trained aircrew assets
  - Need for crew training programs
    - However, Chinese have not yet "discovered" training

- In-country support:
  - Size of contractor effort varies by program
    - Smaller programs have no in-country contractor presence
    - Larger programs often require extensive support

- After purchase, Chinese tend to blame US manufacturer/supplier with any problems associated with equipment, operation, etc
  - Often brought about by lack of training, understanding, failure to follow tech data, manuals
    - Chinese invariably insist that problems are the fault of the US company, and therefore it is up to the US company to take care of the problem
      - Some companies find this a hard issue to deal with

- CASC (China Aeronautical Systems Company)
  - Buying arm for Civil Aviation Administration of China (CAAC)
  - Organizationally deficient in ability to deal with mushrooming numbers of contracts
    - Organization small
  - One person (XU Xinle) must personally approve all contracts
    - Monumental bottleneck

- In-country equipment demonstrations, exhibits, etc very costly
  - Expenses can run into $1-2 million range
  - One company which operationally demonstrated equipment:
    - "They milked the hell out of us" for an extended period
    - During the demo, "we worked all of their hard problems" (with the demonstration equipment)
  - Several companies: will shy away from further demos because of high costs, little payback in sales

- Chinese factory conditions:
  - Factory managers woefully deficient
  - Absolutely necessary to establish a factory-wide training program for larger manufacturing programs
    - Projected number of training hours slide
      - Requires more hours than anticipated
  - No effective tool control system

- That is, phasing of manufacture of production tools
- However, with long-term training, proper management, attention to detail:
  - Turn out a product as good as/better than US factory

- US company product support function:
  - One company: takes on responsibility for this as a function of conditions of the sale

- Program management/direction very difficult in China
  - US contractor has expertise
  - However, Chinese want to be a full management partner
  - One company's solution: establish a joint management group to control factory
    - US program manager is chairman; vice chairman is Chinese factory manager
    - Management group plans, resolves issues, sets priorities

- Chinese engineers in US characterized as:
  - Good, narrow-vision personnel
  - But, not system oriented
    - Fall on face from technical and schedule standpoint

Offsets

- Over 900 companies in US now in offsets worldwide
  - Issue of rising sensitivity to US companies
  - Will be an issue of increasing pressure on USG
    - Defense Industry Office Association coming to USG soon
  - Offsets have significant impacts on:
    - Balance of trade
    - Tech transfer issues, technical assistance, etc
  - "Painful, but another competitive tool"

- Types of offsets:
  - Joint production
  - Coproduction/licensed production
  - Equity investment (capital)
  - Procurement/subcontractor production
  - Tech transfer/technical assistance
  - Countertrade (compensation buy-back, counter purchase, barter)

- Like other nations, China wants to develop a self-sufficient aerospace production capability

- PRC pushes a minimum offset requirement of 30%
  - However, for many purchases will accept "best efforts" of 20 or 30%
    - "Best effort": company commitment to meet agreed figures, but no guarantee
      - Often tied to conditionality that Chinese enterprises producing for US contractor must meet all technical and other standards required for the product to be used in the US or in US products

- PRC offset priorities: 1- hard currency; 2- tech transfer
  - One US company's view: Offset package weighs 25% of final Chinese decision

- Some US companies attempting to develop Chinese into suppliers vis-a-vis supporting offset trade
  - Emphasize direct interaction in the aerospace field
    - Vice counter-purchase, barter, etc
  - Objective is to substitute forward-leaning company efforts to encourage and assist Chinese efforts to produce parts, components
    - Use this medium as a counter to offset demands
    - Philosophical transition of approaches from being forced to give offsets
      - Instead, qualify Chinese suppliers to produce under contract for the US company, generating hard currency
  - One US company: will not agree to fixed offsets
    - Gives bidding opportunity for PRC subcomponent supply

- Some corporations setting up organizations to coordinate offset efforts across full spectrum of corporate activity
  - Book credits, trade in commodities
  - Coordinate efforts of various operating divisions
    - Better resource use--synergistic effect
    - Central group become real experts in offsets
      - Also, they take the heat from foreign buyer
      - Division reps, marketing still "good guys"
  - One company: don't offer offsets unless demanded
    - However, now some companies increasingly using as an element of marketing strategy

- Problems in conducting offsets:
  - Countries overestimate their capability to provide offsets
    - Demand/negotiate "X%" of offsets (Example: direct), but cannot produce to required quality, specifications, etc
  - Or, want to use offsets as vehicle to achieve tech transfer
    - Some countries specify transfer of equal technology

- Offset production:
  - Contradiction: worldwide over capacity in aerospace production
  - To date direct offsets predominantly piece part work
  - PRC must develop "build-to-print" capability
    - Many PRC aerospace manufacturers cannot produce to blueprint specs, particularly "complex" machined items
    - Others can meet blueprint (size) requirements for some product items
      - However, lack of capacity in many production processes
        - Heat treatment, etc
  - PRC suppliers often keep slipping delivery dates
  - Factory problems: Info. sent to factory by US companies goes to wrong place, side-tracked
    - Over-compartmentalization of Chinese organizations, desire to hold information close
      - "Knowledge is power"

- PRC manufactured items often "look" like the US quality product; however, in fact parts do not meet specs.
  - Example: one company found it took 3 1/2 yrs to get quality product off production line
    - Despite fact that factory had produced nearly identical item for Soviets for 20+ years
      - Soviet specifications, quality control requirements not as stringent as US requirements

- PRC aerospace materials, associated problems:
  - Chinese do not have a qualified vendor and manufacturing base
    - Movement with Chinese sourcing very slow
      - Much slower than expected
  - Not currently capable of turning out required materials, products
    - Materiels qualification deficient (particularly for fly-away use)
    - Source inspection lacking (QC, compliance, etc)
      - 100% inspection of in-country produced items expensive
    - Expense of shipping qualified materials to China
    - One company: all materials for program processed thru US facility for inspection, insure QC
      - Even those made in China
        - Basic materials shipped to China, item manufactured, item shipped back to US for QC inspection, then return shipped to China for program use
  - To date, virtually no certified materials for fly-away use
    - All fly-away materials supplied from US
    - Many of non fly-away materials have been excellent
  - One company: first Chinese quote to produce articles very high
    - Also, PRC wanted guaranteed (unrealistic) minimum number
  - One company: went in initially with target prices for items
    - Followed by multiple negotiations to arrive at price
    - Pricing looks favorable

- One company: realizing a 1/3 saving by using PRC manufacturing
  - Despite cost of transporting flight qualified materials to China
    - CAAC worked out favorable transportation rates
  - Chinese coming along well on materials specs
  - Production involves manufacture of heavily labor intensive products

- One company: conducting countertrade for CATIC (China Aero Technology Import and Export Corporation) products
  - One company is pursuing with a detailed company plan
    - Under plan CATIC proposes products within plan guideline of company needs
      - US company will choose products to be produced

- PRC approaches:
  - One company: Chinese want US company to market for them
    - Assist and advise in marketing
    - Develop quality control systems in PRC industry

- After contracts signed, PRC side often wants to reopen negotiations to add or increase offset requirements for already-concluded contracts
  - Also, frequent attempts to capture offsets on earlier-concluded contracts

- US firms work to acquire offset credits:
  - Trend to insist on offset credit by PRC for training of Chinese engineers at aerospace companies in US
  - US companies want offset credit for manufacturing programs initiated in PRC, not connected with specific programs with offset requirements

- "Offensive" use of offset requirements:
  - Use to get involved in large number of Chinese projects
    - Establish a base, foot hold
    - Become a partner
    - Positioned when China ready for bigger things
  - One company: views offset requirments not as an obligation, but an opportunity to:
    - Pursue and develop new business

CHAPTER 6
THE US GOVERNMENT AND AEROSPACE COOPERATION

Representatives from all aerospace companies agree that the US Government heavily influences the conduct of business operations in China. Most fundamentally, government policy dictates the general direction and pace of cooperation in this high technology business field. Aerospace, because of its high tech nature, relative high visibility and critical importance in national economic and military development, is therefore a potential "carrot" for policy use and, as a result, often subject to the same ups and downs the bilateral relationship is experiencing. This chapter, also heavily organized in "bullet" format, will enunciate many of the areas in which the US Government plays a role in American aerospace activity in China.

In the views of company executives across the spectrum of aerospace activity the degree of cooperation with the USG is mixed. The current political winds heavily impact on the business climate, despite strong business attempts to keep business separate from politics. US-China relations were strained during the last half of 1987 into the February/March 1988 time period when this research effort was conducted. The issue of Silkworm missiles in the Persian Gulf area was particularly divisive, and has impacted directly on government licensing, business operations, and security issues.

In general, businessmen give the US mission in China very good marks for embassy efforts to promote and support US business, but would like to see more participation by the US Ambassador and senior staff in aerospace related activities. US businessmen seek increased levels of effort in support of US marketing, particularly in cases in which a single American entry is in direct competition with a foreign competitor.

- Many companies state difficulty in determining the true direction US is taking in the military relationship with China

- Bilateral disagreements, particularly in combination, can and do have strong impacts on the commercial atmosphere
  - US companies try to keep political issues out of the commercial field
  - Political climate impacted heavily on trade, licensing
    - Impacts heavily on subcontracting
      - More difficult to give work for offset credit

- Recent publicized political factors:
  - Silkworm missiles in Persian Gulf (CSS-2 IRBM's in Saudi not an issue during Feb/Mar 88)
  - Illicit tech transfer attempts
  - Polytech scandal in US and expulsion of PRC diplomats
  - Situation in Tibet
  - Textile negotiations (large hard currency loss)

- Need for a "government champion" for US business
  - Official advocate to support and push marketing for China trade
  - Often difficult for a company to speak for itself
    - Problem: company appears to be self-serving by pursuing business efforts even though those efforts can also in fact be in support of the larger US interest
      - The importance of their efforts may not be recognized by USG, license review structure, etc
      - Company efforts to publicize seen as self-serving

- Amembassy Beijing support:
  - Several companies: excellent support, working relationship
  - Request additional support in backing, pushing US products
    - Particularly when there is but one US company with a unique product in competition with foreign products of like nature
  - In general, business asks for strong Amembassy support for US commerce
    - On several occasions USG representation at important commercial events, banquets, etc has been minimal to non-existent
      - At same time foreign presence has been at very senior corporate/government levels
        - Very heavy French presence
        - French military attache office being very heavily funded for entertainment, marketing purposes
    - Ambassador/State personnel not often involved in support of US firm's marketing efforts

- "Carter Leprosy Letter" restricting US official participation in supporting US defense sales no longer applies
  - Must keep reiterating that this policy is out
  - USG/State/DOD should come out with instructions to embassies and military attaches not just to remain neutral, but back and support US defense sales efforts
  - Problem is continuing mind-set of those who served abroad during Carter era
    - Still under impression should not be supporting such activity
    - And a lack of current emphasis, guidance to the field
  - Trend: Seeing a lot more cooperation and help from embassy staff
    - But, would still like to see more

<u>Munitions Control Licensing</u>

The following, by way of introduction to this section, provides one respondent's views (shared by representatives of many companies) concerning the role of the USG in munitions licensing:

> "US Government policy, real or perceived, has generally been a deterrent to the pursuit of business in China. While there have been forceful and loud advocates within the government, our perception has generally been that these are outnumbered or outweighed by the nay sayers, and the risks of pursuit outweigh the potential benefits. Policy decisions for release of individual products are generally so delayed that initiative and

enthusiasm in the divisions for pursuit are lost. Even when approvals are granted, they are often so subject to constraints that the package becomes unattractive to the customer.

Our problems with tech transfer guidelines have not really been that they are overly restrictive. We understand the need for meaningful restrictions. It's my impression rather that the problems arise from:

- Gross delays in decision making. The USG just doesn't get its act together in anything like a timely fashion.

- Excessive conservatism based on ignorance. In some cases, the decisionmakers/recommenders, perhaps because of the press of other duties, just don't inform themselves on the risk-vs-reward of release, taking the easy decision (negative). (Yes, I might do the same thing if I were still in the Pentagon.)

- The continuing struggle for control over the tech transfer process, by no means unique to China."

The primary regulating and control mechanism which affects the sale and export of military and dual use technologies is the export licensing, or munitions control, process. Of all the topics relating to USG involvement in the aerospace cooperation with China issue, the licensing process drew the strongest comments. The following section is representative.

- Companies are <u>afraid</u> of the USG
  - Afraid of what government agencies can do to company if company appears to step over bounds or angers individuals/organizations in the review process
    - Especially if company is aggressive in efforts
  - Often, as a result, companies over-react to USG "words"
    - Then companies often become too conservative, not as aggressive as should be to make commercial sense
    - Afraid of breaking rules, stepping on toes
      - USG holds licensing/approval apparatus
        - Power to kill this license and kill/inhibit future licenses

- Export license processing time often kills programs
  - Can't respond sufficiently fast to requests for proposal
  - Beaten out by other competitors (often foreign) who do not have to wait for such approvals
- USG licensing increasingly stringent in recent months
  - Reaction to Silkworm issue, illegal tech transfer attempts

- Recently-imposed provisos on spare parts supplies, logistics support for on-going programs a major problem for industry
  - Requires one-for-one replacement of defective or destroyed parts
    - Onus on US company to prove previous part destroyed or unserviceable

- Cannot preposition parts for immediate needs
  - Can cripple the buyer, his programs, operations
- Message "sent" to PRC is unreliability of US as a supplier
  - Underscores his vulnerability
  - Likely to increasingly lead to PRC sourcing to foreign competitors
- A policy line which almost certainly will lead to distrust
- Heavy and expensive burden on US suppliers
  - Overhead costs associated may have heavy impact

- License review system: a "personality system"
  - Anyone in license reviewing chain can disapprove
  - Visceral reactions by reviewer(s) can kill a license
  - Too dependant on informal system
  - Current approval process is a poor system
  - Insufficient senior attention to system
  - Many reviewing/approving officials don't have "big" picture
    - Disapproving a license which kills a sale, often results in a foreign company picking up the business through sale of same/similar item
  - Policy side of house doesn't closely enough monitor process
  - Tech side of house often has too big a say, works to set policy

- "Hard to deal with the licensing system--an individualized system"
  - License process heavily dependant on judgment/whims of a few people

- State OMC: not manned, equipped, funded to handle current volume of licenses
  - Licenses, even high-priority ones, often sit in in-baskets for extended periods with no action

- One company: closed down production line in China already in operation for nearly 6 years
  - Couldn't get continuation license reissued
    - Only difference was that of one technical upgrade to program which company felt fully licensable

- Military business with China brings about strong reactions
  - Particularly in some areas such as military jet engines, weapons systems, etc

- Corporate holds on proprietary interests very stringent
- One company: export licenses have been difficult
  - Company dealing with medium technology equipment
  - Problems in licensing mostly due to "emotionalism" in one military service
    - Unable to get export approval for equipment type used by this military service
      - Equipment is foreign produced, sold under license by US company
        - Equipment technically not as sophisticated as other similar US equipment already licensed and sold to PRC

- Foreign manufacturer of equipment could easily sell to PRC now if US company did not hold licensing rights for China

- Frustration in dealing with service staffs
  - Visceral reactions by reviewing officers
  - Frequent questionable denials and multiple deferrals
    - Frequently one individual's disapproval triggers a snowball disapproval effect for license as it moves from office to office

- Problems of interpretation of license provisos
  - Difficult to know where line actually is
  - Hard time intellectually dealing with some of provisos
  - More and more licenses issued with provisos
  - Provisos often kill sale or make it unattractive
  - Administrative/other costs to contractors to comply with provisos eat up or kill profits
    - Associated administrative costs can be prohibitive

- Companies would tend to release more equipment/components than USG
  - Company proprietary interests (technologies, knowhow, etc) generally a smaller "slice" than USG release guidelines
    - However, corporate holds on proprietary interests very stringent since they represent company's "lifeblood"

- Tech transfer restrictions:
  - No composite hole drilling
  - No information on composite materials
  - Avionics equipment restrictions (logistics):
    - Exchange only on a one for one basis
      - Not just inertial systems
  - Removing pages from service manuals
    - Manuals are provided to customers world-wide
      - Getting these pages from other operators easy
    - High administrative cost in doing this
    - Hidden danger: liability problem in event of aircraft mishap arising from contractor failure to provide necessary tech data, change notices, safety bulletins, etc
  - Unrealistic restrictions on licenses
    - For example, not allowing Chinese to look at certain aircraft components
      - However, US companies working joint development program with China
        - Aircraft involved eventually to be sold to and manufactured by Chinese

- Tech transfer restrictions often overly restrictive or do not take into account current world market availability or existing Chinese capability
  - Chinese already obtaining same/similar goods, materials, services
    - Example: Reportedly already have in-place and operating an imported composite manufacturing capability

- Current US export guidelines will not permit such a transfer

- Defense Technology Security Agency (DTSA)
  - Large number of companies report cold, antagonistic, non-cooperative atmosphere emanating from DTSA
  - DTSA not looking at bigger picture
    - Restricting export of US equipment, often when there is comparable foreign availability in the market place
    - Through export restrictions, losing the US market share and market growth potential
      - US companies being eliminated from international competition because of unreasonable tech transfer restrictions
      - "If the French have it, its available at the right price"
      - France doing everything possible to "Europeanize" the Airbus
        - Cutting out US suppliers
        - Eliminate US components which restrict Third Country sales
        - European efforts to "Europeanize" fighter development is another identical effort

Several US businessmen (involved directly in licensing efforts) took a critical look at their own company operations in the licensing field, with an assessment that their companies are not "smart" in the way that that they support marketing activities and prepare license requests. Most credit this lack of attention to the issue of licensing to short-term thinking and general company-wide lack of appreciation of the critical importance of the process to marketing, sales and operations. Further, many private sector licensing officials admitted that their companies do not put adequate time and effort into briefing appropriate government agencies and officials on projected business concepts, plans and programs. As a result, the first time an official may know that something is anticipated or underway may well be the moment when the license application first crosses his desk. Without pre-briefing and a context, the license application may not survive the first encounter.

- Several companies do informal pre-submission checks on licenses to predetermine lay of land
  - However, most companies not very good at pre-briefing programs, laying groundwork for USG decision-making, licensing actions
  - License actions often looked at as a ho-hum by-product
    - Necessary, but not well though-out, structured, presented
      - Process is often a "crap-shoot"
  - Keys to success are:
    - Pre-briefing USG
    - Carefully preparing complete license application
      - Absolute necessity for forthrightness, honesty
    - Obtaining (for important licenses) advisory opinions
    - High responsiveness for USG requests for information, clarification
    - USG receptivity to listen to company proposals
      - Predisposition to assess company plans and assist company efforts rather than opposite

Nearly every company executive interviewed indicated the information gap which exists between government and industry. There is widespread lack of knowledge and understanding of US policy objectives and guidelines for cooperation with China. Again, some of these executives state that their companies do not expend sufficient time and effort to ferret out this information; however, at the same time there is widespread critique that the USG is not articulating its goals and policy; that the company's real indicator of current US policy is the reply to its most recent license request.

The message received was that US business largely believes that they and government should be seeking to foster close cooperation to accomplish US goals and interest. Communication is critical to the process. Therefore:

- Lack of information exchange between government and industry re China is not in best interest of all parties
  - Useful for government and industry to meet
    - Conduct grass roots dialogue
    - Better understand policy
    - Better coordinate efforts to support US policy
    - More direct input from companies to USG
      - Approaches, options recommended by industry as a result of their continuing operating experience, contacts
      - Able to pre-identify down-side effects of some actions or policies if undertaken by USG

Security Issues

According to USG policy statements China is described as a "friendly but not allied foreign country" and, as a result, enjoys a status quite different from other communist nations. For instance, China enjoys Most Favored Nation (MFN) status, is eligible for and exercises the US Foreign Military Sales (FMS) system for Security Assistance ("technology cooperation"), and possesses an export control status in fact which does not significantly differ from the status of other friendly but not allied nations. Company officials point out, however, that they daily face real-world problems which balance politics with security, with seeming inconsistency.

- PRC still on Designated Country List (DCL)
  - Security guidelines coming from DIS (Defense Industrial Security)
  - Policy: China "friendly but not allied"
    - However, strong indication that security apparatus moving beyond bounds set down/envisioned by policy makers
      - Unrealistic, overly security conscious, restrictive
  - Companies are cognizant of need for security, particularly of US defense programs being carried out at same facilities
    - Troubled by perception that many restrictions are spurious in nature
  - Companies reluctant to challenge DIS guidelines because of potential loss of facility certification by DoD

    - Could result in disbarring company from undertaking USG defense contracting
  - Therefore, companies tend to err on conservative side to avoid big problems

- Many companies now have exchanges, work programs, cooperative development programs with Chinese
  - However, stringent security restrictions do not build, encourage trust, friendship, cooperative environment
    - Companies feel that such restrictions do not allow company or exchange personnel to work productively or build people-to-people trust
    - Neither side gets full value from its investment

- Exchange programs involving Chinese personnel in US industry:
  - Chinese generally hard-working, conscientious
  - Follow rules when understand them
  - Tightly restricted access within facilities
    - Often taken to unrealistic, non-thinking extremes
      - Can't see aircraft production lines
      - Can't see aircraft they can examine at any air show open to general public
      - Can't be taken to company offices, dining rooms
  - Both US company and PRC exchange personnel frustrated that they couldn't be more fully used during course of exchange
  - Many companies feel this hyped level of security runs counter to US policy statements and senior-level direction
    - In one extreme case, Chinese in training on aircraft purchased from US segregated from all other foreign students in training, given different badges requiring escort
      - Other foreign nationals (not from allied nations) did not require escort

- Security clearances:
  - Contractor personnel traveling to communist countries "lose" security clearances
    - Results in restricted personnel movement, travel
    - Personnel working in other (US) programs refuse to travel
      - Job security in jeopardy
      - Interrupts/terminates work in other programs
    - Cause contractors major headaches/forces hard decisions
      - Often can't afford to risk loss of an individual from a US program -- even though badly needed to support a company effort in China for a short period

<u>Requirement for a US-PRC Airworthiness Accord</u>

- Requirement for a US-PRC Bilateral Airworthiness Accord
  - Recommendations from industry that FAA negotiate Chinese airworthiness certification into the bilateral under discussion
  - Lack of Airworthiness Accord affects production, repair and overhaul function

- New PRC airworthiness requirements seen as a foreign exchange grab to fund the institution and growth of a new bureauocracy
  - Some companies paying fees
  - Other have warned Chinese that cost of their next sales will be higher if they are forced to pay fees
    - That is, certification costs will be passed on to Chinese
  - A very small number, to date, have refused to pay this fee
  - No currently-published Chinese airworthiness guidelines
    - Companies don't know what is being certified
      - Strong sense by US businessmen of being "ripped off"
  - Companies resent that US has not charged Chinese for extensive FAA airworthiness assistance to China
    - China now seen as charging US on basis of its education
      - "We are teaching them and they are charging us for giving them the knowledge"
    - However, some other countries also have airworthiness charges

CHAPTER 7

CONCLUSIONS

Introduction

In January 1988 a 15-month study undertaken by an advisory commission to the National Security Council and the Department of Defense (The Commission on Integrated Long-Term Strategy co-chaired by Fred C. Ikle and Albert Wohlstetter) entitled Discriminant Deterrence was released. This report of the commission examines the evolving world situation beyond the beginning of the 21st Century and makes recommendations for US defense policy and strategy. China figures prominently as an evolving world economic power after the dawn of the new century and this study projects that, despite large uncertainties which surround China's future, by the year 2010 China's gross national product could well pass that of Japan and the Soviet Union, moving that nation's economy into second place in the world's economies.

The year 2010 is a projection and the date, as well as the fact, is uncertain. However, barring major unforseen calamaties, attainment by China of this level of economic clout is likely. By virtue of increasing economic power and influence (and concommitment expanding political and military power) it will be both necessary and desirable for the USG and US industry to view China with long-term perspectives as an emerging equal. In many respects this long-term perspective has yet to develop in America's public and private sectors.

Corporate Planning and Perspectives

US aerospace companies are torn in several directions by competing factors in their approaches to doing business in and with China for all the reasons discussed in this paper (and others). While there are many detractors from cooperation with the Chinese, there are also many potential rewards from such cooperation, with high potential for substantial business into the out-years.

It seems to me that there are several areas of shortcomings where US business generally has been less than successful in preparing for business dealings with the Chinese. US firms should:

1) Realistically assess the Chinese market place and do a no-nonsense analysis of the company's capability to respond to China's needs. Also deficient: lack of knowledge of how to assist on the basis of China's real ability to fund and absorb purchases.

2) On the basis of 1) above, decide if a real market exists for the company. If so, make the requisite long-term commitment to doing business if company resources permit.

3) Deal with the Chinese on an fair, straighforward, and firm basis, emphasizing presentation of options to satisfy

requirements rather than attempting to "market" product lines for which the company is pushing sales and for which the China has little or no current or projected use.

4) Make a conscious corporate decision to commit/not commit to China operations by first addressing and resolving the issue of the corporate perspective regarding profitability. Is the company willing to underwrite losses to break into the market or is it important to seek profitability from the outset of doing business? If the company is willing to operate at a loss, how much and for how long?

5) Work to understand existing and likely future USG policy and guidelines. This is a continuing, critical requirement and the firm must be proactive in seeking out this information.

6) Establish business planning strategies which balance Chinese needs, company capabilities/product lines, and USG policy and guidelines.

7) Brief business planning strategies to appropriate USG agencies.

8) Enter into interactive dialogue to mesh public policy goals and interests with business objectives and needs.

Successfully undertaking these outline steps would provide a solid foundation for a company to undertake effective business efforts. The planning necessarily undertaken to support these steps, the review and defense of that planning by industry and before the government review process, and the interactive melding of business and government interests would provide the company with a much surer basis upon which to deal with the Chinese. In short, it is easier to negotiate when the company has an established, agreed position which includes government backing.

<u>US Government Planning and Perspectives</u>

I subscribe to the theory that a nation is at its strongest when it has good leadership with a communicated vision of direction which effectively employs the economic, political and military elements of the nation in a coherant national effort to achieve shared goals and objectives. In line with this it is important, if not critical, for the government to formulate policy through effective blending of relevant interests <u>and then articulate that policy</u> in a clear understandable way. Policy, as a reflection of life and the living, is dynamic and seldom remains static and unchanging. Therefore, effective policy formulation and dynamism implies continuing communication among relevant interests and continuous update and articulation to all those involved.

A continuing refrain among US businessmen is that US policy toward China is ethereal in form, heavily dependant on current events and the impact of those events on the bilateral atmosphere. Further, that there is little dialogue between government and industry, and dialogue such as does exist is primarily a result of confrontation. There is no established medium for information flow to industry to explain policy changes or provide information updates. Further, business representatives state that, aside from the Commerce Department, they perceive that there is little USG interest in supporting a US national business effort vis-a-vis China (or, most would argue, with anyone else either). While policy elements in State and Defense by and large are at least moderately pro-business, the remainder of the bureaucracy is viewed as either not interested or negative.

If US business efforts in China are to survive and in time to prosper, establishment of a much closer amalgamation of public and private sectors must take place. While both sides have their own imperatives and objectives, it seems clear that the interests can be largely congruent and that it is to our national interest to bond the efforts of these two sectors. For government there is a clear requirement not to make policy decisions solely on the basis of loosely-defined political considerations. In the long term, the US-PRC bilateral relationship is too important to pass off as business-as-usual.

Politics shape the form of the relationship, but economics the substance. Without a willingness to listen and without the establishment of mechanisms to coordinate government and private efforts, we continue to face the probability of unnecessary disconnects and conflicts between the goals and efforts of the public and private sectors. Government would be served well by initiating efforts to bring about such cooperation and integration of interests. Cross talk and increased information flow, development of business-government trust and understanding, and clear policy articulation would provide the basis for strong and realistic business development efforts and furtherance of public policy goals.

Developing the Long-Term View

It is to the advantage of all participants, government and business, US and China, to pursue the bilateral relationship with a long-term perspective. Short-term issues which do impact on the relationship must be carefully examined to determine (as well as can be determined) the potential for real damage to the substance of the relationship. If the issue is sufficiently important, then appropriate action should be pursued. If, however, short-term considerations are permitted to prevail over long-term interests, then both sides risk damage to the fundamental basis of the political and economic relationship -- with impacts that may be largely unforeseen at the time.

US and Chinese interests are not coincident, nor are they parallel. Nor are they ever likely to be. They do, however, show congruence in certain areas and at certain times. For their part the Chinese will continuously seek to pursue their own objectives, seek their own ends. This must be understood.

A challenge for the bilateral relationship will be continued efforts by both sides to emphasize the positive and those areas that are commonly shared, while building the trust and understanding to enable both sides to deal with the difficult and non-agreed upon. All sectors must have a degree of confidence in understanding that issues which are not held as <u>vital</u> to one party or the other (or both) will not be allowed to escalate or develop to the point where it threatens existence of the basic relationship.

Based on my discussions with industry I perceive a widely felt view that the Silkworm missile issue in the Persian Gulf has resulted in unnecessary "China bashing" which has already had a serious negative effect on the relationship, which may be long-term in nature. In particular, many businessmen feel that bilateral handling (mishandling?) of the issue has had the effect of seriously undermining the hard-fought efforts to develop a degree of trust and working cooperation. This atmosphere has threatened the life of the long, laborious efforts undertaken in the past four to five years to build trust and confidence in the ability of the two countries to engage in constructive dialogue and resolve issues short of calling the entire relationship into question. Again, while the US may be variously accused of "China bashing," China must also bear a major portion of responsibility for the situation. Chinese failure to acknowledge and publicly deal with the arms sales issue has impacted heavily on their international image. Politically, the Chinese will not fare well on this issue.

The degree to which the Silkworm missile issue is or is not a reflection of vital concern to either country is not the issue here. The issue is that it is highly desirable for both the US and China to use the vision of the long-term relationship as the yardstick for measuring the relative importance of intermediate issues. That result will have direct, forceful impact on <u>all</u> sectors of the relationship -- particularly the economic element. Relative stability in the relationship will permit business and industry to compete more effectively. Even more important, however, an atmosphere of bilateral cooperation, policy consistency, and avoidance of unnecessary waves in the relationship which impact negatively and for long periods of time or create adverse momentum in large bureaucracies should be sought. It takes years to build a degree of cooperation and trust; it takes only a short period of time to tear it down.

<u>USG Licensing System</u>

There is widespread agreement within the US aerospace industry (and within working levels of the government) that re-engineering the munitions control licensing process is necessary and overdue. Major complaints are that the present system is cumbersome, extremely slow, too all-inclusive, unpredictable, overly-restrictive, and too heavily dependent on the views (and personalities) of a very small number of reviewing officials. A new technology transfer philosophy, it is felt, must be formulated and workable guidelines instituted. Within this formulation a means must be found to assess the truly critical elements of technology the US must safeguard, and then permit transfer of the remainder with an abbreviated and faster moving licensing review process in order to permit the US to become truly competitive in world markets.

A new focus of defense related and dual use tech transfer licensing should be founded on the philosophy of presumption of approvability rather than on the predilection to disapprove (in short, innocent until proven guilty rather than the reverse). The policy apparatus must retain ultimate authority to approve or disapprove the release of any specific request; however, it is critically important that policy makers be well informed by technical and other communities before any decision is made to release sensitive technologies and equipment.

Unfortunately, at present, that technical "advice" is typically the review of a single relatively low level official (in the vast majority of instances, a highly knowledgeable, experienced, technically competent individual) in one of the military services or in the DOD structure. Often, because of the small number of reviewing offices (small numbers driven by high case load volume and pressures to process cases in short time periods), a single "nay" vote may kill a license request on the spot unless another reviewing official or office challenges the recommendation for disapproval. Usually, if a challenge is made, it comes from the policy formulation staff in the military service, OSD, or from OSD Munitions Control (DTSA -- Defense Technology Security Agency).

Many businessmen decry the license review "personality system." There are wide-spread beliefs that more checks and balances (read "accountability") be put into the system to ensure a fair, balanced review that evaluates the license proposal in the light of the bigger policy/national objectives picture. This, these businessmen maintain, requires more supervision of the system by senior officials and small specialist staffs specifically chartered to screen incoming licenses for near-automatic approval/disapproval, or dispatch to appropriate offices for review and comment (distinctly separate from staff functions which administratively process license requests -- though the two functions would probably best be combined within organizations in the military staffs, Office of the Joint Chiefs of Staff (OJCS) and DOD). This system argues for fewer cases to be reviewed as a consequence of screening out routine license requests, and more deliberate examination of the ones that are reviewed. Recommended as a part of this process is more commercial involvement with contractor input concerning competing foreign products, proprietary concerns, and company positions and recommendations on releasability -- positions for which the companies would be held accountable.

Corporate Licensing Efforts

The US aerospace industry (with observed exceptions) does not do a good job in briefing business planning strategies to appropriate USG organizations, or in entering into productive dialogue to mesh public policy goals and interests with business objectives and needs. This shortcoming is largely a failure of company planning, inattention to detail, and a failure to realize how critically important this step is to long-term success. Insufficient attention is paid to briefing appropriate USG agencies, seeking informal (and therefore non-binding) inputs, listening to this informal input, requesting advisory opinions, and preparing export license requests in a "smart" way. Many companies with independent operating divisions, for instance, lack effective internal coordination and, on occasion, end up with license requests which are contradictory (left hand doesn't know what the right hand is doing). Often the licenses themselves are internally contradictory, ambiguous, flawed, lack sufficient or accurate detail or, in a small percentage of cases, are intentionally misleading. Those companies who do invest in this process experience far fewer licensing problems.

Corporate attention to export license requests which are concise, factual, truthful, complete, and which relate this request to corporate plans and programs will stand much better chances for effective review and better odds for approval. The single most important license request element is the reputation the company builds over time for the truthfulness and completeness of its licensing paperwork. Attempts to omit, shadow or misrepresent portions of a license request may provide a company a short-term tactical success if undiscovered during the initial review; however, when such an attempt is discovered the company must then deal with a poisoned well situation in the licensing system. Companies would be well served by building a record and reputation for reliable, well thought-out representations in their licensing paperwork.

Finally, and most troubling to me, is my impression of the degree to which fear is a very real element which pervades many companies I visited when the issue of government licensing for exports was discussed. Fear results from:

- What the government could do to a company which, for whatever reason, has incurred the wrath of individuals or organizations within the review chain

- A general unwillingness of the review system to identify and examine the merits of a request, as well as its demerits. In short, the view is most often "How much damage can this do?" rather than "What gain does the US get from this release? Is the gain greater than the risk?"

- Irrational or uninformed decision-making by a single individual in the review process

- Belief that a failed license could then poison the prospects for future licenses

- Possibility that processing a reclama to a failed license, or taking it to a higher level in the approval chain, would result in long-term confrontation with the review system and individuals/organizations in it

- Long delays in obtaining a license, which cause the contract to go to other quicker-moving (usually foreign) competitors

- Unrealistic, crippling provisos which make the contract unattractive to the customer and non-supportable by the US company

- Inability to carry out company planning, marketing, and programs because of the possibility of the difficulties cited

This fundamental issue must be addressed. Unless and until it is, the prospects for significant aerospace cooperation with China (and with anyone else who is not defined as a close US ally) is decidedly up in the air. This situation is a symptom of a "failure to communicate." It is solvable, but requires genuine and significant cooperation and trust-building between government and private industry.

Internal Corporate Communication

In addition to my perception that business planning is deficient in many US aerospace firms, I also believe that internal communication and coordination between operating divisions is often lacking. In several companies visited there was open admission that each division pursued its own marketing, business development and operations virtually autonomously. In some corporations, joint briefings and discussions held for my visit by heads/representatives of various operating divisions were, on occasion, the first crosstalk sessions for the various entities working the China market. Additionally, these divisions would often handle their own offset trade arrangements with little or no assistance from the corporate center or communication and coordination with other company divisions.

In an era of shrinking profitability due to intense competition it would seem that better corporate internal communication and centralization of some business functions would be of competitive advantage. One trend observed was consolidation of offset trade arrangements into one corporate central office, working offsets the breadth of the corporate structure. By doing this, one central function was able to track total corporate offset obligations, and orchestrate the negotiation of offset packages that might draw elements from across the spectrum of corporation products and services. As a result, more efficient use of division resources was possible, sales went up as a result of being able to efficiently handle offsets as a part of marketing, and the corporation as a whole was better able to manage and balance a growing volume of offset trade obligations.

Offset Trade

Offset trade (both direct and indirect) is, to make an understatement, a big issue in the US aerospace industry. While it is possible to use offsets to corporate advantage (and some corporations are doing so), the long-term effects of customer demands for high rates of offsets are not positive.

World-wide aerospace competition is fierce and is characterized by over-capacity in most production areas. To exacerbate the situation, a large number of industrializing nations are actively working to establish their own aerospace industrial base, seeking to achieve a maximum in self-reliance and self-sufficiency. Foreign efforts to obtain maximum offsets, particularly direct offsets, will further increase this world-wide production capacity. As foreign countries become more capable in aerospace production they offer the potential for increased competition on the world market.

Offset trade requirements also impact in other important areas. First, it is a strong contributing factor resulting in reduction/elimination of a balance of payments surplus resulting from US aerospace sales. Over the past several years the US has seen the aerospace sector's balance of payments surplus decline drastically. As the US seeks to reduce its international trade deficit, offset trade requirements often compound the problem by effectively requiring that a large part of the value of the sale be reinvested directly in the purchasing country. Second, many countries are requiring transfer of sophisticated technology and advanced technical assistance as a condition of sale. These requirements present problems to companies seeking to preserve proprietary interests and who must seek USG export license approval to release such technologies. Finally, the overhead costs associated with managing offset trade can exceed the profits inherant in the contract. Businesses working in China and elsewhere may decide that contracts requiring excessive offset demands are not viable business opportunities, unless some other factor is of paramount importance (holding off foreign competition, for example).

I believe that the onus is on industry to take action on this issue. The government is not likely to take strong action unless and until strong private sector pressure is brought to bear. To date US industry has appeared to fragment completely as competition has focused members of the aerospace industry on short-term win-this-contract-at-any-price efforts. Foreign buyers and governments have been very successful in inducing this fragmentation. It seems to me that at some point US industry must exercise some internal control and bite the bullet by entering into a heightened degree of cross-industry cooperation to reject offset demands that are excessive or which work against the basic interests of the US aerospace industry and the US. Unless this takes place I see little prospect for real improvement in the situation.

Chinese Efforts to Acquire US Technology and Information

A final area I will address are US aerospace business views of Chinese efforts to acquire US technology and information through illegal and quasi-legal means. As I mentioned earlier in this paper, my discussions revealed a very strong, very negative reaction to Chinese efforts to illegally acquire US weapons, weapons components, electronics, high tech manufacturing equipment, etc, and to the subtle -- and sometimes not so subtle -- pressures applied to US citizen employees of Chinese descent.

Among the US aerospace business community, I detect a strong sentiment that, in the interest of a long-term bilateral relationship which emphasizes growth and forward movement, the US should encourage an open relationship. On the other hand, the Government of the PRC has certain responsibilities in this relationship. US views on the nature of the relationship as regards attempts by Chinese organizations to operate beyond the bounds of accepted behavior should be articulately stated to the Chinese. Further, these views of China's responsibility to shut down illegal and quasi-legal tech transfer acquisition operations must be strongly stated and the Chinese made clearly aware that it is held fully accountable for any such activity (to include dealing with private groups and individuals engaged in "freelancing" operations) and that continuation of such activity will have clear consequences. In short, as one business executive put it, those activities are totally inconsistent with our national views and policy that China be accorded the status of a "friendly, not allied" foreign country. These activites are not compatible with the American definition of the word "friend."

Final Thoughts

This research project was of intense personal interest to me. I was surprised by some of the results of the travel, and most worried by the lack of vision that I perceived in some US aerospace firms as they looked at the China market. The China market is a tough nut to crack and doing business in China is not likely to get appreciably easier in the future.

I believe strongly, however, that the US aerospace industry can be highly competitive in China over the long term, but that competitiveness will be largely dependent on how responsive US business can be to meeting real Chinese needs (rather than our preconceptions of what the Chinese need), and how well industry can pull in harness with the USG. As a nation we are not going to achieve our greatest potential for long-term success in these endeavors, however, without a shared vision of the objectives, and a macro plan to get there.

The bottom line is, as I suspected before I started the project, that we in the US collectively lack a coherant vision of the long-term relationship between the United States and China. Failing that, policy and business will continue to be heavily dictated by short-term considerations and characterized by unpredictable, sometimes erratic movement of the relationship. I believe that it is time for industry, government and academia to galvanize a joint effort with the objective of determining US purpose, and the desired direction of future movement for this very important relationship.

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