

Contracting Styles for International Projects

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Fabric structures were once perceived as fragile. Over the years, because of the efforts of many of the architects and engineers who believe in membrane building technology, but also because the structures themselves have proven to be rugged and long-lasting, fabric structures have gained a much wider acceptance from architects and owners. Based on the current level of inquiries, it appears that we are at the beginning of a breakthrough into the mainstream of architectural design.

The demand for high quality, technically sophisticated architectural fabric structures has been increasing at a rapid pace around the world. Advances in technology in the areas of transportation and communication have created a situation where the competition to engineer, manufacture and construct these buildings has become truly global.

With the press of a button, building engineering information is instantaneously transmitted from New York to Shanghai. The light weight and portability of the fabric membranes used in these buildings means that the membranes can be fabricated anywhere in the world and transported to the most remote job sites in a few weeks by conventional shipment. If sent by airfreight, they can arrive in a single day.

It has become common for companies from Europe, the United States and Asia to compete for projects in South America as well as in each other's home markets. This creates an interesting mix of business strategies.

Our industry is racing toward the second millennium. The 21st century brings to us a world that is reduced in size because of the new technologies we use in the execution of our work. The internet now makes it possible to transmit entire design packages and contract documents without ever reducing the contents to a hard copy. As we progress

further into the next century, the use of this technology will continue to change the way we carry out our work. What is revolutionary today will be passé tomorrow.

How does the Information Age affect the way we conduct our business and manage the personal relationships in contracts? As a subsidiary company within a larger, global organization, Birdair has participated in a number of projects which have brought new challenges, as well as opportunities to the fore. While there is a saying that the more things are different, the more they are the same, it is very true that every country, or culture, has a different contracting style, and the international participant, be they an Engineer, Architect, Construction Manager, or Specialist Contractor, must understand the nuances among the styles.

The Quantity Survey Method that is used to its fullest extent in Great Britain and the British Commonwealth has a requirement that the project content and scope of work be broken into well defined parts, all of which must be combined to make the whole. This project compartmentalization must be reconciled with the Tendering Company's internal project division method. The use of sophisticated database oriented estimating and cost evaluation systems is essential to enable the almost constant manipulation of the various components of the project. Thus, it becomes vital that the entire project team have a full understanding of the components and the significance of each to the prescribed quantification. The use of cross referenced and annotated itemization of the complete project is required. Estimating programs such as Timberline are well adapted to this process, and spreadsheet programs such as Microsoft Excel can be used to manipulate the data as required. It is necessary and actually quite easy to perform such calculations as cost compilation, overhead application, profit computation, currency conversion, and format presentation in one complex calculation within the spreadsheet, but an easy input step.

Exhibit 1 shows the type of spreadsheet that could be put together for this purpose. The only input to the spreadsheet is the estimated cost for the Scheduled items in the Bill of

Quantities. Within the Cost Estimate Database, each item of cost is assigned to a Bill of Quantities item, and the Cost Estimate is sorted to match the Bill of Quantities.

	A	B	C	D	E	F	G
1	Project Name	Project Number				Exchange Rate	Margin
2						1.62	5%
3		Qty.	Unit	Unit Price £	Sell Price £	Sell Price \$	Cost
4	TENDER SUMMARY						
5	Description						
7	items	1	item	=E7/B7	=F7/\$F\$2	=G7/(1-\$G\$2)	\$
9	Sub Total			=SUM(D5:D7)	=SUM(E7)	=SUM(F7)	=SUM(G7:G7)
10							
11	Description						
12							
13	items	1	item	=E13/B13	=F13/\$F\$2	=G13/(1-\$G\$2)	\$
14	items	1	item	=E14/B14	=F14/\$F\$2	=G14/(1-\$G\$2)	\$
15							
16	Sub Total			=SUM(D12:D14)	=SUM(E13:E14)	=SUM(F13:F14)	=SUM(G14:G14)
17							
18	Description						
19							
20	items	1	item	=E20/B20	=F20/\$F\$2	=G20/(1-\$G\$2)	\$
21							
22	Sub Total			=SUM(E20:E20)	=SUM(F20:F20)	=SUM(G20:G20)	
23							
24	Description						
25	items	1	No.	=E25/B25	=F25/\$F\$2	=G25/(1-\$G\$2)	\$
26	items	1	No.	=E26/B26	=F26/\$F\$2	=G26/(1-\$G\$2)	\$
27							
28	Sub Total			=SUM(E25:E26)	=SUM(F25:F26)	=SUM(G25:G26)	
29							
30	Total			=SUM(E28,E22,,E16,E9)	=SUM(F28,F22,,F16,F9)	=SUM(G28,G22,G16,G9)	
31							
32	Description						
33	Value added Tax	1	item	=E33/B33	=F33/\$F\$2	=G33	\$
34	10% performance bond (1%of total sell)	1	item	=E34/B34	=F34/\$F\$2	H35/(1-\$H\$2)	=F30*0.1*0.01
35							
36	Grand Total	1		=SUM(E30:E34)	H37/(1-\$H\$2)	=SUM(G30,G33,#REF!,G35)	

Exhibit 1
 Bill of Quantities Spreadsheet

The Lump Sum Schedule of Values Method is the most commonly used contracting method in North America. This calls for a single price or a divisional breakdown of smaller single prices that, together, comprise a total fixed price. After the contract is awarded the Contractor is required to submit a Schedule of Values that will become the basis of payments for the contract. The Schedule of Values is broken into a number of items, and they are measured for payment on the basis of the percentage of completion

for each item. The assembly of the Schedule of Values is a strategic matter for the Contractor, and before the advent of spreadsheets and their wide use, a time consuming process subject to error. Exhibit 2 indicates an automated method for compiling a Schedule of Values from a detailed estimate, including the application of overhead and profit into the value for each item. Again, the use of automated business tools can turn a tedious task into a relatively simple one. Of course, no computer program can substitute for the knowledge an individual has about the task at hand. Without a thorough understanding of the project and its estimated cost components, the individual performing the tasks will not be successful.

	A	B	C	D	E	F	G	H	I
1	Schedule of	Estimate	Cost of	Margin	Profit on	Item Totals	Supplement	Final	Schedule of
2	Values Item	Items	Included	%	Included		Profit	Margin	Values Item
3	Sheerfill V	Included	Items		Items		Addition	%	Value
5	Design	Eng			= (C5/(1-D5))-C5	= C5/(1-D5)		= (G5+F5-C5)/(F5+G5)	
6		Dr			= (C6/(1-D6))-C6	= C6/(1-D6)		= (G6+F6-C6)/(F6+G6)	
7		WAI			= (C7/(1-D7))-C7	= C7/(1-D7)		= (G7+F7-C7)/(F7+G7)	= SUM(F5:G7)
8					= (C8/(1-D8))-C8	= C8/(1-D8)		= (G8+F8-C8)/(F8+G8)	
9	Fabric Mats	SF			= (C9/(1-D9))-C9	= C9/(1-D9)		= (G9+F9-C9)/(F9+G9)	= SUM(F9:G13)
10		Access			= (C10/(1-D10))-C10	= C10/(1-D10)		= (G10+F10-C10)/(F10+G10)	
11		Clampg			= (C11/(1-D11))-C11	= C11/(1-D11)		= (G11+F11-C11)/(F11+G11)	
12		Aids			= (C12/(1-D12))-C12	= C12/(1-D12)		= (G12+F12-C12)/(F12+G12)	
13		Crates			= (C13/(1-D13))-C13	= C13/(1-D13)		= (G13+F13-C13)/(F13+G13)	
14	Fabrication	Shop			= (C14/(1-D14))-C14	= C14/(1-D14)		= (G14+F14-C14)/(F14+G14)	= SUM(F14:G15)
15		QC			= (C15/(1-D15))-C15	= C15/(1-D15)		= (G15+F15-C15)/(F15+G15)	
16					= (C16/(1-D16))-C16	= C16/(1-D16)		= (G16+F16-C16)/(F16+G16)	
17					= (C17/(1-D17))-C17	= C17/(1-D17)		= (G17+F17-C17)/(F17+G17)	
18	Shipping	Ship			= (C18/(1-D18))-C18	= C18/(1-D18)		= (G18+F18-C18)/(F18+G18)	= SUM(F18:G18)
19					= (C19/(1-D19))-C19	= C19/(1-D19)		= (G19+F19-C19)/(F19+G19)	
20	Supv	Supv			= (C20/(1-D20))-C20	= C20/(1-D20)		= (G20+F20-C20)/(F20+G20)	= SUM(F20:G21)
21		Sitr T&E			= (C21/(1-D21))-C21	= C21/(1-D21)		= (G21+F21-C21)/(F21+G21)	
22	Overhead	PM			= (C22/(1-D22))-C22	= C22/(1-D22)		= (G22+F22-C22)/(F22+G22)	= SUM(F22:G26)
23		T&E			= (C23/(1-D23))-C23	= C23/(1-D23)		= (G23+F23-C23)/(F23+G23)	
24		Res trips			= (C24/(1-D24))-C24	= C24/(1-D24)		= (G24+F24-C24)/(F24+G24)	
25		Stby lc			= (C25/(1-D25))-C25	= C25/(1-D25)		= (G25+F25-C25)/(F25+G25)	
26		lc Conf			= (C26/(1-D26))-C26	= C26/(1-D26)		= (G26+F26-C26)/(F26+G26)	
27					= (C27/(1-D27))-C27	= C27/(1-D27)		= (G27+F27-C27)/(F27+G27)	
28					= (C28/(1-D28))-C28	= C28/(1-D28)		= (G28+F28-C28)/(F28+G28)	
29					= (C29/(1-D29))-C29	= C29/(1-D29)		= (G29+F29-C29)/(F29+G29)	
30	TOTAL CONTRAC					=SUM(F5:F29)			= SUM(I4:I28)
31									
32									
33	VALUE REMAINING					=A31-F30			=A31-I30

Exhibit 2
 Schedule of Values Item Calculation Spreadsheet

In Asia, it is common practice for Tenders to be presented as a **Single Lump Sum**, which is subject to dissection and negotiation of one or all of its parts. Given the nearly prohibitive cost of international air travel, it becomes vital to the negotiator that nearly constant communication with the Home Office Estimator be possible. Use of internationally capable cellular telephones, the internet, and company intranets becomes a necessity rather than a high-tech luxury. The constant changing of contract content, language, and valuation during the negotiation process creates an environment that demands a high level of knowledge about every aspect of a project on the part of the contract negotiator, and also a requirement for instant communication with colleagues and advisors half a world away. The ability to manipulate cost estimation documents with interactive capacity can subtract days, even weeks, from the time required to complete negotiations. Time zone differences actually aid in this process. When discussions break for the day in Asia, the negotiator is able to use e-mail, fax, intranet, and telephone communication with the office in North America or Europe during the business day at the Home Office. At Birdair, we regularly communicate through each of the above methods around the world to clarify, adjust, and complete the adjustments required for the ensuing day's discussion. What took three to four weeks as recently as 1995 can now be accomplished in three to four days of intensive negotiation.

Cultural differences between the International Tenderer and the Customer must be given the highest degree of respect. Subtle differences between, say, Americans and Britons should be understood by both parties, but the true onus falls on the Tenderer, for he is the one with the most to lose in a situation where an offhand remark can lead to a scuttled or needlessly tense negotiation. In a relationship such as American/British it is vital that both parties make measurable efforts not to be offended by the offhand remarks of the other; the differing use and intended meaning of common words and phrases; contrasting styles of demonstrating the importance of a specific item.

In Asia, cultural differences are more obvious, but also far more complex to Westerners. Asians, and Chinese in particular tend to think in terms of webs of thoughts and relationships. They try to unravel the pattern, often wondering if it is too complex to be solved. Americans take pride in their directness, but the Asian culture seems more comfortable with ambiguity. What appears as an outright contradiction to a Westerner can be merely an expression of the duality of an issue for his Asian counterpartⁱ. There are five concepts for negotiating a contract in Asia that are vital to the success of the process, especially for the Western negotiatorⁱⁱ:

1. **Cultural Continuity.** The Asians' sense of historical and cultural continuity has taught them that things will always change, and that the possibilities are better awaited than forced. Asian culture has been active for thousands of years, and this inherent knowledge puts a one month long negotiation in a wholly different perspective than for the Westerner, particularly the American or Australian, whose cultural extent goes back only about 400 years.
2. **Cultural Superiority.** Asians are masters at creating a guest-host relationship in which the foreigner starts out in the position of inferiority and obligation, at least from the Asian perspective. This can sometimes cause impatient negotiators to make unplanned concessions or agree to unfavorable terms simply to "get on with it." In China, this sense of superiority bred the opinion among some Chinese negotiators that China deserved special treatment. But, there is an opposite reaction to this: a sense of technological inferiority. This can create a conflict within the Asian negotiator, making him fear that the Westerner will cheat him through this perceived technological advantage.
3. **Clannishness and Conformity.** Through the centuries, Asians have been taught to conform and seek consensus in most aspects of life. This leads to indecision, and there are endless and continued meetings. While there may be a team of two, or three Western negotiators, the group of ten or so Asian negotiators must all agree on how to proceed. Many times the most important party to the negotiations is not present at the meetings. The Asian traditional

system gives no rewards for taking initiative or making correct decisions, but instead punishes those who make wrong decisions. This can make the process seem interminable to the Westerner. The concept of “face” is also ever present in negotiations with Asians. It is vital to Asians to be viewed by their peers, superiors, and subordinates as one who has done nothing to violate conformity. This can result in indecision and procrastination, sometimes to the point at which, rather than lose face, someone might kill a deal. Along with “face” is the importance of Hierarchy within the Asian culture. It is vital for the Western negotiator to understand the system and take it into account in the negotiations.

4. **Relationships and Obligations.** The concept of *guanxi*, the web of relationships and obligations that holds the Asian system together is never more evident than in the contracting process. Simply being expert, or the best at a particular skill, is not enough to ensure success in Asia. The interpersonal relationship between seller and buyer must be extended to a level beyond the immediate goal. Nurturing business and personal friendships makes the fog part when moving to the next step in critical projects. But, there is also a flip side to *guanxi*. It is not simply tapping into the network; it also implies the obligation to return the favor. The negotiator must be extremely wary of becoming caught in the quicksand of unfilled mutual expectations. While the concept of *guanxi* implies long and ongoing relationships, there is no emotional basis implied. The relationship often appears impersonal or even callous. This is simply the nature of *guanxi*.
5. **Ritual.** In Asia, ritual can never be ignored. The expectation of the Asian customer with respect to the manner in which, and the order in which the process continues is paramount. Meetings must be confirmed in virtually every case, banquets must be held at the proper time in the process, and the correct food must be served. If the Western negotiator is to be successful, he must learn and practice the ritual as required.

The negotiator in the Asian arena must understand and maintain currency in these principles. The actual negotiation is often looked upon by the Asian side as a battlefield, and the principles of War apply. There are six negotiating strategies that are always in play in Asiaⁱⁱⁱ:

1. **Keep your opponent off guard.** Making unscheduled changes to itineraries and agendas is a simple and effective means of accomplishing this. Remember the Asian concept of time. It makes this seem more bearable.
2. **Know your opponent completely and exploit small contradictions.** Being able to prevail taking your opponent's position is another way of saying this. But, Asian negotiators take it one step further, doing exhaustive research to understand how the opponent operates. Contradictions are interjected at strategic moments to maintain the upper hand.
3. **Establish principles first, worry about details later.** The order of the negotiating agenda and the control over the process is the object. Once the overarching general principles can be agreed to, then the detail can be fought over in as harsh or protracted an environment as might be advantageous. The negotiator who maintains control of the agenda will have an easier time at success.
4. **Be welcoming, then use the pressure of time against your opponent.** Again, the concept of time becomes a valuable tool. Suffice it to say that no Western negotiator should allow himself to succumb to time pressure. An extra few days at the hotel become unimportant when the key terms of agreement are at stake.
5. **Drive a hard bargain.** Simply cut to the chase when things bog down. Many times the real issue is how much discount against price will be offered, while the process becomes bogged down in minutiae. This can often be attributed to the demands of the "boss," but the effect can be the same. On the other hand, the savvy negotiator will allow his opponent to "win" with a good price, but

then leave important items out of the contract, to be negotiated later, after the leverage has shifted.

6. **Don't forget the End Game.** Move quickly when the conclusion is at hand. When things are moving very fast, it is easy for the opponent to forget or ignore some important loose ends.
7. **A signed contract does not mean a settled contract.** Negotiate endlessly. When agreements and contracts are ready, consider them as drafts subject to further "friendly discussions." Once signed, continue negotiating. "Yes" in Asia can mean "now we can get down to the serious items." This is usually the result of all those loose ends left in the name of expedience, or friendship, or time. The able negotiator will understand that this will become the case later and do what is necessary to avoid the problem. Time can be a powerful tool for both sides in the process.

It might seem that there is an insurmountable difference between culture driven negotiations described above and the successful conclusion of a contract. Trust among the parties allows the process to move forward. The Western negotiator must show that he is willing to maintain the open communication that is needed, to remain sincere in his efforts to provide a quality product or service. Trust also means that everything must be continuously spelled out for each other. Blind faith has no part in the process.

Birdair, a wholly owned subsidiary of Taiyo Kogyo Corp., recently became the owner of Stromeier and Wagner GmbH, Konstanz, Germany. The Taiyo Group has offices in Japan, the United States, Europe, Australia, Singapore, and Mexico. These are all functioning offices with their own employees. The group also has a network of representative relationships in virtually every area of the world.^{iv}

At Birdair, we have a travel agency located in our office and most of our project managers and senior staff are in a state of perpetual jet lag. When somebody in our office asks, "What time is it?" the most common response is, "Where?" Many of us start the

day by talking to Europe or the Middle East at 6 a.m. and end by talking to Asia at 9 p.m. (EST). Global business is truly 24 hours per day, and a cellular phone is an absolute necessity unless you plan to sleep and eat in your office.

Our work often requires that we take full turnkey responsibility, from engineering to materials supply to construction. Obviously, the challenges are many. Duties on imported goods vary from country to country, and the rates swing wildly based on the materials imported. At times the duty rates change on the basis of what the materials are called in the Bills of Lading. Taxes also are an issue. These vary from country to country, depending on how the revenue is earned. For example, in Argentina the tax rate for revenues earned from engineering services is far different from the tax rate for revenues earned from construction contracts.

Every country has its own set of building codes and contract laws. The method of construction also can change from country to country. We are required to expand our thought process beyond what we have traditionally become accustomed to. In countries where labor costs are very low, the use of mechanized equipment is often eliminated in favor of brute manpower. Our office often has animated discussions over the estimates for projects in the tender stage. During one of these discussions, while arguing over some 2,000 man-hours for a project in China, it becomes evident that the time spent discussing whether to include or exclude the man-hours actually costs more than the value of the man-hours.

For a typical fabric structure to be built in, say Italy, the international content can be awesome: the steel is from Germany, the cables from Canada, the engineering from a joint effort between the United States and the U.K., the construction equipment will be brought in from all over Europe, and, of course, the construction labor from Italy. Just organizing the contracts and transfer of funds becomes a complicated issue. This is made even more difficult when we make efforts to protect ourselves from currency-valuation

swings between the U.S. dollar, the Italian lira, the British pound sterling, the Deutsche mark, and the Canadian dollar.

The complexity of organizing the engineering, purchasing the material, and scheduling its arrival on-site at the correct time, and even of organizing construction in a distant land, pales to insignificance when compared to the selling or bidding process. As a United States company, we are bound by our sense of business ethics, which are part and parcel of our society, as well as The Foreign Corrupt Practices Act. Essentially, we are bound by the laws of the United States regardless of where we enter into a contract. This does not result in a level playing field. For example, a United States business and the responsible management, as individuals, could be charged with felony criminal acts for expending funds that a foreign counterpart might claim as a valid business expense and tax deduction in its country.

Since our industry is proprietary in nature, with few competitors for large PTFE projects, every significant tender becomes a Machiavellian political conspiracy with secret alignments of membrane suppliers, cable suppliers, engineers, architects, and fabricators. Owners are often confused and deceived about the real specifications of the materials to be supplied, and contractors sometimes attempt to define specifications based on their commercial interests and not on the best interest of the owner and end user. When specifications are not clearly defined, the end result is often a “bid down” reduction of a project’s quality level, which ultimately damages every component of our industry. Outside the United States, the United Kingdom, and Germany, this practice has become common. Since architectural fabric technology is relatively new, at least to many owners, architects, and engineers, this quality dilution has occasionally occurred in these countries as well.

In order to increase the number of designs incorporating membrane structures, our industry must educate owners and architects about tensile fabric structure buildings. Our company’s preference is to work with knowledgeable owners who have employed

architects and engineers who have a knowledgeable understanding of the available membranes, and also the ability to produce a very clear specification that does not permit the unscrupulous tenderer to pervert it to his own purposes. We also prefer to work with architects, construction managers, and owners who conduct the tendering process in a professional manner that minimizes the opportunity for prevarication and other unethical behavior.

All of us in the industry must strive for a normal situation in which contract awards are based upon the highest quality at the most reasonable price. If we do not succeed in reaching this goal, the continued acceptance of fabric structures by the architectural, engineering, and project owner communities will be severely slowed, possibly halted. Very few of this group would purchase a personal item from a salesman who is or even appears to be unethical. The personal risks are far too high. We must apply the same standards to our industry as we demand in our own situations. Since communication is now immediate and far-reaching, the failure to achieve this universally high level of integrity could result in the failure of our industry on a global scale.

ⁱ De Kreizer, Arne J. *China Business Strategies for the '90s*. Pacific View Press, 1992

ⁱⁱ *Ibid.*

ⁱⁱⁱ *Ibid.* and Sun Tzu, *The Art of War*.

^{iv} **Fabrics and Architecture**, January & February 1998, Global Business From a Contractor's Perspective, Jon R. Duncan