Designing Communications on International Projects

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ABSTRACT
This paper will explore the issue of how design teams can handle and manage international clients and contractors. The role of a design professional is largely dependent upon the breadth of their expertise, and the confidence that the customer and constructor(s) have in their abilities. Both of these dimensions are of course related to the initiating, planning, execution and controlling, and close-out phases of projects. But, this paper will argue that the initiating and planning phases are where it matters most.

This paper will focus on the design of communication systems for international projects by the design professional.

KEYWORDS
Communication, Project Management, International Projects, Trust

INTRODUCTION
This paper is based on a brief review of the literature, and personal experience in the international marketplace. It is intended to codify many aspects of communications that are known to those who work in the industry, but are seldom proactively addressed. Drawing first on practice, this paper then adds research in communications and leadership to support the propositions put forth.

The first consideration for communications is what type of relationship the design professional and the customer have (do they trust one another), and the relationship that the customer prefers that the design professional have with the constructor(s) (will they be able to trust one another). This would also be governed by contractual stipulations between the parties. The second consideration is the breadth of experience and expertise held by the parties. This will impact the trust that is given to the parties by the other participants in the project, and their confidence and trust.

The Third consideration is the communication plan that is designed and implemented by the design professional, starting with the structure of the contracts. What information is to be provided to the participants, who will receive it, what will they do with it, how often do they need it, and at what level of detail. In Project Management terms, it is stakeholder analysis and communication management.

RELATIONSHIPS

Relationships on projects are affected by the structure of the contract(s), the preferences of the customer, the reputation of the design professional, and last, but not least, the design of the communication plans for the project. International Project success depends on effective communications with the stakeholders of each party, and a design professional must provide in the specifications adequate latitude for all parties to engage as fully as possible, within the framework of the contract. Most importantly, however, is that the parties trust one another.

Sustainability or striving to create a long-term relationship, although the project may be a transactional one, can greatly facilitate a more sharing and open communications environment for the entire team. The design professional can imbue this sort of attitude, and mutual trust, into the international project team, regardless of the hurdles, cultures, and personalities that exist through leadership. This topic will be explored in the last section of this paper.

On most international projects there is a set of General Conditions (GC) that describes the commercial, legal, and procedural rules to be followed on the project. These are often standards that the customer has used on previous projects. However, the customer may request that the design professional prepare these documents in close cooperation with the customer's staff or legal consultants. This is especially the case on projects where the customer is a first-time buyer of such services.

On many international projects the Special Conditions (SC) are written by the design professional, who takes the General Conditions and amends them to include the specifics of the project at hand. For example the site location, external funding requirements, time and reporting issues, governmental oversight, and etc. Multiple use constructors will sometimes prepare these documents with their own staff.

The design professional and the customer frequently prepare the GC's and SC's long before a constructor is brought into a international project, especially competitively bid projects. On Design-Build projects, the design professional and the constructor are together, or one entity, from the start of the project. From a communication's perspective, this later model is preferred, as it enables the entire team to participate in the structure of the contract, and thus the flexibility of the communications.

It is essential to think of an international project as a temporary organization. It is a temporary organization that is formed to perform the project, and then is dissolved – Project Management Organization (PMOrg), (Mintzberg 1983; Toffler 1997). Winter, Smith, Morris and Cicmil (2006) pointed to the work of the so-called *Scandinavian school*

that looked at projects as temporary organizations. According to DeFillippi and Arthur (1998) reputation, relationships, and heavy reliance on the value chain are essential needs for temporary project organizations. In a well referenced article, Grabher (2004) concludes that (Pg. 211): "The formation and operation of projects essentially relies on a societal infrastructure which is built on and around networks, localities, institutions and firms." Grabher points to the work of Brown and Duguid (1996) who suggested that team members are *enculturated* by the telling of stories that are community-appropriate.

The international project team must, through the GC and SC design the organization, and its communications systems. International projects are mostly short term affairs that last less than five years. So designing communications plans, implementing them, and then deconstructing them requires speed, and trust. The use of storytelling is one method to build relationships quickly. Brown (2005) asks the following questions related to story-telling and the *enculturation* of a team:
- Where is the knowledge in organizations?
- How do you know what people know?
- How do you know how to behave?
- How do you know how to act when you enter an organization?

The answers to each of theses questions should be incorporated into the design of the communication system. According to Brown, Jack Welch was asked his most important attribute and he said (Pg. 5): "What really counts is that I'm Irish and I knows how to tell stories." A well-known economist (McCloskey and Klamer 1995), wrote an article showing that 28% of the gross national product (GNP) in the United States is accounted for by persuasion, and one could make a good argument that perhaps around two-thirds of that is clever storytelling. On that basis, storytelling would have amounted in 1999 to activities valued at US $1.8 trillion. On a project with a value of US $200 million, that amounts to about 18%, or US $ 37 million.

Research has found that when people tell stories about other people, the motivations are reliability, trust, and knowledge (Cohen and Prusak 2001). Stories can include those about other people, the organization, the work, the social bonding, the past, the future, life, oneself, and signals. The stories have endurance, salience, sense making, and provide a comfort level. The use of metaphors, storytelling, and poetry also play an important role in the leadership for any project (Grisham 2006).

Pritchard (2004) believes to have good communications on a project the communications must be consistent, the manager must be a facilitator, and the design and monitoring of the system must consider existing protocols and selected mediums.

With such considerations, the design of the contract structures matters greatly. If a contract structure restricts the communications and interaction amongst the parties on an international project, this will either reduce or eliminate the environment in which such teamwork can grow and flourish. Contracts that are worded to effectively pit the parties against one another, in an atmosphere of distrust and secrecy, will encourage this type of behavior. Ideally, the contract should allow for absolute free flow of information to all concerned with the exception of possibly copyright/proprietary and/or price sensitive issues.

EXPERIENCE AND EXPERTISE

One reason that customers retain the services of a constructor and a design professional is that they lack the expertise internally. The design professional often is trained and licensed to provide for the design of facilities in keeping with established codes, standards, and practice. The constructor is a licensed professional with experience in translating theoretical design into reality, in mobilizing resources, planning sequences, ensuring quality, and in providing for safety in the workplace. It is often the case that design professionals know quite a lot about construction, and that constructors know quite a lot about design. This can be a blessing or a curse depending upon their willingness to communicate openly, and their trust in one another. The success of the contract to a large extent lies in choosing a communication model between the different parties that can add the knowledge bases of the parties to the common goals and objectives of the project. For such an approach to be effective requires trust among the parties, and essential basic faith among the team members that all are focused on the common objectives of the project and do not have their own separate agenda to execute.

The customer provides the vision for international projects, the goals and objectives, and generally the real estate and the financing. The customer knows why the project is being done, and decides how to acquire the services of the other parties. Frequently, design services are contracted for on a negotiated basis, whereas constructor services are contracted for on a bid basis. At one extreme, in the USA there is a perception that design professionals are worthy of trust by nature of their education and credentialing, whereas constructors are viewed as trained workers who must be watched. As Gray and Hughes say (2001) (Pg. 57): "The most successful projects are often those in which the client has a long-term relationship with the designers, based on respect and trust," and (Pg. 74): "Collaboration requires people to work together freely to the maximum of their potential. This can only happen where there is mutual trust and respect for each other's capabilities." Theses two statements should apply to the constructor.

Experience teaches that international projects which begin with this approach often are conducted without trust, and with erratic and inaccurate communications. Trust is a critical ingredient for all endeavors, and especially on short-term international construction projects. Cross-Cultural Leadership Intelligence (XLQ) (Grisham 2006) considers trust to be an essential leadership skill. It is a skill that should be practiced by the customer, design professional, and the constructor.

The customer should show the leadership, and set the expectations for communications on international projects. The customer must see that the design of the contract structure encourages trust on the project, and then must strive to imbue it in the parties. Customers have a reputation and that will frequently determine who tenders, and what price is demanded for the services. Reputation helps set the tone for customer trust, as it does for the constructor and the design professional.

The reputation of the design professional and the constructor also play critical roles. Firms can have a reputation themselves, that is easy

to research. The people assigned to international projects, however, can vary wildly. Frequently a "good" firm can put a person on a project that is not qualified for the post they are to fill – like having a young engineer assigned as the project manager on a project that requires someone with 15 years of experience and practice. Leadership in each firm must inspire the desire to follow (Grisham 2006), and the creation of referent power. Self-assured experienced individuals with XLQ skills will have a far greater chance of creating respect more swiftly.

International construction projects require teams to be constructed quickly, organized, motivated, and supported. Often these projects last less than two years, and the first 15 percent of the project is usually involved in the learning curve, and in the *forming*, *storming*, and *norming* parts of team building (Tuckman and Jensen 1977). On international projects, virtual teams put even more emphasis on this early portion of a project, for *swift trust* must be created (Meyerson, Weick et al. 1996).

Jarvenpaa, Knoll and Leidner (1998) concluded (Pg.57): "although the team-building exercises had a positive effect on the perceptions of other members' integrity, ability, and benevolence, they did not have a direct effect on trust…Perhaps the most interesting finding was that the qualitative case analysis suggests that high-trust teams exhibit swift trust."

For international construction projects (temporary organizations, global virtual teams, short-term teams) the reputation expertise and experience of the leaders of the various parties is essential in creating a swift foundation for trust. Trust then will facilitate open and effective communications, as long as the *knowledge pipelines* are unrestricted.

CONTRACT STRUCTURE

Figure 1 provides a view of a conventional contract structure where the customer has a contract relationship with a design professional, and a separate contract with a constructor. Often, these contracts describe the role of the other contracted party, and define some general communication protocol. For example, the constructor may be instructed to address all communications to the design professional, as shown in the Figure. It is also common for the communications between Subcontractors and Sub constructors to be prohibited by the contract, or by edict, from either the design professional or the constructor. Likewise, it is seldom that a design professional or constructor is given access to a user unless accompanied by the customer. This structure should not be taken to imply that the participants are in geographic proximity to each. On international projects they are likely working in virtual teams in multiple countries.

This paper does not argue for unlimited access to everyone, but it rather points to the barricades that the structure of a contract imposes on the parties. Imagine that all of the parties are present at the initiation (PMBOK 2004) of the project, and all participate in the design of the contract structure, and the communications plan. Each party would serve their individual interests of course, but each would also recognize the risks of having barriers to communications. A balance would likely be the goal for everyone. Know enough to do your task effectively without giving up proprietary information to others – the

dashed lines in Figure 1.
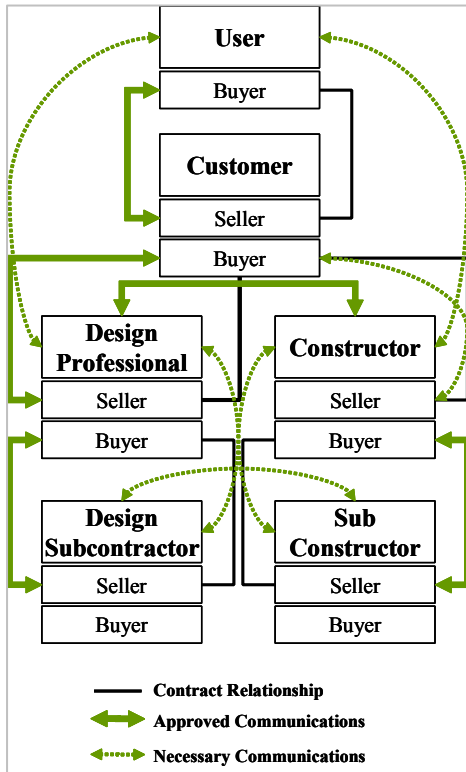
One reason for limiting communications is the old idea of knowledge as power. If the customer excludes the communications between itself and the design professional, then any errors made by either firm would be invisible to the constructor.   Some customers and design professional hold the belief that this in some way shields them against design errors and omissions. In these types of contracts the customer guarantees the design to the constructor, and then looks to the design professional to make good on the promise.

As with any profession, people will make mistakes, and certainly this is the case on large international complex construction projects. It is to everyone's benefit to have the best expertise looking at a problem, and providing quick advice on how to best fix it. It is

Structure not in the best interests of anyone to cloak, disguise, or postpone the day of reckoning on a problem. Yet this type of behavior is designed into genes of the project if the structure encourages the withholding of information critical to the success of an international project.

Another way of looking at this issue is to consider the use of a pipeline metaphor (Grisham and Walker 2005; Walker, Grisham et al. 2006) shown in Figure 2. The customer can change the rules of the game, and the communication dynamics on a project, for the contract structure establishes who needs information, who gets information, and when they get it. The customer can create bottlenecks to innovation and communications as shown in the figure, for the customer has control over the valves in the *knowledge pipeline*.

The *knowledge pipelines* also have valves that can be controlled by the individual parties. For example the design professional, the customer, and the constructor can choose what information is provided to the constructor, such as errors and omissions relating to their respective work. On some international projects a customer will withhold information that is essential to the successful completion of the project, like geological tests of subsurface conditions - experience has shown this is not an unusual occurrence. Any trust built on the project will be demolished if this becomes know to the participants. These valves are implicit in nature, not explicit. Meaning they are not specified in the contract, but are embodied in the spirit of the laws relating to the project.
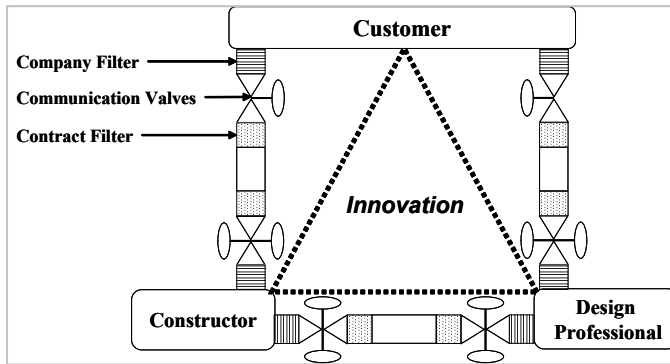
Figure 2 - Knowledge Pipelines

The contract filters are defined in the GC's and SC's of the contract. They often specify who may, and may not, talk to whom. For example, customers can restrict communications with the constructor, and require that they be routed through the design professional. In some cases, constructors even require the presence of the design professional in informal conversations. These are explicit filters that are set forth in the contract.

Then there are the company filters. These relate to the values and norms of the individual firm or organization. Organizations that prefer a highly partitioned and structured communications will be far less likely to open up to other firms on a short-term international project – like a traditional hierarchical structured organization. Organizations that are more flexible in nature, that are accustomed to sharing information will be inclined to communicate more openly – like a matrix organization.

If the customer imposes strict communication limitations in the contract, but then opens wide the valves, the message can often be misunderstood as insincere, or worse deceitful. If the contract leaves the communication protocols to the devices of the participants, and the constructor is a more closed-minded organization, then they can be perceived as hiding information, and a non-team player. If the design professional employs under-experienced inspectors, and close off the communications in the field, they can likewise be seen as hiding information. As Emmitt and Gorse state (2007), despite advances in structures of contracts, *actors* (project participants), still have to communicate over organizational and contractual boundaries, and across cultures. The authors also recognize that these boundaries may at times be very subtle.

Figure 2 also shows innovation that is possible on an international project. Innovation can be finding a better technical way to accomplish a piece of the work, finding a better administrative way to improve communications, finding a way to reduce the costs (value engineering), finding a way to reduce the time, and etc. For example, assume that the constructor is given a contract that pits the participants against one another, and requires the work to be completed in 200 days. The constructor does a due diligence schedule for the project and finds that it will only require 180 days to complete the work without crashing or fast-tracking the schedule with an innovative approach. Why would the

constructor table a 180 day schedule and make the float known to the other participants? Particularly if the attitude is that the other participants will potentially take advantage of this float themselves. The success of the project lies in creating a positive atmosphere (during every stage of project) which is conducive for the parties to share the innovations as above without inhibitions or reservations.

Global virtual teams add a third dimension to the communications challenge, for the normal teambuilding, interpersonal contact, and para lingual clues are not available in a conventional way. Virtual teams demand that a sense of belonging be constructed immediately, and nurtured throughout the international project. They require strong leadership, consistency, and an atmosphere that facilitates a sense of team work. In other words, they require even more emphasis on the need for a structure that enables this type of environment to exist on a project.

COMMUNICATION PLAN
The PMBOK suggests that (Pg. 225): "the communications planning process determines the information needs of the stakeholders." Planning communications on an international project requires consideration of the points noted above during the conceptual or initiating phase of the project, to establish the environment for trust and the sharing of knowledge. During the planning phase, it also requires developing a communication plan for the project. Clearly the key stakeholders (sponsors of the project, external political forces, etc.) must be identified first, and then the participants must be evaluated.

Evaluation of the participant's needs and the appetite of the leaders to empower their respective teams will determine the success of an international project. One way of preparing the necessary background information is through a responsibility assignment matrix (RAM) (Gareis 2006; Kerzner 2006; Lester 2007). The matrix determines who is responsible for the work packages for such things as creating the work, reviewing the work, approving the work, and so forth. It is an arduous task to complete a RAM, and involves understanding the internal operations and resources of all the participants in the project. It needs to be done at a detailed level, and therefore requires significant time and resources, but it is worth the effort. The RAM will determine who needs what information, and what they do with that information.

A Communication Assignment Matrix (CAM) can then be created to add the timing for the information (when it is needed), the acceptable format for the information (webpage, email, fax, snail mail, etc.), and confirms the distribution. CAM's should build from the structure of the RAM, but they should NOT report all of the detail contained in the RAM. The CAM serves as the basis for the communication plan, should be constructed during the initiating phase of the project, and then should be refined during the planning phase of the project, before execution.

The creation of the communication plan should be an integral part of the kick-off meeting, or the Joint Project Planning session (JPP) (Wysocki and McGary 2003). Before the execution of an international project begins, building team spirit, respect, buy-in, are all results of participating in the determination of who talks to whom, when, and why.

What better way for the customer to assure an environment of trust and open communication than by demonstrating its importance, and by leading the way.

CONCLUSION
This paper views international construction projects as temporary organizations that are designed by the customer. These organizations require leadership from all firms and organizations, but the primary leadership responsibility resides with the customer. Customers often rely upon the design professional to write the SC's and GC's, but in personal experience, seldom if ever is the idea of designing a temporary organization actually considered in this process. Thought goes into the structure of the contract, but not with the goal of creating trust, knowledge sharing, and effective communications.

This paper argues that the trust, relationships, experience and expertise (especially the XLQ of the leaders), and structure of contract play critical roles in determining the efficacy of communications on an international project. It is recommended that the development of the communication plan begin at the inception or initiation of the project and that participation in completion of the plan be required of all firms and organizations. Build trust, equity, and a team culture from the start.

For the design of effective communications on international project, the design professional should counsel the customer as follows:
- Design trust into the contract – build a temporary organization that includes the constructor.
- Design equity into the contract – receive counsel from the design professional and the constructor on how best to structure the agreements.
- Design transparency into the contract – demonstrate the importance of sharing information from the start.
- Design, and enable, open communications throughout the temporary project organization – open the valves and remove the filters (Figure 2).
- Require the participation of the major participants in the design of the contract and temporary organization.
- Lead by example in communications – customer first.

Design professionals are frequently trusted by customers from the outset, and can use this trust to design temporary organizations, built on trust, to improve the probability of success on international projects.

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