Information Development in China and India

White Paper

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Introduction

This white paper is a result of a growing interest in the costs, benefits, and risks associated with using offshore information developers to produce techni¬cal product documentation in India and China.

As North American and European companies look for ways to decrease operating costs and increase competitive advantage, offshore information development has, for some companies, become an alternative to hiring information developers in North America and Europe. For some information-development organizations, the man¬date to send information development offshore has accompanied a move to co-locate information-development and product-development teams, product development having already been driven offshore to pockets of less expensive skilled labor in India, China, Russia, or elsewhere. For others, the decision to outsource informa¬tion development is based on a mandate from senior management to cut costs and the perception that, dollar for dollar, it is less costly to hire an information developer in India, China, or elsewhere in the third world rather than in North America or Europe. For others, offshore development has been an attempt to expand their company's global reach.

Whatever the incentive, many companies are taking the plunge into murky off¬shore waters, with little or no upfront planning or ways of tracking whether or not offshore development really does reduce costs. The lure of cheap labor combined with a desire to find a quick fix may, in some cases, supplant indus¬try best practices.

This report presents the study findings and offers guidelines for best practices for North American and European companies considering moving their information develop¬ment to offshore resources. We discuss common challenges faced by compa¬nies already using offshore information developers and take a look at the hidden costs often neglected when considering the cost of doing business off¬shore. Although this study gathered information on companies moving infor¬mation development to a variety of countries, this report will focus primarily on information related to India and China.

The term "offshore" in this white paper refers to the use of foreign resources outside North America or Europe to perform tasks associated with informa¬tion development previously handled by North American and European employees. Offshore information development may either be handled by direct employees of the North American or European company, or its subsidiaries, partners, or contract agencies employing temporary information developers in offshore locations.

Methodology

Benchmarking creates a partnership between companies with similar goals to compare practices and determine optimal solutions. In addition to providing information about the issues targeted in the benchmarking study, benchmark¬ing also encourages partners to create ongoing relationships that can extend into other studies or professional activities. All partners benefit from sharing ideas, exchanging information, and learning about each other's goals, experi¬ences, and processes.

In this study, we used surveys, literature, and interviews to learn common practices of North American and European companies using offshore information developers for their technical documentation. The companies involved in this benchmark study have been involved in offshore information development for anywhere from six months to 25 years. Industries represented in the study include financial, software, telecommunications, process management, and e-learning software. The information development outsourced offshore is primarily intended for highly technical end-users, although, in several cases, the target audience is a non-technical end-user.

The term "offshore writer" in this report refers to non-native-English speakers located outside North America or Europe, who are employed or contracted by North American or European companies to write user documentation. Some North American and European companies have for some time outsourced their software and hardware devel¬opment to offshore developers to save money. The newer practice of moving information development offshore is done to take advantage of a low-cost labor force and, in some cases, to co-locate information developers with a com¬pany's offshore product developers. The following sections discuss the strate¬gies used to achieve the study objectives.

Literature Search

For information on China, we researched the literature related to North American and European organizations doing business there, both from the point of view of selling to China and using services in China, particularly software and hardware development and information development and training. A bibliography of our sources can be found in Appendix C.

Surveys

For organizations offshoring to India, two surveys were used to gather preliminary information about companies and individuals currently or previously involved in offshore technical documenta¬tion. The first survey was sent to North American companies with experience moving information development offshore. The second survey was sent to off¬shore information developers with experience providing information develop¬ment to North American companies. Of the companies contacted, 20 North American companies completed the first survey in 2002 and 10 companies completed the survey in 2005. Eleven offshore technical information developers completed the second survey in 2002 and 31 completed the survey in 2005. The purpose of these sur¬veys was to identify companies and individuals involved either in moving doc¬umentation offshore or providing these services to North American companies. Appendix A summarizes the data received from the online surveys for India.

For organizations offshoring to China, we used three surveys to gather preliminary information for the study. The first was a short survey focused on identifying companies and individuals who had present or past information-development experience in China. The second survey was sent to the companies and individuals in North America and Europe who were identified during the first survey, requesting more detailed information regarding their operations and experiences in mainland China. The third survey was sent to managers and information developers located in mainland China requesting detailed information regarding their experiences with offshore operations moved to mainland China. Appendix B summarizes the data received from these online surveys.

Telephone Interviews

In-depth telephone interviews were conducted with ten respondents involved in moving technical writing offshore to China. The purpose of these interviews was to collect first-hand accounts of the challenges and benefits associated with off¬shore information development and to discuss best practices for companies moving their information development offshore. Because of cost and time dif¬ferences, email correspondence was used to gather additional information from offshore information developers who had responded to the second survey requesting detailed information regarding their operations and experiences in mainland China.

Purpose and Goals

The purpose of these studies is to assist the technical publications organizations in identifying the benefits and challenges associated with offshore documentation development, particularly as it pertains to setting up working units in India and China. A growing number of North American and European companies are currently involved in or considering moving all or a portion of their information development offshore to places like India or China.

While, at first glance, offshore information development seems like a way to cut costs and expand a company's global reach and competitive edge, offshore information development's successes will largely depend on a company's ability to identify and follow best practices unique to offshore information develop¬ment. Because offshore information development is relatively new, this white paper identifies best practices for using non-native English information developers from lessons learned by other companies who have already had experience.

The study's goals were to

♦   identify the primary reasons North American and European companies turn to off shore resources for technical documentation

♦   inventory the main factors that differentiate successful offshore informa¬tion development from costly, unsuccessful information development

♦   discuss common challenges faced by companies using offshore informa¬tion developers and solutions for controlling these challenges

♦   attempt to determine short- and long-term costs associated with offshore information development, including upfront and hidden costs

♦   discuss language and editing issues associated with using non-native-English speakers to write documentation for a North American or European target audience

♦   unravel management concerns, including communication and cultural hurdles

♦   define overall principles for success in offshore information development arrangements, beginning with the development of a comprehensive service agreement

Findings of the Benchmark Studies

Overall findings in the benchmark studies indicate that offshore information development is a complex and problematic pro¬cess for many companies. Many of the challenges we found were related to

- strategic planning

- project planning

- process development

- management

- writing and editing

- culture

STRATEGIC PLANNING

No manager interviewed in the studies reported having done adequate strategic planning pri-or to moving documentation offshore. However, based on the information gathered, strategic planning on a number of levels is critical for successful offshore information development. We recommend careful, thor¬ough planning before entering into any offshore initiative. Strategic plans should consider

- the reasons for offshore information development

- direct or contract relationships

- academic preparation

- participation in hiring

- service agreements

- process development

REASONS FOR OFFSHORING

The participants of the benchmark studies have a variety of reasons for deciding to offshore portions of their information development to foreign workers. Most of the participants have been asked by upper management to research the possibilities of offshoring information to China and India, in many cases without a clear objective. The following reasons for offshoring information development have been identified:

♦ cost savings

♦ the need to find cost effective talent corporate mandate to decrease headcount or salary costs

♦ a desire to have the product developers and information developers co-located

♦ acquisition of, merger with, or joint venture in an offshore corporation

♦ a desire for the company to have a greater marketing presence in the country

♦ maintain competitive advantage with competitors who are offshoring

Companies who send information development offshore do so with the belief that there will be significant cost savings. However, the true cost savings have not yet been proven. When companies analyze cost savings, they mainly focus on the salary costs for employees in low-cost regions. In China, depending on the region, we find typically a 40 to 60 percent salary savings for Chinese information developers. However, there are other costs associated with offshoring that most companies do not efficiently track. These additional costs are associated with hiring, training, turnover, travel, long-distance communication, editing time, extra technical reviews, longer development life cycles, and process development.

One contact reported that when the company first established an offshore infor¬mation-development team in India in 1996, salaries for offshore information develop¬ers were approximately one-third of the cost of North American information developers. Today, the difference is closer to one-half.

Some reported that, although the hourly costs for offshore information develop¬ers were lower than for North American or European employees, these costs were misleading, especially when contractors and contract agencies are used. Contract agencies typically charged for full-time work (40 hours per week), although the contract writer was not working on the project full-time. The extra costs more than made up for the differences in hourly rates.

In another case, the cost of using Indian information developers was estimated at about 35-40 percent of the cost of US information developers. However, this manager stated that rates for offshore information developers were increasing. In contrast, given the recession in high tech, US rates for information develop¬ers appear to be decreasing. One company was able to negotiate a 12 to 15 per¬cent savings from previous years with their US information developers, making the use of offshore information developers less attractive.

Several contacts stated they started an information-development department in China because they currently have product development in China. They think it is very important to develop the technical information where the product is developed for the following reasons: information developers speak with the product developers face-to-face, both parties are located in the same time zone, information developers receive hands-on experience with the product, and communication is easier since they speak the same language and are from the same culture. Although most companies think it is important for the teams to be co-located, we have found examples where companies are writing information in North America or Europe for companies producing goods in China. There is also an example where the information-development department in China is documenting and updating information for products developed and maintained in North America. The contacts in both instances stated their ventures were successful. These contacts did recognize that they needed well-defined processes to be successful.

The Chinese government, in many instances, has also placed restrictions on companies if they want to sell products within China. According to our contacts, some of these restrictions are as follows: companies are required to produce their goods within China, they must create their information for those products in China, and they must have a marketing team in China. However, the requirements for each company vary depending on the goods they are selling and the economic benefit to China.

Developing information in-house or outsourcing

Through our study, we found the majority of companies have in-house information developers. Although most companies in China have their own information-development departments, we found two information-development outsourcing companies from North America and Europe who are located in China. One company is a full information-development outsourcing company, while the other company provides consulting to companies to build their internal information-development departments. While the information-development department is being developed, the outsourcing company produces their information.

Direct or contract relationships

In India, 64 percent of the participating managers hired information developers as direct employees of the North American company, foreign subsidiaries, or local partner companies; the remaining 36 percent hired information developers from contract agencies. In these cases, the information developers remain the employees of the contract agency, which handles all recruiting, hiring, and payment.

Most offshore information development is being done in India where there is a large pool of technically skilled employees for whom English is a strong second language. Managers we interviewed also report working with information developers in Russia, China, Singapore, and Hungary. In addition, we interviewed the manager of a Swedish company who worked with information developers in North America because of the larger pool of skilled information developers available.

In China, dealing with non-North American, non-western European countries, managers report that hiring experienced information developers with the skills necessary to produce good documentation is challenging. Technical communication as an academic concentration

does not exist, and these coun¬tries have no tradition of producing user-centered product documentation.

The majority of the contacts stated they are hiring full-time employees for their information-development teams. The exception has 50 to 70 percent of the employees as contractors hired through an agency in Shanghai. The laws for contractors in China are different than in the US. For example, a contractor can be hired by a company indefinitely without having to become a full-time employee. Also, the salary for a contractor is typically within the same salary range as a full-time employee.

ACADEMIC PREPARATION

According to those interviewed in China, offshore information developers have a vari¬ety of backgrounds. Their academic preparation typically includes journalism, engineering, sciences, humanities, computer science, English language, busi¬ness management, and business administration. Those with technical back¬grounds generally produce technically sound documentation, especially when they were co-located with the product-development teams, but the quality of English and structure and focus of the documents is often poor.

Likewise, those with English or more general academic preparation produce better English copy but are not well prepared for the technical aspects of the projects. Managers contend that information developers in non-North Ameri¬can and non-western European countries have little understanding of commu¬nicating with end-users in general and consumers in particular.

According to research and those interviewed, information development is still a very new field in China. Universities, companies, and the government are beginning to recognize the need for information development; however, they are still trying to define what information development is since there is not a direct Chinese translation for technical writing. Several universities are beginning to implement a course in technical writing, but we found only one university offering a degree program for technical communication. This exception is North Eastern Normal University in Changchun, China, which has started a joint program with Southern Polytechnic State University located in Georgia. In this joint program, students study for two years in China and two years in the United States. When the students have completed the four years, they will have earned a degree in English from North Eastern Normal University and a BS in Technical Communication from Southern Polytechnic State University. However, this joint program is only in its second year; therefore, the success of this program cannot be evaluated.

With regard to the technical writing courses, we have found the following:

♦ Universities have hired instructors from North America, Europe, and Australia to teach technical writing courses.

♦ Foreign instructors who are hired to teach technical writing courses in China have experience teaching similar courses in North America.

♦ Foreign instructors who are hired to teach the technical writing courses in China do not have any practical or teaching experience in information development.

♦ Technical writing courses are merely courses teaching phrases typically used in the business world.

Contacts have also stated that universities share their curricula with other universities, a practice very different from universities in North America where the curriculum is specific to each university and is not shared with other universities.

Through our study, we found that there is a business certification program offered in China. This certification program was developed by the British to certify individuals who have the skills to communicate in the business world efficiently. The exam offered for this certification, the Business Communication Exam (BCE) does not focus on information development; instead, it focuses on business letters and reports typically used in England.

Participation in hiring

In most cases, the North American publications manager or team members were not involved in selecting or hiring the offshore information developers. Lack of involvement in the hiring process was a problem both when using con¬tract agencies and local offshore employees for hiring. Lack of North Ameri¬can involvement in the hiring process often creates a mismatch between the information developers' skills and the requirements of the project.

In one case, a manager noticed that about mid-way through each project, the quality of the writing began to deteriorate. After some probing, the manager found that the employee responsible for hiring had made it a practice to lure new information developers into the department by promising them a transfer into programming, a more prestigious job, after they had worked in documen¬tation for several months. This practice created high turnover in the documen¬tation group and inconsistency in the end product.

Other problematic hiring practices, from a North American perspective, involved hiring individuals based on relationships rather than skills. India and other Asian and South American countries have a high-context culture, a cul¬ture that places primary importance on relationships. That is, who you know and how you are connected to a person is of paramount importance. These con¬nections may serve as a stronger impetus for hiring and promotion than perfor¬mance, skills, or academic preparation.

Most other countries lag behind North America in academic training for infor¬mation developers. As a result, the person in charge of hiring must seek out the appropriate skills in applicants. Identifying potential skills is particularly chal¬lenging when the person doing the hiring does not have a clear understanding of the skill set the sponsoring organization is looking for. The North American manager, working closely with the human resources department, must ensure that the person in charge of hiring thoroughly understands the requirements for the positions.

Another concern is the practice of North American companies with offshore development sites to raid information developers once they are trained. Indian information developers, for example, are concerned with upward mobility and will leverage one job against another for more salary, an opportunity to work in North America, and a perceived superior corporate culture.

One manager found that the best solution is to combine the experience of an offshore manager who is familiar with local resources, cultural differences, and employment regulations with the experience of a North American team mem¬ber who is familiar with corporate human resources policies and the require¬ments of the positions.

In one case, a North American manager who had experienced a number of problems with turnover and quality traveled to India, hired her own human resources manager, and trained him in her requirements. She used a US-based skills inventory, modified to incorporate specific requirements she had identi¬fied as unique to offshore information developers. For example, the skills inventory was rewritten to identify whether the applicant had an understanding of basic information-development practices and tools.

The North American manager then modeled recruiting and interviewing tech¬niques for the Indian human resources employee. After returning to the US, she continued to support the Indian in charge of hiring by reviewing resumes and participating in phone interviews with potential hires. The costs associated with travel to India and the additional training of the Indian employee were high. However, the North American manager believes that this new approach has significantly helped identify the kind of information developers she wants and has reduced long-term documentation costs. To test an applicant's compe¬tence, this manager required applicants to provide her with writing samples related to the type of information they would be creating on the job. In addi¬tion, she quizzed the applicants on their depth of understanding of the end-user.

Another company uses offshore information developers for e-learning continu¬ing education courses. The manager reports that her company uses a writing test and objective criteria to judge performance when hiring new information developers. Applicants are given a large batch of content and some information about what a user will need to know. The job candidates are then asked to sto¬ryboard the content according to specific instructions, chunk it into topics, and identify which information should go into tables and bulleted lists. This pro¬cess is used not only to select the best qualified applicants, but also as a tool for identifying the areas in which the applicant will need further training.

Several managers interviewed stressed the importance of using a recruiter in country who fully understands the requirements of the job and can hire accord¬ingly. Familiarizing an in-country employee with job requirements necessitates additional work on the part of the North American organization, especially because job requirements are often taken for grant-ed in North America. For example, most North American managers recruiting local informa-tion devel¬opers assume that professional information developers can use second-person and active voice and have basic word processing skills. In countries where no degree or certificate courses for information development exist, the assumption that information developers have the same skills as their North American counterparts is likely to be wrong.

The majority of contacts we spoke with have a local human resources department to locate potential employees. The local human resources departments also help with interviewing and educating the foreign managers on what is and is not appropriate to ask during an interview. The contacts state the following as common ways to recruit future employees:

♦ online through job recruiting web site

♦ directly through company web sites

♦ through local universities. The key recruiting time at a university is in November. Students will be available to work in April.

♦ through agencies

♦ through newspaper ads

We also found networking, also referred to as guanxi in China, leads to many job offers. Guanxi is similar to the concept of networking in North America and Europe. In China, guanxi is vital when trying to get inside information, secure a position with a company, or to gain access to goods or services which are hard to come by. In China, you need these "back door" connections to accomplish things. However, there is a strict rule that guanxi is very much of a tit-for-tat relationship where both parties reciprocate their obligations. The favors asked and the favors given have to be in balance to maintain the guanxi relationship.

Our findings show that companies hire people with a variety of backgrounds ranging from technical to English majors. Several contacts who have technical information to develop recommend hiring individuals who have technical degrees and who possess strong English skills. The education system in China is similar to the European model; students focus primarily on their major and receive little education in other areas. If the information that companies are publishing is highly technical, it may be hard for people with non-technical backgrounds to grasp the information they need to author. However, contacts have stated it is hard to find a technical person who is both interested in writing and has the proper English skills.

Several contacts stated it is better to hire locally than try to find someone from other parts of China. Apparently, people have difficulty relocating their residences or traveling long distances to work. China is large, and transportation can be difficult depending upon the location. It is also better to hire locally to ensure that the potential new hires are not just using the company to move to the city.

Another tactic companies are using to hire employees for their information-development departments is to find someone located in their country who is from China and is willing to move back. They feel this tactic will allow them to find someone who has experience with the cultural difference between the countries as well as experience with the English language. Companies are also hiring people from the Philippines, Australia, North America, and Europe who are located in China, to author their information. They believe this is a successful strategy because they are able to locate individuals who have experience in information development and are fluent in English. This decreases the amount of training needed and allows

their information- development department to have higher productivity during the startup.

SERVICE AGREEMENTS

Participants in these benchmark studies agree that it is important to develop a ser¬vice agreement that includes goals for both quality and schedule and identifies the consequences for not meeting these goals. Service agreements are used pri¬marily with contract agencies but may be useful to apply to direct employees, as well.

PHYSICAL LOCATION

Several companies in China are starting up or beginning to move outside of Shanghai and Beijing. In Shanghai and Beijing, there is typically a greater percentage of employees with experience who are more fluent in English. However, the cost to operate in these cities is said to be much higher. Another reason companies are moving outside of Shanghai and Beijing is that the government is giving companies incentives to set up operations in other cities. The cities these companies are moving to, however, are port cities or cities with major airports because the transportation system in China is still not completely developed. Therefore, op¬erating in some cities would not be cost effective due to the distribution process a company would have to implement to move their goods.

PROCESS DEVELOPMENT

None of the study participants believed that enough process development had taken place prior to the decision to move information development offshore. Lack of planning resulted in additional costs related to the quality of the prod¬uct, time to market, customer satisfac¬tion, and additional training and travel. Process planning is usually associated with organiza¬tions that have higher lev¬els of process maturity. We believe that the level of process matu¬rity in an organization is directly related to the success of offshore information-develop¬ment projects.

Project planning

As with strategic planning, project planning needs to follow pre-determined processes specific to offshore information development. Managers report that little or no project planning specific to offshore development had occurred prior to beginning their offshore agreements. Most companies attempted to impose project processes used in their North American organization onto their offshore projects without first assessing them for applicability.

In the project planning process, managers recommend paying close attention to staffing and project selection.

Staffing

The managers commonly arranged projects so that information developers could work directly with offshore developers. In most cases, the information development that was placed offshore was closely linked to the product devel¬opment being done in the same location. In some cases, product development was outsourced and then the engineers were asked to write the documentation. In one case, the engineers were hostile and uncooperative when faced with these additional responsibilities.

Through the study in China, we found that managers staff their projects in the following ways:

♦ Information developers and product developers are co-located in China.

♦ Information developers are located in China, and the product developers are located in North America or Europe.

♦ Information developers are located in North America or Europe, and the product developers are located in China.
♦ Product developers in China produce and write the final information for the product.

Project selection

In one case, a company began by moving all of their documentation to India. After a year and a half, they realized that the Indians could not handle many of the more complex activities in the information-development life cycle. At this point, they began to limit the work they outsourced, choosing very specific, concrete pieces, such as maintaining existing information and updating the documentation for legacy products. Although some development and testing continued to be done in India, the documentation being created was for products being developed in Massachusetts. Because the Indian infor¬mation developers were not co-located with the engineers who were developing the product, the information developers had difficulty understanding and explaining how to use the product.

Although one company expects to increase the quantity and complexity of the documentation created in India over the next few years, three companies inter¬viewed have withdrawn some portion of their projects because of unsatisfac¬tory results related to limited domain knowledge, information-development experience, and end-user understanding.

Chinese information development teams are tasked with a variety of projects such as producing information for a new product developed in China, updating legacy information, editing information authored in North America or Europe, and authoring new information for small projects. Since information development is a new field in China, the information developers are inexperienced. Therefore, our contacts think it best to send maintenance and production projects to China. This tactic allows authors in China to begin to develop their information-development skills and to learn the writing processes while still providing value to the company. Over time, more complex writing assignments can be given to the Chinese information developers as their skills improve. Companies that have taken this approach feel their ventures have been successful. However, the companies that authored new information in China at the beginning view their ventures as a failure. They had to schedule considerable time for editing by their North American and European teams. They did not have the bandwidth needed within the teams in North America and Europe to support all the editing required.

Several contacts stated there have been consequences in sending only legacy and editing work to China. When the writing in the teams in China improves, they think they should be given the same assignments information developers in North America and Europe are given. Since they are not always given the same assignments, employees have quit.

ATTRITION

Our study has shown that the majority of companies are currently experiencing attrition rates of 50 to 100 percent per year for information developers. However, we did find one company that is experiencing a 20 to 30 percent attrition rate. Managers feel the high turnover is due to the following:

♦ The information developers get frustrated about the work they are assigned. They feel they should have the same writing assignments as North American and European information developers.

♦ The information developers get frustrated about the amount of information they are receiving regarding expectations and specifications about the products they are documenting. For example, the information developers are given a large style guide of 500 pages and feel they are required to understand all of the information contained in the guide. They feel that there is too much information and get frustrated because they are unable to memorize the entire guide.

♦ Their skills are in a higher demand so they find better work elsewhere at higher pay.

♦ Companies hire product developers for the information-development team with the promise that they can move out of this position into a more technical position within the year.

♦ Poor management in China causes employees to get frustrated. They are not adequately challenged and decide to leave.

Job mobility is a new phenomenon in China. Traditionally, mobility was governed by the philosophy of a work unit (danwei) which has been in place since the 1950s. Individuals were assigned to a danwei when they graduated. The danwei became their family and controlled their careers. Their danwei told them where to live, where to travel, and controlled their rations. As the economy in China has continued to improve, the concept of the danwei has become less important. With the freedom individuals now have, they are shifting from the concept of the danwei to the view that they must be constantly on a search for a bigger and better job.

Management involvement

As should be obvious already, the most complex issue for companies develop¬ing offshore resources is management. Project management is generally han¬dled as management directives originating in the North American or European organization, through offshore managers, or through a combined approach involving man¬agement on both shores. No matter what the management configuration, both Indian information developers and North American managers identified a number of problems associated with a perceived lack of support and cultural differences.

The reasons for these disconnects are not always apparent to either side, but both have acknowledged differences around communication styles, male/ female role expectations, management styles, and time management, all of which affect project success. In one case, delays in schedules due to cultural clashes were estimated to have cost the company hundreds of thousands of dollars.

Issues that need management consideration include differences in

- time zones

- communication

- training needs

- time management

- power and hierarchy

- individualism and collectivism

- gender orientation

- future and past orientation

TIME-ZONE DIFFERENCES

Although contract agencies in India and other countries often boast that offshore information development provides 24/7 cover¬age, time-zone differences add to communication problems and delays in schedules.

Both Indian and North American participants in this study report that while greater productivity may be realized because teams can work around the clock, in reality, the 9-12 hour time differences may also result in stalled projects when questions cannot be answered immediately.

ORGANIZATIONAL STRUCTURE

In the China portion of our study, we found the following organizational structures currently implemented within companies:

♦ Companies manage both the project and daily activities from North America and Europe. If there is a personal emergency and the employee in China cannot reach his or her manager in North America or Europe, the employee can speak with the manager of the product-development team or the local HR department. These managers are used as last resorts and do not handle daily work or project issues.

♦ Companies have hired local managers for day-to-day activities; however, the project management is located in North America or Europe.

♦ Companies have hired project managers in China to manage both the daily activities and the project.

Although there are several different structures currently in place, several contacts stated that the best situation is a local project manager who manages both the daily activities and the project.

When hiring a manager, several contacts stated the best solution is to find a Chinese native who has worked in North America or Europe for several years. This helps bridge the cultural gap between the two countries. The other option is to find someone from North America or Europe who has lived in China and can relate to Chinese cultural practices.

MANAGEMENT STYLE

If you are not Chinese, you need to be aware of several cultural differences when managing Chinese employees. Managers need to be aware of the concept of minazi (the act of saving face). Minazi plays a key role in how individuals behave both at work and in personal relationships. It is not considered proper to criticize a person in public because such criticism will cause both parties to lose face. Also, in group settings, individuals will not ask questions because they do not wish you to lose face if you are unable to answer the question. Asking questions in a group is beginning to change; however, Chinese will still ask fewer questions in a group and will email their questions or ask them one-on-one afterwards. Losing face is also extremely important to keep in mind when managing someone who is older; it is very important to show them respect so they do not lose face.

Chinese are also less direct than Westerners and are always trying to please. Often, they will agree to deadlines and answer your questions even if they are not sure exactly what you are asking. They do not want to lose face by saying no, and they take pride in doing a good job by working hard. However, workers often over-commit themselves because they are too accommodating. They also take criticism very personally and will do everything in their power to fix a problem. For example, in the West, if you criticize a person's writing and give feedback at the end of the day, he or she will take this feedback and begin correcting the work the next day. In China, they take the criticism very personally and will stay all night trying to fix the document. It is acceptable to give them feedback about their writing; however, a manager has to choose words carefully.

We also found it is imperative for managers to explicitly state in detail what is expected of their workers in China and how they are supposed to meet these expectations. Workers like to have all of the information laid out in a precise way in advance.

Several contacts stated it is very important for Westerners who are visiting or doing business to be non-judgmental and very sensitive toward the Chinese culture if they want to be successful. A Westerner will never be Chinese, and a Chinese person will never be a Westerner; however, if both parties keep an open mind and are sensitive to cultural differences, they both can be successful.

COMMUNICATION

Geographical distance between teams has a direct impact on all forms of communication, even when team members are from the same country. Communication is often less frequent and more strained when using distance communication rather than person-to-person meetings. Distance impedes problem-solving, team cohesiveness, and knowledge sharing. Experts recognize that 80 percent of all communication is made up of non-verbal cues and contextual signals. Distance communication erases non-verbal communication and often leaves a large gap in understanding, especially for high context cultures.

Although some communication problems between Indian information developers and North American managers may have been due to limitations associated with distance communication, it is more likely that many of the miscommunications were a result of differences in communication styles. The way people communicate varies widely between cultures. North Americans tend to be more direct and less formal than their Indian counterparts. In this study, North Americans complained that the Indians were too wordy or circular in both their writing and verbal styles. North Americans tend to think and speak linearly, while people from Asian cultures start outside the topic and circle around to the point. Being too direct is considered rude. In con¬trast, the Swedish participant in the study complained that the North Ameri¬cans were too wordy. Swedes tend to be even more direct than North Americans. Typically, differences are on a continuum. Companies need to understand where they fall in the continuum relative to their offshore team members.

Different cultures also have different ways of expressing agreement or dis¬agreement. For example, Indians shake their head from side to side (the North American equivalent of "no") during a conversation to indicate that they understand what you are saying, although not

necessarily that they agree with you. Indians avoid saying "no" directly and may either avoid responding or provide the answer they know you are seeking, rather than disappoint you.

Tied closely to communication styles are differences in conflict and decision-making style. In Eastern cultures, open conflict is viewed as embarrassing and demeaning, while North Americans are encouraged to deal with conflict openly. North Americans are also more apt to compartmentalize work and per¬sonal relationships. In Eastern cultures, the two may be harder to separate and may often be one and the same.

When making decisions, North Americans tend to focus on the task at hand and let relationships develop as time goes on. In contrast, other cultures, such as Indians, place a greater emphasis on relationship building upfront. In fact, business often does not take place until there is a solid personal relationship. In these cultures, reaching a consensus is much more likely to play a role in deci¬sion-making.

Although these differences may be much more apparent when comparing East¬ern and Western cultures, differences exist to a lesser degree between North America and Europe. In one case where Swedes and North Americans were collaborating on information development, misunderstandings occurred about how much upfront planning was needed before starting the project and how much time should be spent reaching a consensus. One contact described the communication between North American and Swedish information developers as a "political dance" in which both competed for control over what lan¬guage would be used and how the project would be run.

North American and European companies communicate with their counterparts in China via phone, instant messenger, email, web conferences, and video conferences. Due to the time zones and cost, companies typically communicate through instant messaging and email on a daily basis. However, network bandwidth may be an issue in China depending upon where the company is located.

The communication methods vary depending upon where the parent company is located because of time zone differences. As a result, most North American companies have fewer "live" conversations with their counterparts in China. Many companies conduct live communications only when absolutely necessary. However, many typically schedule a team phone or video conference once every two weeks to ensure that everyone understands what is going on. The study has shown that companies are able to communicate successfully even with the differences in time zone. Working in different time zones can be both a help and a hindrance. If a project has team members in both time zones, work is happening 24 hours a day, five days a week. However, if someone within another time zone needs to answer a question for you and you are stuck until that question is answered, the time differences stop productive work until the next day. Some companies have placed a manager or trainer in China who is capable of answering the majority of questions until the group is established to avoid long delays. Potential time zone issues need to be accounted for and managed properly.

The time zone issue can be decreased depending upon your company's locations and the work schedules of your employees. In China, employees average twelve- to thirteen-hour days, typically arriving at work later in the morning and working late into the evenings.

When communicating across cultures, it is very important to be clear and concise. Communicating across cultures is difficult even with face-to-face communication because not all parties understand the nuances of the language. People may misunderstand the meaning of a word, causing a miscommunication. The benefit of face-to-face communication is that you can use a person's facial expressions and body language to determine what was intended. Interpreting body language is more difficult with the Chinese because they are taught to hide their emotions, making it more difficult to decipher their meaning. Communicating can be even harder over email and instant messaging because the meaning of a message can be easily misinterpreted. These misunderstandings decrease if the Westerner knows a little Chinese or begins learning Chinese.

We found another communication challenge between the information and product developers. In some companies the product developers speak very little, if any, English; therefore, they are only able to communicate with individuals who can speak Chinese. In these cases the companies even have to translate their product specifications into Chinese. Other companies, however, have hired developers who are fluent in English and do not have any problems communicating with their information developers or with their counterparts in North America or Europe.

TRAINING

Companies reported that they used a variety of training methods and tools to support their offshore information developers. However, 30 percent of the Indian information developers surveyed responded that the training they received was only occasionally adequate to support them in producing a qual¬ity product.

The most common strategies for getting offshore information developers up-to-speed involved long-distance communication, providing a variety of support materials including glossaries of American versus British usage, style guides, sample documentation, tools and style templates, and quality guidelines.

To a lesser extent, information developers received training at their location or in the North American organization. Training occurred in North America more commonly in cases where information developers were not co-located with engineers and included instruction on tools, processes, products, infrastructure, information mapping, company philosophy, branding, editorial standards, and quality measures. In one case, several English specialists were hired in India to provide training on grammar and style.

Through our study, we have found that most companies, when starting an information-development department in China, provide one month of intense training. This training typically includes a review of the company's style guide, training in the specific tools, training on information development, and training in English. All companies we spoke with provide the one-month training in China. Some companies stop their training after the one month and put their employees to work, whereas other companies have implemented ongoing training programs to help their new Chinese information developers improve. We found that continuing training is conducted in the following manner:

♦ One company implemented a peer/mentor program in which they paired an employee in China with an employee from North America or Europe. The North American and European counterparts speak with the Chinese employees on a daily basis about the product they are documenting, helping to answer questions about information development and providing guidance about improving their writing. At the beginning, this relationship took nearly 80 percent of the North American's and European's time. However, over time, the mentoring activities decreased to about 20 percent, a level they have continued to maintain. All parties we spoke with felt mentoring was very beneficial; however, it is important that both parties are aware of the cultural differences and are sensitive to these differences when communicating and mentoring.

♦ Another company placed a North American or European manager in China on an expatriate contract. They made this decision so that the department could be set up successfully and there would be someone in the same time zone who could help train their employees on a regular basis. In this way, the Chinese employees did not have to wait for their counterparts to get to work in a different time zone.

♦ Other companies provide continuing training via web conferencing to help improve their employees' skills.

Companies take the approach of train the trainer. The trainer is trained via web-conferencing from North America or Europe. Then, the trainer trains the rest of the team in China. We found that companies also provide training on the company's products, offer English courses to Chinese employees, and offer Chinese courses to North American and European employees located in China.

Time management

In countries like the US, time is viewed as being a limited resource that is for¬ever being used up. In countries like India, time is seen as infinite. Cultures that view time as limited also tend to view time as linear, tangible, and divisi¬ble. In contrast, cultures that view time as infinite also view time as supporting simultaneous occurrences of many things, with interpersonal activities often competing for time with business obligations.

Time-plentiful societies rely heavily on trust to do business. Given these differ¬ences, it is not surprising that some North American companies with Indian team members have found that Indians may grossly underestimate the time it will take them to complete a project. In one case, the estimate was off by as much as 50 percent. One contact reported that deadlines were interpreted by her Indian information developers as "suggestions" and not taken as firm dates to be met. In societies that view time as limited, keeping track of time is very important and punctuality plays a key role in business transactions. Time is money. Because time-conscious societies allow little time to develop trust, they put rules and regulations in place first and worry about building trust later. In societies where time is seen as plentiful, individuals are less likely to keep close track of appointments and schedules; keeping someone waiting is not seen as a problem.

We have found the Chinese take their deadlines very seriously and will do everything in their power to meet deadlines. Managers stated that the employees will stay all night to meet a deadline. However, we found occasions where the deadlines have not been met. The employees will over-extend themselves by agreeing to meet deadlines for too many people. They take pride in pleasing and accommodating others; however, when people ask for help on a project, they are unaware of the workload of the employee. Typically, the Chinese also will not volunteer to their manager that they have been assigned too much work.

It is also important within projects to account for holidays. A holiday in China can also decrease turn-around time. There are many one-week long holidays throughout the year.

Power and hierarchy

The extent to which people accept differences in power or a hierarchical struc¬ture (such as, the boss is always right versus the boss is only right when he gets it right) also causes cultural clashes.

In some cultures, such as India, bypassing or arguing with a superior breaks the rules. In cultures, such as the US, less emphasis is placed on one's placement in the hierarchy; superiors and subordinates often interact at many levels as equals. In these cultures, disagreement and discussion may be more open between different levels of employees. North American companies working with Indian colleagues often report that their Indian information developers are reluctant to let them know about problems or do not ask questions when they don't understand something.

Indians have a high need to structure relationships, both personal and profes¬sional. They rely heavily on the hierarchical structure of the situation and the set of responsibilities and expectations they attach to that structure. For exam¬ple, a boss is expected to mentor his or her subordinates, and, during group dis¬cussions, only the senior Indian participant should speak. The silence of the others represents respect for the senior team member, not necessar¬ily agree¬ment.

Power and hierarchy play a significant role in the Chinese culture. It is not acceptable to question authority in front of a group. It is also not acceptable to question authority once a decision has been made. Typically, there is a clear distinction between the levels and the roles each person plays at his or her own level. In North American and European organizations, less emphasis is put on one's placement within the hierarchy. Often, superiors and subordi¬nates interact as equals. In Western cultures, disagreement and discussion may be more open among levels of employees.

Individualism versus collectivism

In general, North Americans and Europeans are much more individualistic than Indians. In individualistic societies, one's own uniqueness and self-determination are val¬ued. North American and Europeans promote self-initiative, independent thought, and an independent work ethic.

Collectivistic societies, such as India, expect to be acknowledged as a group first and not singled out for praise or reprimand. An interesting twist is that while individualistic societies often expect everyone to think as they do, col¬lectivistic cultures more readily acknowledge that people have different values and ways of thinking.

The Chinese culture instills the value that group membership is more important than the individual. The Chinese are taught not to question authority or their place within the social order. They are also taught that their actions reflect more on the group than themselves. Therefore, the Chinese often submit willingly and will typically not question authority. The Chinese do try to come to a consensus regarding issues; however, once the leader makes a decision, the decision is final. No one will question the decision, and everyone will act to support the decision.

We have also heard from several managers that the Chinese have a very strong drive and work ethic. Due to this drive and work ethic, they continue to grow and improve quickly.

Gender orientation

A female North American manager told of the unwillingness of a male writer in India to talk directly to her. Instead, he would go over her to a male manager he felt more comfortable with. When the male manager left and was replaced by a female, the Indian writer refused to communicate with either manager and now speaks only to his male North American mentor.

In China, women are beginning to be treated as equals within the workplace. Although the workplace environment is changing, it is now common to see women. Fewer problems exist in the workplace between men and women; however, it is still important to be careful how you address each.

Future and past orientations

Past-oriented societies, such as India, focus on traditional ways of doing things. In keeping with tradition, they may be more conservative in their management. Future-oriented societies such as North America believe that the future can be shaped by individual actions. Future-oriented societies tend to view management as a matter of planning, doing, and controlling.

China is a very complex culture that is continually changing and developing. They are trying to determine how their past fits into their future, which causes many contradictions when doing business in China.

In China, Confucianism is very important and governs how Chinese interact with one another, emphasizing duty, loyalty, filial piety, sincerity, and respect for age and seniority.

However, China also wants to be a large player in the world market and is beginning to focus business decisions on monetary gain. These two beliefs often contradict each other.

Upper management support

Several North American managers complain of a lack of support from upper management, especially when problems arise. One manager in a North American information-development organization said that she had continually raised red flags to upper management regarding problems with using offshore information developers, but her concerns were ignored. Another contact discussed a similar experience with upper management's unwillingness to address significant problems with quality and editing related to the use of offshore information developers.

The perceived lack of importance given to information development by senior management on both shores also causes problems. In more than one case, Indian information developers reported that information development was not given the same level of importance that product development was given, which caused problems for them. One contact in India stated that his team had to "literally beg" for proper hardware and software to do their jobs. He also complained that they had to share a printer with the training group and were often "bumped" from its use "for documents of importance."

Several managers commented that upper management does not consider information development to be important in the Chinese culture. They think decisions to offshore are based solely on salary rather than on all costs associated with the effort of setting up a new department, such as employee satisfaction, editing, training, communication, travel, and so on. Because information development's importance is hard to quantify, managers believe it is given less emphasis than it deserves and is sent offshore without understanding the true ramifications of the decision. The result is damage to the quality and integrity of a customer-facing, post-sales service.

Writing and editing

The majority of managers interviewed argue that using non-native-English speakers significantly increased the amount of editing required to produce a sound product for North American audiences and translation from English into additional languages. In addition, turnaround time was affected by the need for additional editing and rewriting. In one case, the editing was so extensive that the company decided it was too costly to edit the documentation. In this case, the costs were pushed from documentation to the help desk and resulted in a decrease in customer satisfaction.

We recommend that managers planning to work with offshore information developers factor in additional costs and extend deadlines to accommodate the changes that will be required. Even if information is technically sound, it does not necessarily mean that it is appropriate, usable, or readable.

One manager estimates that the cost of editing and rewriting information developed offshore was approximately 50 percent of the total documentation-development cost. Another North American manager estimates that their edit¬ing costs have increased 20-25 percent since opening their Indian office. While she feels that the increase is partly due to the increase in the number of prod¬ucts they are documenting, she feels it is largely the result of editing and revis¬ing the documents produced by their Indian information developers.

Challenges associated with writing and editing include

- the use of non-native-English information developers

- differences in writing experience

- increased turnaround time

- lack of proper tools

During the study, we have found that if companies are going to write information that is very culturally flat and ambivalent, there will be few if any problems authoring information in China. However, any information that is affected by the culture of the reader will be difficult to author in China.

In addition to the cultural contexts that information contains, we found general issues with the authoring styles in China. Below are the typical characteristics of Chinese writing:

- Writing is likely to be verbose rather than minimal.

- The Chinese typically have difficulty with English verb tenses, subject verb agreement, and the proper use of prepositions, requiring extensive copyedits.

- User analysis is a new concept in China, as well. Therefore, information based on the user's needs is not always included within the document.

The amount of editing varies depending upon the type of work, level of experience, and quality of training the employees in China have received. The companies who had their Chinese departments author new information had so much editing that they could not handle the workload. In the end, they felt they would have been better off hiring one Western employee than the six employees they hired in China. Other companies that have sent information to be updated did not experience the same level of editing; however, they still have done considerable editing for the small projects at the beginning.

Several managers have stated that their employees in China listen to feedback and improve rapidly. However, it typically will take two to three years before the Chinese information developers are considered productive to the company.

Other companies have stated that if you send enough information to China, the amount of editing time eventually is less than the time it would take for the North American and European companies to author and edit the information in their home country. However, for offshoring to be beneficial, a large volume of information has to be sent to China for authoring. If a large volume is not sent to China, the additional cost of editing will exceed the costs to author and edit in North America or Europe.

Companies have taken two different approaches to editing. Some companies send the information back to their home country for editing, while one company sent it to their information developers in India to edit. They made this decision because their Indian team is skilled in information development and is located in the same time zone so that they can interact more easily.

Non-native English information developers

According to those surveyed and interviewed, non-native English information developers produce the vast majority of offshore technical documentation. In India, where most information development work is being done, information developers are native speakers of Tamil, Hindi, Telugu, and Konkani. English is for most a second language that is used to bridge differences between the many distinct languages across India and as a "link" with the rest of the world in academic and business settings.

In keeping with cultural patterns, the average Indian's writing style tends to be wordier than the average North American's style. Several managers reported that the writing produced by information developers with English as a second lan¬guage requires considerable editing to be suitable for a North American audi¬ence. In one case, the US-based mentor found he had to rewrite almost all of the documentation he received from his offshore information developers, requiring an almost complete duplication of effort. In this case, the offshore information developer not only wrote English as a second language but had lit¬tle technical background and had trouble understanding the technical content.

North American managers concerned with the English quality of their docu¬mentation face the challenge of determining whether hidden costs associated with using non-native English information developers (such as increased edit¬ing, increased turnaround, usability, and additional training) will significantly reduce their cost savings. For others whose emphasis lies in producing a tech¬nically accurate product and in decreasing their time to market rather than with the usability of the information and the quality of the language, these chal¬lenges may be of less concern.

Writing and technical experience

Another problem recognized by several managers was associated with using offshore information developers who lack training in technical communica¬tion. In some cases, companies found that training helped alleviate some of the basic problems.

Some companies found that Indian information developers who had received training through technical programs had theory but not hands-on technical experience. For example, the information developers did not know how to nav¬igate the software they were asked to use in their work. In most cases, how¬ever, managers found that the information developers were able to pick up these skills quickly.

In other cases, information developers were not able to analyze the technical source materials. One manager decided it would be too costly to train the Indian information developers on all parts of the information-development life cycle and instead asked them to do only a por¬tion of the work required to bring an information product to market.

Translation costs

Translation from English to other languages works best when the original English text is written in standard language. Managers report that handing non-standard English to translation agencies results in significant cost increases or even in unsuccessful translation efforts. Many people for whom English is a second language make basic mistakes when writing in English. Information developers trained in British English rather than American English often have difficulty producing standard Ameri¬can English documents.

Turnaround time

Some managers noted that turnaround time for offshore information develop¬ers was about the same as turnaround time for their counterparts in North America or Europe, especially if they decided not to edit the offshore information products. The more common experience was that offshore information developers required a longer development cycle because of time-zone differences, additional coordi¬nation time, communication difficulties, work quality, and additional editing time. Many Indian outsource agencies claim that the time-zone differences actually increase productivity because of a round-the-clock approach. In the experience of the participants in this study, the 9- to 12-hour time difference resulted in delayed projects when questions could not be answered immedi¬ately.

Tools

Several managers reported that access to tools in use at the home office were not always available at the offshore location. One participant described prob¬lems working with offshore information developers who only knew MS Word, although the company used Quicksilver and Interleaf. The incompatibility in tools required that files be converted on both ends, costing additional time and money.

In one company where a significant amount of infrastructure ramp up was needed, the Indian organization agreed to absorb the costs. The North American company, how¬ever, expected eventually to pay for training time with higher salaries.

Culture

Proprietary information is a great concern for companies doing business in China. The Chinese government has implemented stronger proprietary information laws in 2005, but these laws alone will not safeguard your information because they are not regularly enforced. Contacts have informed us that if you choose to develop in China, know that you will be giving your information away. The Chinese believe that stronger economies and large corporations owe them their product designs and information. To change this point of view, the culture in China will have to change. Such a shift will occur only when China recognizes that they have a proprietary interest in the products they are developing and want to protect those interests. Individuals in our study have also stated that the Chinese do not necessarily understand what it means to protect proprietary information. They enjoy talking with others and may share proprietary information inadvertently.

Due to these obstacles, companies find it difficult to protect their intellectual property; however, there are measures a company can take to decrease the chances of losing intellectual property. Some measures we have found include the following:

- Employees sign a confidentiality agreement.

- Employees sign a non-compete agreement. We have found some examples of non-compete agreements lasting up to 3 years.

- Companies provide training for their employees on how they can help protect proprietary information.

- Companies register their trademarks and patents with local authorities.

- Companies send only pieces of a product to China for production and development. In these cases, the pieces sent to China never reveal the whole product and do not include the most innovative products.

- Companies do not produce or sell their most innovative products in China.

- Companies limit network access for employees in China to prevent them from accessing the specifications for all of the company's products. They also implement firewalls and prevent large file transfers to limit the actions of the Chinese employees.

- Companies limit network access for employees for their most innovative products so that information is not accidentally given to the wrong person.

- Companies have hired employees from China who have lived and worked in other countries with the hope they will have a greater respect for intellectual property.

Some Chinese companies have built campuses around their companies. Their employees are paid in campus credits. They buy from company stores and use company-sponsored services. The activities on the campuses are monitored to ensure that no information is sent out or brought into the company. They also are known to take strong measures to ensure that nothing is taken out of the company by outside visitors.

LANGUAGE

Because of China's political history, the levels of understanding of the English language will vary drastically. The older generation can speak some English, the middle generation generally cannot speak English, and the younger generation typically can speak English very well. There is also a difference between spoken and written English. Most people speak better English than they write. Some attribute this difference to the fact that Chinese is easier to speak than to write.

Chinese English may sound awkward because of differences between the Chinese and English languages. When Chinese communicate in English, both orally and in writing, they use the correct words but make errors in grammar. For example, they typically do not understand how to ensure that verbs agree with subjects, that verbs are in the correct tense, or that the correct articles (a, an, the) are used correctly. Several of our contacts from Western countries stated that as they learn Chinese, they can appreciate the nuances between the languages and can communicate more effectively with their Chinese counterparts.

Chinese speakers may also have difficulty with the subtleties of English. Consequently, English speakers must be as explicit in their instructions as possible. It will be quite easy for a Chinese counterpart to misinterpret something you have said because of cultural differences. For example, in the West, if you tell someone that what they want to do is probably not a good idea, they understand they should not follow through with their idea. In China, if you state that something is "probably not a good idea," they might understand you to say that the idea is not good but they can continue doing what they suggested.

Since the Chinese do not necessarily understand all of the nuances of the English language, some of the things they say may seem very rude. They may be unaware that they have offended someone with their words.

The Chinese typically treat the English language with great delicacy and are very concerned with using the proper words and phrases. At times, we found that some people believe their productivity might be affected, depending upon the circumstances, because they are not confident with their English and do not want to make mistakes.

Conclusions

Based on the findings obtained through our literature searches, surveys, and phone interviews, as well as comparisons with benchmarking done for outsourcing to India over a three year period, we present these conclusions:

♦ Organizations offshore for a variety of reasons, not only to cut costs.

♦ Successful organizations have carefully planned their implementations.

♦ Many offshore implementations are co-located with product development.

♦ Addressing cultural differences is important to success.

♦ Organizations use on-site managers with cultural experience in both the West and in China and India.

♦ Hiring is difficult because of weak applicant English and writing skills.

♦ Organizations provide training after hiring in writing, cultural, and technical skills.

♦ Successful implementations have more than six information developers at startup.

♦ Startup costs are high.

♦ Ongoing costs, other than salary, are higher than domestic costs.

♦ Savings are not as high as expected, based on salary differences.

Offshoring to China is in its infancy and some of these conclusions are based on results from only a few organizations. In India offshoring is more mature. Many more organizations have experience in India. We hope to continue to review the benchmark data to watch for trends.

Best Practice—Process maturity

A strong argument can be made for a direct link between an information-devel¬opment organization's process maturity level and the degree to which offshore information development is successful. The more mature an organization's process is at the beginning, the more likely that maturity will be extended to the offshore organization and increase the chances of success.

We know that the process maturity of information development is influenced by the process maturity level of software development and hardware engineer¬ing. In most cases, we find that information-development is rarely more than one level ahead of software and hardware development.

In a recent article[1], Carol Dekkers noted that many offshore product develop¬ment organizations, especially in India, Singapore, and other Asian countries, are likely to exhibit higher process-maturity levels than their North American counterparts. We have learned in this study that information-development organizations in these countries are similarly more likely to follow a set process and value effi¬ciency in their operations over individual creativity. If they are matched by mature North American organizations, the relationship is more likely to succeed.

However, an immature information-development organization in North America is unlikely to be successful in guiding the learning and organizational structure of a remote team. The remote team, needing more structure in its processes than its sponsoring organization is able to provide, becomes increasingly frustrated, identifying the problem as a lack of communication and understanding of the needs of the offshore organization.

As a result, we recommend that offshore information development be done when it can be guided by an experienced and mature North American organiza¬tion.

Best Practice—Start with a strong commitment from management

The startup costs of offshoring are considerable. You should expect increased costs for travel, management, hiring and training, equipment, software, and office space and furnishings. In addition, the offshoring project will be a distraction to your management and senior information developers at home. All this commitment comes before you will see any labor savings! Before starting an offshoring project, you must have an adequate budget to carry the project over three or more years until payback is reached.

With management pushing for offshoring but not giving adequate long-term support, offshoring implementations will fail.

ORGANIZATIONS OFFSHORE FOR A VARIETY OF REASONS, NOT ONLY TO CUT COSTS

The prevailing view among information developers is that offshoring is a way for their organizations to save costs and be more profitable at the expense of quality and their loyal employees. We have found that although cost reductions may be the primary motivator, the reasons for offshoring are more complicated.

The pressure to offshore information development to India or China usually comes from management above the publications department manager level. However, our benchmark primarily focuses on department managers and information developers. Unfortunately, we have not been able to talk to CEOs or other top managers to discuss their business goals. We offer several reasons why organizations want to offshore expressed or implied by the information developers we interviewed or from the literature.

♦ Companies want to sell their products in India and China. The Chinese government requires that companies that want to sell their products in China must employ a percentage of Chinese labor.

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[1] Carol A. Dekkers, "Cultural Obstacles to Measurement and Process Maturity," *Essentials*, Issue #64, April 2, 2002. Essentials is the e-newsletter of the Software Productivity Center, Inc.

♦ Companies want to cut costs. Management believes that using Indian or Chinese information developers at very low wages will make writing in these countries more cost effective.

♦ Companies want to decrease headcount.

♦ Companies want to co-locate information development with product development. Hardware and software development for some projects have already been offshored to India and China.

♦ Competitors are offshoring. Companies feel they must also offshore to remain competitive.

♦ Companies want to have a global presence. They want to have product development and information development in all of the primary countries in which they market their products and services.

♦ Companies may acquire, merge, or engage in a joint venture offshore.

♦ Companies have difficulty finding the talent they need at a price they can afford in North America or Europe.

COMPANIES WANT TO SELL THEIR PRODUCTS IN INDIA AND CHINA

The Chinese government exacts a price for allowing foreign companies to sell products in China: they must hire Chinese workers. Many large North American and European corporations have moved some of their operations to China for just this reason. Manufacturing and product development have more commonly been moved offshore because language and culture are not significant impediments as they are in information development.

Because labor costs are so low in China, it is possible for American companies to create throw-away jobs to meet their quotas in China. We have seen some situations in which there is little commitment by American organizations to manage Chinese information developers effectively.

COMPANIES WANT TO CUT COSTS

In some organizations, upper management has the view that information development is a commodity. They think that all information development is the same, just an unfortunate cost of doing business. They tend to view the current cost of information as a product of the number of information developers on the payroll times the average salary. Therefore, the low salaries paid to Indian or Chinese information developers are very appealing.

Information-development costs are much more complicated than this simple-minded argument. Costs vary considerably from company to company even if salaries are the same. Costs depend on the priority given to information, as well as the costs associated with quality assurance, production, localization, distribution, information development tools, infrastructure, communication, in addition to labor costs.

Studies of offshoring projects in India reveal that savings can be obtained while maintaining a reasonable level of quality. The savings are not as much as the labor cost difference would imply, however. Careful studies have shown that savings of 15 to 20 percent can be achieved. In today's competitive markets, such savings are substantial. Data is still not sufficient to measure the potential savings with offshoring to China.

COMPANIES WANT TO DECREASE HEADCOUNT

To satisfy investors, companies are under pressure to decrease their headcount. This can be accomplished by downsizing and increasing their efficiency or by outsourcing domestically or offshore.

COMPANIES WANT TO CO-LOCATE INFORMATION DEVELOPMENT WITH PRODUCT DEVELOPMENT

For a variety of reasons, companies have moved their development of some products offshore. Some have found that developers in India and China are often poor English speakers. Some information development groups have found it very difficult to work with Chinese or Indian developers because of language incompatibilities. By co-locating the information development for these projects with the developers, the language problems are mitigated because the information developers can speak Hindi or Mandarin with the developers and do their information-development in English.

COMPETITORS ARE OFFSHORING

Some companies have not thought out the business case and potential return on investment from offshoring to India or China but are moving product and information development offshore for fear that their competitors will have a step up on them if they don't. In some cases, upper management believes that having an offshore presence will look good to the stockholders.

COMPANIES WANT TO HAVE A GLOBAL PRESENCE

Many of the largest corporations are truly global and have development, manufacturing, information development, and marketing and sales throughout the world, including India and China.

COMPANIES MAY ACQUIRE, MERGE, OR ENGAGE IN A JOINT VENTURE WITH AN OFFSHORE CORPORATION

In the case of mergers, acquisitions, and joint ventures, companies may inherit offshore information-development groups. The positive aspect of this is that the infrastructure and staffing of the group is already there. The negative aspect is that the group did not originally intend to work for a North American or European organization, and they may not have been hired with English language fluency in mind.

COMPANIES HAVE DIFFICULTY FINDING THE TALENT THEY NEED IN NORTH AMERICA

We have seen hints that talent is available offshore that cannot be obtained at any price in North America. Both China and India are producing a greater percentage as well as a larger number of undergraduate and graduate degrees in the high-tech areas. In the United States there has been a recent drop in college enrollments in engineering, computer science, and science, probably because of the difficulty of obtaining good jobs in these areas.

Best Practice—Understand your management's goals for offshoring

There may be several reasons that your company would like to do offshoring to China or India. You must understand your management's goals to manage your offshoring project to meet those goals.

You must continue to manage your possibly nervous domestic information developers. If you can make a convincing case that the company's goal is not to replace them, you can gain their full cooperation to make your offshoring project a success. If you fail, some additional costs associated with the offshoring project may be increased labor costs at home to ensure that your information developers stay, plus hiring and training costs for new information developers.

If the goal of your management is to lower information costs, you should explore all possible ways to meet that goal. You may be able to cut costs by building efficiencies into your current process rather than offshoring. If your management's goal is to offshore, then you should make it clear that this goal may lead to cost savings, no cost savings, or even increased costs.

SUCCESSFUL ORGANIZATIONS HAVE CAREFULLY PLANNED THEIR IMPLEMENTATIONS

Organizations that have been successful initiating information-development groups in India or China have put in place well-developed plans before proceeding. Those that have not been as careful have had less success. The most successful have been initiated after product development was offshored.

All successful benchmark participants had a well-defined management in place in North America or Europe as well as in India or China prior to the implementation of an offshore writing group.

Best Practice—Create a strong implementation plan

Create an implementation plan based on best practices of organizations that have been successful in their offshoring implementations. Practices of these successful organizations are highlighted in this report. Offshoring to China will be a long-term project. Participants who have rushed into hiring a few Chinese information developers have reported failures. Planning should include startup management, ongoing management, location selection, expected tasks, hiring strategy, training strategy, expected startup and ongoing costs, communication, expected savings, and much more. It is much better to have a plan in place, even if it is subject to major changes, than no plan at all.

If you are offshoring to save on writing costs, the only way you can determine that your implementation is a success is to have a plan in place at the start.

Best Practice—Project selection

While some companies start by moving all of their documentation to an off¬shore subsidiary, contract agency, or joint venture, such blanket offshore information development is most likely to fail. We recommend that the information managers begin with a pilot project. The pilot project may be most successful if it is carefully planned, involving well-understood, existing documentation that requires maintenance and updating.

The more structure that can be provided initially, the more successful new information developers will be, especially when they have little or no training or experience in technical communication and no on-site experienced publica¬tions management. An experienced manager would give a new team such structured work even if the team were in the North America.

We have also learned that non-North American or European individuals selected for information development positions are not experienced developing end-user information or documenting consumer products. Because individuals are almost always educated in technical fields or areas such as journalism or law, they have a complete lack of experience or understanding of user-centered information design. We believe that consumer products are not good candi¬dates for offshore information development.

Best Practice—Bring your domestic information developers into the offshoring project

We have found that offshoring is very often perceived as a threat by North American and European information developers. However, after an implementation, information developers who interface directly with an Indian or Chinese group feel much less threatened. The image of the Indian or Chinese writer changes from an enemy to a friend. The more Western information developers are involved directly with their Chinese and Indian counterparts, the less threatened they are.

We recommend that you involve as many of your domestic information developers as possible with your offshoring implementation and that you manage projects with both groups involved in the same project rather than relegating some simple-minded work to the offshore writers. They will learn faster if they are integrated with domestic information developers in projects, and the domestic information developers will be happier and more helpful to the offshore writers.

MANY OFFSHORE IMPLEMENTATIONS ARE CO-LOCATED WITH OFFSHORE PRODUCT DEVELOPMENT

Many offshore information-development groups in India and China are co-located with product-development teams. Offshore product developers, generally engineers or programmers, often have poor English speaking, reading, and writing skills. If they are co-located with information developers with better English skills, the offshore information developers act as liaisons both to make the product specification from North America or Europe more understandable to the product developers and to understand the product developers so that they can create usable information.

We found one case in which US management was translating product specifications into Mandarin to make them understandable to the Chinese product developers.

Best Practice—Co-location with product development

From the benchmark study, we learned that the most successful projects are those in which the information developers are co-located with product developers. This practice, widely used in North America and Europe, ensures that information developers learn the product by working closely with the developers. If a product-development activity is moved offshore, we recommend that some effort be made to hire technical communicators at the same location.

Nonetheless, co-location will only ensure that the information developed accurately reflects the product development. It will not ensure that the information will support user needs. Managers participating in the study note that their offshore information developers begin with almost no understanding of user information needs. Because they often have technical backgrounds, they are strongly influenced by the points-of-view of product developers, producing information that describes the product but does not meet end-user needs.

As a result, we recommend that information developers be employed in situations where product developers are moved offshore. At the same time, we recommend that they be coached in developing information for end-users rather than simply describing the product. The more technical the end-users and the more likely they will appreciate product descriptions, the more successful the offshore information developers are likely to be in meeting their needs. Information developers with no understanding of consumers or less technical end-users are not likely to produce usable documentation.

Addressing cultural differences is important to success

India has a culture very different from that of North America or Europe. However, India has had a long history of working with the British. Most Indians do not have English as their first language, but English skills are more common than in China. Indians have a much greater understanding of North American and European culture than the Chinese.

We are all aware that the Chinese culture is very different from North American or European cultures. All of the successful implementations we found in our benchmark were carefully planned with Chinese culture in mind. In every case, North Americans and Europeans involved with the implementation were given cultural training. Some of the companies also provided cultural training to their Chinese information developers so they would have a better understanding of North Americans and Europeans. Without this training, both the North Americans and Europeans and the Chinese measure the other's behavior in terms of their own cultures, resulting in occasional embarrassment or misunderstanding.

Despite cultural differences, successful implementers have not had to make changes to their information processes and procedures. The Chinese information developers and managers seem to have adapted quite well.

Best Practice—Provide cultural training

Managers and other key personnel who will work with offshore information developers must be trained in communicating across cultures. Training that is specific to the country of the offshore development activities will greatly assist to prepare managers and staff and ensure the experience is mutually beneficial.

We also recommend that offshore information developers be trained in work¬ing with their North American counterparts. Communication, management, and personal styles are more different than we tend to assume.

ORGANIZATIONS USE ON-SITE MANAGERS WITH CULTURAL EXPERIENCE IN BOTH THE WEST AND IN CHINA OR INDIA

Project management problems are very different offshore than in North America or Europe because of cultural differences. American information developers are very independent and are used to working alone with minimal management. By contrast, the Chinese are very oriented to the group; they don't want to stand out, and they are driven to follow official standards and procedures.

Several benchmark participants have reported that their Chinese information developers are hesitant to bring up problems or to bluntly state what they may be unable to do. Managers have had to be careful because their Chinese staff will say yes to any request, even if it is clear that it cannot be accomplished or accomplished in the time requested.

ON-SITE MANAGEMENT

In the most successful offshoring implementations reported by benchmark participants, companies have sent managers from North America or Europe. They have been able to find senior people in North America or Europe who grew up in China or India and have worked in the West for a number of years. Some Chinese managers in the West have been hesitant to return to China on a permanent basis. Some are being used temporarily because the company expects to hire a Chinese manager from China eventually.

Best Practice—Find on-site management with cultural understanding of both East and West cultures

We recommend that before you start up your offshore site, you put in place an on-site manager who has experience in both local and Western culture. Several benchmark participants have found managers who grew up in China and did information development in North America or Europe. The Silicon Valley has a large population of people with such a background, some of whom are information developers.

A problem expressed by some is that many people of Chinese background prefer to live in the West. Some companies have sent managers to China to work as expatriates with a limited stay. Others have had managers make frequent extended trips to China to help with management. All benchmark participants expected to eventually establish a pure Chinese management.

HIRING IS DIFFICULT BECAUSE OF WEAK APPLICANT ENGLISH AND WRITING SKILLS

China does not have well-developed outsourcing organizations like InfoSource, Tata, and others in India. Most of the organizations we contacted who are doing information development in China have hired Chinese information developers directly or through local agencies. An exception to that is a company that outsources locally and has asked its local outsourcing agency to hire in China.

As a result, companies are required to recruit and screen candidates themselves rather than depending on an outsourcing agency to provide qualified personnel.

RECRUITING

There are fewer recruiting venues in China than in North America, Europe or India. Recruiting has been done by participants online through job web sites and through company web sites. Some recruiting has been done through newspaper advertising. Some recruit through agencies. Several participants contract with agencies for information developers and hire them directly after a trial period as contractors. Chinese law allows contractors to be used indefinitely, so there are no legal limitations to using contractors. However, competition among North American and European companies already makes direct hiring advantageous. India has had more time to develop a recruiting infrastructure. Many contract organizations in India are competing for information-development contracts with North American and European companies. At the same time, India has a more mature technical writing community than China.

Several participants are recruiting directly through universities, as well as working with universities to train information developers with the necessary skills to be employable by North American and European companies.

Companies that have been successful with their offshoring efforts have been very careful in their recruiting because most applicants are not qualified. They have developed effective evaluation techniques.

EVALUATING

Most organizations expect applicants to have acceptable English language skills. They filter out poor English speakers using English language testing. Applicants with good English skills have degrees in either English, engineering, or computer science. University education in China and India is quite uneven, with the large national institutions providing better education than the provincial universities.

Because of the lack of good English information-development skills, lack of product-specific technical skills, and lack of understanding of Western culture, most organizations provide training in writing, technical skills, and cultural training.

RETENTION

Retention has been a serious problem in China and a more serious problem in India. Because qualified English language information developers are rare to nearly nonexistent, information developers are hired at the intern level and given significant training in American English, writing, and product technology. Because of this training and because of the rarity of qualified people in China and India, after a year of work, information developers become valuable and are likely to move to higher paying jobs. Additionally, offshore information developers become frustrated when they are given maintenance, production and other low level tasks. They move to other jobs where they can get more stimulating work.

Offshore information developers are more concerned about money and career development and less about friendships and working environment than North American information developers. As Chinese information developers get more training and experience, we expect pressure for higher wages, similar to the situation in India.

Best Practice—Hire carefully

Before beginning the process of recruiting and hiring, we recommend that sev¬eral best practices be followed:

♦ Identify the skills and background you are looking for and establish an objective means for measuring those skills.

♦ Select a hiring agent or employee who is familiar with the country and understands cultural basics, laws, and regulations surrounding employment, as well as the educational system that will produce the best applicants.

♦ Modify applications, tests, job descriptions, and employee documents to reflect cultural differences.

♦ Check references and ask for sample work.

♦ Qualify contract agencies by asking for references, records of service com¬mitment, as well as information on hiring practices.

Participants reported that they were swamped by applications responding to newspaper or internet advertising, making evaluation difficult. We recommend that you prioritize qualifications. You can then filter out most of the applications. Most of the benchmark participants used English language skills as the primary qualification. Some used an English language test to filter applicants.

Technical skills, writing skills, and knowledge of your technology are next in priority, not necessarily in that order. We recommend that you prioritize these skills and possibly give additional tests.

Some companies have recruited at local universities. However, be aware that the quality of university education is very uneven in China. Matriculation is no assurance of acceptable skills. Some large North American companies are cooperating with Chinese universities to improve the education so that they can produce more qualified entry-level English information developers.

Southern Polytechnic State University in Atlanta is partnering with Northeastern Normal University in Changchun, China for technical communication education. The program involves two years of study in Changchun followed by two years of study in Atlanta. The advantage of this program is that students improve their English and Western cultural skills by spending two years in the United States. The program has just started, and no students have come to the United States yet. We recommend that you contact the university to possibly hire some of the students as summer interns after they start the United States portion of their education. Their visas and university policy require that they return to China after their education.

Best Practice—Use service agreements
A good service agreement clearly defines the scope of the project but incorpo¬rates enough flexibility to accommodate business changes over the course of the agreement. Whenever feasible, a company should create short-term deliv¬erables within a long-term contract to gain better control of the overall process. The agreement should spell out how the product will be evaluated, for exam¬ple, how the end-product will be tested for usability, readability, and accuracy. Finally, any agreement should be written to benefit both the offshore informa¬tion developers and the European or North American organization.

ORGANIZATIONS PROVIDE TRAINING AFTER HIRING IN WRITING, CULTURAL, AND TECHNICAL SKILLS

All of the participating organizations that have successful implementations have undertaken a training program for their Chinese and Indian information developers. Some have also provided training for their North American or European information developers who interface with the information developers in China and India.

ACADEMIC PREPARATION

Universities in India are turning out millions of graduates every year. Those that apply to technical writing jobs have degrees in engineering, computer science, science, business, and humanities. Generally their technical backgrounds and English language skills are adequate, but they are lacking in their technical writing skills and have little understanding of communicating to customers and end-users.

Universities in China are just beginning to implement information-development programs. Some companies that are offshoring are working with Chinese academics to help develop programs and to support the universities. Although a good start has been made, we will have to wait a number of years for graduates of these programs to be available.
In both India and China, the quality academic training at universities varies widely.

TECHNICAL

Some training on product technology is provided for information developers in most of the participating organizations. If the offshore information-development group is co-located with a product-development group, the training is done in China or India. In other cases, training is done through remote communication or through a trainer from the development group sent to China or India.

In the absence of formal product training, information-development projects do not succeed.

INFORMATION DEVELOPMENT

Some organizations have attempted to give training on information development. These attempts have not been successful because they are perceived as remedial by the offshore information developers. Training in company style has been more successful. However, there have been difficulties because of problems with English and weak writing skills among the offshore information developers.

Cultural

Participating organizations have reported that cultural issues are very important and can result in management problems offshore as well as domestically. A few organizations provide cultural training for the offshore information developers as well as their domestic information developers.

Best Practice—Training

We recommend that companies planning to move information development offshore develop an in-depth technical writing training plan for offshore employees. In India and most other countries outside of North America and Western Europe, technical communication is still in its infancy. Therefore, information developers in these countries must learn the basic concepts and techniques of the field, as well as the basic tools of the trade. In most cases, people you hire come into the field with education, not in technical writing, but in engineering, computer science, journalism, or law. Additionally, while many individuals are fluent in English because they learn and use it in school, English is not their native language.

In the best cases, publications managers have sent managers, information developers, and editors from North America to train and work closely with the new team members as they begin work. Training periods are six weeks to six months. In addition, successful projects have included time and money to bring offshore information developers to North America for training and accultura¬tion into the style of the company and the publications organization.

Successful implementations have more than six information developers at startup

All of the successful implementations were started with a reasonable number of information developers. The attempts with one, two, or even six information developers have failed. Many of the costs of offshoring to India and China are fixed, but the savings depend on how much work can be done by Chinese or Indian information developers compared to North American or European information developers. The tendency has been for companies to inadequately support small implementations. Without a minimum number of people working together, it is difficult to develop a sense of community that is even more important to the Indian and Chinese culture than to Western cultures.

With a very small implementation of six or fewer information developers and considering the startup and increased operating costs, it may be impossible to ever reach the breakeven point at which offshore costs are comparable to domestic costs for the same information development. Companies that make such small implementations either do not have a cost savings goal for offshoring, or they are making a mistake.

Best Practice—Start with a critical mass

The most successful implementations of offshoring to China have been large. The failures are more likely to have been small. We recommend that you put in place at least a dozen information developers and a management team before you try to do any information development.

Many startup costs and some ongoing costs are independent of the size of the group being implemented. These include travel, hiring, training, establishing process and management, and others. Unless your labor savings are large enough to offset these costs, your implementation will not be successful. Participants in the benchmark reported that, with a small number of information developers, they were not able to establish a sense of community, resulting in an attrition, problem as well.

Startup costs are high

Estimates of the costs vary greatly among benchmark participants. Since most writing managers are not involved with financial analysis within their companies, they are not aware of all of the costs of offshoring. However, they can compare some of the costs of offshoring against their internal departmental costs. Unfortunately, many managers do not have good information about their costs prior to offshoring.

Startup costs to offshore in India or China are considerable. Extra costs during the first year or two include preparation costs before hiring, as well as additional costs after startup. Some of these costs include

- travel to India or China to recruit, train, and do initial project management

- labor costs for North American or European staff involved in the project

- cultural training of North American or European staff

- tool costs, including communication, hardware, software, and supplies

- recruiting

Ongoing costs, other than salary, are higher than domestic costs

Benchmark participants have found many ongoing costs:

- travel of North American or European staff to India and China

- possible travel of offshore managers to North America or Europe

- labor for European and North American managers and staff

- increased editing

- training in cultural areas, tools, corporate style, and product technology

Best Practice—Track startup and ongoing costs

The bottom line for most companies considering moving documentation off¬shore is: Will it save the company money? Remarkably, although most compa¬nies report that the offshore information development initiative was implemented to save money, almost none are tracking their costs, and those that are often do not track the right costs or the total cost.

In our studies, we found that some managers believed they were saving money; others felt sure they were not. A few participants were not concerned with overall costs of the offshore projects because the cost increases affected other cost centers. A few believed that their overall costs were lower. Unfortunately, most managers had no con¬crete data to back up their beliefs.

Best Practice—Allow time for extensive revisions

All of the participants in the study noted that they initially experienced many rounds of editing and revision with their new offshore projects. In most cases, English is not the native language of the new team members. The English they have learned in school is typically British rather than American English. The new offshore team members are unlikely to have experience in technical com¬munication and may not know anything about the technology they are writing about.

For initial projects, participants recommend allowing for three to four times the average schedule. Even for later projects, continuing problems with language, user-focus, and technology require much editing and revising.

Best Practice—Expect increased translation costs

Future translation requirements must be included in the decisions about the type of information that is suitable for offshore development. Participants in the study noted that technical communications for those whom English is a second language produce non-standard writing that is difficult, time-consuming, and very costly to translate. Translators, for whom English is also a second lan¬guage, are trained to handle standard English. They have difficulty understand¬ing non-standard writing. In fact, if your English copy has significant problems, translation may be impossible. We recommend checking for specific requirements for translation with either your in-house translation department or outside translation vendor prior to beginning any English documentation for future translation.

Savings are not as high as expected based on salary differences

A myth exists that costs for information developers in China are very low, possibly only one sixth of North American labor costs. Participants have told us that for information developers with excellent English skills and adequate technical skills, the cost of labor is closer to 40 to 60 percent of North American labor costs (for entry-level information developers) in Shanghai and Beijing. Other cities have lower salaries but a less qualified labor force. The only information developers available in China, currently, are entry-level. As the Chinese gain experience writing technical information in English with North American and European companies, the labor advantages become less. Participants report greater attrition in China than in North America or Europe as Chinese information developers move on to better paying jobs.

In India, labor costs have increased substantially in the last five years as North American and European companies compete for information developers. If the same thing happens in China, cost savings will not be as great in offshoring to China as they now appear.

Payback period

Benchmark participants have been measuring the success of their implementations based on management issues and on the quality of service they can achieve from their offshoring projects. If offshoring is being implemented to cut costs, it is important to measure the payback period, including the length of time it will take to pay back the startup costs.

None of the participating companies has reached the point in which the offshoring costs were less than domestic costs for information development. Some did not have good data on domestic costs; they were not clear on what the differences were for offshoring.

Based on information from participants, we estimate that the breakeven point, the time in which offshoring ongoing costs are the same as the costs for doing the work in North America or Europe, is more than one year. Because of large startup costs, we estimate that the payback period will be more than three years from implementation.

Best Practice—Measure your current domestic costs before offshoring

Cost savings are not the only reason to offshore. Whatever the reason for offshoring, you must keep metrics of the efforts before and after the offshoring implementation. If the goal is cost savings, we recommend that you measure your current costs for information development. Measure all of the costs for the startup phase of the offshoring project, and measure all ongoing costs, including domestic costs related to the offshoring project.

Just because Indian or Chinese labor costs are less than North American or European labor costs is no guarantee that the project as a whole will be less expensive than doing the information development domestically. Hiring, training, communication, and quality assurance costs are likely to be higher for offshore information-development groups than for information development done domestically. Labor costs in China or India for information development are likely to rise rapidly in the next few years because of competition for offshore information developers by North American and European companies. At the same time, some costs will decrease as the offshore writing community gains experience working in English with North American and European companies.

If your management's goal is to improve quality and efficiency by having the information development for a project co-located with product development in China, you will still want to make sure that costs are comparable to the current situation. The only way you can compare costs for work done offshore with work done domestically is to have data on domestic costs while carefully measuring offshore costs.

Best Practice—Expect a long start-up period

Expect to spend one year planning, researching, and obtaining management for an offshoring implementation. Expect to spend another year recruiting, training, and bringing the on-site management and new information developers up to speed. The next several years will be spent recovering startup costs. Finally, you may begin to see some cost savings.
Remember that many of the startup costs are fixed, while the savings are dependent on cheaper labor. Therefore, larger implementations will reach payback sooner than smaller implementations.

Best Practice—Consider alternative ways to save on costs

There are many ways to cut information-development costs other than offshoring to India or China. Offshoring to China is a risky venture now when few are attempting it and fewer are being successful. As the process of offshoring becomes more mature and a base of educated and experienced information developers is established, the risks will decrease.
We recommend that you consider some less risky alternatives. Telecommunications organizations traditionally have large amounts of maintenance information, generally in the tens of thousands of pages. We know from user studies that technicians who repair telecom equipment generally look at a limited set of information, usually no more than 100 pages. Maintenance engineers who get involved when the technicians can't solve the problem still only read a small fraction. Much of the maintenance information is redundant or has no value for maintenance.

With a small investment of travel and writer time, you can visit users of your information and find out what they really use. Departments that have implemented minimalist techniques have been able to significantly reduce the amount of information in the maintenance manuals. We know of cases in which information has been cut back 20 to 50 percent with no impact on users except to make information easier to find. Localization costs are reduced proportionately.

These savings are comparable to what can be expected with offshoring to China without the associated risks and writer upheaval. Of course, some of the savings may come from cutting back writing staff as the information becomes smaller. But our observations are that information developers see this as a legitimate way to save costs without the cultural tensions of offshoring.

Many organizations are moving to forms of topic-based writing to manage topics, with or without a content management system. While the move to topic-based writing will ultimately lead to lower costs, the time required and the risks involved are comparable to those of offshoring. We recommend a parallel development of topic-based writing whether you choose to send writing offshore or not. Topic-based writing cannot be used to rapidly generate cost savings in the same way as minimalism.

Some high-tech companies are saving labor costs by moving call centers to areas in North America or Europe that are financial depressed. Some areas in the Midwest or Southern US have much lower information-developer salaries than the big cities on the East or West coasts. Information developers there have English as a first language and are culturally the same as your current information developers. It is possible to encourage experienced information developers in today's economy to move to these areas to find employment.

Offshoring to India 2002—2005

We conducted surveys of companies offshoring to India and information developers in India in 2002 and again in 2005. The surveys do not have enough participants to be statistically significant. However, we were able to observe some changes.

♦ The percentage of respondent companies that do some offshoring has increased substantially between 2002 and 2005. In 2002 only 50% of responding companies did some offshoring. In 2005, 90% of respondent companies reported some offshoring.

♦ From 2002 to 2005 there has been an increase of Indian writers who are independent contractors. They are not employees of outsourcing companies. Offshoring companies now can add the choice of independent contractors to their previous choices of outsourcing companies or direct employees for their offshoring models.

♦ The average number of years of experience of Indian information developers has dropped from 5 years in 2002 to 2.5 years in 2005. This may seem counterintuitive. However, we expect to see years of experience decrease in an expanding discipline and increase in a declining discipline.

♦ In 2005, fewer of the Indian writers were co-located with developers than in 2002. This may represent a maturing of Indian technical writers. As they gain experience they become more flexible.

♦ Companies offshoring to India in 2005 are more satisfied with the results of their experience than they were in 2002. Indian information developers in 2005 are more satisfied with the support they get from European and North American companies than they were in 2002.

♦ In 2005, compared with 2002, North American and European companies have increased their level of offshoring to India. These companies are somewhat more satisfied with the results in 2005. Indian writers feel better supported by North American and European companies in 2005 compared to 2002. However, labor rates for Indian writers are higher in 2005 than in 2002.

♦ Based on current trends, we expect that the future the satisfaction of North American companies with Indian information development will continue to improve, labor costs for Indian labor will continue to rise while labor costs for North American information developers will fall until the two will become comparable at a cost intermediate to today's costs.

Appendix A: Data from Online Surveys (India)

Data is provided from two surveys: a survey of managers in North American and European companies and a survey of technical writers in offshore organizations, mainly India.

OFFSHORE TECHNICAL WRITERS WORKING WITH US OR CANADIAN COMPANIES
This survey was completed by technical writers located outside the United States or Canada who work with companies in the US or Canada.

What is your relationship with the US or Canadian company for which you are producing technical documentation?

	Number of Responses	Response Ratio
Employee of US or Canadian-based company	19	68%
Independent	4	14%
Other	3	11%
Contract house	1	4%

To what extent have you provided technical documentation for US or Canadian companies over the last year?

	Number of Responses	Response Ratio
Exclusively	21	78%
Some percentage	5	19%
Occasionally	3	11%
None	1	4%
Other	0	0%

Currently, what percentage of your work in technical documentation is intended for a US or Canadian audience?

	Number of Responses	Response Ratio
More than 50%	23	82%
More than 25%	3	11%
Less than 10%	1	4%
Less than 1%	1	4%
Don't know	0	0%

What types of companies usually employ you to write their technical docu¬mentation? (Please check all that apply.)

	Number of Responses	Response Ratio
Computer	21	78%
Engineering	13	48%
Technical Publications	12	44%
Telecommunications	11	41%
Educational/Training	9	33%
Industrial	5	19%
Other	4	15%
Medical	4	15%
All of the above	4	15%

How are you generally introduced to your clients? (Please check all that apply.)

	Number of Responses	Response Ratio
US manager sent from US	10	38%
Contract houses in my country	7	27%
Foreign national employee residing in my home country	5	19%
My own marketing efforts	5	19%
Other	4	15%
Contract houses in the US or Canada	3	12%
Foreign national employee sent from US	2	8%

How long have you been offering technical documentation services to companies located in the US or Canada?

	Number of Responses	Response Ratio
Two to five years	15	56%
Over five years	7	26%
Under one year	3	11%
Other	2	7%
One to two years	1	4%

What is the nature of the subject matter you handle? (Please check all that apply.)

	Number of Responses	Response Ratio
Highly technical	24	86%
Non-technical end-user	13	46%
Other	2	7%

Are you generally co-located with the company's development team?

	Number of Responses	Response Ratio
Yes	20	71%
No	8	29%

How do you receive information on the equipment or product you are writing about? (Please check all that apply.)

	Number of Responses	Response Ratio
Long distance communication with the US	24	86%
Access to the equipment or product	23	82%
Written text	22	79%
Work directly with developers on-site	22	79%
Other	0	0%

Do you have someone on-site supervising your work?

	Number of Responses	Response Ratio
No	9	32%
In some cases	8	29%
Usually	8	29%
In all cases	3	11%
Other	2	7%

What is your native language?

	Number of Responses	Response Ratio
English	6	19%
Hindi	6	19%
Tamil	5	16%
Kannada	4	13%
Marathi	3	10%
Telugu	2	6%
Malayalam	2	6%

What formal English language training have you received?

	Number of Responses	Response Ratio
None	8	26%
Grade school to high school	8	26%
Bachelors degree in English	7	23%
Masters degree in English	3	10%

What type of English is your final product delivered in?

	Number of Responses	Response Ratio
US standard English for a technical audience	21	75%
All of the above	3	11%
Other	2	7%
British English	1	4%
US colloquial English	1	4%

What level of education do you have? (Please check all that apply.)

	Number of Responses	Response Ratio
The equivalent of a baccalau-reate degree or higher	21	75%
Some university	7	25%
Technical writing certificate program	6	21%
Other	5	18%
High school or less	1	4%

What was your major field of study?

	Number of Responses	Response Ratio
Engineering	11	39%
English language	9	32%
Computer science	6	21%
Sciences	6	21%
Other	5	18%
Technical writing	3	11%
Translation	2	7%
Humanities	2	7%
Journalism	2	7%
Law	0	0%

Please select one of the following choices:

	Number of Responses	Response Ratio
I am sometimes familiar with the subject matter I am asked to write about	18	64%
I am always familiar with the subject matter I am asked to write about	10	36%
I am often NOT familiar with the subject matter I am asked to write about	3	11%

What type of training do you receive on the product prior or during your writing efforts? (Check all that apply.)

	Number of Responses	Response Ratio
Training provided in-country by non-US employees	17	61%
Style guides	16	57%
Software training	13	46%
Training provided in-country by US employees	11	39%
Glossary of technical terms	10	36%
Travel to the US for product training	7	25%
Other	6	21%
Computer training	2	7%
Travel to the US for writing training	0	0%

Is the training you receive adequate to support you in producing a quality product?

		Re-
Usually	10	36%
Always	9	32%
Sometimes	9	32%
Seldom	0	0%
Never	0	0%

Do you feel you are being fairly compensated for your work with US or Canadian companies?

	Number of Responses	Response Ratio
Yes	16	57%
No	12	43%

How are you usually compensated?

	Number of Responses	Response Ratio
It depends on the project and company	11	39%
Based on a 40 hour a week rate, although I may not work on this project for all 40 hours	6	21%
Other	6	21%
A flat rate per project	5	18%
Based on an hourly rate	2	7%
Based on 40 hours of work on this project	2	7%

What are the greatest challenges you face in producing a quality product? (Please check all that apply.)

	Number of Responses	Response Ratio
Short time lines	11	41%
No major challenges	10	37%
Communication issues	8	30%
Inadequate project start-up time	8	30%
Ineffective or lack of management	7	26%
Poor understanding of end-user	7	26%
Time zones	6	22%
Expected to work for too little money	6	22%
Incomplete or inaccurate information from the US or Canadian company	5	19%
Lack of training	5	19%
Language	5	19%
Other	3	11%
Lack of repeatable processes	2	7%
Inadequate knowledge of subject matter	2	7%
Culture clashes	2	7%
Overall lack of support from the US or Canadian company	1	4%
Technical infrastructure issues	1	4%
Availability of satellite or reliable broad-band communication	1	4%
Lack of technical skills	1	4%
High turnover	0	0%

Would you say the US company or Canadian company is usually satisfied with the quality of work you produce?

	Number of Responses	Response Ratio
Yes	27	100%
No	0	0%

How much of your time is spent incorporating edits received from the US or Canadian company?

	Number of Responses	Response Ratio
Less than 10%	13	48%
Less than 1%	8	30%
More than 25%	3	11%
More than 50%	2	7%
Other	2	7%
Don't know	0	0%

How does this percentage compare with the technical documentation you produce for your home country?

	Number of Responses	Response Ratio
It is about the same	13	50%
Don't know	5	19%
It is significantly higher (50% or more)	4	15%
It is higher	2	8%
It is lower	2	8%

In general, would you say that your experience writing technical documentation for US or Canadian-based companies has been positive?

	Number of Responses	Response Ratio
Yes	22	79%
It depends on the company	5	18%
It depends on the project	3	11%
No	1	4%
Other	1	4%

Do you expect to continue working with US or Canadian-based companies? If so, why?

♦   US companies have better infrastructure and processes so far as technical documentation is concerned.

♦   Yes. We are in a business of providing technical writing and courseware development solutions—large and small—for clients around the world, and we are satisfied with our experience of working with US or Canadian-based companies.

♦   Yes. Work culture is far better and they recognize good work.

♦   Yes, because the US companies understand the importance of quality documentation for the success of their products/projects.

♦   It gives me the chance to learn new technologies.

♦   Yes, I would like to continue working with US companies. I am satisfied with the work.

♦   Yes, because this constitutes the major part of IT industry technical writing jobs in India.

♦   Yes, because of the work culture, compensation packages, and freedom on various issues.

♦   Instead of through a contractor company in India, I would like to work directly with the US or Canadian company. This will enhance the benefits to both the parties. Ideally, I would like to work with established documentation companies operating in the US, Canada, and elsewhere. We are comfortable working with compensation that ranges from 1000-1500 rupees for an A4 page which is just about $20-30 US and is highly economical to the client companies.

♦   No, I prefer working with European companies.

♦   US and Canadian companies have an open culture, well-defined processes, approachable management, and so on. In addition, they offer competitive salaries.

♦   Yes, and I presume the organization I work for will continue to expand its client base to the US.

♦   Yes, because I like their management style, people are of an understanding nature, and the pay is good.

♦   I enjoy the scope and genre of work—there is also an excellent work culture.

♦ Both US and Canadian companies are time and quality-conscious, which I like. At the same time, they give you the time to learn new products/technologies before you start writing.

♦ I enjoy working with US and Canadian companies because they generally appreciate the value of a technical writer.

♦ Yes! They pay very well, and I can access the latest tools and technologies.

♦ Yes. The proof is in the pudding, and US and Canadian companies have the most pudding.

OFFSHORE TECHNICAL DOCUMENTATION DEVELOPMENT

This survey was completed by managers in US and Canadian companies asso¬ciated with The Center for Information-Development Management.

To what extent has your department used offshore technical communicators (employees or contractors) for technical documentation over the last five years? (We define offshore as out-side the US/Canada.)

	Number of Responses	Response Ratio
Some percentage for our documentation is done offshore	9	90%
Other	1	10%
We occasionally write our documentation offshore	0	0%
We never write our documentation offshore	0	0%
All our documentation is done offshore	0	0%

At present, is your department using offshore technical writers for your documentation, either directly or outsourced?

	Number of Responses	Response Ratio
Yes	10	100%
No	0	0%

If you answered "yes" to question three, in what countries do your writers reside? (Please check all that apply.)

	Number of Responses	Response Ratio
India	9	90%
Other	4	40%
China	0	0%

Why did your department originally pursue offshore options? (Please check all that apply.)

	Number of Responses	Response Ratio
Development team moved offshore	7	70%
Corporate mandate to decrease technical documentation costs	5	50%
Other	3	30%
Acquisition, merger, or joint venture in an offshore corporation	2	20%

What is the nature of the subject matter handled by your offshore writers? (Please check all that apply.)

	Number of Responses	Response Ratio
Highly technical end-user	6	60%
Highly technical (installation, programming, system integration)	5	50%
Other	1	10%
Non-technical end-user (consumer-oriented, requires some colloquial American English)	0	0%

Are your product development teams co-located with your technical writing teams?

	Number of Responses	Response Ratio
Yes	7	70%
No	3	30%

How do your offshore writers receive information on the equipment/product they are writing about? (Please check all that apply.)

	Number of Responses	Response Ratio
Work directly with developers onsite	9	90%
Written text	7	70%
Access to the equipment/product	6	60%
Long distance communication with the US (phone, email, video conferencing)	6	60%
Other	2	20%

How do you find your offshore writers? (Check all that apply.)

	Number of Responses	Response Ratio
Through direct hiring by a foreign national employee residing in the foreign country	6	60%
Other	4	40%
Through contract houses in the foreign country	2	20%
Through contract houses in the US or Canada	1	10%
I don't know	1	10%
Through direct hiring by a foreign national employee sent from the US	0	0%
Through direct hiring by a non-foreign national employee sent from the US	0	0%

Are your offshore writers employees of your company?

	Number of Responses	Response Ratio
Yes	8	80%
No	2	20%

Does your company have a technical communication manager on-site at the location of your offshore writers?

	Number of Responses	Response Ratio
Yes	6	60%
No	4	40%

What is the native language of your offshore writers? (List all languages that apply.)

♦ English

♦ Hindi

♦ Various dialects

If your offshore writers work in English, do they have the following?

	Number of Responses	Response Ratio
British English as a first language	4	40%
English as a second language	3	30%
Other	3	30%
US English as a first language	0	0%

What type of education do your offshore technical writers commonly have?

	Number of Responses	Response Ratio
The equivalent of a baccalaureate university degree or higher	9	90%
Technical writing certificate program	3	30%
I don't know	1	10%
Other	1	10%
Some university	1	10%
High school or less	0	0%

What are the major fields in which your writers are educated?

	Number of Responses	Response Ratio
English language	7	70%
Engineering	7	70%
Computer science	7	70%
Journalism	4	40%
Humanities (in general)	2	20%
Sciences	1	10%
Translation	0	0%
Law	0	0%
Other	0	0%

What level of technical knowledge (subject matter) do your offshore technical writers usually have at hiring?

	Number of Responses	Response Ratio
Average	7	70%
Minimal	4	40%
Above average	0	0%

What degree of tool skills (for example, software, computer, email, modem, and so on) do your offshore writers have at hiring?

	Number of Responses	Response Ratio
Average (based on US standards)	9	90%
Minimal	2	20%
Above average (based on US standards)	1	10%

What type of training or tools do your offshore technical writers receive to assist them in their writing effort? (Please check all that apply.)

	Number of Responses	Response Ratio
Style guides	9	90%
Other	8	80%
Glossary of technical terms	7	70%
Training provided at their location by US employees	5	50%
Travel to the US for product training	3	30%
Travel to the US for writing training	3	30%

Overall, what is the quality of the information product you receive from your offshore technical writers? (Please provide details)

♦ Excellent—We have only hired very experienced tech writers.

♦ Good on projects written solely in India.

♦ Excellent on projects written jointly with US staff.

♦ Poor—one writer produced poor results.

♦ It varies.

♦ Poor—what we get reads more like engineering specs. Poor technical writing.

♦ Good, but needs a lot of editing.

♦ They are poor in ownership of editing/quality and researching.

♦ Good—they use our content modules, so minimal impact.

♦ Excellent—a few people have stood out overall.

♦ Good, although there is editorial support needed for standard English.

♦ Good and getting better with strong mentoring.

♦ Good because they are only providing simple information, but it's quality.

What was the outcome of your offshore writing projects in the last year in terms of turn-around time?

	Number of Responses	Response Ratio
About the same	8	80%
Significantly more time	2	20%
Much less time	0	0%

What was the outcome of your offshore writing projects in the last year in terms of cost?

	Number of Responses	Response Ratio
Significantly less expensive	8	80%
About the same	2	20%
More expensive	0	0%

Of the total cost, what percentage was due to editing and revising edited content?

	Number of Responses	Response Ratio
More than 25%	5	50%
Less than 10%	3	30%
I don't know	2	20%
More than 50%	0	0%
Less than 1%	0	0%

How does this percentage compare with the technical documentation your department has had done in the US or Canada?

	Number of Responses	Response Ratio
It is higher	4	40%
It is about the same	3	30%
I don't know	2	20%
It is significantly higher (50% or more)	1	10%
It is lower	0	0%

What challenge(s) has your department encountered using offshore writers? (Please check all that apply.)

	Number of Responses	Response Ratio
Time zones	10	100%
Managing offshore writers	9	90%
Communication issues	8	80%
Finding experienced technical writers	7	70%
Cultural issues	6	60%
Editing issues	6	60%
High turnover	4	40%
Quality issues	4	40%
Other	3	30%
Writers' lack of understanding of the end-user	3	30%
Consistency in end product	2	20%
Increased turnaround time	2	20%
Technical infrastructure issues (telephone, power, and so on)	2	20%
Availability of satellite or reliable broadband communication	1	10%
No major challenges	0	0%
Security issues	0	0%

In general, what is the attitude of your US or Canadian-based employees regarding the use of offshore technical writers?

	Number of Responses	Response Ratio
Agree that offshore development of technical documentation can be a good idea depending on the type and scope of project	6	60%
Disagree that offshore development of technical documentation is a good idea	4	40%
Other	3	30%
I don't know	0	0%
Agree that offshore development of technical documentation is a good idea	0	0%

Does the department expect to continue using offshore outsourcing to meet your technical documentation needs and, if so, why?

♦ Our goal is to build up many technical development centers. The next one may be in China.

♦ Yes, as long as the cost differential remains so great, I anticipate that we will continue to "augment" our staff with offshore personnel, either hired as employees or contractors. However, we are still adding staff in the US, as well.

♦ Yes, because of cost.

♦ Yes, due to wide-scale engineering/product relocation and the need to reduce cost.

♦ Yes, because of a company mandate.

♦ The company is actually thinking of increasing the number of writers offshore in the coming year. US jobs will be cut.

♦ It is expected across the company to reduce the costs for end-of-life products.

♦ Yes, most engineering will be done offshore, and writing will match. The products can't bear onshore development costs anymore.

♦ Yes. There is a high demand to reduce costs and locate the writers with the engineers.

Appendix B: Data from the Online Survey (China)

What percentage of your department's overall information development is done in mainland China?

	Number of Responses	Response Ratio
Less than 10%	4	40%
10%-20%	2	20%
More than 80%	2	20%
None	2	20%
20% - 40%	0	0%
40% - 60%	0	0%
60%-80%	0	0%

How many individuals are in your Chinese information development department? (This includes information developers, editors, managers, and illustrators)

	Number of Responses	Response Ratio
Less than 5	6	67%
5-10	1	11%
10-15	1	11%
20 and higher	1	11%
15-20	0	0%

What towns/cities are your Chinese technical information departments located in?

	Number of Responses	Response Ratio
Shanghai	5	42%
Beijing	3	23%
Xian	1	7%
Tianjin	1	7%
Jiamusi	1	7%
None-former company	1	7%
Nanjing	1	7%

Why did your department originally pursue offshoring to China? (Please check all that apply.)

	Number of Responses	Response Ratio
Development team moved offshore	5	56%
Cost savings	4	44%
Acquisition, merger, or joint venture in an offshore corporation	2	22%
Corporate mandate	2	22%
Shifted work from vendor to in-house office	1	11%

What is the nature of the information handled by your Chinese offshore information developers? (Please check all that apply.)

	Number of Responses	Response Ratio
Moderately technical information for consumers	5	56%
Technical information for new end-user customers	5	56%
Technical information for experienced end-user customers	5	56%
Highly technical information for experienced end-user customers	4	44%
Highly technical for programmer audience	1	11%
Our information developers are not Chinese, however, we do all of the above development in China	1	11%

What is the primary technical information responsibility of your Chinese information developers?

	Number of Responses	Response Ratio
Creating new information for new products developed in China	4	44%
Maintaining legacy information for products developed in another country	2	22%
Editing information created in another country	1	11%
New docs for products designed in North American and developed in Europe	1	11%
Our information developers are not Chinese	1	11%
Creating new information for new products developed in another country	0	0%
Maintaining legacy information developed in China	0	0%

When hiring in China, how do you find information developers? (Please check all that apply.)

	Number of Responses	Response Ratio
Through recruiters in China	6	67%
Recruit graduates directly from a university	6	67%
Online job posting	5	56%
Hire from other countries	4	44%
Newspapers	3	33%
Hiring manager recruits CSG staff	1	11%
Through recruiters in North America or Europe	0	0%

What criteria do you use when hiring Chinese information developers? (Please check all that apply.)

	Number of Responses	Response Ratio
Fluency in writing English/ speaking English	7	78%
Background in technical subject matter	7	78%
Basic writing skills	5	56%
Previous experience in technical information	4	44%
Ability to translate from English to Chinese	2	22%

Please provide any other information on hiring and training information developers in China that would be helpful to this study.

♦ This is the first go at hiring a writer.

♦ The case I cite was a company that was strictly interested in cost cutting. Time to market and quality were sacrificed. They were not a good example. Information developers should have a good demonstration of all aspects cited in the above question.

♦ Know both Chinese and English for information exchange.

♦ We initially are looking for information development contacts in China to identify and research domestic requirements and share that information with authoring centers located outside of China.

♦ Concepts of collaboration, due dates, conflict resolution, questioning ideas, brainstorming, discussions after presentations--are all different than in US.

♦ Training is an ongoing process.

After hiring, in what areas do your information developers receive training? (Please check all that apply.)

	Number of Responses	Response Ratio
Tools (XML, FrameMaker, CMS)	6	67%
Information development	6	67%
English language	5	56%
Company product knowledge	5	56%
Production	3	33%
Specific products	3	33%
Editing	2	22%
Project management	2	22%
Industry/technology knowledge	1	11%
Moderate review by product marketing engineers	1	11%
Most of our information developers receive little or no training	1	11%
Instructional design	0	0%
Graphics	0	0%

Where is this training performed?

	Number of Responses	Response Ratio
China	8	73%
US	3	27%

Please provide any other information on tools and training that would be helpful to this study.

♦ Various internal authoring tools are used by information developers who require specific training. Quality checks on authored content also help train information developers in English grammar.

What level of education do your Chinese information developers usually have?

	Number of Responses	Response Ratio
The equivalent of a baccalaureate university degree or higher	6	75%
Post-graduate education	3	38%
Dual degrees: technical and English	1	11%
Do not have any Chinese information developers	1	11%
Some university education	1	13%
High school or less	0	0%
Information development certificate program	0	0%

What are the major fields in which your Chinese information developers are educated?

	Number of Responses	Response Ratio
English language	5	56%
Computer science	5	56%
Engineering	3	33%
Science	1	11%
Agricultural science	1	11%
Our information developers are not Chinese	1	11%

What level of technical knowledge about your products do your Chinese information developers usually have at hiring?

	Number of Responses	Response Ratio
Average	3	33%
Minimal	2	22%
Above average	2	22%
Unknown at this time	1	11%
Information developers are not Chinese	1	11%

What language do your Chinese information developers author in?

	Number of Responses	Response Ratio
American English	5	56%
Mandarin Chinese	1	11%
Wuhan China University trained in English (Brit)	1	11%
Our information developers are not Chinese	1	11%
British English	1	11%

How do your Chinese information developers receive information on the equipment/product they are writing about? (Please check all that apply.)

	Number of Responses	Response Ratio
Written text (such as specifications and design documents)	6	75%
Long distance communication (phone, email, video conferencing)	5	63%
Access to the equipment/product	4	50%
Work directly with developers on-site	4	50%
All based in China	2	25%
To be determined	1	15%

Please provide any other information on education that would be helpful to this study.

♦ We are a university and have a 2 + 2 program with Northeast Normal University in Changchun, China. The students will take the first two years at NENU and then the last two years at SPSU.

♦ OJT Extensive writing, review by editors, audience and task analysis skills, research skills.

Please specify the first language of your information developers?

	Number of Responses	Response Ratio
Chinese	4	44%
Mandarin Chinese	3	33%
To be determined	1	11%
English	1	11%

Please provide any information on language skills or language barriers you face when hiring Chinese information developers that would be helpful to this study.

♦ To be determined.

♦ English is OK, but not as good as native.

♦ Performed by the marketing manager.

♦ Lack of knowledge about document management.

♦ English competency is needed to communicate with contacts outside of China.

♦ Many applicants in China say they are fluent in English, but we have to give them an English test to verify.

♦ Our writers are not Chinese. Although our Chinese developers speak some English, it is often difficult interviewing them for information as our Chinese is limited, and it can be difficult trying to communicate complex technical concepts with the respective lack of language skills.

How much turnover has your Chinese technical-information department experienced in the last year?

	Number of Responses	Response Ratio
Less than 10%	6	75%
10%-20%	2	25%
20%-30%	0	0%
30%-50%	0	0%
Higher than 50%	0	0%

Please provide any additional information on the Chinese culture that would be helpful to this study.

♦ To be determined.

♦ Not aggressive at solving their own problems; too dependent on "authority."

♦ Understanding domestic user requirements is needed to provide targeted information.

♦ Saving face is valued more than the truth; it makes it difficult sometimes to send and receive review comments.

How are deadlines perceived by information developers in China?

	Number of Responses	Response Ratio
Deadlines are always met	3	33%
Deadlines are sometimes met	1	11%
Deadlines are rarely met	1	11%
To be determined	1	11%
The core product always slipped with no notice.	1	11%
Correct terminology reviews can be lengthy	1	11%
Other	1	11%
Deadlines are never met	0	0%
Deadlines are not required	0	0%

Has your department taken any measures to protect your proprietary information in China?

	Number of Responses	Response Ratio
Yes	4	50%
No	4	50%

If yes, please specify:

♦ NDAs required for all employees / contractors. Manager of team is fulltime MSFT employee and communicates the restrictions.

♦ Signing non disclosure agreements.

♦ One company requires all employees to sign an agreement not to share our proprietary information.

♦ Everyone in the company must sign a confidentiality and no-compete agreement before being employed.

Where is the information-development manager for the Chinese information developers located?

	Number of Responses	Response Ratio
Co-located with writing staff in North America	3	33%
Co-located with writing staff in China	3	33%
Co-located with product developers in China	3	33%
Co-located with writing staff in Europe	0	0%

What language does the manager use when communicating with Chinese information developers?

	Number of Responses	Response Ratio
English	3	38%
Chinese/English	2	25%
English and Mandarin Chinese	1	12%
Chinese	1	12%
Mandarin	1	12%

Has the project manager had to change his/her management style when working with Chinese information developers versus information developers in other countries (i.e., managing deadlines, timelines, assignments, etc.)?

	Number of Responses	Response Ratio
Yes	4	50%
No	4	50%

Please specify:

♦ To be determined.

♦ Since they are Chinese, it is their style.

♦ We've had to tone down our requests (so that they are not viewed as being rude or harsh).

♦ We do not have Chinese writers. Manager is new to managing, so I don't know whether he has had to change his style. We have had to change out working style when working with Chinese developers. Deadlines are very important to the Chinese, and trying to explain why we cannot meet the deadlines that Development wants to impose can be a challenge.

Is your direct manager a technical writer?

	Number of Responses	Response Ratio
Yes	1	11%
No	8	89%

If yes, please specify.

♦ Background is print production environment. Performs editing and information development duties in addition to managing.

What is the ratio of immediate managers to information developers in your Chinese technical information team? (number of managers: number of information developers)

	Number of Responses	Response Ratio
1:5	2	25%
1:10	2	25%
1:20	2	25%
Have not set up yet	1	12%
1:3	1	13%
2:5	0	0%
2:10	0	0%
2:20	0	0%

Are the product developers co-located with the Chinese information-development staff?

	Number of Responses	Response Ratio
Yes	6	67%
No	3	33%

What language do your product developers speak?

	Number of Responses	Response Ratio
Chinese	3	33%
Mandarin	2	22%
Primarily English, Chinese, and Indian dialects	1	11%
English	1	11%
Chinese and English	1	11%
Chinese with some English	1	11%

What forms of communication have you found to work the best with the Chinese information-development staff? (Please choose your top two answers.)

	Number of Responses	Response Ratio
Email	7	88%
Phone	5	63%
Face to face meeting	3	38%
Instant Messaging	2	25%
Time differences with US are and issue to work out	1	13%
To be determined	1	13%
No Chinese information developers. Developers like email.	1	13%
Internet meeting	0	0%
Video conferencing	0	0%

Have you noticed a delay due to working in different time zones?

	Number of Responses	Response Ratio
Yes	7	88%
No	1	13%

Please specify:

♦ To be determined. I expect this, though.

♦ Better preparation.

♦ SLAs exist for workflow, and we have adequate time in SLAs to account for time differences.

♦ Early a.m. U.S. calls are early evening calls in China. For now, China contacts are calling in from home.

♦ We schedule phone meetings at times when one party is typically participating from home--we have three U.S. time zones and two Asian time zones. Sometimes the time zones can work to our advantage in terms of getting things done, and we try to leverage that.

What processes have you put in place to measure the costs of a writing operation in China?

♦ To be determined.

♦ Labor tracking is used, as well as known CPH rates.

♦ N/A

♦ None.

♦ We are working on that now in Taiwan.

What are your production costs for materials produced in China versus materials produced in either North America or Europe (including editing, formatting, and revision)?

	Number of Responses	Response Ratio
Lower than 50%	2	29%
Less than 10% lower	1	14%
10-25% lower	1	14%
25-50% lower	1	14%
To be determined	1	14%
Don't know. Costs are labor-related, not production.	1	14%
Less than 10% higher	0	0%
10-25% higher	0	0%
25-50% higher	0	0%
Higher than 50%	0	0%

How long has it taken you to realize your Return on Investment for having a technical information group in China? (Please check all that apply.)

	Number of Responses	Response Ratio
Decreased costs in the first year	3	43%
Too early to know what our ROI is	2	29%
Increased costs in the first year	1	14%
Costs are the same in the first year	1	14%
Per item costs lower, more bandwidth=more volume	1	14%
To be determined	1	14%
Increased costs in the second year	0	0%
Costs are the same in the second year	0	0%
Decreased costs in the second year	0	0%

Do you see a long-term return on investment?

	Number of Responses	Response Ratio
Yes	7	100%
No	0	0%

Please specify:

♦   To be determined.

♦   Cheaper to get product to market, even though the quality is poor.

♦   Writers here are paid one-half to one-third of what writers make in the U.S. We are starting to hire Filipino writers who are paid even less.

What is the average cost, per writer, of training information developers in China?

- To be determined

- $4000

- N/A

- 1/7 of US

- Don't know

- We do virtually no training.

How do your quality assurance methods change when working with your Chinese information development team (i.e., testing, editing, formatting, usability, etc.)?

- To be determined.

- Added copyeditor function to review and improve English.

- We apply the same QA checks across groups. China improves more readily with QA feedback compared to other international groups we've worked with.

- QA in China.

- No change.

- We do not have Chinese information developers. As an editor, one of the things I am seeing from the Taiwan team is their lack of training in technical communication. I am having to explain edits in the level of detail I would give to my university students rather than being able to assume that they are information developers.

Of the total cost to run your Chinese technical publications department, what percentage is due to editing and revising content?

	Number of Responses	Response Ratio
1%-10%	4	57%
I don't know	1	14%
25%-50%	1	14%
10%-25%	1	14%
Less than 1%	0	0%
50% and higher	0	0%

Of the total time to run your Chinese technical publications department, what percentage is due to editing and revising content?

	Number of Responses	Response Ratio
1%-10%	4	57%
50% and higher	2	29%
10%-25%	1	14%
Less than 1%	0	0%
25%-50%	0	0%
I don't know	0	0%

Is your information development effort longer for your Chinese technical publications team versus a team in your home country?

	Number of Responses	Response Ratio
No	4	67%
Yes	2	33%

Please specify:

♦ To be determined.

♦ 25% longer.

♦ No, since development is done there, a time lag would be larger in doing the writing in the US.

♦ We do not have Chinese information developers.

Has there been any effect on the customer satisfaction for information when the technical information has been produced in China?

	Number of Responses	Response Ratio
No	5	71%
Yes	2	29%

Please specify:

♦ To be determined.
♦ Content missing, poorly structured, poorly written, many basic spelling/grammar issues. Poor product image.

What major challenge(s) has your department encountered using offshore information developers in China? (Please choose your top three answers.)

	Number of Responses	Response Ratio
Finding experienced information developers	9	100%
Communication issues	6	67%
Cultural issues	6	67%
Quality issues	5	56%
Editing issues	5	56%
Managing offshore information developers	3	33%
Information developers' lack of understanding of the end-user	2	22%
Time zones	2	22%
High turnover	1	11%
Increased turn around time	1	11%
All above are anticipated challenges	1	11%
Security issues (proprietary information)	0	0%
Availability of satellite or reliable broadband communication	0	0%
Technical Infrastructure issues (telephone, power, and so on)	0	0%
No major challenges	0	0%

In general, what is the attitude of your North American and European-based employees regarding the use of Chinese information developers?

	Number of Responses	Response Ratio
Agree that the development of technical information in China is a good idea	3	33%
Disagree that development of technical information in China is a good idea	3	33%
Agree that development of technical information in China can be a good idea depending on the type and scope of the project	2	22%
I don't know	2	22%
It is going to happen in India or China	1	11%
It depends on who you talk to	1	11%
We do not have Chinese information developers	1	11%

Which of the following best describes your next step with regard to technical information in China?

	Number of Responses	Response Ratio
We plan to expand the size of our information team in China	4	50%
We plan to expand the responsibilities of our Chinese technical information team	3	38%
We plan to keep our information development team in China the same size	1	13%
I do not know the company's long-term plan	1	13%
Not set up yet	1	13%
We are not planning to continue our technical information effort in China	0	0%
We plan to reduce the size of our information team in China	0	0%
We plan to keep the responsibilities of our Chinese technical information team the same	0	0%
We plan to reduce the responsibilities of our Chinese technical information team	0	0%

What other countries do you currently have information development departments in?

	Number of Responses	Response Ratio
None	2	25%
Israel, Russia, China, Germany, US	1	12%
US, India	1	12%
Brazil, Mexico, US, Germany, France, Netherlands, India	1	12%
India	1	12%
Taiwan and the US	1	12%
US, Israel, plan on others	1	12%

If you do have information groups in other countries, how has your experience in China differed?

- ◆ To be determined.

- ◆ Take less ownership. Show less independence. Better English skills than Russia.

- ◆ In China the team is a mix of FTE and CSG staff. In India, it was vendor-managed staff.

- ◆ Not set up yet.

What departments, other than your information development department, have moved some work to mainland China? (Please check all that apply.)

	Number of Responses	Response Ratio
Product development	7	88%
Training delivery	3	38%
Instructional design (training development) Training delivery	2	25%
Graphic design or illustration	1	13%
Tool development	1	13%
Human factors testing	1	13%
We do not perform any other activities in mainland China	0	0%

If your company is currently developing training courses or conducting training in China, please describe their responsibilities.

- ◆ Yes, to be determined.

- ◆ I am going to Taiwan to train our information developers there in basic technical communication, process development, and FrameMaker skills. Company is leveraging my previous experience in training to provide sorely needed in-house training.

Appendix C: Literature References

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