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Updating the 2001 NSPE Products & Services Catalog

Report Submitted to:

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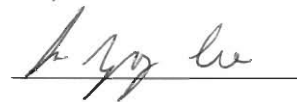
Washington D.C., Project Center

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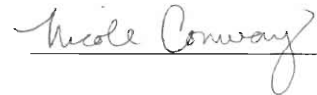
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December 18, 2000

Abstract

The content analysis performed on the data collected from the focus groups, interviews and surveys, along with a new ranking system, was used to update the 2001 NSPE Products and Services Catalog. The new ranking system was the first of its kind developed for the NSPE and can be used in the future for selecting new products that meet the needs of Professional Engineers.

Authorship Page

The IQP group contributed together in the writing of this report. Sections within each chapter were divided among group members in its initial drafts. Drafts were reviewed and edited by all group members.

Acknowledgements

First we would like to thank the NSPE for sponsoring this project and hosting us for seven weeks. The staff was helpful and greatly facilitated our completion of this project. Our liaison, Terry Ames, was instrumental to our success in this endeavor. Her guidance and patience made it possible for us to get through the arduous catalog making process and all the hours she spent with us in meetings and proofreading documents were greatly appreciated. We would also like to thank Cindy Kirschner for helping to acclimate us to the NSPE during the first week and for her help in editing the catalog. We also wish to thank Hillary and Mike from the mail/print room for delivering all of the review copies we ordered and binding our final report. We thank Professor DiBiasio for working so hard to organize the project center here in Washington DC. We also want to thank Professor Jamison for preparing us so well during A-term. Finally we would like to thank Professors Ma and Heinricher for their assistance and guidance throughout this entire project. Their critiques, corrections, and support have helped to guide this project from its infancy during A term to its conclusion.

Executive Summary

The goal of this project was to update and create the 2001 NSPE Products and Services Catalog by devising and using a system to choose products that meet Professional Engineers' needs.

Semi-standardized interviews were conducted with Professional Engineers on the WPI campus to gain knowledge of the reasons engineers became licensed. The NSPE had conducted focus groups consisting of Professional Engineers, designed to collect their thoughts and opinions to aid in the development of new products and services. The NSPE also sent out surveys to its members to assess their continuing education interests.

A content analysis performed on the open-ended questions of the survey, focus group summary, and interviews showed that NSPE members and engineers were very interested in and sought more information regarding professional ethics and employee relations. There was also a moderate interest in communication, leadership development, continuing education, deregulation, global business, and contracting. There was somewhat less interest in business writing and public speaking.

Using the results of the content analysis, the team researched products that covered the topics of interest. Approximately 130 products were identified as possible new products. The desired number of new products to be added to the catalog was 20. To reduce the number of products in consideration, a ranking system was developed. This ranking system took into account the topic of the product, overall quality, and the methods by which the product could be purchased and shipped.

With the final list of products, the team created a catalog master document that detailed what would be in the catalog. A total of 24 products were selected to add to the

catalog. Descriptions of these products were added to the catalog master document. Having fully edited the document, it was sent to the catalog designer to be laid out.

One of the major results of this project was a step-by-step guide that the NSPE can use to update their catalog in the future. This guide is detailed and easy to follow. It also details what portions of the process can be done simultaneously if several people are working on the catalog.

Another recommendation made is that the NSPE create a product review board consisting of NSPE members and employees. This review board would be an effective way of determining and identifying new products for the catalog. If a review board cannot be created, it is recommended that the NSPE use the ranking system outlined in this project.

The final recommendation is that the NSPE alter its methods of market research. Conducting more research with increased coordination between departments would give the NSPE a more accurate view of the thoughts and concerns of Professional Engineers. This would allow the NSPE to find more useful products to add to its catalog.

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Chapter 1

Introduction

The National Society of Professional Engineers (NSPE) is one of the only organizations that represent engineering professionals and licensed engineers across all disciplines. The organization is based in Alexandria, Virginia and has been serving its members for over 65 years. The society's main goals are to promote the competent, ethical, and professional practice of engineering; enhance the image and stature of engineering as a profession; and to provide education, career development, networking opportunities, and other benefits to engineering professionals and students.

While many professional engineering societies exist today, the NSPE distinguishes itself by focusing on the non-technical aspects of engineering. Instead of keeping its members abreast of the latest technical advances, the NSPE keeps its members current on the news related to the ethical and legal aspects of engineering. It strongly advocates the licensure of engineers as Professional Engineers (PE's). A Professional Engineer is an engineer who has fulfilled the educational and experiential requirements and passed the rigorous examinations that, under state licensure laws, permit them to offer engineering services directly to the public. PE's take legal responsibility for their engineering designs and are bound by a code of ethics to protect public health and safety.

Today, the NSPE serves approximately 60,000 members through over 500 state and territorial chapters. Membership in the NSPE peaked at over 80,000 members but has declined in recent years. The NSPE is seeking to reverse this trend and increase its

membership. A major concern for the organization is the fact that there are currently over 400,000 PE's in the United States but only 15% of them are members of the NSPE.

To achieve their goals, the NSPE provides a number of services. These include a monthly update of the latest professional news, continuing education opportunities, professional forums, networking opportunities, and access to the NSPE's members-only section of their web site. This section contains searchable salary data, job listings, downloadable licensure laws, downloadable contracts and documents, ethical and career advice, and many other services. Also found on their main web site is the NSPE's Products and Services catalog. This catalog, which is also published and distributed across the country, includes a variety of products such as career resources, licensure aids, and contract documents. Services such as insurance, financial planning, car rental, and professional development courses are also available through the catalog.

The goal of this project was to find new products to assist PE's in their careers, to include them in and produce the 2001 Products and Services Catalog, and to create a system that the NSPE can use to update their catalog in the future. The NSPE is always looking for new products to improve its catalog. It is interested in improving this catalog in order to better serve its existing members and promote new membership. Since members receive a discounted price on most items, the addition of new and better products to the catalog would help to attract new members. To make these improvements it was determined what types of products and services would benefit engineers in today's workplace. To determine what types of products might be useful, it was important to understand what problems engineers face.

To achieve this understanding, the NSPE conducted a series of three focus groups in Atlanta, Houston, and Grand Rapids on June 22, 28, and 29, 2000 respectively. These obtained information about the types of problems engineers face in the work place and what types of products they thought would help to solve those problems. A survey of NSPE members was also performed to gather information. Interviews with PE's on the WPI campus were also conducted to further investigate these ideas.

The information obtained from this research was analyzed, and then, from this analysis, categories of products that would make good additions to the catalog were determined. After products were chosen that fit within these categories, the best method of purchasing and distributing them was decided. The items were then incorporated into both the online and print version of the catalog.

The NSPE desires to produce a final version of their 2001 Products and Services catalog as soon as possible. Since this catalog is one of the most important services that the NSPE provides, it is essential that it be distributed in a timely fashion. The products contained in this catalog should help to meet the needs of the engineers receiving it. In order to meet these needs the products must help to solve their engineering and professional problems. If all of these conditions are met, the new catalog will help to promote increased membership in the NSPE and help the society to meet its goal of helping its members to reach their professional potential.

Chapter 2

Literature Review

2.1 The National Society of Professional Engineers (NSPE)

The National Society of Professional Engineers concentrates its efforts on five main goals. The goals are:

- Promote the competent, ethical, and professional practice of engineering.
- Enhance the image and stature of engineering professionals.
- Provide education, career development, networking opportunities, and other benefits to engineering professionals and students.
- Advocate the interests of engineering professionals and protect the public through an effective government relations program.
- Align the structure, activities, and governance of the society to optimize support and resources for all programs.

To further these goals, the society provides products and services to assist members and non-members in engineering. An annual catalog, which includes books, videos, and software, is produced and distributed to NSPE members and other engineers. NSPE members receive discounts on most products in the catalog. Members stay informed of recent developments in the engineering profession and industry through the *Engineering Times*, which the NSPE distributes to its members eleven times a year. The NSPE stresses the need for education and provides services to students as well. For example, the NSPE organizes the program Mathcounts, which is focused on coaching middle school students for mathematics competitions (NSPE, 2000).

Engineering ethics is one of the NSPE's main interests. In fact, other professional associations and organizations have adopted the NSPE Code of Ethics (Appendix B). All members of the NSPE are required to adopt its Code of Ethics. The society offers a

service in which members can ask PE's questions about Professional Engineering. Often, questions asked concern ethical and legal matters. The NSPE has also published theoretical ethics cases, which can be read to demonstrate the proper ethical action called for in a given situation (NSPE, 2000).

A Professional Engineer is expected to exhibit the highest standards of honesty and integrity. Engineers provide services that can greatly affect the public and PE's are certified to offer their services directly to the public. PE's are required to be honest, impartial, fair, equal, and must protect public health, safety, and welfare at all costs (NSPE, 2000). The National Institute of Engineering Ethics (NIEE) was created by the NSPE in 1988 and became an independent organization in 1996. The NIEE provides ethics education and promotes the understanding and application of the ethical processes within engineering. Along with the NSPE, the NIEE evaluates many cases in which ethical questions arise. The NSPE and NIEE are often called in on legal cases to help guide courts regarding the proper ethical practice of the engineering profession. NSPE members are able to access these cases for reference (www.NIEE.org, 2000).

There has been increasing concern for the value of engineering ethics education after such cases as the Challenger disaster, the Kansas City Hyatt-Regency Hotel walkway collapse, the Exxon Valdez oil spill, and the Citicorp towers incident (Texas A & M, 2000). Education on engineering ethics is vital and it is important to expose undergraduates to such cases to show the effects they may have as an engineer. The NPSE 2000 Products and Services Catalog only has one product that concerns engineering ethics. More products might help to show engineers the importance of the topic.

A core value of the NSPE is to promote the licensure of engineering. Licensure is the only way to become a Professional Engineer. Employers see a Professional Engineer as an individual that is more competent and dedicated to his field of study than a non-licensed engineer. A Professional Engineer has advantages over a non-licensed engineer, such as opportunity, respect, status, promotability, and a possibly higher salary (Kogut, 1993). As of January 1, 2000, the median income of PE's was \$77,392 while non-licensed engineers were 25% less at \$57,000 (www.eweek.org, 2000). A salary survey commissioned by the NSPE is done every year by the society. Results of that survey can be purchased from the NSPE catalog.

The NSPE strives to help engineers pass the licensure examinations. The NSPE, partnered with MGI Management Institute offers programs to help guide engineers to pass these examinations. Individuals must complete four major steps to become a PE. While the process varies from state to state, these four steps are common to all of them. The individual must receive an engineering degree in a program approved by the state engineering licensure board and the engineering program must be accredited by the Accreditation Board for Engineering and Technology (ABET)¹ or the Canadian Accreditation Board (CAD). After the degree is received, the individual must pass the Fundamentals of Engineering (FE) Examination. The candidate must then work four-years under the supervision of a PE after they have taken the FE. Finally, they must pass the Principles and Practice of Engineering Examination. When those steps have been completed, the individual must apply for their license in the state in which they will practice and pay the fees that are required for licensed engineers (NSPE, 2000). The

¹ ABET and CAD are organizations that accredit college engineering programs, and decide if a college program is up to standards that employers demand (ABET, 2000).

National Council of Examiners for Engineering and Surveying (NCEES) give the FE and Principles and Practice of Engineering examinations. The NCEES is also the organization that determines if an individual passes the examination (NCEES, 2000). The NSPE offers a product titled *Get Licensed, Get Ahead* to help guide engineers through this process. They also have products that help individuals prepare for the FE and Principles and Practice of Engineering examinations.

The FE consists of multiple-choice questions designed to demonstrate the engineer's knowledge of the fundamentals of engineering (Kogut, 1993). Engineers can choose to take a general engineering examination or an engineering field specific examination. The examination is an eight-hour open-book test, where calculators are allowed, and is offered in the months of April or October of every year (NCEES, 2000). If an individual passes the test, they are legally certified as an Engineer-Intern (EI) and are commonly referred to as an Engineer-In-Training (EIT). It is widely recommended that a graduate take the FE within a few months of receiving his or her first engineering degree (Kogut, 1993). Upon passing the examination, four years of work experience is required, and must be done under the supervision of a Professional Engineer. With at least four-years practice, an individual can apply to take the Principles and Practice of Engineering examination, which is engineering discipline-specific. Like the FE, the Principles and Practice of Engineering examination is also eight-hours and open-book, and is also offered in April or October depending on which discipline of engineering is to be taken. The examination contains both essay and multiple-choice questions (NCEES, 2000).

Tables 2-1 and 2-2 show the pass rates of the FE and Principles and Practice of Engineering examinations taken in past years. A very high percentage of test takers pass the FE examination in all fields. However, the pass rates of the Principles and Practice of Engineering examination vary from discipline to discipline and test to test.

Table 2-1: Pass rates of recent Fundamental of Engineering Examinations

FE Exam	Oct-97	Apr-98	Oct-98	Apr-99	Oct-99	Apr-00
General	64%	67%	60%	65%	60%	79%
Chemical	88%	90%	83%	83%	84%	86%
Civil	66%	58%	63%	57%	61%	77%
Electrical	67%	72%	64%	70%	65%	81%
Industrial	58%	66%	55%	63%	64%	70%
Mechanical	76%	79%	70%	76%	71%	87%

Source: <http://www.ppi2pass.com>

Table 2-2: Pass rates of recent Principles and Practice of Engineering Examinations

PE Exam	Oct-97	Apr-98	Oct-98	Apr-99	Oct-99	Apr-00
Chemical	38%	38%	40%	47%	48%	47%
Civil	38%	31%	42%	55%	32%	38%
Electrical	32%	37%	43%	24%	22%	47%
Environmental	67%	38%	35%	69%	70%	73%
Mechanical	48%	46%	39%	52%	37%	51%
Structural I	51%	43%	45%	49%	45%	63%
Structural II	15%	7%	19%	13%	23%	48%

Source: <http://www.ppi2pass.com>

As seen in Table 2-2, passing rates for the Principles and Practice of Engineering exams have been as high as 73% and as low as 7%. Some tests, like the Environmental exam, have a history of having the highest passing percentage while others, such as the Structural II exam, have traditionally had the lowest passing rate. This could be the result

of a number of factors, including the difficulty of the test, the number of people taking it, or the quality and availability of test preparation materials. Having high passing rates is not the most important goal of the NCEES because it is more important that only the most competent and qualified engineers become licensed.

2.2 Professional Societies

There are many engineering societies in existence. Some of these societies compete for members from the same pool of engineers. While membership in several societies is allowed and often encouraged, not all engineers opt to belong to more than one organization. Therefore, it is very important that these organizations offer the best possible services to their members to entice engineers to join. Table 2-3 shows a comparison of the membership benefits of five professional societies, including the NSPE.

Table 2-3 compares the services offered by the NSPE with those offered by four other large professional societies (the American Society of Mechanical Engineers, the American Society of Civil Engineers, the Institute of Electrical and Electronic Engineers, and the American Institute of Chemical Engineers). As the table demonstrates, all of the professional societies offer a number of similar services. These include technical conferences, professional development courses, a product catalog, a trade magazine, access to a library of professional publications, networking opportunities, and discounts on the purchase of publications.

Table 2-3: Membership Benefits of Professional Societies

BENEFIT	NSPE	ASME	ASCE	IEEE	AIChE
Members	60,000	125,000	123,000	352,000	57,000
Cost of Membership	\$13-\$176	\$20-\$107	\$35	\$19-\$113	\$28-\$139
Technical Conferences	1-2/year	30+ /year	20+ /year	300+ /year	8+ /year
Professional Courses	100+ /year	200+ /year	200+ /year	50+ /year	50+ /year
Product Catalog	16 pp	102 pp	80 pp	72 pp	110 pp
Online Catalog	yes	yes	yes	yes	yes
Assess to Pub. Library	yes	yes	yes	yes	yes
Networking Opportunities	yes	yes	yes	yes	yes
Trade Magazine	Engineering Times	Mechanical Engineering, ASME News	ASCE News	IEEE Spectrum	Chemical Engineering Progress
Discount on Publications	up to 50% on NSPE pubs	20% on all pubs	up to 75% on ASCE pubs, discount on 27 Journals	20% on non IEEE pubs, >20% on IEEE pubs	20% on all products

Source: (NSPE, 2000), (ASME, 2000), (ASCE, 2000), (IEEE, 2000), (AIChE, 2000)

It is useful to look at the overall size of these organizations. Having a large number of members gives these organizations a number of benefits. First, having a large membership means that the society will have a large amount of money to work with, since most of the budgets for these societies are derived from membership dues and conferences. Having more members will also increase the number of publications an organization produces since there will be more people willing to contribute their research to trade journals. Having a lot of members also increases the opportunity for engineers to network with other members of the organization. The NSPE is at a severe disadvantage in this category, especially when compared to an enormous society like the IEEE who has almost 300,000 more members than the NSPE. The NSPE also had the highest annual membership dues of all of the organizations at \$176. Technical conferences are

important meetings held throughout the year where professionals can exchange technical information and learn new ideas. Most of these organizations hold many conferences, for example, the IEEE holds over 300 each year. The NSPE, however, focuses mainly on its one annual conference. The existence of an online catalog is another important service offered by some of the professional societies. An online catalog makes shopping for products very easy for members and allows the organization to display far more products than it could on the limited space provided in a printed catalog. All five organizations have large online catalogs.

Table 2-3 shows that the other professional societies offer a more extensive list of benefits than the NSPE does. This includes hosting more conferences, having a larger library of resources, and publishing more reference and research journals. Table 2-3 also shows that the NSPE has the highest annual fee of any of the societies compared. These are a few reasons that a Professional Engineer who chooses to belong to only one organization is more likely to join his respective engineering society than the NSPE.

2.3 Marketing

Marketing is an important aspect to consider when putting together a product and service catalog. “Marketing is a method of business based on scientific thinking; it comprises both the strategy and the tactics of business and also includes the organization and administration of the selling procedure” (Adler, 1967). The topic of marketing encompasses a large number of areas. When researching and designing a product catalog one must consider questions such as:

- What products and services should be for sale?
- Who is buying these products and services?

- What are reasonable prices?
- Can a discount be provided?
- What types of advertising are effective?
- What amount of profit is needed or desired?

Specific questions like the ones above fall into broader marketing categories. The categories of particular importance include: sales, advertising, product quality, and marketing finance.

The type of consumers that the NSPE catalog targets is important to consider when choosing appropriate products. Primarily, the NSPE Products and Services Catalog targets organization members. The majority of these members are PE's but there are also a small number of engineering students. First and foremost the products and services chosen for the catalog must appeal to these groups of people. The products focus on helping these groups solve engineering problems and increasing their knowledge about ethics and licensure. The NSPE's catalog helps to address the organization's goals rather than provide technical information. The NSPE prioritizes their goals and mission first and then considers the members and customers when putting a catalog together.

The NSPE offers discounts on products in its catalog to benefit its members and to try and entice new members to join. The discounts vary from product to product. The savings for members can be up to 65% off the price that non-members pay. By providing these discounts, the NSPE maintains competitive prices and encourages increased membership. "Consumers often use price as a quality cue" (Steenkamp, 1989). Consumers associate cheaper prices with lower quality products. The NSPE can avoid these quality/price perceptions by providing a discount to members.

In order to promote the products and services that the NSPE catalog provides, sufficient advertising must be done. "The aim of advertising is to recommend certain

products and to encourage consumers to buy a certain brand” (Adler, 1967). Advertising helps to ensure that consumers are aware of the organization and the products that they provide. Sales cannot be expected without advertising. One key to effective advertising is branding. “A branded article has a certain quality which is always kept at the same level; and in this way the notion of a brand coincides with the notion of its quality” (Adler, 1967). By branding a product, the organization advertises the product and emphasizes the quality of the product through repetition. The NSPE uses branding as a sales tool in its catalog.

Successful marketing and sales requires that a great deal of attention be focused on the financial aspects of catalog function. Providing quality products, appealing to customers with discounts, effective advertising, and sales techniques all enter a complicated equation of costs and benefits. Often, when organizations try to evaluate this equation, the costs outweigh the benefits. The goals of the NSPE must be carefully considered when trying to balance the costs and the benefits of catalog production. The NSPE has a products and services catalog in order to promote their ideals, reach their organizational goals, and provide services to their members. Generating profits is not their main priority, but it is a concern. They do not want to lose money in this process since the catalog is an additional source of revenue for the non-profit organization. Once all aspects of marketing are considered and their costs are determined, the organization must be satisfied with the projected outcome of the project if it is to proceed. The estimated profits and sales must outweigh the costs of advertising and marketing. Combining the many focuses of marketing research with the power of technology will help to make the benefits more significant than the costs. “Successful organizations view

information as a critical corporate resource. Marketing research provides one component of the organization's overall information asset base" (Blankenship, et al., 1998). The NSPE maintains this view and intends to continue to use marketing as well as technology. One example of the NSPE's use of technology is their web-site, which is continuously being updated and improved.

The NSPE catalog (both hard copy and online) uses different icons that represent different shopping areas. For example, the 2000 catalog has an icon associated with career resources (a man and a woman), practice management (buildings), project management (a computer), ethics (a scroll), and contract documents (a scale). These icons are small distinctive pictures. They are simple and not detailed. The icons are next to products and services that fit into the various product categories. The purpose of icons is to help the shoppers find easily what they seek. They are intended to help the customer feel more comfortable shopping. Most catalogs utilize some type of icon to aid shoppers. Choosing appropriate icons could lead to happier and more successful shoppers.

The NSPE works cooperatively with other organizations to advertise and profit share. These companies include the Virtual Education Corporation, who has created a number of video courses that PE's may use for continuing education credits, and Zweig White and Associates, who produce a large number of management products designed for engineers. The NSPE advertises these organizations and products which NSPE members receive a discount on. The NSPE then received a predetermined amount of money for each NSPE member that purchases one of these products. By making deals with other organizations, the NSPE is able to use the Internet to make money with little or no risk. These cooperative agreements reduce the need and costs of additional advertising.

Cooperation with other companies helps the NSPE serve its members and customers better.

2.4 E-Commerce

The NSPE catalog is available on the Internet. The online catalog includes all of its products and services with detailed explanations and information. The hard copy catalog targets a few main areas and highlights some products, however it directs and encourages customers to access the web catalog for more products and extensive details. The web catalog is a less expensive alternative to a lengthy hard copy catalog. Many customers also prefer the convenience of shopping online. Because one of the project's foci deals with updating this online catalog, a firm understanding of the World Wide Web is necessary for the successful completion of this project. A few main areas were focused on to gain a background in this broad subject.

In order to stay competitive and provide top quality service to its members, providing a detailed online catalog is almost a necessity. "Tens of thousands of companies, both large and small, have created Websites through which you can purchase goods and services or receive valuable information" (Cusumano & Yoffie, 1998). By utilizing the Internet, the NSPE saves a great deal of time. If price changes are made or product descriptions are altered the Internet catalog can be updated quickly and easily. Online shoppers do not have to deal with telephone ordering systems or mail-in payments. By utilizing the Internet, the NSPE can save time in catalog production and focus more attention on choosing new products and services to provide to its customers.

Having an online catalog is very valuable, but there are some costs associated with this technology. The NSPE works with a service provider to meet all of their online needs. The service provider then helps to design a Web-based system that will help the NSPE reach these objectives. The service provider designs all aspects of the NSPE web site including the online catalog. This ensures that the entire site is uniform in appearance. By utilizing a service provider, the NSPE compensates for a lack in computer knowledge.

The NSPE takes advantage of web links and cooperative arrangements with other companies and organizations. Because the NSPE is a relatively small organization it is impossible for them to keep on hand every product that all PE's might need. To continue to meet the needs of PE's the NSPE would like to build more external relationships. E-commerce firms are gaining popularity; among the more popular firms are Amazon.com, E-Trade Group, Travelocity, eBay, and Peapod. The NSPE can work with E-commerce firms to direct their members to other information and product sources. E-commerce firms can include a link to the NSPE's online catalog to advertise for the organization and help their customers. There are some costs associated with this type of advertising and partnering. However, in special cases deals can be made that ensures both partners benefit from the arrangement and little cost is involved.

2.5 Affiliate Relationships

E-commerce has made it possible for customers to make purchases 24 hours a day, 7 days a week. It has been projected that \$7 billion in sales in the year 2000 will come from online purchases alone (www.hotwww.com, 2000). Large portals such as Amazon.com and Borders.com have dominated online shopping. These large Internet

websites have recently introduced “affiliate services.” These services work by having the company that wishes to cooperate with the retailer put up links on their web page to that of the retailer. A percentage of the profits from products purchased from that link are given back to the company. A specific example of an “affiliate service” would be the one offered by Amazon.com. This service allows a web page to link to specific products available from Amazon.com. If any of these products are purchased, a commission of 5% is given to the affiliate. Commission is not received on other products purchased by the shopper (Amazon.com, 2000). Table 2-4 provides a summary of the commission system offered by four different online retailers.

Table 2-4: Comparisons of Affiliate Services

Affiliate	Commission	Fees	Limitations	Notes
Amazon.com	5% on books directly linked from the NSPE web page, increasable to 7%	None	\$10 commission maximum for anything other than books, no commission on products that are not individually linked from the NSPE web page	Bonuses are given if new customers are made for Amazon
Barnes & Noble	5% on books and could be as much as 7% if net sales for the affiliate from links reaches \$1M	None		Commission on products other than books are also 5% and products do not have to be individually linked from the NSPE web page
Booksamillion.com	6% on Books, could get up to 7% if sales reach \$750K	None	Must have a specific list of products to be linked from NSPE website	Website is not as popular as the other websites
Borders Books	5% on books and could be as much as 7% if net sales for the affiliate from links reaches \$1M	None	Customer has to have Cookies enabled to track purchases	Products do not have to be individually linked from the NSPE web page

Source: Amazon.com, BarnesandNoble.com, Booksamillion.com, Borders.com

The NSPE has much to gain by affiliating with an online retailer. It makes a far greater number of products available to NSPE shoppers. It is also an advantage because the NSPE will not have to keep a stock of these new products but can still receive a commission on them. There are limitations to these services however. For instance, as displayed in Table 2-4, Amazon.com will not give commissions on products that are not individually linked to their page. In other words, if a customer links to Amazon.com, puts that product in their shopping cart, but then clicks to purchase other products, the affiliate will only get commission for the linked product and not the others thereafter. This is not true of the three other websites that were researched. Disadvantages such as a smaller array of products offered and lower commission were found with Booksamillion.com. Other limitations include the need for “cookies²” to track customer purchases. This eliminates the ability to receive commissions on items purchased by customers that disable “cookies” on their web-browser.

2.6 International Standard Book Number

The International Standard Book Number (ISBN) is a system that assigns a unique number to specific books, videos, cassettes, and software. The NSPE currently does not utilize this system. This numbering system is the standard cataloging system used by book distributors and libraries. Many of these places will not carry NSPE publications unless they have ISBN's. The presence of NSPE publications in libraries would be a very useful resource for PE's. Each ISBN consists of ten digits divided into

² cookie - A message given to a web-browser by a web-server. The browser stores the message in a text file on the client's hard drive.

four distinct parts, country/group identifier, publisher identifier, title identifier, and check digit (Bowker, 2000). Many book retailers use the ISBN system to help customers find books easily, because every book has a different ISBN. It is a relatively easy process for a publisher to get an ISBN for their products. R.R. Bowker is the United States ISBN agency and is responsible for assigning numbers. ISBN's are assigned to publishers in blocks of at least 10 numbers; larger block sizes may be requested (www.ask.com, 2000). It usually takes approximately two weeks to process the application (Appendix F). There is also a significant processing fee for ISBN's, \$205 for 10 ISBN's, and up to \$12,500 for 100,000 ISBN's, as each block has a price range (www.ask.com, 2000).

2.7 Qualitative Research Methods

To improve the existing NSPE catalog, research was done to identify types of products and services that would be useful to NSPE members. Three focus groups were conducted with PE's in Atlanta, Houston, and Grand Rapids in June, 2000. These groups were composed of engineers from the NSPE divisions most likely to purchase products from the catalog. These three divisions were Private Practice (PEPP), Construction (PEC), and Industry (PEI).

A focus group is one method of collecting qualitative data. It is a group interview usually conducted with seven to twelve participants. The dialogue is guided by a moderator who brings up a set of predetermined topics for the interviewees to discuss. This moderator also promotes interaction between the participants to insure that everyone's ideas are heard. The information put forth by the interviewees in their discussions is recorded and later analyzed.

There are many advantages to using focus groups over other qualitative research methods. The first is that they provide data from a group of people much more quickly and at a far lower cost than if each of these people were to be interviewed individually. They can also be assembled on very short notice. The presence of the moderator allows for direct interaction with the respondents. The nature of the group interview also allows the respondents to react to and build upon the responses of other group members. This fact is especially important since the “attitudes and conceptions are developed in part by interactions with other people. Other methods assume that people really know how they feel and that individuals form opinions in isolation” (Krueger, 1994). Stewart (1990) states that focus groups are also important because “the results of a focus group are easy to understand. Researchers and decision makers can readily understand the verbal responses of most respondents.”

Like any other research method however, focus groups have limitations. The moderator himself can knowingly or unknowingly bias the results by giving cues as to what types of responses are desired by the researchers (Krueger, 1994). Also, since a very small number of people can participate in the group, it is often very hard to obtain a representative sample to talk to (Morgan, 1998). It is also particularly easy for the results to become biased as a result of one particularly strong or opinionated member of the group. Another disadvantage of focus groups is that if the group is not randomly selected, the results are only representative of the population being interviewed. This means that the data obtained from a qualitatively sampled focus group cannot be generalized to a larger population or be used to reveal what percentage of a population feels a certain way. Salant and Dillman (1994) state that “Focus groups do not substitute

for quantitative surveys because the participants are not randomly selected nor do they compromise a sufficiently large sample to yield reliable estimates.” Attempting to apply focus groups results to a larger population results in substantial amounts of coverage error and sampling error. Coverage error occurs when the population interviewed does not represent all elements of the intended population for the study. Sampling error occurs when only a small subset of people in a population are interviewed or surveyed (Salant and Dillman, 1994). This means that while focus groups are extremely useful information gathering tools, they must be used along with other, more quantitative methods of research.

The researchers that run and moderate the focus group are considered to be the most important part of the focus group process. Whenever possible, the facilitator should be a highly trained and skilled professional (Krueger, 1994). Even if this is not the case, the facilitator must be extremely organized and prepared. Berg (1998) states that “One sure way to kill a focus group discussion is to begin it without any direction, or indication of what the flow of questions or topics will be.” Another important skill possessed by a good moderator is the ability to establish a rapport with the group. The more comfortable the group feels, the more apt they will be to share information with the researchers. The moderator must remember that while it is his job to provide the structure and direction to the discussion, he must contribute very little to it. Berg (1998) suggests that the ideal discussion is 90 percent group and 10 percent moderator.

Another technique that will be used to identify types of products to be added to the NSPE’s catalog is qualitative interviewing. Interviewing is one of the oldest methods of data collection still in use today. In the context of this project, PE's will be

interviewed to find out why they opted to become PE's and why they join professional societies.

Interviewing can be split into two basic categories. The first of these is structured interviewing which is also referred to as standardized interviewing (Berg, 1998). In this type of interview, the interviewer asks the respondent a series of already established questions with a limited set of response options. There is very little flexibility in the way questions are asked and answered. Researchers using this technique will already have a solid idea of what they intend on uncovering during the interview (Berg, 1998). The interviewer is able to control the pace of the meeting by treating the questionnaire as if it were a script. He must also be sure to play a neutral role and never interject opinions into the interview. This could result in biased responses from the interviewee. This type of interview is effective when the research team has a small number of very specific questions to ask (Denzin, 1994).

The other category is qualitative interviews, which are also known as unstandardized interviews. The main assumption behind this type of interview is that the interviewer does not know all the necessary questions in advance (Berg, 1998). A much greater breadth of information can be obtained when this type of interview is conducted. Rubin (1995) states that it is the job of the qualitative interviewer to "listen to people as they describe how they understand the worlds in which they live and work." Rubin also says that all unstandardized interviews share three common characteristics. "First, qualitative interviews are modifications or extensions of ordinary conversations, but with important distinctions. Second, qualitative interviewers are more interested in the understanding, knowledge, and insights of the interviewees than in categorizing people or

events in terms of academic theories. Third, the content of the interview, as well as the flow and choice of topics, changes to match what the individual interviewee knows and feels.” These unstructured interviews are often used in the course of research.

The qualitative nature of the data obtained from focus groups and interviews makes it very difficult to interpret and analyze. Unlike numerical data, which is straightforward to understand and interpret, qualitative data is very subjective and requires a different type of analysis. A process called content analysis is often used to interpret qualitative data. This process is used to condense qualitative data and make it systematically comparable. To do this, an objective coding scheme is applied to the data. Usually, this coding scheme is performed by counting the number of times a sample occurs in a written document. There are seven different types of samples that can be counted in a content analysis. These are words, themes, characters, paragraphs, items, concepts, and semantics (Berg, 1998). For this project, a content analysis counting themes was performed. A theme is a simple sentence or string of words that describe an idea. Themes that arose the most during the analysis were the areas that PE’s felt were most important. These were the areas for which new products were researched.

Chapter 3

Methodology

3.1 Qualitative Research

To prepare for this project, the NSPE conducted three focus groups to identify new products and services for members and non-members. These focus groups were designed to collect the thoughts and opinions of PE's from the three practice divisions most likely to be customers for NSPE products and services. Those three divisions were Private Practice (PEPP), Construction (PEC), and Industry (PEI). Each group consisted of ten engineers, who were selected from these fields. The groups were conducted in Atlanta, Georgia on June 22, 2000, Houston, Texas on June 28, 2000, and Grand Rapids, Michigan on June 29, 2000. These locations were chosen because they had the most NSPE members from the three selected practice divisions, 67 in Atlanta, 202 in Houston, and 34 in Grand Rapids. Due to the low number of suitable interviewees all of the engineers were contacted beforehand and informed that this focus group would be coming up. Later, the NSPE sent out the time and location of the focus groups and again asked them to attend. The focus group was conducted with the first ten invitees that showed up. Every one that showed up to the focus group, even those who were turned away, received a \$75 stipend.

Sheila Wexler of the Wexler Marketing Group, Inc. moderated all three focus groups. The objectives of these studies were to explore the challenges and issues facing engineers in the day-to-day workplace and to identify any additional skills PE's felt would be important in helping them achieve success in their careers. At the start of the

sessions, each participant also filled out a brief questionnaire that determined which societies they belonged to and which sources they used to keep current with the engineering profession. The questions included in this survey were:

1. What professional societies are you a member of?
2. What sources do you use to keep current on the engineering profession? (i.e. internet, magazine, etc.)
3. What engineering related websites do you visit?
4. What engineering magazines do you read?

Afterwards, they moved into the group and the moderator started the discussion. First she led the conversation to cover the types of problems engineers were having in today's workplace. Next, she moved the group on to discussing the skills that an engineer would find useful in daily work. Participants were also asked what engineering or professional development products and services they and their companies had purchased over the past year. Finally, six potential engineering products under consideration by the NSPE were described to the focus group participants, who then discussed whether they would be interested in using any of them.

The NSPE also recently conducted a survey to assess its members' educational interests. The assessment consisted of two components, an email portion, and a US mail portion. Email versions of the survey were sent to 17,778 NSPE members and US mail versions were sent to 3,000 members. The goals of this assessment were to determine the educational and professional development needs of the NSPE's membership in order to construct professional development programs, activities, and products.

The questions in this assessment were designed to ascertain the level of interest of NSPE members in selected topics, including managing and motivating employees, leadership development, professional ethics, public speaking, and business writing.

Questions on the survey asked the participants to rate how important a number of areas were to a successful career, how they obtained professional development hours, and what areas they thought it would be important to receive a professional certificate. A copy of this survey is included in Appendix D.

To supplement the research performed by the NSPE, brief interviews were conducted with PE's from the Worcester Polytechnic Institute (WPI) campus. These interviews gathered information regarding why engineers choose to become PE's and why they did or did not choose to join the NSPE. A purposive sampling technique was used to choose the interviewees. Using knowledge of the NSPE and the different fields in which PE's work, a group of subjects representative of WPI's fifteen person PE population was chosen. To do this, interviewees from all three departments with available PE's were used. These departments were civil engineering, chemical engineering, and mechanical engineering. This was done to see if engineers from different fields gained different benefits from being a Professional Engineer. Interviewees were also asked what other professional organizations they belonged to and why. This was intended to help us understand what reasons make a Professional Engineer choose one society over another. The interview questions were:

1. When did you become a PE?
2. Why did you become a PE?
3. What benefits have you gained from being a PE?
4. Do you belong to the NSPE?
5. Why do you or why don't you belong to the NSPE?
6. What other professional societies do you belong to?
7. Why do you belong to these societies?

The end of the interview was left open for the interviewee to discuss any other aspect of being a Professional Engineer that he felt had not been covered. These

interviews were conducted in teams of two. One person acted as the interviewer and asked questions to the interviewee. The other took field notes on the interview. Immediately after the interview, the researchers recorded their notes and observations. By doing this immediately after the interview was conducted, the chance of forgetting information was minimized.

3.2 Content Analysis

Once the data were collected from the focus groups, survey, and interviews, they were analyzed to determine the answers to two questions. The first question was “What areas do PE's feel are the most important to a successful career?” The second was “In what areas do PE's feel that they need the most improvement?” The answers to these two questions would determine which areas of the catalog needed products.

Since the three methods of research used to collect the data were so different, the same method of analysis could not be used for all three. Furthermore, the educational assessment survey had to be split into two parts, the multiple-choice responses and the open-ended responses. To analyze the multiple-choice section of the survey, the results from questions 1 and 5 (Appendix D) were studied. These were the only items on the survey that were relevant to the two questions to be answered. Both of these items asked respondents to rate specific skills as not important (NI), important (I), or very important (VI). All of these responses were entered into a spreadsheet and sorted in descending order by the percentage of people that responded VI. It was decided that the number of people responding VI was the most important factor to consider because it demonstrated a strong feeling towards the topic. Answering I only implied a weak interest or feeling

towards the topic. To insure that VI responses were the most important factor, the list was also sorted by adding the VI and I responses together. When this was done, the same seven topics finished at the top of the list as when it was sorted by VI alone. The same top three topics were present both times. The bottom four became reordered, but no new topics entered the top of the list. Therefore, it was decided that the topics that received the highest percentage of VI responses would be areas to consider for new products. Questions 3 and 4 were also added to the spreadsheet and their responses were sorted. Both of these questions pertained to different methods by which PE's pursue continuing educational opportunities. A high positive response in the areas of self study modules, books/manuals, internet based learning, or educational audio and video would tell whether or not to look for products of that nature to offer in the catalog.

The rest of the data that was collected did not offer any numbers to analyze. To examine it a process called content analysis was used. This is a system by which an objective coding scheme is applied to notes and data to condense it into a list of easily comparable items. In this analysis, themes that arose from the data were recorded. A theme is a simple sentence or string of words that describes an idea. While reading through the data, each theme that answered either of the two questions was recorded. The number of times a theme came up in the analysis was recorded next to the theme itself. Themes that came up the most times were either areas that were very important to PE's or areas that they felt they needed to improve in.

Questions 1 and 5 of the survey also left one blank line for respondents to write in topics that were not mentioned. These open ended question responses were the first thing this coding scheme was applied to. The next items to be analyzed were the transcripts

from the interviews conducted with PE's on the WPI campus during October 2000. The final item to be coded was the results of the NSPE's focus groups. Ideally, the audio recordings of all three focus groups would have been transcribed. This transcription would then have been coded in the same manner as the interview transcripts and open-ended survey question responses. Due to time constraints, the transcription of the tapes was not possible. Instead a written summary of the focus groups prepared by the Wexler Marketing Group was used for the content analysis. Since this was only a summary, it was not possible to tell how many times a theme had been mentioned or discussed. This meant that the counting portion of the content analysis was impossible to perform. Instead, a list was made of all the themes and ideas that came up in the summary. The complete results of all three content analyses were placed in Appendix G. Once all of these analyses had been completed, the results were compared. Themes that occurred often in all three analyses were deemed to be of high interest to PE's. Those that arose in two of the analyses were deemed areas of moderate interest. These high and moderate interest themes would be the focus of the new product search.

3.3 Affiliate Relationships

Mostly NSPE members receive the hard copy catalog. Since this limits the number of potential customers, the NSPE also has a web catalog. The web catalog offers the same products found in the paper catalog as well as additional old and new products. Affiliate relationships with online book retailers such as Amazon.com, Borders.com, or Barnes & Noble have made it possible for organizations like the NSPE to generate revenue by providing a web link to the retailer's website. Participating in such a program

would allow customers of the NSPE to purchase products from other retailers and help the society gain revenue.

Research of each retailer’s operating agreements was completed to highlight the benefits and costs of each affiliation. The primary topics that were researched were how each affiliates’ commission system worked, how easy it was to implement, what were the fees, and what were the limitations or drawbacks. Table 3-1 shows a comparison of the affiliate services offered by three online retailers.

Table 3-1: Affiliate Relationship comparison

Retailer	Fees	Commission System	Implementation	Limitations
Amazon.com	None	5% on books directly linked from the NSPE web page, increasable to 7%.	Web signup, must include types of products intended to sell.	No commission given to products that were not directly linked from the NSPE web page.
Barnes & Noble	None	5% on all products, increasable to 7%.	Web signup	
Borders.com	None	5% on books only, increasable to 7%.	Web signup	Customer must enable “cookies” on web browser

Source: Amazon.com, BarnesandNoble.com, and Borders.com

Analyzing Table 3-1 can only give an idea of how each retailer operates. It does not mention how other companies or organizations have benefited from an affiliation. To research this matter, contact with other societies similar to the NSPE who have affiliated with an online retailer would have been very helpful. However, no online retailer would provide a complete listing of their affiliates, they would only provide a small list of large well-known organizations such as Discovery.com, The World Wildlife Fund, and People

Magazine. Since the retailers would only provide a small list of dissimilar organizations it was hard to judge if setting up an affiliation for the NSPE would be beneficial. Contact was made with some organizations such as Discovery.com, Schoolpop.com, People Magazine, The Weather Channel and AT&T to get their views of the affiliations they have. The following questions were asked:

1. Why did the organization become affiliated?
2. What are the benefits seen?
3. Why did the organization choose that affiliation over another?
4. Has there been significant revenue drawn from the affiliations?
5. Are there any drawbacks with the affiliation?

The responses of the organizations were very similar to each other. All of the organizations recommended affiliating with online retailers. There were no drawbacks cited by any of the organizations

3.4 International Standard Book Number

Many products published by the NSPE are not in libraries or bookstores because they do not have ISBN's. Other professional society catalogs include ISBN's and the NSPE would like to include them in their 2001 catalog. Since the NSPE Marketing Director, Ms. Terry Ames, did not know of any specific products published by the NSPE that had ISBN's and did not have information on ISBN's the NSPE had purchased before, old NSPE products had to be researched to determine which of them had ISBN's. If there were any products that did have ISBN's it would indicate that the NSPE might still have a block of unused numbers since ISBN's are not sold individually. R.R. Bowker was contacted to locate any NSPE titles that had ISBN's and to find out if the

NSPE still had any unused numbers. The cost of purchasing blocks of ISBN's was also researched.

3.5 Product Research

In order to determine new products and services to add to the catalog, extensive product research was conducted. The research was organized in a very detailed manner to ensure that it could be understood and performed easily in the future. The detail that was used will enable the product research to be reproduced for future additions to the catalog. The first step in product research was to compile a list of categories and topics on which to concentrate the research. There were formerly five categories that represented a wide variety of products and services. The five categories were:

1. Career Resources
2. Practice Management
3. Project Management
4. Ethics
5. Contract Documents

There was a need to have more specific categories to ensure that members could navigate the catalog easily. By making the categories more specific, the number of categories increased from five to eleven. The categories were determined by the results of the content analysis. Themes that were found to be important were considered when determining the specific categories. Categories in similar catalogs were also considered for the NSPE catalog. The final list of categories is found in Table 3-2.

Table 3-2: List of Catalog Categories

#	Categories	Status
1	Employee Relations	existing
2	Engineering Ethics	existing
3	Global Marketing	new
4	Career Resources	existing
5	Licensure Assistance	new
6	Communication Skills	new
7	Financial Management	new
8	Project Management	existing
9	Contract Documents	existing
10	Resources For Young Engineers	new
11	Clearance Items	new

The five existing categories were included, however in some cases their names were changed to better clarify the types of products contained in that category. For example, the category “Practice Management” was changed to “Employee Relations”. The six new categories helped to highlight other areas of particular interest to PE’s, areas that were important to the NSPE’s mission and accounted for suggested marketing ideas. For example, Ms. Ames noted that a section including products for teenagers would help to involve students and make them aware of the engineering profession at a younger age. It was also believed that NSPE members would consider products in this category to purchase for their children. For these reasons the “Resources for Young Engineers” category was added to the catalog. Another suggested marketing idea was to include a “Clearance” category. This section would include, at a reduced price, products that were not successful in the past. This section would help the NSPE to sell the unsuccessful products, and move them out of their warehouse, making room for newer titles.

The final categories were used as a starting point for the product research. Numerous sources were used to find new products. On-line and hardcopy catalogs of similar organizations were used, as well as specific publisher catalogs and correspondence. Over forty sources were used to find products that fit into the eleven catalog categories. Table 3-3 is a small sample of the spreadsheet that was compiled containing the various catalogs that were used to find products. The entire spreadsheet can be found in Appendix J.

Table 3-3: Sample Source List

SOURCE	DATES	PP	TYPE
Amacom (Trade and Professional Books)	Fall/Winter 2000	32	hard-copy catalog
American Consulting Engineers Council	2000	12	monthly bulletins
American Society of Chemical Engineers	2001	110	hard-copy catalog
American Society of Civil Engineers	Fall/Winter 2000/2001	31	hard-copy catalog
American Society of Mechanical Engineers	2001	100	hard-copy catalog
Battelle Environmental Technology Catalog	2000	31	hard-copy catalog
Professional Publications, Inc.	July-December 2000	20	hard-copy catalog
Project Management Institute	2000	64	hard-copy catalog

Some sources contained up to fifteen appropriate products, however others did not have any products to consider. A spreadsheet was used to organize information for each of the products. The complete spreadsheet can be viewed in Appendix H. The spreadsheet contained the following information:

- Product number (assigned arbitrarily for tracking purposes)
- Source where the product was originally found (specific catalog or web site)
- Title of the product
- Type of product (book, video, CD-ROM, etc.)
- Price of the product (listed in original source)
- Primary Category
- Secondary Category (if applicable)

- Author or Editor
- Publisher
- ISBN or catalog number
- Notes (publishing date, selling information)

To ensure that the product was relevant to the NSPE catalog it was categorized immediately. If a product topic overlapped and appeared to be relevant to more than one category, the primary category was recorded and then the secondary category was also recorded in the spreadsheet. However, in many cases the product would fall into one main category and no category was recorded for the secondary category. If any of the information was not originally found for a product, research was conducted to find out all of the information that was needed to complete the spreadsheet. This information was obtained from Internet searching tools and by calling the product sources. All of this information was added to the database and a description of each product was created. The descriptions were necessary to appropriately categorize each product. The final hard-copy catalog would also contain descriptions that would be written by referring to product descriptions, publisher information, and a review copy analysis. Once all of this information was compiled, publishers were contacted.

Publishers supplied information on pricing and discounts, shipping, additional product descriptions, and pictures. Publishers were contacted by email and by telephone. Another spreadsheet was set up to keep track of publisher contacts. The spreadsheet contained the following groups:

- Publisher
- Contact Person
- Phone Number
- Email Address
- Shipping Options
- Bulk Ordering Discounts
- Notes

Publishers that were located outside of the United States were not contacted. The relevant United States publishers were contacted and the information they provided was compiled. Of particular interest in deciding which products to include were the shipping options. The NSPE has a limited budget to buy products and inventory, so the option to have products “drop shipped” by publishers was very important. This allows the NSPE to advertise the product in their catalog but not purchase it for inventory. When an order is received it is directed to the publisher who ships the product to the customer and bills the NSPE. By doing this, the NSPE can avoid taking inventory for a product. Some publishers do not provide any discount for the drop shipment option, which means that the NSPE would collect no revenue for the sale. Most publishers offer considerable discounts for bulk ordering. This information was collected from the publishers in order to include it in the choice of products for the catalog. Review copies of all the products were requested. The review copies would also help to choose products for the catalog.

3.6 Product Selection

Approximately 130 products were selected for consideration during the product research process on the basis of the topic they covered. Upon reviewing the information that had been collected for each product, about 35 products were removed from consideration. These products were removed because they were either published outside of North America, out of print, or the publisher information could not be found.

To analyze and rank these products, they were assigned to the individual categories in which they would appear in the catalog. Then all of the products in each individual category were compared and ranked. Given more time and resources, a better

way to perform this ranking would have been to set up a committee of NSPE members who would review each of the products and give their opinions. The products could then have been ranked according to those opinions. However, this was not a viable option due to time constraints. Instead, the products were ranked within their categories on the basis of a number of different factors. The product description or an actual copy of the product if it was available was used to decide how closely the product related to any of the themes or discussions that arose from the previous research into the concerns and thoughts of PE's. The relevance each product had to an engineering workplace was also considered. Other topics considered were whether the book covered more than one topic, the length of the book, the price of the book, the publisher of the book, how easy to read the book was, how well the book sold for other companies, and how favorably people reviewed the book. The product that possessed the most of these favorable characteristics was given a ranking of one, the next most was ranked two, and the rest of the products in the category were ranked accordingly. Once this was completed for all of the topics, each product was assigned points based on the ranking it received. The top ranked product in each category received five points, the next best received four points, the third ranked product received three points, the fourth best received one two points, and the fifth best product received one point. Anything ranked below five received zero points. Table 3-4 shows a sample category from the catalog and how the products within it were ranked.

Table 3-4: Sample Category Ranking

Global Relations	Rank	Points
Managing International Operations: A Guide For Engineers, Architects, and Construction Managers	1	5
Do's and Taboos Around the World for Women in Business	5	1
Global Marketing Management	4	2
Working in Japan: An Insiders Guide for Engineers and Scientist	3	3
Going Global: Strategies for Success in the International Arena	2	4

The five products in this category were ranked according to the system described above. The top ranked product was *Managing International Operations*. This product received a high ranking because it possessed the most favorable qualities of the five products within the category. It covered several areas that were determined to be of interest to engineers during the content analysis. These areas were operating in a global environment, managing, and project management. The publisher of the book was ASCE, who is affiliated with the NSPE. The book was also a best seller for the ASCE. The book was also specifically written for engineers and construction. The lowest ranked product in this category was *Do's and Taboos Around the World for Women in Business*. This book did cover the topic of doing business around the world, which had been brought up in the focus groups. However, the book also possessed a couple of negative factors. The book was not geared towards engineers or any type of technical profession. This type of generality can make a book less effective in the catalog. It was also geared towards women, who make up a very small percentage of the NSPE's membership.

The next step was to consider the shipping methods available for each product. The preferred shipping method was drop shipping. This was because the NSPE would not have to purchase or stock the book as previously discussed. Points were assigned to

each product based on the best available distribution method offered by its publisher. This point system reflects the fact that the NSPE would prefer drop shipping with a 20% discount to purchasing a stock with a 40% discount. Each product received points only for the best available shipping method. A book that could not be drop shipped or could be drop shipped with no discount to the NSPE received zero points for its drop shipping score. A 10% drop shipping discount received 4 points. A 20% drop shipping discount received 5 points and a 30% discount received 6 points. A product received a point for each 10% that its publisher discounted it for bulk sales. For example, a book that is discounted 40% received 4 points. The discount for bulk orders was determined on a basis of the purchase of 25 items since this was the typical quantity ordered by the NSPE. Each product received only one point value for its publishers shipping method. The point system for shipping methods is summarized in Table 3-5.

Table 3-5 Shipping Point System

Drop Shipping		Bulk Ordering	
Discount	Points	Discount	Points
< 10%	0	10%	1
10%	4	20%	2
20%	5	30%	3
30%	6	40%	4
40%	7	50%	5

The final point value for each product was determined by the following equation:

$$0.75 * (\text{rank points}) + 0.25 * (\text{shipping points}) = \text{total points}$$

This weighting system made the rank points three times as important as the shipping points. This reflected the fact that the NSPE did not desire the available discounts and

shipping methods to be the most important factor in making a decision on a product. Instead, the overall quality and relevance of the product, as determined by the rank points, was the most important factor. Once the total points were calculated for each product, they were ranked from highest to lowest.

After these final rankings were determined, it was decided how many products were going to be added in each category. This was done using the results from the content analysis performed earlier. The NSPE had decided it would like to add approximately 20 new products to its catalog for 2001. Categories in the high interest column were allocated at least three products. The category “Products for Young Engineers” was made a high priority by the NSPE. Categories of moderate interest were allocated two to three products. Products of low interest were allocated only one product. Using these numbers and the completed product rankings, products were selected from each category and recommended for inclusion in the 2001 catalog. The head of the NSPE marketing department reviewed this list and selected the final list of products that would be included in the NSPE 2001 Products and Services Catalog.

3.7 Publisher Contacts

Once the product selection process was completed and the list of potential products was reduced to a smaller selection it was necessary to contact the publishers again. A new spreadsheet was created using the original publisher spreadsheet. The new spreadsheet contained only the publishers of titles that were on the final list of potential products. New columns were added to this spreadsheet. The new columns were:

- Product Numbers
- Total Number of Products

- Email Response
- Fax Response
- Review Copy
- Blurb (product description, quotes, testimonials received)
- Cover Art
- Price Check
- Forms
- Account

At this point in the new product selection process, it was probable that many of the titles would be included in the new catalog. In order to include them in the new catalog it would be necessary to take inventory or make drop ship arrangements with the publishing companies. The spreadsheet simplified the process by laying out all of the information for each publisher. The “Product Numbers” column contained the product numbers of each product that was being considered by each publisher. The next column “Total Number of Products” listed the total number of products that were still being considered by each publisher. How each publisher responded, whether by fax or email, was also included. The information that they had provided was very important. Whether a review copy, product description, or cover art had been received was all documented in the spreadsheet. If any of these items had not been received after the initial contact, it was requested again in the follow-up contact. Of particular interest at this point were the product descriptions and review copies. To write up complete and accurate product descriptions for the catalog, this information was crucial. If pictures of the cover of the product were to be included in the hard-copy catalog, electronic files would be needed or the cover would have to be professionally scanned to ensure high resolution and a quality picture. When the publishers were contacted, electronic files were requested so that the NSPE would not have to spend more money to scan the covers and time could be saved. The electronic files were requested as either TIF or EPS files because only these could be

used by the catalog designer in the final catalog layout. The list prices of the products, the discounts, and the shipping options were also double-checked to be sure the information was accurate and up to date.

The next step in adding titles to the catalog was to acquire any forms necessary for setting up accounts with the various publishers. These forms were received via fax, email, or download from web sites. Most of the publishers requested information about the company and type of catalog including typical product type, successful products, and target audience. They also requested more specific information to set up an account, such as bank references, trade references, and a copy of an exemption certificate. The “Forms” column of the spreadsheet noted whether or not forms had been received and reviewed. In some special cases there were titles from publishers with which the NSPE had already established an account. A few publishers did not require any forms to be filled out to establish an account. The “Account” column recorded this information in the spreadsheet.

When the final decisions were made and the products that would be added to the catalog were selected, the information that was requested from the publishers submitted. In some cases the forms overlapped so much that one document was created and sent to all the appropriate publishers in order to save time. The process was simple, however because it dealt with the handling of money and required signatures, Ms. Ames’ participation was required. As the Marketing Director, Ms. Ames makes the final decisions on the quantity of each product ordered and decides whether the product will be drop shipped or if the NSPE will take inventory. Because the actual layout and design of

the catalog was a lengthy process, the final decisions were made and the paperwork was filled out at the same time as the final catalog was produced.

3.8 Catalog Layout

Once a complete list of products and services was established, the design and layout of the catalog had to be completed. The graphics, colors, fonts, and basic design that were used in the 2000 catalog were used again in the 2001 catalog. The main changes were the addition of new products, the removal of some older products, the addition of new categories, and the distribution of products into the new categories.

The first step in laying out the new catalog was to determine which products would remain and which products would be removed. To do this, the NSPE's sales records from the last four years were checked. Products with poor sales histories were taken out of the hard copy catalog. These were products that had shown a significant decrease in sales over the past two to three years. Products with low sales and high inventory were placed in a clearance section in the back of the catalog.

The next step was to sort all of the existing products as well as all of the new products into their respective categories. Once this was finished, each category was examined to insure that it contained enough products to warrant being a category in the catalog. Having categories with a very small number of products would hurt the appearance of the catalog.

Once all of the categories were finalized, the actual catalog layout began to take shape. Every element of the catalog was compiled in a document called the catalog master. Ms. Ames had put together a catalog master for the 2000 catalog. This was used

as a guideline for putting together the 2001 version. Much of the catalog would remain the same. The cover, color scheme, and graphics were not changed. This was essential for creating a catalog that was recognizable to the NSPE membership. The four-column style on full-sized pages also remained the same. By maintaining this type of layout, the catalog was more easily organized. The catalog master contained very detailed instructions and placed each product in the appropriate category.

The bulk of the catalog is the actual products and their descriptions. Product descriptions for old products that were in the 2000 catalog were not changed. However, new products that were added to the catalog required new descriptions. The descriptions were written in the same style as the descriptions that were in the 2000 catalog to maintain uniformity. The descriptions were put together using information from publishers, such as blurbs, testimonials, and quotes. The review copies were also browsed through to ensure that the description described each product completely and accurately. The covers of each selection were also reviewed. In some selections only the electronic files could be viewed. Only interesting and visually pleasing covers were to appear in the catalog. By comparing the covers, there was a stark contrast between the covers. The covers fell into two basic categories. Some covers were plain, displaying only the title of the selection. The other category included selections that had pictures and interesting graphics on the cover. The covers containing pictures and interesting graphics were chosen to be included in the catalog.

The document also contained all of the information for five different sidebars. In this catalog a sidebar is the outermost column on each page. It has a blue background

that helps highlight important products and services that the NSPE provides. The five sidebars included in the catalog were:

- Specific Product Information
- Ordering Methods
- Online catalog reference
- NSPE Code of Ethics
- NSPE Annual Convention Advertisement
- NSPE Membership Advertisement

NSPE departments were consulted to obtain updates and changes to the sidebars. The necessary changes were made and the sidebars were thoroughly explained in the catalog master.

The catalog also contains a membership application and an order form. The NSPE Membership department was consulted to ensure that the most up-to-date version of each appeared in the new catalog. Again, changes were noted and applied to the catalog master.

When all the major pieces of the catalog were written and edited the entire catalog was put together. The categories were organized in order of importance. The level of importance was determined by considering the NSPE's mission and goal, as well as the feedback compiled in the content analysis. The products were strategically arranged within each category. The NSPE publications were first in each category. This was to promote the NSPE as much as possible in order to make the most money on their own publications. Next, new products were placed into each category. Finally, the old products that were not placed on the backlist were placed into each category.

The catalog master was edited many times to ensure that every piece of information was accurate. Every small detail was thoroughly explained to make the

actual design of the catalog clear and straightforward. Once the catalog master was edited and finalized it was submitted to Mr. Tom Trussell, the catalog designer. Mr. Trussell began to layout the final printed version of the catalog using the catalog master and last year's catalog as a reference. The process required exchanges between Mr. Trussell and the NSPE to be certain that the catalog was put together correctly. This process requires approximately one month to complete. When it is complete, the final version will be reviewed and approved by the NSPE. The catalog will then be printed and distributed to the NSPE mailing list.

Chapter 4

Results and Discussion

This project contained a variety of results. The Hard Copy Catalog Master that was made to send to the catalog designer was one of the main outcomes of this project and is discussed later in this section. The ranking system used to determine which products would be suggested to the NSPE for inclusion in its catalog was also a result. The documented system of putting together a catalog was another result of this project. Also included in this section are the results of other pieces of this project such as focus groups, survey, interviews, content analysis, affiliate relationship research, and ISBN study.

4.1 Qualitative Research

The results of the focus groups, survey, and interviews were used to determine in which areas PE's were most interested in improving themselves and which areas they thought were most important to a successful career. Before an analysis was completed, the results themselves were reviewed to determine their accuracy and usefulness. The first results studied were those from the focus groups. To determine their validity, the methods used to collect the data were examined.

The use of a professional moderator greatly reduced the risk of the participants being fed cues. This insured that the data collected was an accurate assessment of the feelings of the group being interviewed. As stated in the Literature Review however, these focus groups alone cannot provide valid information on the feeling of the entire

Professional Engineer population. If the results were assumed to be true for the whole PE population, a great deal of coverage and sampling error would be introduced because the group was not randomly sampled. One other obvious problem was that this study consisted of only thirty people. When compared to a Professional Engineer population of over 400,000, this is a very miniscule number. It must also be noted that the thoughts and concerns of engineers in Houston, Atlanta, and Grand Rapids were not necessarily the same as those of engineers in the rest of the country. This is especially true for engineers who do not work in highly populated urban areas like the three cities in which the focus groups were conducted. It should be noted however, that focus groups are not designed to be a stand-alone research method. They are more effectively used as a way to gather the thoughts and ideas of a sample of a group that will later be studied using a more comprehensive research method such as a survey. These focus groups would have been a far more effective research tool had the NSPE then designed a survey around the responses it obtained and sent it to a more representative population of PE's.

The next results that were reviewed were those obtained from the NSPE's Educational Assessment Survey. The response rate for the email survey was 10.5% and the response rate for the mail survey was 11.1%. This means that approximately nine out of every ten people who received this survey declined to return it. This introduces an enormous amount of non-response error. This type of error occurs when a significant number of people do not respond to a survey and are in some way different from the population that does respond. According to Salant and Dillman (1994), "People who receive a mail questionnaire have the chance to examine it before deciding to respond; their interest in the topic will very likely affect this decision." It is very likely that the

90% of the NSPE members surveyed whom chose not to respond had different feelings about the NSPE than the people who did respond. When a survey of the general population is conducted, it is considered acceptable to get a response rate as low as 60%. When a survey is conducted of a special population like members of the NSPE, survey results are considered questionable if a response rate of less than 70% is achieved (Salant and Dillman, 1994). Since only 10% of the people surveyed responded, it was impossible to predict what the other 90% of the population thought. Therefore, there is a significant probability that the data collected from this survey is inaccurate. Had a higher response rate been achieved, this data could have been used effectively.

If time and money had not been a factor, it would have been most beneficial to the NSPE to conduct this research again in a manner that would have collected results more representative of the entire population of PE's. However, the top priority of the NSPE throughout this entire project has been getting this catalog out to its members. Since this was the case, it was necessary to move on to an analysis of the data to determine what areas of the catalog would benefit from additional products.

4.2 Content Analysis

Appendix G contains the results of the analyses that were performed on the survey, interviews, and focus groups. The analysis of the multiple-choice section of the survey (Appendix E) showed that the same six topics placed on the top for both questions 1 and 5 (Appendix D). The percentage of respondents that rated these six topics as very important ranged from 66.4% to 46.3% for question 1 and 56.6% to 38.3% for question 5. These six topics were professional ethics, business writing, professional image,

managing/motivating employees, public speaking, and leadership development. Question 3 showed that 19.2% of PE's used self-study modules such as books and tapes to meet their continuing educational requirements. The catalog contained very few products of this type and the addition of more self-study courses would certainly help the NSPE catalog. Question 4 showed that 19.3% of PE's felt that books and manuals were very effective ways of meeting their continuing educational requirements while only 6.4% rated audio and video tapes as highly.

Table 4-1 is a sample of the results found in Appendix G. The results in Table 4-1 were the themes that came up the most times in the content analysis.

Table 4-1: Sample of Content Analysis Results

Theme	Counts
Open Ended Survey Questions	
Communication	13
Continuing Education	7
Working in Teams	6
Interviews	
Ethics	6
Licensing	5
Focus Groups	
Deregulation	N/A
Recruiting/Hiring	N/A
Working Outside North America	N/A

Only three themes came up with regularity in the analysis of the open-ended survey question results. The topic of communication, both with clients and non-engineers, came up a total of thirteen times. The importance of continuing education to an engineer, even if it is not required by the state, came up seven times. Organizing and

working with teams was mentioned six times during the analysis. Other ideas that were mentioned were maintaining high morale, office productivity, retaining employees, and combating deregulation.

The analysis of the interviews performed on the WPI campus revealed only a couple of recurring themes. The most common one was mentioned six times in the four interviews and stated PE's must be responsible, ethical, and hold the public trust. The next most common theme had five counts and stressed the importance of being licensed to do design work. Tied for third with three counts was being a consultant and testifying in trials. Other interesting ideas that were not mentioned as often were a possible service for filing all of the application materials for a PE license and products that would help business owners and managers to form long term relationships with their employees.

As mentioned earlier, it was impossible to count the number of times any theme was mentioned during the focus groups conducted by the NSPE. It was only possible to see how often it came up during the summary of the focus groups written up by the Wexler Marketing Group. The issue of deregulation and the fact that many decisions were made based on money alone was brought up several times. The difficulty of recruiting in today's marketplace, because of the low number of graduates and engineers leaving the field, also received some mentions. Participants stated that useful skills for an engineer today would be management, contract law, project management, marketing, accounting, and communication. Though books are very useful, they also mentioned that audio and video courses were very useful for continuing education purposes because they were very cost effective. One of the products discussed (Engineering Outside North America) received a high degree of interest. Participants also said that they might be

interested in one other (How to Operate as an Engineering Contractor) in the future.

Other ideas they suggested were products relating to legal and ethical information and Internet courses.

The final step of the analysis was to see which themes occurred in several places. Upon comparison, it was noted that both professional ethics and managing employees came up with regularity in the survey, interviews, and focus groups. These were labeled areas of high interest. Continuing education, contracting, communication, deregulation, engineering outside the US, leadership development, and forming long term relationships with employees both came up in two different sources. These were labeled areas of moderate interest. Public speaking and business writing each received responses in the educational assessment survey and were labeled areas of low interest. Table 4-2 summarizes the results of this content analysis.

Table 4-2: Summary of Content Analysis

Interest Level	Areas
High	Professional Ethics Managing/Motivating Employees
Moderate	Continuing Education (books/manuals, or audio/video) Communication Deregulation Leadership Development Engineering in Other Countries Contracting Forming Long-Term Relationships with Employees
Low	Business Writing Public Speaking

4.3 Product Selection

The results of the ranking system for the top 21 products are shown in Appendix I. The actual ranking of each product was a major result of this project. However, the methodology involved in using the ranking system is also a major result of this project. The process is detailed in Section 3 of this report. Table 4-3 shows the final products that were selected for the catalog, along with the points they received from the ranking system.

Table 4-3 Products Selected for Catalog

PRODUCTS	AUTHOR	RANK
Engineering Ethics		
Social, Ethical, Policy Implications of Engineering Selected Readings.	J. Herkert	4.5
The Management of Engineering: Human, Quality, Organizational, Legal and Ethical Aspects of Professional Practice	F. Bennet	4.25
Employee Relations		
Finding and Keeping Great Employees	J. Harris, J. Brannick	5.25
Understanding and Changing Your Management Style	R. Benfari	3.5
Global Relations		
Managing International Operations: A Guide For Engineers, Architects, and Construction Managers	R. Kangari, C. Lucas	4.75
Do's and Taboos Around the World for Women in Business	R. Axtell, T. Briggs, M. Corcoran	2
Global Marketing Management	M. Kotabe, K. Helsen	2.75
Working in Japan: An Insiders Guide for Engineers and Scientist	H. Honda	2.5
Going Global: Strategies for Success in the International Arena	E. Greco	4.25
Career Resources		
Engineer's guide to Life Long Employability	J. Eason	4.5
Licensure Assistance		
How to Become a Professional Engineer	Prof Pub Eds	4.75
Communication Skills		
Engineering Your Writing Success	J. Vincler	4.25
Technically Speaking	J. D'Arcy	4
Creating Winning Presentations	M. Kemether	3.5
Financial Management		
Common Sense Financial Management	I. Rusk	5
Marketing		
Reinventing Marketing	M. Zweig	5
Project Management		
Wired!	D. Stone	5
Young Engineers		
Is There an Engineer Inside You?	C. Baine	4
Studying Engineering: A Road Map to a Rewarding Career	R. Landis	5
Careers In Focus (Engineering)	Ferguson Eds.	3.25

4.4 Catalog Layout

The final version of the Hard Copy Catalog Master is located in Appendix K. This document is the main result of the catalog layout process. After closely inspecting each category, some final adjustments were made during the catalog layout process. This inspection revealed that the *Project Management* and *Financial Management* categories

were too small to be placed in the catalog. To fix this situation, products from both categories were combined into a single category called *Practice Management*. Another category, called *Continuing Education*, was created containing products from *Project Management* as well as the two professional development courses originally placed in *Career Management*.

The results of all the updates, such as the side bars and bursts can be noted in the 2001 Hard Copy Catalog Master (Appendix K). Also the new products and their descriptions can be seen. Each product description followed the same format. The following is a sample product description exactly how it appears in the catalog:

Going Global: Strategies for Success in the International Arena for A/E/P & Environmental Consulting Firms: A Video Conversation with Edward M. Greco, P.E.

Sub: Learn how to succeed in making your firm international.

Taking your A/E/P or environmental consulting firm international can be one of the most exciting and rewarding business ventures you pursue. This one-hour video takes you step-by-step through the preparation, planning, and execution of an international strategy.

Find out what works and doesn't work globally, how much planning is needed, what to include in your international plan, what marketing resources are necessary, and how international contracts differ. You'll also find out how to conduct a self-assessment of your firm's capabilities and resources.

©1999, ZWEIG WHITE & ASSOCIATES
60 MINUTES VIDEO, ISBN: 1-929868-28-6
NSPE Product #ZGGS
NSPE MEMBER PRICE: \$ 134.00
NON MEMBER PRICE: \$ 149.00

The results of the writing process were the 20 new descriptions added to the catalog.

Every product description followed the same format. First the title was typed in Italics,

then a small subject heading was written. This subject heading was a short, interesting blurb that summarized what the book was about. Next two short paragraphs were written that succinctly described each book. Listed at the end of each description was the publisher, publishing date, number of pages, ISBN, NSPE product number, NSPE member price, and Non-Member price. In addition, if the cover art of a title was included, a reference to the electronic file name was placed at the very beginning of the product description. Only those covers that were determined to be interesting and attainable were included in the catalog due to the limited amount of space.

The actual Hard Copy Catalog Master was the result of following an elaborate list of steps. This system can be easily utilized by following a series of steps. This report also details the steps if additional information is required. However, the following steps are very specific and the need for additional information is small. The steps are as follows:

1. Gather information about areas of interest using collection tools like surveys, focus groups, and interviews.
2. Analyze the information and highlight those areas of high, moderate, and low interest levels.
3. Specify categories that reflect the NSPE's mission and the areas of interest determined above.
4. Use the categories as a starting point in determining new products to add.
5. Gather catalogs from similar organizations and publishers to determine products that fit into the categories.
6. Establish a spreadsheet containing potential products.
7. Contact publishers to gather preliminary information and review copies.
8. Organize this information in spreadsheet.
9. Compile product information, including testimonials, descriptions, basic information, reviews, and pictures.
10. Eliminate any products that lack significant information or are blatantly irrelevant.
11. Review copies of the potential products.
12. Using the spreadsheet of potential products and the product information, eliminate products that are not closely related to NSPE's mission or membership.

13. Submit this spreadsheet to the Director of Marketing and Public Relations for approval.
14. Use a ranking system to determine the appropriate number of products to add to the catalog (in this case it was 20).
15. Rank each product within its respective category and eliminate lowest ranking products.
16. Using all the information compiled, write product descriptions for remaining products.
17. Submit these to the Director of Marketing and Public Relations and the Manager of Public Relations for corrections and editing.
18. Finalize publisher information for specific products, including pricing, shipping, and return information.
19. Create Hard Copy Catalog Master using the previous year's updated version. (Use the following steps to update the previous year's version.)
20. Determine which products sold well and which products did not.
21. Place the unsuccessful products on the backlist to be sold for 50% off or returned for a refund.
22. Check the supply of each product in the catalog.
23. Remove any products that are no longer in print or are out of date.
24. Contact the Director of Meetings to get updated information on the NSPE Convention
25. Contact the Production Assistant to get a new picture of the NSPE Convention Site and the new convention logo.
26. Contact the Director of Member Development and Services to get updated information for the NSPE Membership Advertisement.
27. Double-check the "On-line Reference", "Ordering Methods", "NSPE Code of Ethics", and "Vision, mission, values, and goals" sidebars to make sure the information has not change
28. Check the order form to make sure it is still operating properly and no information needs to be added.
29. Contact the Membership Development department and request that the electronic file of the newest membership application be sent.
30. Research the NSPE Product and Services Partnerships to determine if they are valuable to NSPE members.
31. Remove any invaluable partnerships.
32. Compile information on any new partnerships.
33. Categorize products in the catalog to fit the newly determined categories.
34. Add new products and their descriptions to the appropriate categories.
35. Include cover art (in the form of EPS or TIF files) for new products with attractive covers.
36. Within each category, place NSPE published material first, new products second, and any other products third.
37. Edit all details including blurbs, tag lines, cover information, table contents, and general formatting and spelling.
38. Submit Hard Copy Catalog Master to the Director of Marketing and Public Relations for approval and corrections.

39. Make the necessary changes and corrections to the catalog master.
40. Submit Hard Copy Catalog Master to Catalog Designer to begin design process.

This step-by-step guide is very detailed and lists the specific tasks that need to be completed in chronological order. However, it is important to note that three students and the NSPE Director of Marketing and Public Relations worked on the bulk of the catalog's creation and were able to divide the work among themselves. For example, while one student was contacting publishers, another student was simultaneously compiling product descriptions, quotes, pictures and book reviews. A flow chart was put together to summarize the process and procedure. It can be found in Appendix C. This flow-chart clearly shows tasks that can be done simultaneously, and demonstrates more concise order of operations.

4.5 Affiliate Relationships

The NSPE's main purpose in affiliating with an online retailer was to create an alternate way to generate revenue for the society. The questions that the NSPE needed to answer were:

1. Does an affiliation help serve NSPE members?
2. How can the NSPE gain revenue?
3. Does it cost anything?
4. Are there any drawbacks?
5. Who else is doing it?

Using Tables 2-4 and 3-1, it was seen that all the retailers have a very similar commission system. All of the retailers offered a 5% commission for books. However, Barnes & Noble did not limit the commission to books, as do Amazon.com and Borders. All the retailer's commission systems allowed the commission rate to increase up to 7% if the net sales reached \$1,000,000.

Other differences between the retailers were the ways that the NSPE would receive a commission. Amazon.com seemed to have the most limitations of all the retailers. In Amazon.com's system, the NSPE would have to provide a listing of books to link to their system. Only those books that were listed and linked from the NSPE would generate a commission. Borders' system limited the tracking of commissions by the need for the customer to enable "cookies" on their web browser. If the "cookies" were disabled, the NSPE would not receive any commission.

Another way of gathering information about affiliations was to contact other organizations that were affiliating and ask them what they thought of it. The organizations that were of interest in feedback were other professional engineering societies. Contact was made with the retailers asking them to provide a listing of similar non-profit organizations with which they were affiliated. None of the retailers contacted would provide us with this information. They only provided a sample of very well known companies such as People Magazine, AT&T, and the Weather Channel.

Contact was made with some of the companies from the small list provided by the retailers. All of the companies said that they were very happy with affiliating with the retailers. Schoolpop.com said that, "anyone not doing any affiliation is crazy because it is free and does not cost you anything." (Schoolpop.com is a non-profit organization that primarily generates all revenue from affiliate relationships). There were no negative comments from any of the organizations.

Since all of the organizations had nothing bad to say about the retailers and no examples of drawbacks were mentioned, the results of Tables 2-4 and 3-1 were used to make a recommendation. The recommendation that was made was for the NSPE to

affiliate with Barnes & Noble. The reason for this choice is primarily the limitations imposed by Amazon.com and Borders' commission systems previously discussed.

4.6 International Standard Book Numbers

The ISBN system has been adopted by many professional societies in their catalogs. The NSPE plans to utilize the system as well, starting with their 2001 catalog. It was known that ISBN's were used in prior NSPE publications, but it was unknown when the last time and for what publications the numbers were used and for what publications. It was also not known who purchased the numbers for the NSPE and what existing numbers, if any, remained unused.

Research of NSPE products was completed to locate NSPE publications that had ISBNs. The publication *Opinions of the Board of Ethical Review Volume VIII* was the only publication found that had an ISBN. With this information it was possible to know what the NSPE's publisher code was. The publisher code is a sequence of digits within an ISBN that is unique to the individual publisher to which the number was assigned. The NSPE's code was 0-91540.

Contact with the ISBN agency was made to find out how many ISBN's purchased by the NSPE were still unused. Ninety-eight numbers out of a block of one hundred numbers remained unused. However, the ISBN agency would not say what the numbers were unless a service charge of \$100 was paid. If the NSPE calls (877-310-7333) the ISBN agency and request a "Duplicate Log," the set of numbers will be provided.

Since the NSPE is a non-profit organization it is possible for the NSPE to get ISBN's with no processing fee if the NSPE has a 501 (C3) tax exemption. Therefore

instead of paying the \$100 to find out what the old numbers are, new numbers can be obtained. Doing this would be the best method of getting ISBN's for NSPE publications and would be very easy since the NSPE already has an account with the ISBN agency.

Chapter 5

Conclusions

The following are our conclusions:

1. The new products and categories added to the NSPE 2001 Products and Services Catalog are believed to meet the needs of Professional Engineers in today's workplace. The content analysis of the research results determined what topics were most important to Professional Engineers. The new products and categories were selected to cover those topics.
2. Due to errors present in the qualitative research the areas of interest to Professional Engineers determined in the content analysis may not be fully adequate for the selection of products. This is because the three studies were performed by three different groups using different techniques and asking three very different sets of questions.
3. The step-by-step guide to making a catalog and product ranking system developed in this project are suitable for use by the NSPE in the future. These two systems would be a useful guide to anyone working on the catalog in the future.
4. The product ranking system, which takes into account several factors including the topic of the product, the overall quality, and the methods by which it can be purchased and shipped, was the first of its kind to be developed and used at the NSPE.
5. This ranking system is flexible enough to meet the changing needs of the NSPE. The many factors that the system takes into account and the modifiable

weightings of the ranking and shipping points make it possible for the system to reflect the NSPE's current needs.

Chapter 6

Recommendations

Based on the results obtained and conclusions that were made, we make the following recommendations to the NSPE for future catalog production. The recommendations focus on improving the catalog production process, specifically beginning with research and product selection and carrying through to catalog layout and design. Some additional recommendations on the overall process are also made. The recommendations are as follows:

1. In order to choose products that help NSPE members and the population of PE's, it is essential that research be conducted. Several different methods should be used in order to gather information to identify correctly the types of products that meet the needs of PE's.
2. The NSPE needs to improve the consistency and coordination of its market research in order to get a more accurate assessment of what should go into its catalog.
3. The product research method of searching as many sources as possible should be adopted in order to ensure that all possible additions are considered.
4. The NSPE should utilize the developed ranking system in the future to ensure that the best products are selected for inclusion in its catalogs. By using the ranking system it will be possible to compare products year by year, meaning that the ranks of new products for the 2002 catalog can be compared to that of the 2001 catalog to get an idea of which products are the best overall.

5. The NSPE should utilize the step-by-step Catalog Production System that was generated during this project. By consulting the system as a reference, employees can learn the entire process or use it as a method to ensure that all steps are considered.
6. A Product Review Board should be created to help identify and evaluate new products for the catalog. By forming a Product Review Board, the selection process can take more people's opinions into consideration. The Product Review Board should be made up of the Director of Marketing and Public Relations, NSPE Members, PE's, and students planning on getting licensed.
7. The process of design and production of the catalog should be completed in a longer time frame. Although the actual amount of time spent on the catalog does not need to increase, spreading the time out will help account for any lags from outside resources such as publishers for example.
8. The catalog should continue to be utilized as an effective tool that helps the NSPE meet its goals.

Appendix A: The NSPE

History

D.B. Steinman, the president of the American Association of Engineers (AAE), founded the National Society of Professional Engineers (NSPE) in 1934 in Washington D.C. Steinman thought that a separate organization for PE's (PE's) across all disciplines of engineering was needed. The NSPE serves over 60,000 members and the public through 54 state and territorial societies and more than 500 chapters.

Mission

NSPE is a national society of engineering professionals from all disciplines that promotes the ethical and competent practice of engineering, advocates licensure, and enhances the image and well-being of its members. The NSPE's primary vision is to be "the premier national organization that promotes and defends the professional interests of all engineering professionals (NSPE, 2000)." The society strives to meet its mission with the follow core values:

- Protection of the public
- Ethical conduct
- Professionalism
- Competency
- Fulfillment of member needs
- Service to the public
- Licensure

Along with the NSPE core values, the following are the societies major goals:

- Promote the competent, ethical, and professional practice of engineering.
- Enhance the image and stature of engineering professionals.

- Provide education, career development, networking opportunities, and other benefits to engineering professionals and students.
- Advocate the interests of engineering professionals and protect the public through an effective government relations program.
- Align the structure, activities, and governance of the society to optimize support and resources for all programs.

These core values and goals are carried into the “Engineers’ Creed,” which was adopted by the NSPE in 1954 as follows:

“ As a Professional Engineer, I dedicate my professional knowledge and skill to the advancement and betterment of human welfare.

I pledge:

To give the utmost of performance;
 To participate in none but honest enterprise;
 To live and work according to the laws of man and the highest standards of professional conduct;
 To place service before profit, the honor and standing of the profession before personal advantage, and the public welfare above all other considerations.
 In humility and with need for Divine Guidance, I make this pledge.”

Budget

The NSPE budget for 2000-2001 is \$6,194,000, as calculated by the NSPE Budget Committee. Sixty-one percent of the budget comes from membership dues. Twenty-two percent comes from products and services. The rest of the budget comes from reimbursements, rents from tenants, and interest.

Project Relation

The NSPE Marketing Director and Public Relations proposed this project to our group prior to our arrival to Washington D.C in the form of a letter. The original letter can be found on page 69. This project plays a very important role in the society’s core

values and its mission. The creation the new catalog and addition of new products and services has helped the society to better serve and fulfill the needs of its members. By promoting products that engineers have expressed a need for, the NSPE will help to promote success in its members' careers which will directly influence the image of the engineering profession and promote the goals of the NSPE.

With the completion of the catalog many aspects of the organization of the society may be affected. If the catalog proves to be successful, and product sales increase, more revenue will be generated and could possibly result in a larger budget for the future. If that is the case, many significant changes may occur within the society, such as the additions of more staff, products, and conventions. If these factors are increased, more work will be completed within each respective department of the NSPE. The most important change, other than generating revenue, is the possibility of the increase in membership. Having an increase in membership would help the NSPE reach their vision of "promoting and defending the interest of all engineering professionals."

**National Society of Professional Engineers
WPI Internship Position Description
Fall 2000**

Project Description:

To research and identify products and services for NSPE members. This will include engineering products, member benefits, student products and student programs. Interns will produce the NSPE on-line and print catalog that will include existing and new products and services.

Project Responsibilities:

- ❖ Conduct market research on products and services by reviewing publications, CD-ROM's, videos, on-line courses and traditional courseware.
- ❖ Contact state chapters and student chapters to determine student programs and products.
- ❖ In consultation with Director of Marketing & Public Relations and Education Manager select new products and services.
- ❖ Negotiate with publishers and vendors on "purchasing" products.
- ❖ Coordinate the set-up, written product descriptions, data entry and proofing of the on-line and print catalog.
- ❖ Research partnering with on-line bookstores (e.g. Amazon.com) to augment NSPE's Bookstore.

Qualifications:

- Excellent writing skills
- Attention to detail - ability to proof-read documents
- Web savvy - ability to use Internet in researching product information
- Team oriented - will be working with two departments

Project Outcome(s):

The interns will produce NSPE's on-line and print catalog. Additionally, the catalog will include new products and services identified by the interns.

Supervision:

This position(s) reports to the Director of Marketing and Public Relations and the Education Manager.

Appendix B: NSPE Code of Ethics for Engineers

Preamble

Engineering is an important and learned profession. As members of this profession, engineers are expected to exhibit the highest standards of honesty and integrity. Engineering has a direct and vital impact on the quality of life for all people. Accordingly, the services provided by engineers require honesty, impartiality, fairness and equity, and must be dedicated to the protection of the public health, safety, and welfare. Engineers must perform under a standard of professional behavior that requires adherence to the highest principles of ethical conduct.

I. Fundamental Canons

Engineers, in the fulfillment of their professional duties, shall:

1. Hold paramount the safety, health and welfare of the public.
2. Perform services only in areas of their competence.
3. Issue public statements only in an objective and truthful manner.
4. Act for each employer or client as faithful agents or trustees.
5. Avoid deceptive acts.
6. Conduct themselves honorably, responsibly, ethically, and lawfully so as to enhance the honor, reputation, and usefulness of the profession.

II. Rules of Practice

1. Engineers shall hold paramount the safety, health, and welfare of the public.
 - a. If engineers' judgment is overruled under circumstances that endanger life or property, they shall notify their employer or client and such other authority as may be appropriate.
 - b. Engineers shall approve only those engineering documents that are in conformity with applicable standards.
 - c. Engineers shall not reveal facts, data or information without the prior consent of the client or employer except as authorized or required by law or this Code.
 - d. Engineers shall not permit the use of their name or associate in business ventures with any person or firm that they believe are engaged in fraudulent or dishonest enterprise.
 - e. Engineers having knowledge of any alleged violation of this Code shall report thereon to appropriate professional bodies and, when relevant, also to public authorities, and cooperate with the proper authorities in furnishing such information or assistance as may be required.
2. Engineers shall perform services only in the areas of their competence.
 - a. Engineers shall undertake assignments only when qualified by education or experience in the specific technical fields involved.
 - b. Engineers shall not affix their signatures to any plans or documents dealing with subject matter in which they lack competence, nor to any plan or document not prepared under their direction and control.
 - c. Engineers may accept assignments and assume responsibility for coordination of an entire project and sign and seal the engineering documents for the entire project, provided that each technical segment is signed and sealed only by the qualified engineers who prepared the segment.

3. Engineers shall issue public statements only in an objective and truthful manner.
 - a. Engineers shall be objective and truthful in professional reports, statements, or testimony. They shall include all relevant and pertinent information in such reports, statements, or testimony, which should bear the date indicating when it was current.
 - b. Engineers may express publicly technical opinions that are founded upon knowledge of the facts and competence in the subject matter.
 - c. Engineers shall issue no statements, criticisms, or arguments on technical matters that are inspired or paid for by interested parties, unless they have prefaced their comments by explicitly identifying the interested parties on whose behalf they are speaking, and by revealing the existence of any interest the engineers may have in the matters.
4. Engineers shall act for each employer or client as faithful agents or trustees.
 - a. Engineers shall disclose all known or potential conflicts of interest that could influence or appear to influence their judgment or the quality of their services.
 - b. Engineers shall not accept compensation, financial or otherwise, from more than one party for services on the same project, or for services pertaining to the same project, unless the circumstances are fully disclosed and agreed to by all interested parties.
 - c. Engineers shall not solicit or accept financial or other valuable consideration, directly or indirectly, from outside agents in connection with the work for which they are responsible.
 - d. Engineers in public service as members, advisors, or employees of a governmental or quasi-governmental body or department shall not participate in decisions with respect to services solicited or provided by them or their organizations in private or public engineering practice.
 - e. Engineers shall not solicit or accept a contract from a governmental body on which a principal or officer of their organization serves as a member.
5. Engineers shall avoid deceptive acts.
 - a. Engineers shall not falsify their qualifications or permit misrepresentation of their or their associates' qualifications. They shall not misrepresent or exaggerate their responsibility in or for the subject matter of prior assignments. Brochures or other presentations incident to the solicitation of employment shall not misrepresent pertinent facts concerning employers, employees, associates, joint venturers, or past accomplishments.
 - b. Engineers shall not offer, give, solicit or receive, either directly or indirectly, any contribution to influence the award of a contract by public authority, or which may be reasonably construed by the public as having the effect of intent to influencing the awarding of a contract. They shall not offer any gift or other valuable consideration in order to secure work. They shall not pay a commission, percentage, or brokerage fee in order to secure work, except to a bona fide employee or bona fide established commercial or marketing agencies retained by them.

III. Professional Obligations

1. Engineers shall be guided in all their relations by the highest standards of honesty and integrity.
 - a. Engineers shall acknowledge their errors and shall not distort or alter the facts.
 - b. Engineers shall advise their clients or employers when they believe a project will not be successful.

- c. Engineers shall not accept outside employment to the detriment of their regular work or interest. Before accepting any outside engineering employment they will notify their employers.
 - d. Engineers shall not attempt to attract an engineer from another employer by false or misleading pretenses.
 - e. Engineers shall not actively participate in strikes, picket lines, or other collective coercive action.
 - f. Engineers shall not promote their own interest at the expense of the dignity and integrity of the profession.
2. Engineers shall at all times strive to serve the public interest.
- a. Engineers shall seek opportunities to participate in civic affairs; career guidance for youths; and work for the advancement of the safety, health and well-being of their community.
 - b. Engineers shall not complete, sign, or seal plans and/or specifications that are not in conformity with applicable engineering standards. If the client or employer insists on such unprofessional conduct, they shall notify the proper authorities and withdraw from further service on the project.
 - c. Engineers shall endeavor to extend public knowledge and appreciation of engineering and its achievements.
3. Engineers shall avoid all conduct or practice that deceives the public.
- a. Engineers shall avoid the use of statements containing a material misrepresentation of fact or omitting a material fact.
 - b. Consistent with the foregoing, Engineers may advertise for recruitment of personnel.
 - c. Consistent with the foregoing, Engineers may prepare articles for the lay or technical press, but such articles shall not imply credit to the author for work performed by others.
4. Engineers shall not disclose, without consent, confidential information concerning the business affairs or technical processes of any present or former client or employer, or public body on which they serve.
- a. Engineers shall not, without the consent of all interested parties, promote or arrange for new employment or practice in connection with a specific project for which the Engineer has gained particular and specialized knowledge.
 - b. Engineers shall not, without the consent of all interested parties, participate in or represent an adversary interest in connection with a specific project or proceeding in which the Engineer has gained particular specialized knowledge on behalf of a former client or employer.
5. Engineers shall not be influenced in their professional duties by conflicting interests.
- a. Engineers shall not accept financial or other considerations, including free engineering designs, from material or equipment suppliers for specifying their product.
 - b. Engineers shall not accept commissions or allowances, directly or indirectly, from contractors or other parties dealing with clients or employers of the Engineer in connection with work for which the Engineer is responsible.
6. Engineers shall not attempt to obtain employment or advancement or professional engagements by untruthfully criticizing other engineers, or by other improper or questionable methods.
- a. Engineers shall not request, propose, or accept a commission on a contingent basis under circumstances in which their judgment may be compromised.

- b. Engineers in salaried positions shall accept part-time engineering work only to the extent consistent with policies of the employer and in accordance with ethical considerations.
 - c. Engineers shall not, without consent, use equipment, supplies, laboratory, or office facilities of an employer to carry on outside private practice.
7. Engineers shall not attempt to injure, maliciously or falsely, directly or indirectly, the professional reputation, prospects, practice, or employment of other engineers. Engineers who believe others are guilty of unethical or illegal practice shall present such information to the proper authority for action.
- a. Engineers in private practice shall not review the work of another engineer for the same client, except with the knowledge of such engineer, or unless the connection of such engineer with the work has been terminated.
 - b. Engineers in governmental, industrial, or educational employ are entitled to review and evaluate the work of other engineers when so required by their employment duties.
 - c. Engineers in sales or industrial employ are entitled to make engineering comparisons of represented products with products of other suppliers.
8. Engineers shall accept personal responsibility for their professional activities, provided, however, that Engineers may seek indemnification for services arising out of their practice for other than gross negligence, where the Engineer's interests cannot otherwise be protected.
- a. Engineers shall conform with state registration laws in the practice of engineering.
 - b. Engineers shall not use association with a nonengineer, a corporation, or partnership as a "cloak" for unethical acts.
9. Engineers shall give credit for engineering work to those to whom credit is due, and will recognize the proprietary interests of others.
- a. Engineers shall, whenever possible, name the person or persons who may be individually responsible for designs, inventions, writings, or other accomplishments.
 - b. Engineers using designs supplied by a client recognize that the designs remain the property of the client and may not be duplicated by the Engineer for others without express permission.
 - c. Engineers, before undertaking work for others in connection with which the Engineer may make improvements, plans, designs, inventions, or other records that may justify copyrights or patents, should enter into a positive agreement regarding ownership.
 - d. Engineers' designs, data, records, and notes referring exclusively to an employer's work are the employer's property. Employer should indemnify the Engineer for use of the information for any purpose other than the original purpose.

As Revised July 1996

"By order of the United States District Court for the District of Columbia, former Section 11(c) of the NSPE Code of Ethics prohibiting competitive bidding, and all policy statements, opinions, rulings or other guidelines interpreting its scope, have been rescinded as unlawfully interfering with the legal right of engineers, protected under the antitrust laws, to provide price information to prospective clients; accordingly, nothing contained in the NSPE Code of Ethics, policy statements, opinions, rulings or other guidelines prohibits the submission of price quotations or competitive bids for engineering services at any time or in any amount."

Statement by NSPE Executive Committee

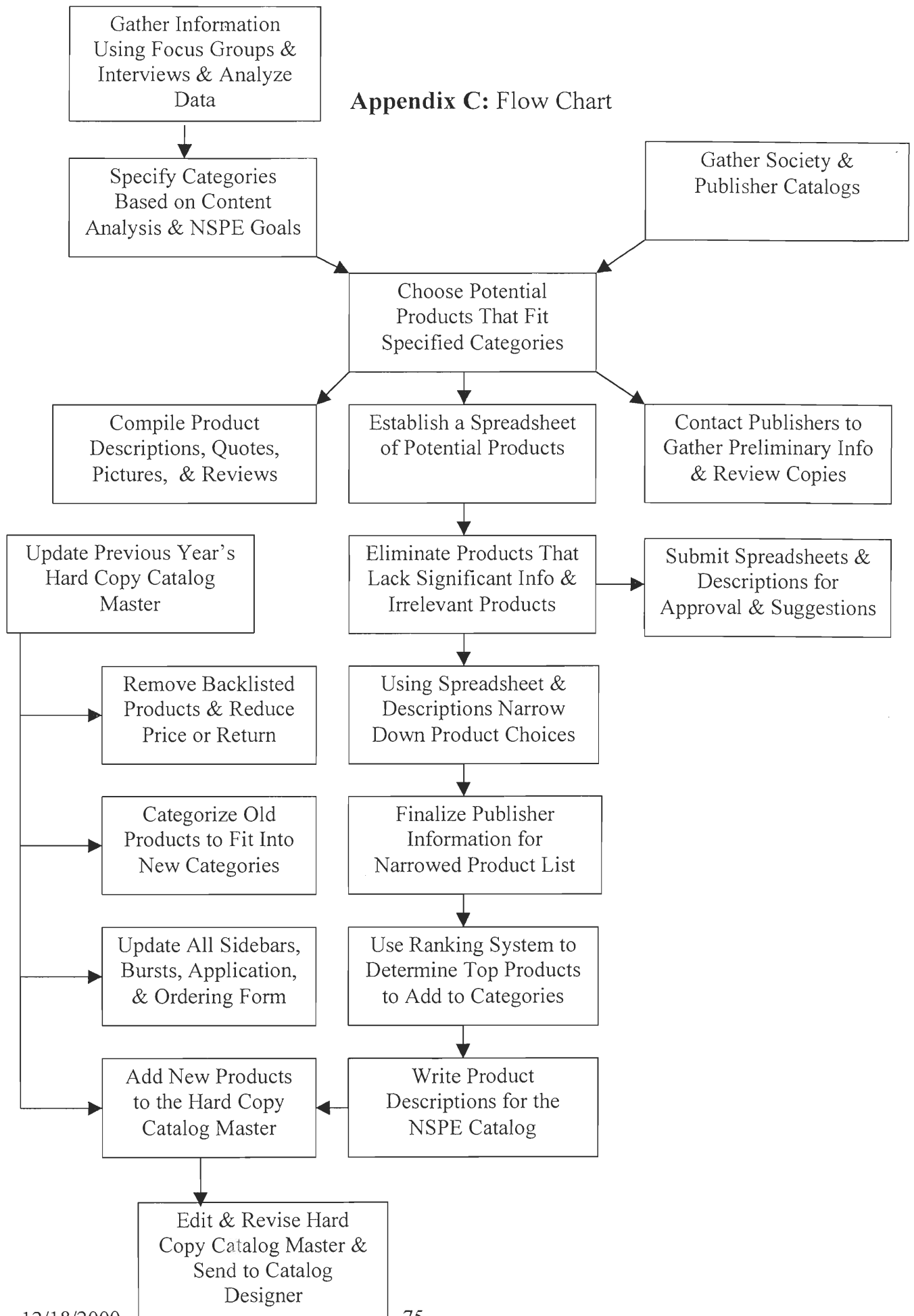
In order to correct misunderstandings which have been indicated in some instances since the issuance of the Supreme Court decision and the entry of the Final Judgment, it is noted that in its decision of April 25, 1978, the Supreme Court of the United States declared: "The Sherman Act does not require competitive bidding."

It is further noted that as made clear in the Supreme Court decision:

1. Engineers and firms may individually refuse to bid for engineering services.
2. Clients are not required to seek bids for engineering services.
3. Federal, state, and local laws governing procedures to procure engineering services are not affected, and remain in full force and effect.
4. State societies and local chapters are free to actively and aggressively seek legislation for professional selection and negotiation procedures by public agencies.
5. State registration board rules of professional conduct, including rules prohibiting competitive bidding for engineering services, are not affected and remain in full force and effect. State registration boards with authority to adopt rules of professional conduct may adopt rules governing procedures to obtain engineering services.
6. As noted by the Supreme Court, "nothing in the judgment prevents NSPE and its members from attempting to influence governmental action . . ."

NOTE: In regard to the question of application of the Code to corporations vis-à-vis real persons, business form or type should not negate nor influence conformance of individuals to the Code. The Code deals with professional services, which services must be performed by real persons. Real persons in turn establish and implement policies within business structures. The Code is clearly written to apply to the Engineer and items incumbent on members of NSPE to endeavor to live up to its provisions. This applies to all pertinent sections of the Code.

Appendix C: Flow Chart



Appendix D: NSPE Member Education Assessment

1. How important is each of the following skills for success in your career? (Not important, Import, Very Important)

- Professional Image
- Public Speaking
- Business Writing
- Financial/Accounting
- Meeting Management
- Marketing
- Risk Management
- Negotiation
- General Business
- Software (e.g. MS Project Management 98, etc.)
- Leadership Development
- Managing/Motivating employees
- Professional Ethics
- Legal Issues
- Other:

2. Are you required to obtain continuing professional education, development or competency requirements for your position or your license?

- Yes
- No
- Uncertain

3. How do you usually obtain your professional development hours (PDH)? (Please check all that apply)

- College or university courses
- Employer sponsored workshops or seminars
- Continuing education courses sponsored by professional societies
- Self study modules (CD ROM, audiotapes, books, videos, etc.)
- NSPE Annual Convention education sessions
- Other Association Conferences: _____
- Not required to complete PDHs

4. How effective do you find each of the following delivery methods? (Not Effective, Effective, Very Effective)

- In-person seminar or class
- 2-3 day conference

- Live television (satellite conferences)
- Internet Based
- Audio or video taped
- Books/manuals
- Correspondence
- Teleconference

5. How would you value a professional certificate program that focused on business skills to complement your technical skills?

- No value
- Some value
- Valuable
- Very Valuable

6. Rate the importance of each of the following subject areas for a professional certificate. (Not important, Important, Very Important)

- Software (e.g. MS Project Management 98, etc.)
- Meeting Management
- Financial/Acct
- Professional Image
- Public Speaking
- Business Writing
- Marketing
- Negotiation
- Risk Management
- General Business
- Leadership Development
- Professional Ethics
- Legal Issues
- Managing/Motivating employees
- Other: _____

7. Approximately how much do you spend on your professional development activities (include personal and company expenditures)?

- Under \$250
- \$250-\$500
- \$500-\$1000
- \$1000-\$2000
- \$2000-\$4000
- \$4000 or more

Appendix E: Multiple Choice Survey Results

JOB SKILL	NI	I	VI
Professional Ethics	3.9%	29.7%	66.4%
Business Writing	2.7%	33.3%	64.0%
Professional Image	3.2%	39.4%	57.3%
Managing/Motivating Employees	10.8%	35.1%	54.1%
Public Speaking	6.8%	45.8%	47.4%
Leadership Development	9.3%	44.4%	46.3%
Meeting Management	9.9%	51.5%	38.5%
Negotiation	11.0%	50.9%	38.1%
Legal Issues	10.8%	56.1%	33.2%
Risk Management	16.8%	51.6%	31.6%
Marketing	27.3%	45.9%	26.7%
Software	19.6%	58.5%	21.9%
Financial/Accounting	16.0%	63.3%	20.6%
General Business	11.5%	68.9%	19.7%
Professional Development Hours	%		
Professional Society courses	54.6%		
Employer Sponsored Workshops	40.0%		
Other Association Conferences	35.8%		
College Courses	29.2%		
Self Study Modules	19.2%		
NSPE Annual Convention	5.8%		
Effectiveness of PDH Methods	NE	E	VE
In-person Seminar	1.6%	40.6%	57.7%
2-3 Day Conference	10.5%	57.6%	31.9%
Books/Manuals	19.0%	61.7%	19.3%
Internet Based	32.7%	57.4%	9.9%
Correspondance	39.8%	51.1%	9.1%
Audio or Video Taped	35.5%	58.1%	6.4%
Live Television	38.9%	56.8%	4.3%
Teleconference	46.7%	49.3%	4.0%
Importance for Professional Certificate	NI	I	VI
Professional Ethics	6.8%	36.6%	56.6%
Business Writing	7.5%	45.7%	46.9%
Managing/Motivating Employees	15.7%	43.0%	41.3%
Leadership Development	13.7%	46.1%	40.2%
Public Speaking	12.8%	48.9%	38.3%

Professional Image	16.9%	46.2%	36.8%
Negotiation	15.9%	53.7%	30.5%
Risk Management	16.4%	53.3%	30.4%
Legal Issues	12.5%	58.6%	28.9%
Meeting Management	23.9%	56.2%	19.8%
Marketing	29.4%	51.0%	19.6%
General Business	16.5%	65.5%	18.0%
Financial/Accounting	21.6%	61.8%	16.6%
Software	30.6%	55.6%	13.8%
	EMAIL	US MAIL	
Total Sent	17,778	3,000	
Bad Addresses	3,272	-	
Responded	1,522	333	
Response Rate	10.5%	11.1%	

Appendix F: ISBN Application



INTERNATIONAL STANDARD BOOK NUMBER--UNITED STATES AGENCY

International Standard Numbering System for the Information Industry

121 Chanlon Road, New Providence, New Jersey 07974

TEL: 877-310-7333 FAX: 908-665-2895 Email: isbn-san@bowker.com

R.R. Bowker, A division of Reed Elsevier Inc.

International Standard ISO 2108

APPLICATION FOR AN ISBN PUBLISHER PREFIX

FOR AGENCY USE ONLY

SYMBOL: _____

PREFIX: _____

PLEASE PRINT OR TYPE:

Company/Publisher Name: _____

Address: _____

Phone Number: _____ Fax Number: _____

Toll Free Number: _____ Telex Number: _____

E-MAIL: _____ Web Site: _____

Fax-on-Demand: _____ Toll Free Fax: _____

If P.O. Box Indicated, Local Street Address is Required:

Company Position: _____ Phone Number: _____

Name of Rights & and Permissions Contact: _____

Title: _____ Phone Number: _____

Name of ISBN Coordinator/Contact: _____

Title: _____ Phone Number: _____

Division or Subsidiary of: _____

Imprints: _____

PAYMENT: A NON-REFUNDABLE PROCESSING SERVICE CHARGE

PRIORITY PROCESSING SURCHARGE \$50

<u>ISBN PREFIX BLOCK</u>	<u>REGULAR PROCESSING FEE</u>	<u>PRIORITY PROCESSING FEE</u>
10 ISBNs	\$205.00	\$255.00
100 ISBNs	\$500.00	\$550.00
1,000 ISBNs	\$750.00	\$800.00
10,000 ISBNs	\$1,500.00	-
100,000 ISBNs	\$12,500.00	-

Fee Waiver:

Applicants requesting a fee-waiver MUST provide a list of titles and formats along with 501(C3) and mission statement documents. Failure to provide this title list will delay Agency processing.

Check/Money Order enclosed. Make payable to "R. R. Bowker."

Charge: American Express Visa Master Card

Card Holder Name: _____

Account #: _____ Expiration Date: _____

Total amount enclosed or charged: _____

Authorized signature: _____ Date: _____

* Note: Credit Cards are the preferred form of payment

PUBLISHING INFORMATION:

1. Indicate year you started publishing: _____

2. Indicate what type of products you produce (circle):

Books Videos Spoken Words on Cassette/CD
 Software Mixed Media

Other - Please specify: _____

3. Book Subject Area (circle):

- Children's
- Law
- Medical
- Religious
- Sci-Tech
- Other - Please specify:

DISTRIBUTION INFORMATION:

1. Do you distribute for, or are you distributed by, any other company?
Yes: _____ No: _____. If yes, please provide full company name, address and ISBN Publisher Prefix (if any):

PROCESSING INFORMATION:

Your application for an ISBN Publisher Prefix will be processed ONLY if you include the following:

1. Completed application
2. Payment

*** Note: Credit Cards are the preferred form of payment**

The ISBN U.S. Agency will not provide an ISBN by telephone or fax. Processing time for an ISBN application is 10 business days (Saturdays and Sundays and holidays are not business days) from the date of our receipt of the completed form. This means that the application is inhouse for that length of time; ISBNs will be mailed to publishers after this processing period is completed (provided there are no problems with the application).

PRIORITY PROCESSING:

If you intend to ask the agency for a faster turn around time, a priority charge of \$50. applies and must be added to the service charge fee. Priority service includes return, within 72 business hours of receipt, of your ISBN Publisher Prefix and ISBN log book (provided there are no problems with the application).

If you are requesting priority service and would like your ISBN log book e-mailed, please provide the e-mail address to where it should be sent: _____

Please Note: The priority service is either by e-mail or courier service, but NOT both.

WAIVING OF THE SERVICE CHARGE:

Your firm may apply for a waiver of the service charge if your firm has been granted a 501 (C3) charitable/philanthropic tax exemption status & your firm can supply a statement of your charitable/philanthropic mission. Your firm must supply documentation on BOTH to be eligible for a fee waiver. If you request a waiver of the service charge and require priority processing, a charge of \$50.00 does apply.

Return the application and payment to:

ISBN U.S. Agency
R.R. Bowker
121 Chanlon Road
New Providence, NJ 07974
isbn-san@bowker.com

Appendix G: Content Analysis

Open Ended Survey

As part of the NSPE Educational Assessment Survey, respondents were able to give open-ended responses and comments on the questions via email. These responses were reviewed as part of the content analysis of this survey. Every theme that came up in responses was listed and the number to the right of each theme is the number of times it came up.

How important is each of the following skills for success in your career?

CAD	1
Common sense and logic	1
Communication (with public and with clients, people skills)	9
Conflict Resolution in teams	2
Continuing Education	3
Continuing Education in Environmental Engineering	1
Continuing Education for experienced engineers	2
Delegation/supervision	2
Education the public about PEs and engineers	3
How to combat deregulation (only bottom line counts, job security)	1
Information technology and productivity	1
Maintaining high morale and a productive environment	1
Managing email	1
Mentor programs	2

Networking/resume writing	1
Organization	1
Planning	1
Political activity	1
Prioritization	1
Programming (C++, PLC)	1
Project Management	2
Teamwork	1
Technical Skill	15
Trustworthiness/honest/compassion	1
Vision	1

Rate the importance of each of the following areas for a professional certificate:

Computer capabilities for the profession	1
Continuing education in area of expertise	1
Effective communication	2
Ethics	1
Exposure to other practices	1
Foreign language/customs knowledge	1
Leadership	1
Office Management	1
Organizing and managing teams	3
Planning	1

Project management	1
Software proficiency	1
Stopping deregulation	1
Visioning	1

All responses debating whether or not a professional certificate is worthwhile because they are not relevant to this project.

On-Campus Interviews

Why did you become a Professional Engineer?

To be a consultant	1
Need a license to do design work	4
A PE is responsible	2
To become a recognized expert	3
Just thought I should	1
To do trial work	2
To do inspections	1

What benefits has being a PE brought you?

Own and run a consulting business	1
Can do jobs that non PEs cannot do	1
Professional status	1

Why or why aren't you a NSPE member?

Not interested in non technical societies	1
Would have joined if knew about license filing service	1

Why have you joined other Professional Societies?

AIChE – group of peers and industry members

NFPA and ASTM – seemed like professional obligation to take part in international standard setting

ASCE – to buy books, life insurance, and go to conferences

Open Ended

For a CM, becoming a PE depends on career path

- work for a plant, don't need to be a PE
- design a plant, need to be a PE

Ethics are the heart of being a PE

Means you have the public trust

Being a PE shows engineer is competent and knows regulations

Organizations promote job placement services in a way that engineers are being told to get new jobs

Product that teaches business owners and managers to form long term relationships with employees would be useful

Focus Groups

Due to large time constraints, it was not possible to listen to and analyze the recordings of the three focus groups conducted in Atlanta, Grand Rapids, and Houston on June 22, 28, and 29, 2000. Instead, a summary of the focus groups prepared by the Wexler Marketing Group was analyzed to see what themes came up during the discussions. Unlike the analysis of the survey and interviews, the number of times each theme came up could not be definitively counted due to the fact that a summary was used as the basis for this analysis.

A) Most significant changes in respondents industry

- do own CAD work, not draftsmen
- do clerical work, not secretaries
- less administrative help
- engineers now turn out a product, not a valued personalized professional design
- engineers must work much faster (do a 6 month job in 3 months)
- more productive today than 5 years ago
- get paid more
- engineering skills not as valued as management skills
- tight recruiting market
- clients want many alternatives because computers make them easy to produce
- computers let small firms handle large projects
- clients see engineering work as a computer product and depersonalize it
- technical limitations – dial ups that aren't T1
- too many formats (don't have them all)

- too many tools to master
- younger engineers not taught these programs in college
- internet makes lots of info available but the info is mostly useless
- can do international work over the internet
- marketplace controls engineering, people get cut so engineers do more work than ever
- final product is more important than the process used to get there
- engineering work is being outsourced to other countries
- bottom line demands – focus on profit
- engineers must do more with less
- firms bring in outside resources (consultants, retirees) to reduce core staff
- recruiting is hard – fewer graduates
- Dot coms are more attractive to employees than engineering firms
- Engineers are leaving the profession (not enough job security)

B) Day to day barriers hindering work as an engineer

- deadlines are short
- non engineers (accountants) run and manage engineering firms without knowing anything about engineering
- engineers must deal with pricing and profitability of products instead of the management
- keeping hardware up and running
- young engineers rely too much on computers and can't spot mistakes

- many technicians and engineers won't work past 9-5 days making deadlines tough
- projects subject to too much legal review

C) Professional skills that could contribute to success as an engineer

- management skills/MBA
- contract law
- project management
- marketing, finance, accounting
- communication: client contact, people skills, gap between engineers and non engineers

D) Transitioning with the engineering profession

- hard to go to another industry because companies want lots of experience within their field

E) Products and services purchased for professional development of engineers

- large companies have own development programs
- professional societies offer courses, but they are expensive
- companies may not reimburse costs
- professional developments not required in all states
- can be hard to find courses or speakers within small disciplines
- time and money costs are great

- audio tapes (video not important) solve time and cost problems – NSPE should pursue this
- subjects include ethics, business law, contract law, marketing
- managerial courses attractive
- training of new employees is important
- making employees productive and keeping them on staff

NEW PRODUCTS

F) Developing an information technology plan for an engineering office

Concept:

A guide or template that would enable an engineering firm to: 1) determine how information technology is used in its office, 2) evaluate the management of its technology resources, plan personnel responsibilities, 3) maximize the value of its technology equipment, develop and maintain its website, and 4) develop a budget and timetable for IT plan execution.

Response:

- only useful for a small company or a startup company
- helps engineers know what to ask about and believe from outside IT vendors
- IT department would be resistant to outside resources
- available from other sources besides NSPE
- would have to be so generic it may not be viable

G) Getting up to speed with information technology

Concept:

An IT overview directed especially to engineers who didn't grow up with technology, but who have taken on IT management responsibility, supervise younger engineers who know how to use technology, or want to become IT literate. The informational package has specific concepts and language of IT. Topics might include: 1) IT in project management, 2) applications in specific types of projects, 3) using technology to provide service to clients, 4) dealing with software applications when you understand the theory but not the technology, and 5) implementing e-commerce on your website. Listserv access with other interested engineers would enable user to exchange experiences.

Response:

- done by in house training in larger companies
- "if you're not already there, you're probably not working right now"
- might appeal to smaller companies without resources

H) Setting up a project website

Concept:

A template and guidelines directed to engineering firms with the steps necessary for the firm to establish its own project website: 1) collecting team input, 2) determining client involvement, 3) software applications, 4) daily maintenance, 5) IT requirements, 6) authorizing and tracking changes, 7) security issues, such as firewalls, access, passwords, back-up copies, and multiple versions.

Response:

- smaller firms interested – larger firms would do it on their own
- Can the NSPE do better than the products that are already available?
- How will the NSPE keep up with current, changing technology?

I) Engineering assignments outside North America

Concept:

A body of knowledge design for engineers whose projects are or will take them to other countries. Information will include: 1) learning about and evaluating business opportunities overseas, 2) soliciting business abroad, 3) teaming with local engineering firms, 4) hiring foreign national engineers in the US as advisors, 5) setting performance criteria and expectations, 6) determining qualifications such as licensing, certification, training, and education, and 7) understanding payment, billing practices, legal rights, and cultural differences.

Response:

- good opportunity for the NSPE
- NSPE can partner with overseas engineering societies
- companies must hire consultants at the moment
- high maintenance and constant updating would be required

J) Recruiting Telecommuters

Concept:

Function as a match-up service for seasoned engineers and firms in need of experienced personnel, this program would be especially appealing for retirees, specialty

areas, part-time, and temporary assignments. There would be 1) guidance on screening, 2) personnel policies, 3) selling the concept (to management and clients), 4) security, 5) access to technology, 6) financial structuring, 7) developing new, marketable skill sets, and 8) determining how to attract and appeal to experienced telecommuting engineers. A listserv would be available for idea exchange.

Response:

- employers not interested in engineers who don't come to work
- companies want people in their offices
- would consider only for real niche expertise
- hard to find assignments for limited number of hours
- quality control becomes an issue
- NSPE must determine exactly what role it would play

K) Operating as an engineer contractor

Concept:

With demand for contract employees growing at many firms, this program would target engineers who wanted to work independently. Topics might include: 1) becoming self-employed, 2) developing business, 3) marketing your services, 4) financial and insurance arrangements, 5) website and e-commerce, 6) creating back-up resources, and 7) networking.

Response:

- these are services that companies don't offer employees

- also include: charging for services, getting paid, avoiding liabilities and handling lawsuits, listening and writing skills
- useful benefit for NSPE members
- “Even though none of us are interested right now, we might be in the future”

L) Other products and services the NSPE could offer

- internet courses
- a list of companies that hire PEs
- national registration/PE license mobility
- international engineering registration
- condense Engineering Times – send a single page every week
- more membership benefits that don't have to be paid for
- make more legal and ethical case studies available
- information on NSPE's PAC
- group discounts

#	SOURCE	PRODUCTS
1	IEEE Catalog 2001	Social, Ethical, Policy Implications of Engineering Selected Readings.
2	ASCE 2000 Publications Catalog	The Decision Makers: Ethics of Engineers
3	ASCE Continuing Education	The Expert Deposition: How to Be an Effective and Ethical Expert Witness
4	Design-Build Resource Library	The Management of Engineering: Human, Quality, Organizational, Legal and Ethical Aspects of Professional Practice
5	Summer Video Catalog	Building Better Contracts
6	Get Your PE License	Engineering Your Writing Success
7	ASME Web Catalog	From Research to Printout: Creating Effective Technical Documents
8	ASCE 2000 Publications Catalog	Preparing International Proposals
9	Correspondence	Preparing Specifications for Design-Bid Build Projects
10	IEEE Catalog 2001	Procedure Writing Principles and Practices
11	IEEE Catalog 2001	The Essence of Technical Communication for Engineers: Writing, Presentation, and Meeting Skills
12	ACEC Bulletins	Writing For Design Professionals
13	PMI Info Sourceguide 2000	Becoming an Indispensable Employee in a Disposable World
14	PMI Info Sourceguide 2000	Planning Successful Meetings and Events
15	PMI Info Sourceguide 2000	Power Etiquette
16	ACEC Bulletins	Bringing Out the Best in People: How to Apply the Astonishing Power of Positive Reinforcement
17	ACEC Bulletins	Effective Project Management: How to Plan, Manage, and Deliver Projects on Time and Within Budget
18	PMI Info Sourceguide 2000	Finding and Keeping Great Employees
19	ACEC Bulletins	Keeping Good People: Strategies for Solving the #1 Problem Facing Business Today
20	Serious Business Tools	Leadership A to Z, A Guide for the Appropriately Ambitious
21	ACEC Bulletins	Love 'em or Lose 'em: Getting Good People to Stay
22	PMI Info Sourceguide 2000	Managing the Project Team
23	Serious Business Tools	Rewarding Excellence Pay Strategies for the New Economy
24	ACEC Bulletins	Total Quality Project Management for the Design Firm
25	Serious Business Tools	Understanding and Changing Your Management Style
26	PMI Info Sourceguide 2000	Global Project Business and the Dynamics of Change
27	Summer Video Catalog	Going Global: Strategies for Success in the International Arena
28	Design-Build Resource Library	Managing International Operations: A Guide For Engineers, Architects, and Construction Managers
29	ACEC Bulletins	Engineering Licensure Laws
30	Design-Build Resource Library	State-By-State Guide to Architect, Engineer, and Contractor Licensing
31	IEEE Catalog 2001	CareerXRoads 2000
32	IEEE Catalog 2001	Engineer's guide to Life long Employability
33	Correspondence	Get the Job You Want and The Money You're Worth
34	IEEE Catalog 2001	How to Succeed as an Engineer: A Practical Guide to Enhance Your Career

#	TYPE	COST	AUTHOR	PUBLISHER	ISBN	INFO	PUB
1	Soft Cover Book	69.95	J. Herkert	IEEE	0-7803-4712-9	352	
2	Book	65.00	J. Armstrong	Thomas Telford, Ltd	0-7277-2598-X	159	
3	Video	95.00				51 min	
4	Book	91.00	F. Bennet	John Wiley & Sons			
5	Video	149.00	J. Novacek	Zweig White & Associates	1-929868-20-0	60 min	2000
6	Soft Cover Book	32.00	J. Vincler	Professional Publications	912045906	304	
7	Soft Cover Book	40.00	J. White	ASME Press	0-7918-0060-1	316	
8	Hard Cover Book	68.00	R. Bartlett	Thomas Telford, Ltd	0-7277-2582-3	256	
9	Soft Cover Book	22.80	E. Abdallah	American Society of Civil Engineers	0-7844-0473-9	56	
10	Hard Cover Book	34.95	D. Wieringa	Battelle Publishers/IEEE	0-7803-5368-4	256	
11	Soft Cover Book	24.95	H. Hirsch	IEEE	0-7803-4738-2	112	
12	Book	36.50	S. Kliment	W. W. Norton & Co., Inc.	393730263	232	1998
13	Soft Cover Book	19.95	N. Whitten	John Wiley & Sons	047107683X	400	1995
14	Soft Cover Book	14.95	A. Boehme	Amacom Books, Div of AMA	0814479952	128	1998
15	Soft Cover Book	14.95	D. Casperson	Amacom Books, Div of AMA	0814479987	150	1999
16	Book	21.95	A. Daniels	McGraw-Hill	70153582	245	2000
17	Book/CD ROM	49.99	R. Wysocki, R. Beck, Jr., D. Crane	John Wiley & Sons	471115215	333	1995
18	Hard Cover Book	24.95	J. Harris, J. Brannick	Amacom Books, Div of AMA	0814404545	240	1999
19	Book	21.95	R. Herman	Oak Hill Press	1886939268	411	1999
20	Hard Cover Book	22.00	J. O'Toole	John Wiley & Sons	0-7879-5308-3	144	2000
21	Book	17.95	B. Kaye, S. Evans	Berrett-Koehler Publishers, Incorporated	1576750736	235	1999
22	Soft Cover Book	32.95	V. Verma	PMI	1880410427	296	1997
23	Hard Cover Book	34.00	E. Lawler III	John Wiley & Sons	0-7879-5074-2	352	2000
24	Book	69.95	F. Stasiowski	John Wiley & Sons	471307874	405	1994
25	Hard Cover Book	25.00	R. Benfari	John Wiley & Sons	0-7879-0858-4	288	2000
26	Soft Cover Book	19.95	Artto, Heinsonen, Arenius, Kovanen, Nyberg	TEKES	9529101538	147	1998
27	Video	149.00	E. Greco, P.E.	Zweig White & Associates	1-929868-28-6	60 min	1999
28	Book	24.00	R. Kangari and C. Lucas	ASCE Press	0-7844-0222-1	160	1997
29	Book	300.00				300	1999
30	Book	260.00	S. Walker, R. Holderness, S. Butler	ABA			
31	Soft Cover Book	26.95	G. Crispin	IEEE	0-9652239-2-2	350	
32	Soft Cover Book	24.95	J. Eason	IEEE	0-87942-314-5	173	
33	Book	25.00	M. Kennedy	ACPE	0924674385	40	
34	Soft Cover Book	29.95	T. Yuzuriha	J&K Publishers/IEEE	0-7803-4735-8	386	

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35	IEEE Catalog 2001	Managing the New Careerists
36	Correspondence	Powerbase:How to Build It/How to Keep It
37	Correspondence	Salary Strategies:Everything You Need to Know to Get the Salary You Want
38	IEEE Catalog 2001	The Balanced Engineer: Essential Ideas for Career Development
39	Get Your PE License	1001 Solved Engineering Fundamentals Problems
40	Get Your PE License	999 Nonquantitative Problems for the FE Examination Review
41	Get Your PE License	Calculus Refresher for the Fundamentals f Engineering Exam
42	Get Your PE License	Engineer-In-Training Reference Manual
43	Get Your PE License	FE Review Manual
44	Get Your PE License	FE Video Review
45	Get Your PE License	FE/EIT Sample Examinations
46	Get Your PE License	How to Become a Professional Engineer
47	Get Your PE License	Interactive FE Review
48	Get Your PE License	NCEES FE Ref. Handbook
49	Get Your PE License	NCEES FE Typical Questions & Solutions
50	Get Your PE License	Solutions Manual (SI Units)
51	ASCE 2000 Publications Catalog	Communication for Professional Engineers
52	AIChE Web Catalog	Communications Skills for Engineers and Scientists
53	Summer Video Catalog	Creating Winning Presentations
54	PMI Info Sourceguide 2000	Powerful Communication Skills
55	ACEC Bulletins	Redicheck Interdisciplinary Coordination
56	PMI Info Sourceguide 2000	Straight Talk
57	ASME Web Catalog	Technical Presentation Workbook: Winning Strategies for Effective Public Speaking
58	PMI Info Sourceguide 2000	Technically Speaking
59	AIChE Web Catalog	Capital Cost Estimating
60	Summer Video Catalog	Common Sense Financial Management
61	AIChE Web Catalog	Process Industry Economics - An International Perspective
62	AIChE Web Catalog	Project Cost Estimate - Principles and Practice
63	ASCE Continuing Education	Effective Marketing of Professional Services For Engineers & Surveyors
64	ASCE Continuing Education	Key Financial, Marketing, & Human Relations Practices
65	ASCE 2000 Publications Catalog	Marketing Strategies for Engineers
66	Summer Video Catalog	Reinventing Marketing
67	ASME Web Catalog	World Wide Web for Scientists and Engineers: A Complete Ref for Navigating, Researching, Publishing Online
68	PMI Info Sourceguide 2000	How to be a Better Project Manager

#	TYPE	COST	AUTHOR	PUBLISHER	ISBN	INFO	PUB
35	Soft Cover Book	18.95	C. Derr	IEEE	0-87589-677-4	309	
36	Book		M. Kennedy	Macmillan			1984
37	Book		M. Kennedy	Rawson, Wade Publishers			1982
38	Hard Cover Book	45.00	IEEE	IEEE	0-87942-328-5	247	
39	Soft Cover Book	36.00	Lindeburg,M	Professional Publications	1888577096	743	
40	Soft Cover Book	29.00	Whitehead,K	Professional Publications	1888577118	155	
41	Soft Cover Book	35.00	Schiavone,P	Professional Publications	1888577010	120	
42	Hard Cover Book	70.00	Lindeburg,M	Professional Publications		1064	
43	Soft Cover Book	53.00	Lindeburg,M	Professional Publications	1888577533	832	
44	Video	450.00	Andrew,S			20 hrs	
45	Soft Cover Book	29.00	Lindeburg,M	Professional Publications		111	
46	Soft Cover Book	20.00		Professional Publications		92	
47	CD Rom	50.00		Engineers Software Partners			
48	Soft Cover Book	10.00	NCEES	NCEES		150	
49	Soft Cover Book	10.00	NCEES	NCEES		66	
50	Soft Cover Book	26.00	Lindeburg,M	Professional Publications	091204540X	256	
51	Book	59.00	Scott, B	Thomas Telford, Ltd		276	
52	Soft Cover Book	7.00			0-85295-354-2	40	
53	Video	149.00	M. Kemether	Zweig White & Associates	1-929868-16-2	60 min	2000
54	Soft Cover Book	10.99	C. McKenna	Career Press	1564143562	116	1998
55	Book	29.00	W. Nigro and M. Nigro			75	1987
56	Soft Cover Book	26.95	E. Douglas	Davies-Black Publishing	0891061177	296	1998
57	Soft Cover Book	35.00	Sullivan,R	ASME Press	0-7918-0040-7	296	
58	Soft Cover Book	29.95	J. D'Arcy	Battelle Press	1574770519	270	1998
59	Soft Cover Book	45.00			0-85295-399-2	115	
60	Video	149.00	I. Rusk	Zweig White & Associates	1-929868-14-6	60 min	1999
61	Hard Cover Book	75.00		Gulf Publishing Company	0-85295-391-7	292	
62	Hard Cover Book	92.00		Gulf Publishing Company	0-85295-380-1	283	
63	Video	359.00				3 hrs	
64	Video	295.00				4 hrs	
65	Book	17.00	Warne, T	ASCE Press	0-87262-859-0		
66	Video	149.00	M. Zweig	Zweig White & Associates	1-929868-00-6	60 min	1999
67	Soft Cover Book	34.00	Thomas,J	SPIE	819427756	354	
68	Soft Cover Book	15.95	T. Young	Kogan Page U.S.	0749419458	128	1997

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69	Correspondence	Results Marketing
70	ASME Web Catalog	Working in Japan: An Insiders Guide for Engineers and Scientist
71	ASCE 2000 Publications Catalog	Construction Project Management: Getting it Right First Time
72	ASCE 2000 Publications Catalog	Cost-Benefit Analysis for Engineers and Planners
73	PMI Info Sourceguide 2000	Effective Project Management
74	PMI Info Sourceguide 2000	Essentials of Project Control
75	PMI Info Sourceguide 2000	Fundamentals of Project Management
76	PMI Info Sourceguide 2000	Human Resource Skills for the Project Manager
77	PMI Info Sourceguide 2000	Making it Happen: A Non-Technical Guide to Project Management
78	PMI Info Sourceguide 2000	Project Leadership From Theory to Practice
79	AIChE Web Catalog	Project Management for the Process Industries
80	ASCE 2000 Publications Catalog	Project Management of Multiple Projects and Contracts
81	Design-Build Resource Library	Project Management: A Systems Approach to Planning, Scheduling, and Controlling
82	ASCE 2000 Publications Catalog	Site Management for Engineers
83	Summer Video Catalog	Successful Project Management
84	IEEE Catalog 2001	Technology Management Handbook
85	IEEE Catalog 2001	Technology Management Handbook CD-ROM
86	PMI Info Sourceguide 2000	The Virtual Edge Embracing Technology for Distributed Project Team Success
87	PMI Info Sourceguide 2000	Tools and Tips for Today's Project Manager
88	ACEC Bulletins	ACEC Human Resources Guidelines
89	ACEC Bulletins	Fair, Square & Legal: Safe Hiring/Firing Practices
90	ACEC Bulletins	Getting Employees to Fall in Love with Your Company
91	Summer Video Catalog	Hiring and Keeping the Right People
92	PMI Info Sourceguide 2000	Human Resource Development
93	Summer Video Catalog	Is Your A/E/P or Environmental Consulting Firm Vulnerable to Headhunters
94	Get Your PE License	The Expert Witness Handbook
95	ASME Web Catalog	The Unwritten Laws of Engineering: Revised and Updated
96	ACEC Bulletins	Workforce Stability: Your Competitive Edge (How to Attract, Optimize, and Hold Your Best Employees
97	Correspondence	Boing-Boing the Bionic Cat
98	Get Your PE License	Engineering Your Start-Up
99	ASCE Continuing Education	Management & Leadership Skills for the New Engineer
100	ACEC Bulletins	The Invisible World-The Bridge Makers
101	ACEC Bulletins	2000 Successful Firm Survey of A/E/P & Environmental Consulting Firms
102	ACEC Bulletins	ACEC Position Descriptions

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#	TYPE	COST	AUTHOR	PUBLISHER	ISBN	INFO	PUB
69	Book?	49.00					
70	Hard Cover Book	40.00	Honda,H	ASME Press	0-7918-0152-7	320	1991
71	Book	92.00	Woodward, J	Thomas Telford, Ltd	0-7277-2557-2	296	
72	Book	78.00	Snell, M	Thomas Telford, Ltd	0-7277-2587-4	306	
73	Soft Cover Book	49.99	R. Wysocki, R. Beck, Jr., D. Crane	John Wiley & Sons	0471115215	352	1995
74	Soft Cover Book	32.95	J. Pinto, J. Trailer	PMI	1880410648	240	1999
75	Soft Cover Book	10.95	J. Lewis	Amacom Books, Div of AMA	0814478352	128	1995
76	Soft Cover Book	32.95	V. Verma	PMI	1880410419	268	1996
77	Soft Cover Book	27.95	M. Kyle	John Wiley & Sons	0471642347	256	1998
78	Soft Cover Book	39.95	Pinto, Thomas. Trailer, Palmer, Govekar	PMI	1880410109	164	1998
79	Hard Cover Book	92.00			0-85295-406-9	375	
80	Book	69.00	Loftus,J	Thomas Telford, Ltd	0-7277-2710-9	184	
81	Book	70.00	H. Kerzner	John Wiley & Sons			
82	Hard Cover Book	75.00	Holroyd, T	Thomas Telford, Ltd	0-7277-2536-2	275	
83	6 Videos	395.00		Zweig White & Associates		180 min	1999
84	Hard Cover Book	95.00	Dorf,R	CRC/IEEE	0-7803-4722-6	864	
85	CD Rom	129.95	Dorf,R	CRC/IEEE	0-7803-4748-x		
86	Soft Cover Book	32.95	M. Mayer	PMI	1880410168	104	1998
87	Soft Cover Book	32.95	R. Kliem, I. Ludin	PMI	1880410613	236	1999
88	Disk		ACEC	ACEC			
89	Book	29.95		Amacom, Div of AMA			
90	Soft Cover Book	17.95	J. Harris	Amacom, Div of AMA	0814479057	166	1996
91	6 Videos	97.00		Zweig White & Associates		210 min	1999
92	Soft Cover Book	39.95	J. Wilson	Stylus Publishing, Inc.	0749430508	384	1999
93	Video	149.00	K. Sprankle	Zweig White & Associates	1-929868-07-3	60 min	1999
94	Soft Cover Book	25.00	PPI	Professional Publications	0912045035	82	
95	Book	13.00	Skakoon,J	ASME Press	0-7918-0162-4	60	
96	Hard Cover Book	19.95	R. Herman, J. Gioia	OakHill Press	1886939365	232	
97	Children's Book		L. Hench	American Ceramic Society			
98	Soft Cover Book	30.00	Baird,M	Professional Publications	0912045485	294	
99	Video	595.00	ASCE	ASCE		14 hrs	
100	Video	39.00	ACEC/Colorado	ACEC			
101	Book	275.00		Zweig White & Associates			
102	Disk	74.00	ACEC	ACEC			

#	SOURCE	PRODUCTS
103	Correspondence	AE&C Business Review-Industry Newsletter
104	Correspondence	Beyond Strategic Planning, Developing and Implementing Winning Strategies For Engineers, Architects, and Construction Companies
105	PMI Info Sourceguide 2000	Bugs in Writing
106	ACEC Bulletins	Construction Site Safety: A Guide For Managing Contractors
107	ACEC Bulletins	Creating Wealth: Principles and Practices for Design Firms
108	Design-Build Resource Library	Cyberplaces: The Internet Guide For Architects, Engineers, and Contractors
109	Correspondence	Frontiers of Engineering (Reports on Leading Edge Engineering From the 1999 NAE Symposium on Frontiers of Engineering)
110	ACEC Bulletins	Information Technology Survey
111	Design-Build Resource Library	ISO 9000 IN Construction
112	ACEC Bulletins	Quality Assessment Workbook
113	ACEC Bulletins	Secrets of Superstar Speakers
114	Design-Build Resource Library	The 1999 Professional Design-Build Conference: DBIA and NSPE
115	JETS Web Catalog	Engineering For You: A Career Guide
116	JETS Web Catalog	Studying Engineering: A Road Map to a Rewarding Career
117	JETS Web Catalog	Flying Buttresses, Entropy, and O-Rings: The World of an Engineer
118	JETS Web Catalog	Is There an Engineer Inside You?
119	JETS Web Catalog	Careers In Focus (Engineering)
120	Correspondence	Wired!
121	Correspondence	Building Profits In the Construction Industry
125	Amazon.com	International Marketing: Strategy, Planning, Market Entry & Implementation
126	Amazon.com	Global Marketing Management
127	Amazon.com	Kiss, Bow, or Shake Hands: How to Do Business in 60 Countries
128	Amazon.com	Dun & Bradstreet's Guide to Doing Business Around the World
129	Amazon.com	The International Traveller's Guide to Doing Business in Latin America (International Business Traveller's Series
130	Amazon.com	The International Traveller's Guide to Doing Business in European Union (International Business Traveller's Series
131	Amazon.com	Do's and Taboos Around the World for Women in Business
132	Amazon.com	Global Marketing Management

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#	TYPE	COST	AUTHOR	PUBLISHER	ISBN	INFO	PUB
103	Newsletter	188.00	ACEC	ACEC		12 iss	
104	Hard Cover Book	65.00	C. Ross	Converse Publishing 2000	0-9674489-0-5	230	
105	Paperback Book	19.95	L. Dupre	Addison-Wesley Publishing Co.	020137921X	704	1998
106	Book	59.95	R. Hislop	ACEC		244	
107	Book	29.95	E. Flynn-Heapes			157	
108	Book/CD Rom	60.00	P. Doherty	R.S. Means Co.			1997
109	Soft Cover Book		NAE	National Academy Press	0-309-06933-5	128	
110	Soft Cover Book	275.00		Zweig White & Associates		344	
111	Book	85.00	P. Nee	John Wiley & Sons			
112	Book	69.00	ACEC	ACEC			
113	Book	16.95	L. Walters	ACEC		332	1999
114	Conference Tapes	420.00	DBIA	DBIA			
115	Book	20.00	J. Jones	Iowa State University Press	0-813806038	144	
116	Book	30.00	R. Landis	Discovery Press	0-964696959	235	
117	Book	45.00	J. Adams	Discovery Press	0-674306899	235	
118	Book	15.00	C. Baine	Bonamy Press	0-9664763-0-1	192	
119	Book	15.00	Ferguson Publishing Company	Ferguson Publishing Company	0-894342827	188	
120	Soft Cover Book		D. Stone	ACEC	0-910090-23-8	152	2000
121	Hard Cover Book	74.95	Kubal, Miller, Worth	McGraw-Hill	0-07-134985-5		2000
125	Soft Cover Book	30.00	R. Bennette	Kogan Page Ltd	0-749422726		
126	Hard Cover Book	94.00	W. Keegan	Prentice Hall	0-139030239		
127	Soft Cover Book	17.95	Morrison, Conaway, Borden, Koehler	Adams Media Corporation	1558504443		
128	Hard Cover Book	20.80	Morrison, Conaway, Douress	Prentice Hall	0-135314844		
129	Soft Cover Book	16.95	T. Morrison, W. Conaway	IDG Books Worldwide	00-2861755X	160	
130	Soft Cover Book	16.95	T. Morrison, W. Conaway	IDG Books Worldwide	00-28617568	160	
131	Soft Cover Book	16.15	R. Axtell, T. Briggs, M. Corcoran	John Wiley & Sons	0-471143642		
132	Hard Cover Book	93.75	M. Kotabe, K. Helsen	John Wiley & Sons	0-471592889		

#	PRODUCTS	AUTHOR
Engineering Ethics		
1	Social, Ethical, Policy Implications of Engineering Selected Readings.	J. Herkert
4	The Management of Engineering: Human, Quality, Organizational, Legal and Ethical Aspects of Professional Practice	F. Bennet
Employee Relations		
18	Finding and Keeping Great Employees	J. Harris, J. Brannick
25	Understanding and Changing Your Management Style	R. Benfari
96	Workforce Stability: Your Competitive Edge (How to Attract, Optimize, and Hold Your Best Employees	R. Herman, J. Gioia
Global Relations		
28	Managing International Operations: A Guide For Engineers, Architects, and Construction Managers	R. Kangari, C. Lucas
131	Do's and Taboos Around the World for Women in Business	R. Axtell, T. Briggs, M. Corcoran
132	Global Marketing Management	M. Kotabe, K. Helsen
70	Working in Japan: An Insiders Guide for Engineers and Scientist	H. Honda
27	Going Global: Strategies for Success in the International Arena	E. Greco
Career Resources		
32	Engineer's guide to Life Long Employability	J. Eason
Licensure Assistance		
46	How to Become a Professional Engineer	Prof Pub Eds
Communication Skills		
6	Engineering Your Writing Success	J. Vincler
58	Technically Speaking	J. D'Arcy
53	Creating Winning Presentations	M. Kemether
Financial Management		
60	Common Sense Financial Management	I. Rusk
Marketing		
66	Reinventing Marketing	M. Zweig
Project Management		
132	Wired!	D. Stone
Young Engineers		
118	Is There an Engineer Inside You?	C. Baine
116	Studying Engineering: A Road Map to a Rewarding Career	R. Landis
119	Careers In Focus (Engineering)	Ferguson Eds.

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PUBLISHER	TYPE	PRICE	ISBN	PAGE	DATE	DS	STOCK	CAT	PTS	SHIP	TOT	RANK
IEEE	Soft Cover Book	69.95	0-7803-4712-9	352	2000	0%	30%	1	5	3	4.5	2
John Wiley & Sons	Hard Cover Book	91.00	047159329X	496	1995	20%	43%	2	4	5	4.25	1
Amacom	Hard Cover Book	24.95	0814404545	240	1999	35%	44%	1	5	6	5.25	1
John Wiley & Sons	Hardcover Book	25.00	0-7879-0858-4	288	2000	20%	43%	3	2	5	3.5	3
OakHill Press	Hard Cover Book	19.95	1886939365	232	2000	20%	20%	2	4	5	4.25	2
ASCE Press	Soft Cover Book	24.00	0-7844-0222-1	160	1997	0%	40%	1	5	4	4.75	1
John Wiley & Sons	Soft Cover Book	16.15	0-471143642	252	1997	20%	43%	5	1	5	2	5
John Wiley & Sons	Hard Cover Book	93.75	0-471592889	784	1997	20%	43%	4	2	5	2.75	3
ASME Press	Hard Cover Book	40.00	0-7918-0152-7	320	1991	0%	10%	3	3	1	2.5	4
Zweig White	Video	149.00	1-929868-28-6	60 min	1999	25%	40%	2	4	5	4.25	2
IEEE	Soft Cover Book	24.95	0-87942-314-5	173	1997	0%	30%	1	5	3	4.5	1
Professional Publications	Soft Cover Book	20.00	091204599X	92	1997	0%	40%	1	5	4	4.75	1
Professional Publications	Soft Cover Book	32.00	912045906	304	1996	0%	40%	1	5	4	4.25	1
Battelle Press	Soft Cover Book	29.95	1574770519	270	1998	0%	40%	2	4	4	4	2
Zweig White	Video	149.00	1-929868-16-2	60 min	2000	25%	40%	3	3	5	3.5	3
Zweig White	Video	149.00	1-929868-14-6	60 min	1999	25%	40%	1	5	5	5	1
Zweig White	Video	149.00	1-929868-00-6	60 min	1999	25%	40%	1	5	5	5	1
ACEC	Soft Cover Book		0-910090-23-8	147	2000	0%	40%	1	5	5	5	1
Bonamy Press	Soft Cover Book	15.00	0-9664763-0-1	192	1998	0%	40%	2	4	4	4	2
Discovery Press	Hard Cover Book	30.00	0-964696959	235	2000	25%	25%	1	5	5	5	1
Ferguson	Soft Cover Book	15.00	0-894342827	188	1999	0%	40%	3	3	4	3.25	3

Appendix J: Product Sources

SOURCE	DATES	PAGES	TYPE
Amacom (The Complete Listing of Books in Print)	2000	24	hard-copy catalog
Amacom (Trade and Professional Books)	Fall/Winter 2000	32	hard-copy catalog
American Academy of Environmental Engineers (Environmental Engineering Bookstore)	Spring/Summer 2000	26	hard-copy catalog
American College of Physican Executives (Catalog of Publications)	Summer 2000	32	hard-copy catalog
American Consulting Engineers Council	2000	12	monthly bulletins
American Management Associate (Self-Study)	Fall 2000	51	hard-copy catalog
American Society of Association Executives (Marketing and Membership Essentials)	2000	8	hard-copy catalog
American Society of Chemical Engineers (Publications Catalog)	2001	110	hard-copy catalog
American Society of Civil Engineers (Civil Engineering Journals)	2000	40	hard-copy catalog
American Society of Civil Engineers (Continuing Education)	Fall/Winter 2000/2001	31	hard-copy catalog
American Society of Civil Engineers (Publications Catalog)	2000	80	hard-copy catalog
American Society of Mechanical Engineers (Publications Catalog)	2001	100	hard-copy catalog
Battelle Environmental Technology Catalog	2000	31	hard-copy catalog
CRC Press (Engineering Excellence on Sale)	2000	10	pamphalet
Design-Build Resource Library	2000-2001	60	hard-copy catalog
Institute of Electrical and Electronics Engineers	2000	64	hard-copy catalog
Institute of Electrical and Electronics Engineers	2001	72	hard-copy catalog
Jossey-Bass (Serious Business Tools)	Summer 2000	15	hard-copy catalog
KPMG Consulting (E-Commerce Update)	2000	15	presentation
Means Building Construction Cost Data	2001	5	pamphalet
National Conference of State Legislatures (Publications Update)	2000	19	hard-copy catalog
Professional Publications, Inc. (Get Your PE License)	July-December 2000	62	hard-copy catalog
Professional Publications, Inc. (Resellers Catalog)	January-June 2001	20	hard-copy catalog
Professional Publications, Inc. (Resellers Catalog)	July-December 2000	20	hard-copy catalog
Project Management Institute (Information Sourceguide)	2000	64	hard-copy catalog
The American Ceramic Society	2000	64	hard-copy catalog
The International Society of Optical Engineering (SPIE)	Fall 2000	25	hard-copy catalog
Water Environment Federation (Development Brochures)	2000	10	pamphalet
www.aegweb.org	2000		online catalog
www.aiche.org	2000		online catalog
www.Amazon.com	2000		online catalog
www.asce.org	2000		online catalog
www.asme.org	2000		online catalog
www.bn.com	2000		online catalog

SOURCE	DATES	PAGES	TYPE
www.borders.com	2000		online catalog
www.digitalthink.com (Live Courses)	May 2000	11	online catalog
www.ieee.org	2000		online catalog
www.iienet.org	2000		online catalog
www.jets.org	2000		online catalog
Zweig White & Associates (Management Solutions Catalog)	Fall/Winter 2000	30	hard-copy catalog
Zweig White & Associates (Summer 2000 Video Catalog)	Summer 2000	15	hard-copy catalog

Appendix K: Hard Copy Catalog Master

Tom: The catalog seems like it should fit in the same manner as last year, with the majority being four column, and parts at the end being three or two column. Products should remain in the appropriate categories, however the layout of each page will be based on available space.

The following 'sidebars' can be used as ads throughout the catalog.

SIDEBAR 1 (use once):

NSPE Code of Ethics for Engineers
Engineers' Creed

As a Professional Engineer, I dedicate my professional knowledge and skill to the advancement and betterment of human welfare.

I pledge:

To give the utmost of performance;

To participate in none but honest enterprise;

To live and work according to the laws of man and the highest standards of professional conduct;

To place service before profit, the honor and standing of the profession before personal advantage, and the public welfare above all other considerations.

In humility and with need for Divine Guidance, I make this pledge.

Adopted by National Society of Professional Engineers, June 1954
(NSPE Logo)

SIDEBAR 2 (use multiple times):

(Tom: Refer to last year's format for this one)

Four Easy Ways to Order

SIDEBAR 3 (use multiple times):

Computer with NSPE logo on the screen

Browse NSPE Online:

About NSPE

Membership Benefits

Licensure

Employment

Government Relations

Practice Divisions

Convention/Expo

Complete Product Catalog

www.nspe.org

SIDEBAR 4 (use once):

Logo(E-Team EDGE logo GS.eps)

Develop your career and save money too...
NSPE provides it all!

- Resource-filled Web site (www.nspe.org)
- Career enhancement via PE licensure
- Networking opportunities with engineering professionals
- Yearly subscription to Engineering Times – explores the issues of foremost concern to the professional engineering community
- Information-packed NSPE Convention and Expo
- Free enrollment in practice specific interest groups
- Continuing education
- Leadership development
- Federal and state advocacy on engineering issues
- Standard contracts
- Major discounts on engineering-related books, videos, and preparation courses
- Award opportunities
- Savings on insurance, health care, travel, and more!

(NSPE Logo)

National Society of Professional Engineers
1420 King Street
Alexandria, VA 22314-2794
Telephone: 703-684-2800
www.nspe.org

SIDEBAR 5 (use once, filler)

Quote: “Public speaking organizational and motivational techniques are skill which I developed as a volunteer leader and can apply both personally and professionally.

Thanks to NSPE, I learned to be an effective leader.”

Gloria P. Holt, P.E.

Ernst & Young

New York, New York

SIDEBAR 6 (use once):

(NSPE/Detroit Logo) FIND THIS!

2001 NSPE ANNUAL CONVENTION AND EXPOSITION
DETROIT, MI

Detroit Marriott
Renaissance Center
Detroit, MI

July 26 – 30, 2001

- Network with other Professionals
- Gain new skills
- Earn valuable PDHs
- Explore our exhibit hall

Save money three easy ways:

- Register online and save 10%
- Register early and save \$100 on a full registration
- Register a group and save 10%

(Picture of Detroit landscape) GET THIS!

(NSPE logo)

COVER 1

(Tom: same as last year, new pictures in circle, reverse color)

Engineering graphics, Title: *2001 Professional Resources for Engineers*, Sub-title: *Essential Resources for Engineering Success*, NSPE logo, etc.

COVER 2 (Inside Cover)

(Tag line for left pages: National Society of Professional Engineers www.nspe.org)

(Tag line for right pages: Shop the Online Resource Catalog at www.nspe.org)

(Page numbers on the bottom outer corner of each page)

Vision

NSPE is the premier national organization that promotes and defends the professional interests of all engineering professionals.

Mission

NSPE is the national society of engineering professionals from all disciplines that promotes the ethical and competent practice of engineering, advocates licensure, and enhances the image and well-being of its members.

Values

The core values of NSPE are:

- Protection of the public
- Ethical conduct
- Professionalism
- Competency
- Fulfillment of member needs
- Service to the public

- Licensure

Goals

- Promote the competent, ethical, and professional practice of engineering.
- Enhance the image and stature of engineering professionals.
- Provide education, career development, networking opportunities, and other benefits to engineering professionals and students.
- Advocate the interests of engineering professionals and protect the public through an effective government relations program.
- Align the structure, activities, and governance of the society to optimize support and resources for all programs.

TABLE OF CONTENTS (ICONS ON LEFT OF EACH CATEGORY)

Licensure Assistance	(page numbers)
Ethics	
Career Management	
Practice Management	
Employee Relations	
Communication	
Marketing	
Global Marketing	
Resources for Young Engineers	
Continuing Education	
Contract Documents	
Sale Items	
Partnerships (no icon)	
NSPE Membership Application (no icon)	
Order Form (no icon)	

(NSPE Logo)
 National Society of Professional Engineers
 1420 King Street
 Alexandria, VA 22314-2794
 Telephone: (703) 684-2800
 Fax: (703) 836-4875
 www.nspe.org

(Begin individual page layouts)

(Icon) Licensure Assistance (section header)

COVER (poster.tif):

Get Licensed, Get Ahead

Sub: Engineering students and recent graduates can secure their career success!

Open the doors to your future by earning greater respect with the Professional Engineer License, and start by reading this brochure. Learn more about the reasons to become licensed: enhanced career development, higher pay, increased prestige, greater authority, and expanded career options. *Get Licensed, Get Ahead* outlines the four essential steps to

licensure and explains how this license will lead you to a rich career. A must-read for any aspiring engineer!

Available as individual items or as a set that includes the brochure, video, and poster.

© 2000, NSPE

NSPE PRODUCT #2010-A, 40 BROCHURES: \$10.00

NSPE PRODUCT #2010-B, POSTER, 18" X 24": \$5.00

NSPE PRODUCT #2010-C, VIDEO: \$20.00

NSPE PRODUCT #2010-D, SET OF 20 BROCHURES, ONE POSTER, AND ONE VIDEO: \$30.00

Quote:

"I found the materials well organized and extremely helpful. I also appreciate the grader's personal input at times when the solutions to problems seemed impossible. I would strongly recommend the MGI program for professionals preparing for the P.E. Examination."

RAMESH KANNAN, P.E.
FLORHAM PARK, N.J.

P.E. Readiness

Sub: Becoming a licensed professional engineer is the single most important step to assure a successful engineering career.

In this changing employment climate of outsourcing, where engineers may change jobs seven times over the course of their careers, licensure is becoming more critical every year. Preparing for a P.E. licensing exam requires effort, but a carefully designed preparation program can greatly reduce the amount of effort required. *P.E. Readiness* includes review courses for FE, Civil, Electrical, Mechanical, and Chemical Engineering.

The course materials consist of a P.E. exam preparation manual, a comprehensive P.E. review and solutions manual, and a final practice exam. In addition, your work will be carefully checked and reviewed by an MGI instructor. The thirty-day free trial and a money back guarantee make it worth the call!

©1998, THE MGI MANAGEMENT INSTITUTE (MGI)

NSPE MEMBERS SAVE \$55.00 ON EACH COURSE.

CONTACT MGI AT 1-800-932-0191 FOR ADDITIONAL INFORMATION.

(Cover) FIND THIS

PE Exam Review, version 1.1

Sub: Guarantee success on the PE Exam with this self paced refresher on CD-ROM.

Featuring seven of the Boston Society of Civil Engineers Section's top civil engineering

instructors, this interactive multi-media refresher simulates taking the real-life PE Exam. The CD-ROM packages nearly 50 hours of learning on seven topics: Sanitary and Environmental Engineering, Geotechnical Engineering, Surveying, Hydrology and Hydraulics, Structures, Transportation, and Economics. In addition to demonstration and practice problems, there are extensive video instructor walkthroughs of each requirement of a PE Exam situation, accompanied by on-screen displays of the corresponding visual aids and reference materials, an audio pronunciation glossary of Greek letters, and animated models and illustrations of key concepts and processes.

©2000, ASCE and VEC
NSPE PRODUCT #0300
NSPE MEMBER PRICE: \$495.00
NON MEMBER PRICE: \$595.00

BURST : ***NEW PRODUCT***

How to Become a Professional Engineer, 5th ed.
Editors of Professional Publications

Sub: This one guide will outline the entire path to becoming a Professional Engineer.

Getting a P.E. license will boost your credentials and your career. This guide will explain the entire Professional Engineer registration process, from filling out the application to receiving your license and seal.

Explanations of the importance of education, experience, and exam requirements are covered in this book. The guide also includes appendices listing state licensing boards, professional society addresses and phone numbers, and a glossary pertinent to registration.

©1997, PROFESSIONAL PUBLICATIONS
92 PP, ISBN: 0-912045-99-X
NSPE PRODUCT #5400
NSPE MEMBER PRICE: \$ 20.00
NON MEMBER PRICE: \$ 26.00

(Icon) Ethics (Section Header)

Quote:

"*Gilbane Gold* is an excellent video that I regularly use in impressing upon engineers and engineering students the critical importance of engineering ethics. The video vividly covers a wide range of ethical dilemmas often faced by engineers including competence to practice, obligations to the public health and safety, whistle blowing, duties to one's employer, and environmental concerns. I highly recommend it."

C. ALLEN WORTLEY, P.E., NSPE
UNIVERSITY OF WISCONSIN
MADISON, WISCONSIN

BURST: ****Earn 2 PDHs ****

Gilbane Gold Ethics Video and Study Guide

Sub: What would you do in this situation?

Understanding ethical principles is quite different from practicing them...and the ethical practice of engineering is too often easier said than done. With this dramatic video, you and your staff can experience and try to resolve some of the ethical dilemmas arising in the real-life practice of engineering.

Gilbane Gold depicts the problems faced by a young PE whose firm is releasing toxic materials into the city's sewage system. Both the video and study guide present helpful discussion points, making *Gilbane Gold* a valuable teaching and training tool.

©1989, NSPE

24-MINUTE VIDEO AND STUDY GUIDE

NSPE PRODUCT #1201

NSPE MEMBER PRICE: \$95.00

NON MEMBER PRICE: \$95.00

Guide for Employed Engineers

NYSSPE and NYSSPE-PEI

Sub: Everything You Want To Know About Engineers' Rights, But Were Afraid To Ask.

This guide is written to help engineers who find themselves in situations where they may have to compromise their personal values to meet a different set of priorities. It provides general legal information on the rights of the engineer regarding employment contracts, privacy results, compensation, discrimination, sexual harassment, and whistle blowing. In addition, it describes the OSHA-mandated requirements regarding a safe workplace, ensuring that engineers do not knowingly place themselves or others at risk.

While this guide includes specific references to the New York State Education Law, the general guidance described for P.E.s in NYS will be similar for P.E.s in most other jurisdictions.

© 1997, NYSSPE

120 PP

NSPE PRODUCT #5300

NSPE MEMBER PRICE: \$15.00, PLUS \$5.00 S/H

NON MEMBER PRICE: \$25.00, PLUS \$5.00 S/H

BURST : ***NEW PRODUCT***

Social, Ethical, and Policy Implications of Engineering: Selected Readings
Joseph R. Herkert

Sub: Learn how social and ethical concerns shape contributions to the engineering field.

This informative guide identifies the professional, societal, and ethical responsibilities that face practicing engineers today. Through an integrated approach to the theory of engineering ethics and practical real-world issues, this comprehensive book offers readers an in-depth analysis of technology's current social role. Drawing on readings and case studies, this easy-to-read text will develop readers' understanding of the important issues surrounding "macro-ethical" public policy debates, including discussions of sustainable development, public health, risk and product liability, and telecommunications.

Contemporary issues presented in this far-reaching book will help students meet the new accreditation criteria for engineering adopted by the Accreditation Board for Engineering and Technology (ABET). Practicing engineers will find the selected readings easy to apply to their own experiences and helpful in future decision making.

© 2000, INSTITUTE FOR ELECTRICAL AND ELECTRONICS ENGINEERS (IEEE)
352 PP, ISBN: 0-7813-4712-9
NSPE PRODUCT #5003
NSPE MEMBER PRICE: \$ 55.95
NON MEMBER PRICE: \$ 69.95

(Icon) Career Management (Section Header)
(Keep these three products together)

Cover

2000 Income and Salary Survey

SUB: ARE YOU PAID WHAT YOU'RE WORTH?

Find out what your peers are being paid RIGHT NOW. This comprehensive report presents the findings of the 34th national compensation survey conducted by the National Society of Professional Engineers (NSPE).

More than 7,900 respondents provided information about their income, education, experience, and careers. Compensation and income are correlated with length of experience, highest degree earned, level of professional responsibility, major branch of engineering, job function, industry or service sector of employer, licensure status, supervisory/managerial responsibility, geography, and gender. Additional analysis includes the effect of corporate downsizing on base salaries.

© 2000, NSPE
84 PP
NSPE PRODUCT #0100
NSPE MEMBER PRICE: \$75.00
NON MEMBER PRICE: \$165.00

2000 NSPE Professional Engineer Income and Salary Survey with Diskette

The 3.5" diskette is IBM PC-compatible and allows you to analyze the data for three or more variables simultaneously.

©2000, NSPE
BOOK AND DISKETTE
NSPE PRODUCT #0100D
NSPE MEMBER PRICE: \$155.00
NON MEMBER PRICE: \$245.00

BURST: IMMEDIATE ACCESS ONLINE www.nspe.org

Salary Survey Online

Find out how your income stacks up to your peers' earning power, using the criteria of your choice in an online search. Order online at www.nspe.org and click on the EMPLOYMENT tab or the ENGINEERING SALARY link on the lower right.

NSPE MEMBER PRICE: \$10.00
NON MEMBER PRICE: \$20.00

BURST: Coming Soon
Watch the NSPE Web site for announcement of the 2001 NSPE Professional Engineer Income and Salary Survey.

BURST : ***NEW PRODUCT***

Engineer's Guide to Life Long Employability
Jean M. Eason

Sub: A must-have guide to locating and obtaining engineering jobs.

Go beyond the newspaper and discover different venues for finding jobs in *Engineer's Guide to Life Long Employability*. Find out how to conduct an electronic job search and how to write a searchable resume. This valuable guide discusses networking, the transition from school to work, interviewing, negotiating an offer, and much more.

©1997, INSTITUTE FOR ELECTRICAL AND ELECTRONICS ENGINEERS (IEEE)
173 PP, ISBN: 0-87942-314-5
NSPE PRODUCT #5004
NSPE MEMBER PRICE: \$20.00
NON MEMBER PRICE: \$25.00

COVER and quote: **FIND THIS!**

"One of our engineers asked me to find an information source on licensing in different states. The NSPE Web site seemed like the best place to start looking. I didn't need to look anywhere else because the comprehensive source we wanted was right there."

MARNA SANDERS
INFORMATION SERVICES MANAGER
TRIODYNE INC.
NILES, ILLINOIS

Engineering Licensure Laws

Sub: Get all the answers to your licensure questions instantly.

Continuing professional competency requirements... application and renewal fees... licensure by reciprocity... requirements for licensure... business/association practices.

These issues are important to you and your enterprise -- public or private. Instead of wondering whether you comply with the law, get your copy of the new edition of NSPE's *Engineering Licensure Laws* and be sure.

The only reference book of its kind, *Engineering Licensure Laws* is the most comprehensive summary of licensure laws ever produced. You'll find the complete summaries of the licensing laws of the 50 states, District of Columbia, and U.S. territories. In addition, NSPE has added summaries of the Canadian provincial laws to this practical reference guide.

The book offers handy pullout charts organized by subject matter for convenient, quick comparisons and easy cross-referencing. There's also a thorough analysis of each U.S. jurisdiction's laws, rules, and practices.

©1999, NSPE
500+ PP
NSPE PRODUCT #2015
NSPE MEMBER PRICE: \$95.00
NON MEMBER PRICE: \$300.00

BURST: Immediate access online

You can now order individual summaries of state, territory, or province licensure laws for immediate online download using your credit card. To order, go to the "Licensure" area of the NSPE Web site, www.nspe.org.

NSPE MEMBER PRICE: \$10.00
NON MEMBER PRICE: \$35.00

COVER

Career Asset Manager

Sub: Take charge of your career!

Are you managing your most valuable asset—your career—with the same care and attention you give your financial and real estate investments? CAM can help you examine your career development objectives and identify ways to achieve your goals.

CAM-INFO covers licensing, career options, coping with corporate downsizing, and strategies for maintaining your technical vitality. CAM-INDEX facilitates record keeping for producing an up-to-date, accurate resume of your skills, work history, and accomplishments. CAM-PLAN leads you through a series of self-evaluation and goal-setting exercises toward a professional development plan tailored to help you achieve your personal career objectives.

©1996, INSTITUTE FOR ELECTRICAL AND ELECTRONICS ENGINEERS (IEEE)
121 PP
NSPE PRODUCT #2013
NSPE MEMBER PRICE: \$35.00
NON MEMBER PRICE: \$45.00

(Icon) Practice Management (Section Header)

COVER (engineer.eps)

The Practice of Engineering as a Business Corporation

Sub: Learn the practical advantages of corporate practice.

Increased global competition is putting pressure on engineering companies to change with the times. This means giving corporate engineers greater flexibility, autonomy, and professional responsibility.

This new report from NSPE features a state-by-state listing of corporate practice laws (including such issues as individual versus corporate liability) and discusses corporate practice trends since the first state law permitting business corporations to practice engineering was passed in 1921. Also covered are the benefits and challenges of corporate practice, including tax advantages and the integration of professional engineers into the business' management operations.

©2000, NSPE
24 PP
NSPE PRODUCT #1940
NSPE MEMBER PRICE: \$19.00
NON MEMBER PRICE: \$38.00

COVER (liabilit.tif) and quote:

“In my opinion, it is very well done, in fact, superb! This will be a valuable resource to engineers and other design professionals and their counsel as a quick reference guide to these four types of laws in various jurisdictions.”

PAUL L. GENECKI
FORMER SENIOR VICE PRESIDENT
VICTOR O. SCHINNERER & COMPANY, INC.
CHEVY CHASE, MARYLAND

A State-by-State Summary of Liability Laws Affecting the Practice of Engineering

Sub: Protect yourself from frivolous claims.

This excellent resource gives a brief description of each state liability-related provision, a one-page snapshot of state engineering tort reform coverage, a state-by-state summary of engineering liability law provisions, and NSPE Model Law language for statutes of repose, sole source workers' compensation statutes, and certificate of merit laws. NSPE has produced this comprehensive publication to assist individuals and state engineering organizations interested in promoting laws that protect engineers from frivolous claims filed in court.

©1999, NSPE
27 PP
NSPE PRODUCT #1918
NSPE MEMBER PRICE: \$19.00
NON MEMBER PRICE: \$38.00

Managing Risk in the Delivery of Environmental Services

Sub: A timely guide for firms practicing in the specialized environmental arena.

Hazardous waste remediation and other environmental services are a specialized practice of engineering and science with unique risks. This comprehensive guide is designed to help practitioners understand these risks and achieve success by providing a discussion of each risk and appropriate checklists.

Topics include the environmental law alphabet soup of CERCLA, RCRA et al, corporate structure, contracts, project evaluation and performance, and more. A perfect companion to the new remediation contracts from EJCDC, page xx. Current Schinnerer customers receive this material at no charge by contacting Schinnerer directly.

©1999, VICTOR O. SCHINNERER COMPANY
NSPE PRODUCT #1983
NSPE MEMBER PRICE: \$50.00
NON MEMBER PRICE: \$75.00

Cover

BURST : ***NEW PRODUCT***

The Management of Engineering: Human, Quality, Organizational, Legal, and Ethical Aspects of Professional Practice
F. Lawrence Bennett, P.E.

Sub: A must-have reference for anyone who manages engineers or engineering organizations.

This comprehensive guide has proven to be an invaluable resource for those who manage engineering personnel or organizations. It discusses the typical transition from engineer to engineering manager and provides practical advice and real-world case studies. The book delves into the key issues of project management, including supervision, scheduling, cost planning and control. Other vital issues discussed include ethical and legal matters, personnel and quality management, and communications.

The book is a quick and easy-to-use reference tool for anyone involved in engineering management. Its extensive reference list will assist you in pursuing individual topics in great depth.

© 2000, JOHN WILEY & SONS
496 PP, ISBN: 0-47159-329-X
NSPE PRODUCT #5500
NSPE MEMBER PRICE: \$ 80.00
NON MEMBER PRICE: \$ 99.95

Cover (projmgt.eps):

Hard-Core Project Management
David A. Stone (Disregard this line below)

Sub: A quick-reference guide to planning and controlling projects.

This book walks you through a planning process that turns the largest projects into a logical series of organized tasks. Then, covering the 'nuts and bolts' of planning, scheduling, budgeting, and tracking a typical project, it provides solid skill to the novice project manager and new tools to the veteran. Also, this book contains a reference list of key publications for your project management library.

It's time to move beyond entry-level performance to become an 'entrepreneurial' project manager. If you're one of the good ones, you've realized that success in project management equals success in business. By treating your projects, your team, your customers, and your suppliers as you would in an independent business, you automatically cover all the required bases of advanced project management.

©1999, IMPACT INITIATIVES, INC.
146 PP
NSPE PRODUCT #5200
NSPE MEMBER PRICE: \$89.00
NON MEMBER PRICE: \$89.00

(Icon) Employee Relations (section header)

Cover and Quote: **FIND THIS!**

“I’ve always been puzzled over how few of our leaders know how and what can be done to involve and motivate employees. *Creative Leadership* addresses these issues very well and should be read by anyone in a leadership position today.”

MICHAEL KELLY
VICE PRESIDENT
REAL ESTATE & FACILITIES, PRC INC.

Creative Leadership: Mining the Gold in Your Work Force
S. Migs Damiani

Sub: Discover what employers will demand from their leaders in the 21st century.

Corporate CEOs are looking for leaders rather than managers – people who will create rather than manage assets. *Creative Leadership: Mining the Gold in Your Work Force* is written for aspiring leaders who are committed to conquering the challenges of an ever-increasing competitive market. These new leaders must possess a clear sense of values and integrity, as well as top-notch communication and problem-solving skills.

This valuable resource not only shows you how to develop your ‘people skills’ but also offers a blueprint for creating a positive, caring workplace.

© 1998, ST. LUCIE PRESS
170 PP, ISBN: 1-574442-26-0
NSPE PRODUCT #5010
NSPE MEMBER PRICE: \$19.95
NON MEMBER PRICE: \$19.95

BURST : ***NEW PRODUCT***

Cover (Understanding and Changing.tif)

Quote: “ It provides managers with the psychological tools to improve their management styles and thereby to succeed in business as well as life.”

MICHAEL SHINAGEL
DEAN, HARVARD UNIVERSITY, DIVISION OF CONTINUING EDUCATION

Understanding and Changing Your Management Style
Robert C. Benfari

Sub: Determine the type of leader you are, and become the type you want to be.

Is the ability to be a good manager an inborn skill? According to Benfari, the way we manage is a mixture of conceptual skills and interpersonal factors that can be analyzed, understood, and changed. This book demonstrate methods you can use to influence others, techniques for problem solving, and exercises that discern your psychological management style according to the widely used Myers-Briggs Type Indicator. Learn practical ways to maximize your strengths, overcome weaknesses, and deal with difficult employees.

© 2000, JOSSEY-BASS
304 PP, ISBN: 0-7879-0858-4
NSPE PRODUCT #5600
NSPE MEMBER PRICE: \$20.00
NON MEMBER PRICE: \$25.00

BURST : ***NEW PRODUCT***

Cover (Finding&KeepingGreatEmps.4c)

Quote: “ This book goes beyond the techniques and quick fixes to the heart of the issue: how the best companies define and leverage their culture and spirit to attract and keep people.”

THOMAS KANEY
V.P. & DIRECTOR, HUMAN RESOURCES
SMITHKLINE BEECHAM PHARMACEUTICALS

Finding and Keeping Great Employees

Jim Harris, Ph.D. and Joan Brannick, Ph.D.

Sub: Create a workplace full of self-driven and highly motivated employees.

There are millions of talented, educated, and employable people in the world, but ask any manager or business owner and they'll tell you that finding and keeping great employees is one of their biggest concerns and is perhaps the most serious challenge faced by businesses today.

Finding and Keeping Great Employees is based on research into more than 250 companies of all types and sizes, from Cisco Systems to Midway Services, and provides action plans that enable you to adapt their cutting edge recruitment and retention techniques to your own organization. Now you can attract and retain great employees and close the revolving door.

© 1999, AMACOM
222 PP, ISBN 0-8144-0454-5
NSPE PRODUCT #5700
NSPE MEMBER PRICE: \$20.00
NON MEMBER PRICE: \$24.95

BURST: ***NEW PRODUCT***

Quote:

"With the aging of America, every workplace will soon be coming to grips with the challenge of managing 'age diversity.' In *Generations at Work*, the authors do a wonderful job of clarifying the needs and values of all working generations while offering invaluable guidance on how to maximize productivity among them."

KEN DYCHTWARD, PH.D.
AUTHOR, AGE WAVE AND AGE POWER
PRESIDENT, AGE WAVE LLC

Generations at Work: Managing the Clash of Veterans, Boomers, Xers, and Nexters in Your Workplace

Ron Zemke, Claire Raines, and Filipczak

Sub: Learn to bridge the gap between generations of workers in your workplace.

In our age-diverse workplace of conflicting work ethics, dissimilar values and styles this book features insightful strategies for understanding and overcoming the generational differences of people in your company.

This book helps you understand how others view the world based on their generation differences. Four generations are explained with examples and advice to provide solutions in creating good inter-generation relationships.

© 1999, AMACOM
256PP, ISBN: 0-8144-0480-4
NSPE PRODUCT #5701
NSPE MEMBER PRICE:
NON MEMBER PRICE: \$25.00

BURST : ***NEW PRODUCT***

How to Become an Employer of Choice
Roger E. Herman and Joyce L. Gioia

Sub: Become the employer that everyone wants to work for!

With unemployment at an all-time low, job seekers and employees are in the driver's seat. Once you learn what they are truly looking for in a job, you will be able to find and retain the best and the brightest workers in the years ahead.

Filled with scores of practical examples, this book will show you how enlightened employers are differentiating themselves in the workplace and becoming an "Employer of Choice." Recommended for business owners, corporate leaders, government executives, human resource professionals, future leaders, and anyone who wants to learn what it takes to be known as an "Employer of Choice".

©2000, OAKHILL PRESS
242 PP, ISBN: 1-886939-35-7
NSPE PRODUCT #5800
NSPE MEMBER PRICE: \$24.00
NON MEMBER PRICE: \$30.00

BURST:***NEW PRODUCT***

Keeping Good People: Strategies for Solving the #1 Problem Facing Business Today
Roger E. Herman

Sub: Learn how to prevent your valued employees from quitting

The truth is, there are plenty of jobs to go around in today's workforce and every employer is facing the risk of losing their best employees. In this how-to manual for employee retention, you will discover what you must do in order to keep your staff.

Learn why employee turnover is high today, and will only get higher in the future. Discover the five main reasons workers leave their jobs. Learn 195 practical, proven techniques for reducing turnover. Gain new insights and approaches for stabilizing your workforce. Your business cannot afford to go without this book!

©1999, OAKHILL PRESS
410 PP: ISBN: 1-886939-26-8
NSPE PRODUCT #5801
NSPE MEMBER PRICE: \$17.50
NON MEMBER PRICE: \$21.95

(Icon) Communication (Section Header)

BURST : ***NEW PRODUCT***

Quote: "An incredible book...if you read it and use its recommendations, you will become as professional a writer as you are an engineer.

ACEC BOOKSHOP NEWS

Engineering Your Writing Success: How Engineers Can Master Effective On-the-Job Communication Skills

James E. Vincler and Nancy Horlick Vincler

Sub: A step-by-step guide to better writing for engineers.

Don't let your writing skills hold you back in your career. *Engineering Your Writing Success* shows engineers how to write reports, proposals, memos, letters, data sheets, and procedures using a logical step-by-step approach.

The book's practical, structured approach builds on engineers' sense of logic, using lots of examples to demonstrate the nuts & bolts of writing. This valuable resource helps you generate and organize ideas, construct more effective sentences, and troubleshoot writing problems. It shows you how to reach your audience and how to choose the right words every time.

©1996, PROFESSIONAL PUBLICATIONS
304 PP, ISBN: 0-912045-90-6
NSPE PRODUCT #5401
NSPE MEMBER PRICE: \$32.00
NON MEMBER PRICE: \$40.00

BURST : ***NEW PRODUCT***

Cover

Quote:

“Jan D’Arcy’s *Technically Speaking* gives scientists and engineers a clear, structured framework for designing and delivering successful presentations. Readers will especially welcome the author’s discussion of fear and how to make it work for you. Her no-nonsense tone and practical tips will go a long way toward dissipating the speaker’s anxiety that plagues so many of us.”

JUDITH RAMEY, PH.D.
CHAIR, DEPT. OF TECHNICAL COMMUNICATIONS
COLLEGE OF ENGINEERING
UNIVERSITY OF WASHINGTON

Technically Speaking: A Guide for Communicating Complex Information
Jan D’Arcy

Sub: Improve your presentation skills with this guide.

Compelling presentations are difficult to create, and technical presentations are even more challenging. In a world where technical knowledge doubles every 18 months, technical professionals increasingly find themselves in unaccustomed roles that demand new communication competencies.

Written for scientific and technical professionals, *Technically Speaking* provides valuable insight into the process of conveying information, whether technical or not. It is designed to lead you through the process of researching, organizing, and presenting complex information and describes a 10-step approach that will save considerable time as you prepare presentations.

© 1998, BATTELLE PRESS
270 PP, ISBN: 1-57477-051-9
NSPE PRODUCT #5900
NSPE MEMBER PRICE: \$24.00
NON MEMBER PRICE: \$29.95

BURST : ***NEW PRODUCT***

Creating Winning Presentations in A/E/P & Environmental Consulting Firms: A Video Conversation with Michael Kemether

Sub: Strengthen your presentations and win more projects.

Looking to improve your presentations? Sales and marketing expert with Zweig White and Associates, Mike Kemether will explain how to create and deliver winning presentations for your consulting firm. You'll learn how an effective presentation will save you time and money.

Learn who should participate in the presentation, how to come up with the unique solution, how to improve on your presentation skills, and more. You can't work on challenging projects if you don't win them first!

©2000, ZWEIG WHITE AND ASSOCIATES
60 MINUTE VIDEO, 1-929868-16-2
NSPE PRODUCT #ZCCW
NSPE MEMBER PRICE: \$134.00
NON MEMBER PRICE: \$149.00

(Icon) Marketing (Section Header)

BURST : ***NEW PRODUCT***

Cover FIND THIS!

Wired! How to Crawl Inside Your Client's Mind for Success in Business Development
David A. Stone

Sub: Dramatically increase your odds of winning projects.

Business is about persuasion and this book will show you how to find and push your potential client's buttons so that they will hire you.

First, David shows you how to find the right clients with the right projects. Next, he tells you how to learn about the client's organization, priorities, and preferences, which you can use to make a winning game plan. Finally, you will learn to craft a presentation that will blow the competition into the next week. This book will help you win clients and projects over your competitors.

© 2000, American Consulting Engineers Council (ACEC)
147 PP, ISBN: 0-910090-23-8
NSPE PRODUCT #6000
NSPE MEMBER PRICE: \$49.00
NON MEMBER PRICE: \$69.00

COVER (negot.eps):

The Negotiation Waltz
David A. Stone

Sub: Explores the 'give-and-take' in real-world negotiations to give design professionals an edge.

More often than not, design professionals end up at the short end of a one-sided contract. Why? Because contract negotiation is a learned skill that clients have studied and design professionals have not.

Working to achieve 'win-win' agreements, this easy-to-read book looks at the essentials of contracts and the vital skill you need to bring your contract negotiations to a fair conclusion. You'll learn how to choose the right negotiating strategy, to properly prepare yourself before the dance begins, and to work through each element of the bargaining process so you can ensure a fair outcome against skilled negotiators.

©1999, IMPACT INITIATIVES, INC.
150 PP
NSPE PRODUCT #5203
NSPE MEMBER PRICE: \$49.00
NON MEMBER PRICE: \$49.00

COVER (price.eps):

The Art and Science of Pricing
David A. Stone

Sub: A step-by-step guide to setting accurate, competitive, and profitable fees.

Pricing a project is the most important and difficult task for a principal or a project manager. This book presents rock-solid procedures to ensure consistent and accurate pricing every time. You'll learn how to ensure a healthy profit with every job, to transform a sketchy outline into a detailed scope of work, to set rational hourly rates to support the value you deliver, and to avoid 'yo-yo budgeting.'

This is a great teaching tool for the neophyte and a handy reference for the seasoned professional.

©1999, IMPACT INITIATIVES, INC.
152 PP
NSPE PRODUCT #5201
NSPE MEMBER PRICE: \$89.00
NON MEMBER PRICE: \$89.00

Quote:

"I've got my MBA, but this book is much clearer and more direct than anything we ever took in class."

BARRY S. SCHWALBE
CORPORATE OPERATIONS MANAGER
ANDREWS ENVIRONMENTAL ENGINEERING, INC.

Mastering the Business of Design
David A. Stone

Sub: A step-by-step guide to prosperity, profit, and overall success in design services.

This manual is, first and foremost, a practical guide that walks you through a process of communication, selling, pricing, negotiating, and managing your projects to come out on top. Launch your firm into an entrepreneurial world of sharp business tactics that let you provide the design you love while achieving the prosperity you demand.

Twenty-five sections and over 400 pages are jam-packed with hard-hitting, entrepreneurial strategies and tactics. You'll learn the right answers to the key questions that design professionals across the country face every day. This book follows a project from its inception to successful conclusion and can be used as both a training and reference tool.

©1999, IMPACT INITIATIVES, INC.
400+ PP
NSPE PRODUCT #5202
NSPE MEMBER PRICE: \$265.00
NON MEMBER PRICE: \$295.00

Fees and Pricing in Design Firms Survey

Sub: A guide to determining a fair price for your services.

This annual survey gives real-world data on fees by engineering and architectural companies by project type and design discipline, charges for CADD, proposal hit rates, occurrence of price as a selection factor, government pricing, and more.

Specifically designed to tell you how professional design firms worldwide determine their fees, the reports show fee allocation by discipline, percentage of construction, daily rates and other charging methods, plus data on compensation type frequencies.

©1999, PRACTICE MANAGEMENT ASSOCIATES, INC.
230 PP
NSPE PRODUCT #1955
NSPE MEMBER PRICE: \$249.00
NON MEMBER PRICE: \$350.00

BURST: ***NEW PRODUCT***

Cover and Quote:

“A must read for success in the 21st century.”

David W. Wood

Former President of the Construction Writers Association

Building Profits in the Building Industry

Mike Kubal, Kevin Miller, and Ron Worth

Sub: Help your construction firm market its products and services.

Endorsed by the Construction Writers Association, this book provides information that you can use to develop marketing plans, engage in business development, and create marketing promotional materials.

This book is targeted to contractors and subcontractors in the commercial building industry. Its emphasis on both marketing fundamentals and cutting edge technologies makes it a useful book for beginning or experienced marketers. This book also comes with a companion CD-ROM that shows color samples of marketing materials from around the country along with Web links to over 250 resources.

©1999, MCGRAW-HILL PROFESSIONAL PUBLISHING

448 PP, ISBN: 1-212-352-3566

NSPE PRODUCT #7100

NSPE MEMBER PRICE: \$

NON MEMBER PRICE: \$

BURST : ***NEW PRODUCT***

Common Sense Financial Management for A/E/P & Environmental Consulting Firms with Ian Rusk

Sub: Point your firm toward profitability and growth.

The importance of financial management is essential to keep your firm out of the red. The financial health of A/E/P and environmental consulting firms has become far more vital in recent years.

This video with Ian Rusk, a CFO and finance and accounting consultant with Zweig White and Associates, will show how keeping your firm in good financial stability takes some common sense and an understanding of how accounting and financial principles affect the business of design and environmental consulting firms. You will learn how to look for warning signs that your firm may be headed towards trouble, how to keep your firm on the right track, and how to read statements and performance measures.

©1999, ZWEIG WHITE AND ASSOCIATES

60-MINUTE VIDEO, ISBN: 1-929868-14-6

NSPE PRODUCT #ZFCS

NSPE MEMBER PRICE: \$134.00
NON MEMBER PRICE: \$149.00

BURST : ***NEW PRODUCT***

Reinventing Marketing in A/E/P & Environmental Consulting Firms: A Video Conversation with Mark C. Zweig

Sub: Get the most bang for your firm's marketing buck.

Don't let an economic slowdown ruin your firm. Mark Zweig, one of today's most sought-after consultants, speaks on new marketing strategies for your A/E/P & Environment consulting firm.

This video showcases Mark Zweig's insights on how smart firms are beginning to reinvent the way they market and sell their services. He will show you how to avoid mistakes, how to get the most out of what you pay for, and how your firm can transform its marketing efforts.

©2000, ZWEIG WHITE AND ASSOCIATES
60-MINUTE VIDEO, ISBN: 1-929868-00-6
NSPE PRODUCT #ZMRM
NSPE MEMBER PRICE: \$134.00
NON MEMBER PRICE: \$149.00

(Icon) Global Marketing (section header)

BURST : ***NEW PRODUCT***

Managing International Operations: A Guide for Engineers, Architects, and Construction Managers
Roozbeth Kangari and Chester L. Lucas

Sub: Learn to handle the challenges of international operations and foreign business with ease.

The rush of technology in the past decade has lead today's engineering professionals around the globe. This book provides practical guidance on achieving success in other countries. By stressing attitudes of awareness and understanding, competent professionals will be better equipped and encouraged to enter and compete in the international market.

Sound approaches for planning and executing fact-finding studies, selecting associates, marketing, presenting proposals, and negotiating contracts are presented in detail. This book offers guidance for successfully facing both the professional and cultural challenges of international business operations and helps make international business a possibility for all professionals.

© 1997, AMERICAN SOCIETY OF CIVIL ENGINEERS PRESS (ASCE)

160 PP, ISBN: 0-78440-222-1
NSPE PRODUCT #6100
NSPE MEMBER PRICE: \$ 21.00
NON MEMBER PRICE: \$ 24.00

BURST : ***NEW PRODUCT***

Going Global: Strategies for Success in the International Arena for A/E/P & Environmental Consulting Firms: A Video Conversation with Edward M. Greco, P.E.

Sub: Learn how to succeed in taking your firm international.

Taking your A/E/P or environmental consulting firm international can be one of the most exciting and rewarding business ventures you pursue. This one-hour video takes you step-by-step through the preparation, planning, and execution of an international strategy.

Find out what works and doesn't work globally, how much planning is needed, what to include in your international plan, what marketing resources are necessary, and how international contracts differ. You'll also find out how to conduct a self-assessment of your firm's capabilities and resources.

©1999, ZWEIG WHITE & ASSOCIATES
60-MINUTE VIDEO, ISBN: 1-929868-28-6
NSPE PRODUCT #ZGGG
NSPE MEMBER PRICE: \$ 134.00
NON MEMBER PRICE: \$ 149.00

Cover

BURST : ***NEW PRODUCT***

Working in Japan: An Insider's Guide for Engineers and Scientists, 2nd ed.
Hiroshi Honda

Sub: Discover essential information for undertaking job assignments in Japan.

Updated and expanded from the highly successful first edition, this book contains practical answers to all of your questions about Japanese employment practices, the workplace, cross-national recognition of academic and professional credentials, and doing business with the Japanese.

You'll receive firsthand advice from the unique perspectives of 17 authors—engineering professionals with different backgrounds and nationalities. And, *Working in Japan* is packed with valuable details, insights, and strategies for dealing with cultural differences, helping to make your time in Japan successful.

© 2000, AMERICAN SOCIETY OF MECHANICAL ENGINEERS PRESS (ASME)
320 PP, ISBN: 0-7918-0152-7
NSPE PRODUCT #6200

NSPE MEMBER PRICE: \$ 40.00
NON MEMBER PRICE: \$ 45.00

Cover (do's@taboos.tif)

BURST : ***NEW PRODUCT***

Do's and Taboos Around the World for Women in Business
Roger E. Axtell

Sub: An indispensable resource for women preparing to conduct overseas business.

In today's business world, a woman must know how to cope with international business in a "man's world." This book reviews how women are seen and how women should deal with business in other countries.

The social and business protocols, cultural differences, and safety issues are covered in this helpful guide. Also included are tips on how to stay healthy and rules for proper dress, speech, and table manners. Personal issues such as dating, harassment, discrimination, and family life away from home are also explained in this text.

© 1997, JOHN WILEY & SONS, INC.
252 PP, ISBN: 0-471-14364-2
NSPE PRODUCT #5501
NSPE MEMBER PRICE: \$16.00
NON MEMBER PRICE: \$17.95

BURST : ***NEW PRODUCT***

Global Marketing Management 2nd ed.
Masaaki Kotabe and Kristiaan Helsen

Sub: Market your company in the international arena.

The objective of this book is to help the reader prepare for the 21st century and become an effective manager overseeing global marketing activities in an increasingly competitive environment. Kotabe and Helsen emphasize the global nature of marketing to help the reader learn how to market their products into all countries and markets, including the U.S. This is one of the first books to offer a truly global, as opposed to multinational, perspective on marketing.

©2001, JOHN WILEY & SONS
741 PP, ISBN: 0-471-37289-7
NSPE PRODUCT #5502
NSPE MEMBER PRICE: \$85.00
NON MEMBER PRICE: \$105.95

(Icon) Resources for Young Engineers (Section Header)

BURST : ***NEW PRODUCT***

Cover (Is There an Engineer Cover.eps) and Quote:

“The perfect reference on choosing an engineering discipline and guiding you to success.”

LIFELINES NEWSLETTER, WINTER 1999

Is There an Engineer Inside You? A Comprehensive Guide to Career Decisions in Engineering

Celeste Blaine

Sub: The perfect tool for an aspiring engineer.

Engineering is one of the most progressive, challenging, and rewarding fields that can be studied today.

In this recent book, author and biomedical engineer Celeste Blaine shares her secrets about engineering education. It shows prospective engineers why they already have the ability to be an engineer, how to prepare for an engineering education, what to expect in college to give them the edge over their classmates, and what resources are available to aid in college preparation. It also describes the differences between 29 branches of engineering and provides an extensive list of society contact information so students can learn more about the engineering fields that interest them.

© 1998, BONAMY PUBLISHING

192 PP, ISBN: 0-9664763-0-1

NSPE PRODUCT #6300

NSPE MEMBER PRICE: \$ 13.00

NON MEMBER PRICE: \$ 15.00

BURST : ***NEW PRODUCT***

Careers in Focus: Engineering

Sub: Help prospective engineers find out what field is right for them.

Careers in Focus describes twenty different careers in engineering in terms of the history of the profession, the nature of the work, educational and certification requirements, job placement and advancement potential, salary figures, and the future outlook of the profession. It also lists sources for prospective engineers to find more information on each engineering career.

© 1999, FERGUSON PUBLISHING COMPANY

188 PP, ISBN: 0-894342-82-7

NSPE PRODUCT #6400

NSPE MEMBER PRICE: \$13.00

NON MEMBER PRICE: \$15.00

BURST : ***NEW PRODUCT***

Quote:

... If this book were read by every beginning or prospective student, our failure rate would drop and our success rate would soar.”

C. ROLAND HADEN
VICE CHANCELLOR AND DEAN OF ENGINEERING
TEXAS A&M UNIVERSITY

Studying Engineering: a Road Map to a Rewarding Career, 2nd ed.
Raymond B. Landis

Sub: Find out why this book is having such an impact on the success rates of engineering majors.

This book provides a useful tool to help engineering majors succeed. *Studying Engineering: a Road Map to a Rewarding Career* is having a major impact on retention and success rates for engineering students at schools throughout the country. This innovative text is rapidly becoming the standard for freshman engineering classes.

Designed to enhance the success of engineering students, this book explains the rewards of an engineering career, academic strategies needed to excel in engineering courses, the process of personal development to support the goal of becoming an engineer, and how to take full advantage of the engineering educational system.

© 2000, DISCOVERY PRESS
304 PP, ISBN: 0-9646969-5-9
NSPE PRODUCT #6500
NSPE MEMBER PRICE: \$21.00
NON MEMBER PRICE: \$23.00

(Icon) Continuing Education (Section Header)

NSPE's Independent Professional Development Courses

Sub: Enhance your career on *your* own schedule with this convenient and cost-effective rental program.

These *Professional Development Courses* are designed to be taken at your own pace, using video and workbook-based training kits. There are no exams, and participants can take the course solo or in a group setting. We give your site 30 days to complete the course. Upon returning the paperwork and video, your next segment is sent to you – automatically. Save both time away from the office and travel expenses with this cost-effective way to keep pace in today's highly competitive marketplace.

BURST: ***Earn 12 PDHs!***

Course 100: 6 segments worth 2 PDHs each.

- Leadership Skills for Engineers, Part 1
- Leadership Skills for Engineers, Part 2
- Ethics
- Planning a Project (workbook only)
- Project Management: Blueprint for Success
- Professional Liability

BURST: ***Earn 12 PDHs!***

Course 200: 6 segments worth 2 PDHs each.

- Implementing Total Quality Management
- Human Resources – Management Challenge
- Engineering Ethics – You Be the Judge (workbook only)
- Contract Documents (workbook only)
- Risk Management
- CADD Management

BURST: ***Earn 12 PDHs!***

Course 300: 6 segments worth 2PDHs each.

- Financial Management
- Qualification Based Selection
- Project Partnering
- Managing Your Clients
- Contract Negotiations
- Pre-Project Planning

BURST: ***Earn 10 PDHs!***

Course 400:

- Budgeting
- Scheduling
- Measuring Progress
- Team Building

NSPE MEMBER PRICE: \$195.00/PERSON

GROUP DISCOUNTED PRICE: \$150/PERSON FOR GROUPS OF 10 OR MORE

NON MEMBER PRICE: \$295.00/PERSON

GROUP DISCOUNTED PRICE: \$250/PERSON FOR GROUPS OF 10 OR MORE

Alliance for Continuing Education (ACE²) Online Education

Sub: Revolutionize lifelong learning with interactive, internet-based delivery.

The National Society of Professional Engineers (NSPE), the American Consulting Engineers Council (ACEC), and the Virtual Education Corporation (VEC)

All ACE² courses are true multimedia learning experiences with full-motion video, audio, animated cartoons, a wide range of graphics, simulations, and exercises and quizzes. ACE² courses are available 24 hours a day, take half the time of conventional training, and ensure your employees spend less time away from the office.

The following courses are available:

BURST: ***EARN 12 PDHs!***

- **Bringing Out the Best in People**
Dr. Aubry Daniels presents the principles of performance management to help you create the right environment and conditions to bring out the best in your performers.
NSPE MEMBER PRICE: \$595.00
NON MEMBER PRICE: \$695.00
- **Safe+R**
Teaches organizations this simple, yet effective, and proven process for systematically changing unsafe work habits into safe work habits.
NSPE MEMBER PRICE: \$595.00
NON MEMBER PRICE: \$695.00

BURST: ***EARN 5 PDHs!***

- **Ten Commandments of Financial Management**
Introduces the basic principles of financial management to engineers and other design professionals and demonstrates how to manipulate ten simple accounting ratios to maximize your firm's financial performance.
NSPE MEMBER PRICE: \$215.00
NON MEMBER PRICE: \$250.00

BURST: ***EARN 4 PDHs!***

- **Recruiting Stars**
This course shows how to recruit and motivate star performers for your firm.
NSPE MEMBER PRICE: \$200.00
NON MEMBER PRICE: \$230.00

BURST: ***EARN 1.5 PDHs!***

- **Business Management Trends in the A/E/P Industry**
Presents a timely, real world perspective to help you understand why the markets act the way they do and how to manage them to your advantage.
NSPE MEMBER PRICE: \$37.50
NON MEMBER PRICE: \$45.00
- **Creating added Value: The Consultant's Competitive Mandate**
This course presents creative strategies for adding value to your services and raising the bar of excellence in the engineering consulting business.
NSPE MEMBER PRICE: \$37.50
NON MEMBER PRICE: \$45.00
- **Keeping Your Cool When Things Aren't So Cool**
This course will help you constructively identify the causes of problems and ways to partner with your staff to prevent their reoccurrence.
NSPE MEMBER PRICE: \$37.50
NON MEMBER PRICE: \$45.00

- Preemptive Marketing...Are You in the Long-Term or Too Fat and Happy in the Short-Term?
Examines several case studies of the effective use of long-term preemptive marketing and how they can be applied in your firm.
NSPE MEMBER PRICE: \$37.50
NON MEMBER PRICE: \$45.00
- It's the Year 2000, the Time to Manage Relationships, Not Projects
This course highlights effective ways consultants and clients maintain relationships.
NSPE MEMBER PRICE: \$37.50
NON MEMBER PRICE: \$45.00
- Facing A Recession: Will You Have What It Takes to Do What Needs to Be Done?
This course demonstrates what a recession may be like and how you should prepare and respond to it.
NSPE MEMBER PRICE: \$37.50
NON MEMBER PRICE: \$45.00
- Keys to Successful Mergers/Acquisitions
Outlines the cost and benefits of mergers or acquisitions by noting key issues that your firm needs to know.
NSPE MEMBER PRICE: \$37.50
NON MEMBER PRICE: \$45.00
- Increasing Production and Profits without Increasing the Payroll
Demonstrates how the top A/E/P firms maximize the quality of their work.
NSPE MEMBER PRICE: \$37.50
NON MEMBER PRICE: \$45.00
- How to Get Paid Promptly from Owners and Architects
Explore ways which your firm can avoid cash flow problems and get paid for your work.
NSPE MEMBER PRICE: \$37.50
NON MEMBER PRICE: \$45.00

Browse the ACE² Web site, www.KeepSmartEngineering.com, for additional information on the technology, a complete listing of courses, and to enroll.

BURST: ****Earn 36 PDHs! ****

Understanding and Managing Risk

Sub: A thorough course on the liabilities of engineers and how to deal with them.

This comprehensive, two-part course in professional liability risk management. Consists of Introduction to Risk and Selected Topics in Risk Management. Issues include all phases of construction, contracts, insurance, alternative project delivery, and dispute resolution. NSPE's Professional Liability Committee played a significant role in defining

and reviewing course content. Current Schinnerer customers receive this material at no charge by contacting Schinnerer directly.

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NSPE PRODUCT #1915
NSPE MEMBER PRICE: \$150.00
NON MEMBER PRICE: \$200.00

COVER (projectm.tif)

BURST: ***Earn 10 PDHs!***

Project Manager's Notebook: A Guide to Project Success
Garold D. Oberlander, Ph.D., P.E., and Gary Rock Spencer, Ph.D., P.E., P.M.P.

Sub: Boost profitability and client satisfaction with these proven strategies!

This video-based program from NSPE's Professional Edge Conference Series reveals the secrets of successful project management from bidding to closeout. Using a sample project, the authors demonstrate how to minimize surprises and maximize efficiency during each phase of the project.

You'll learn practical management tools for budgeting, scheduling, measuring progress, team building, and more. Real-time examples let you test your knowledge and fine-tune your new skills so you can use them with confidence out in the field.

Includes six videotapes (eight hours), companion notebook (222 pages), and the Project Management for Engineering and Construction Textbook.

©1998, NSPE
222 PP
NSPE PRODUCT #2320
NSPE MEMBER PRICE: \$195.00
NON MEMBER PRICE: \$250.00

PARTICIPANT BOOK ONLY:
NSPE PRODUCT #2320-N
NSPE MEMBER PRICE: \$25.00
NON MEMBER PRICE: \$25.00

(Icon) Contract Documents (Section Header)

SIDEBAR QUOTES (use as space fillers):

“Saying the EJCDC’s documents’ reputation precedes them is an understatement. Over 90% of our clients use them because the documents are well known for being fair, and all parties know what to expect. Consistently using them also allows us to train our people to a higher level of quality, resulting in lower liability exposure for our firm.”

JOSEPH W. EBERLE, P.E.
RUEKERT/MIELKE, INC.
WAUKESHA, WISCONSIN

“These documents are up to date, coordinated, use tested language, are complete as to the issues covered and are the best contracts I know of. Designers and owners should use them to avoid disputes.”

DONALD H. KLINE, P.E.
KIMLEY-HORN & ASSOCIATES
RALEIGH, NORTH CAROLINA

Engineers Joint Contract Documents Committee
Standard Contracts for Design and Construction

The design and construction of facilities - buildings, highways, industrial plants, etc. - is enormously complicated, expensive, and risky. There are many players, typically in separate organizations:

- Owners
- Design professional firms and their subs
- Construction contractors and their subs

For a project, these group relationships are defined in contracts. These agreements have a major effect on the smoothness of progress and the relationships of the parties. Unlike manufacturing, constructed facilities are usually one-of-a-kind, created and assembled in often hostile conditions. EJCDC standard forms offer many benefits to all players, including:

- Fairness
- Coordinated documents
- Five-year revision cycle on most forms
- Industry-wide input
- Word processing formats

For complete descriptions, please go to the NSPE Web site, www.nspe.org. **Prices are listed as Member/Non-member/Electronic Document prices.** Shipping and handling are extra.

Owner-Engineer Agreements

Standard Form of Agreement Between Owner and Engineer for Professional Services (1996). Provides for the complete range of engineering design and construction phases, including several exhibits on payments, duties, various notices, and more. #1910-1, \$25/50/100

Standard Form of Agreement Between Owner & Engineer for Study and Report Professional Services (1996), #1910-19, \$14/28/56

Standard Form of Agreement Between Owner & Geotechnical Engineer for Professional Services (1996), #1910-27-A, \$14/28/56

Binder with the three Owner-Engineer Agreements, #1910-81, \$50/100

Hard copy above plus WordPerfect 5.1 disk, #1910-81-A, \$250/500

Hard copy above plus Word 6.0 disk, #1910-81-B, \$250/500

Individual electronic documents may be ordered off the Web site (no hard copy).

Engineers-Subconsultant Agreements

Standard Form of Agreement Between Engineer and Architect for Professional Services (1997), #1910-10, \$14/28/56

Standard Form of Agreement Between Engineer & Consultant for Professional Services (1997), #1910-14, \$14/28/56

Standard Form of Agreement Between Engineer and Geotechnical Engineer for Professional Services (1996), #1910-27-B, \$14/28/56

Binder with the three Engineers-Subconsultant Group, #1910-82, \$40/80

WordPerfect 5.1 disk, #1910-82-A, \$200/400

Word 6.0 disk, #1910-82-B, \$200/400

Standard Form of Joint Venture Agreement Between Engineers for Professional Services (1999), #E-580, \$18/36/72

Amendment to Engineer-Consultant Agreement (1999), #E-571, \$10/20/20

Individual electronic documents may be ordered off the Web site (no hard copy).

Construction-Related Documents

Standard General Conditions of the Construction Contract (1996)

Defines basic terms between the owner and contractor, including duties, bonds, insurance, progress payments, status of the engineer during construction, and more.

#1910-8, \$25/50/100

Standard Form of Agreement Between Owner & Contractor on the Basis of a Stipulated Price (1996), #1910-8-A-1, \$14/28/56

Standard Form of Agreement Between Owner & Contractor on the Basis of Cost-Plus (1996), #1910-8-A-2, \$14/28/56

Application for Payment (1996) (Pads of 25), #1910-8-E, \$14/28/28

Certificate of Substantial Completion (1996) (Pads of 25), #1910-8-D, \$14/28/28

Change Order (1996) (Pads of 25), #1910-8-B, \$14/28/28

Bid Bond (Penal Sum) Form (1996) (Pads of 25), #1910-28-C, \$14/28/56

Bid Bond (Damages) Form (1996) (Pads of 25), #1910-28-D, \$14/28/56

Construction Payment Bond (1996) (Pads of 25), #1910-28-B, \$14/28/56

Construction Performance Bond (1996) (Pads of 25), #1910-28-A, \$14/28/56

Engineer's Letter to Owner Requesting Instructions Concerning Bonds & Insurance Regarding Construction (1996), #1910-20, \$10/20/20

Guide to the Preparation of Instructions to Bidders (1996), #1910-12, \$14/28/56

Guide to the Preparation of Supplementary Conditions (1996), #1910-17, \$14/28/56

Notice of Award (1996) (Pads of 25), #1910-22, \$14/28/28

Notice to Proceed (1996), (Pads of 25), #1910-23 \$14/28/28

Owner's Instructions: Bidding and Construction Documents (1996), #1910-29, \$10/20/20
Owner's Instructions to Engineer Concerning Bonds & Insurance Regarding Construction (1996), #1910-21, \$10/20/20
Suggested Bid Form & Commentary for Use (1996), #1910-18, \$14/28/56
Work Directive Change (1996) (Pads of 25), #1910-8-F, \$14/28/28

Binder with 19 Construction Related Documents Group, #1910-85, \$250/500
Hard copy above plus WordPerfect 5.1 disk, #1910-85-A, \$700/1400
Hard copy above plus Word 6.0 Disk, #1910-85-B, \$700/1400
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Funding Agency Editions

These forms are approved for use on Rural Utilities Service funded water and waste water projects.

Standard Form of Agreement Between Owner and Engineer for Professional Services, Funding Agency Edition (1997), #1910-1-FA, \$25/50/100
Standard General Conditions of the Construction Contract, Funding Agency Edition (1997), #1910-8-FA, \$25/50/100
Standard Form of Agreement Between Owner and Contractor on the Basis of a Stipulated Price, Funding Agency Edition, (1997) #1910-8-A-1-FA, \$14/28/56
Set of three documents, #1910-83, \$50
Hard copy above plus WordPerfect 5.1 disk, #1910-83-A, \$275/550
Hard copy above plus Word 6.0 disk, #1910-83-B, \$275/550

Standard Form of Agreement between Owner, Designer, and Project Peer Reviewers for Professional Services for Independent Project Peer Review (1999), #E-581, \$25/50/100
Standard Form of Master Agreement Between Owner and Engineer for Professional Services (1999), #E-505, \$25/50/100
Amendment to Owner-Engineer Agreement (1999), #E-501, \$10/20/20

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Hazardous Remediation Documents

EJCDC offers this unique family of documents for use on hazardous remediation projects. Developed jointly with the Environmental Business Action Coalition (EBAC) of ACEC, the forms deal with the roles of owners, design professional firms and contractors in this very specialized design and construction arena.

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Agreement Between Owner and Environmental Remediator on the Basis of Stipulated Price, (2000), # R-520, \$14/28/56
Agreement Between Owner and Environmental Remediator on the Basis of Cost Plus, (2000), # R-525, \$14/28/56

Standard General Conditions of the Subagreement Between Environmental Remediator and Subcontractor, (2000), # R-750, \$25/50/100
Agreement Between Environmental Remediator and Subcontractor on the Basis of Stipulated Price, (2000), # R-521, \$14/28/56
Agreement Between Environmental Remediator and Subcontractor on the Basis of Cost Plus, (2000), # R-526, \$14/28/56

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Procurement Agreements

These forms are used for acquisition of significant furnishings, fixtures and equipment on a construction project. They take into account the Uniform Commercial Code where applicable, inspection, acceptance, title transfer, assembly onsite, and much more.

Suggested Form of Agreement Between Buyer and Seller for Procurement Contracts (2000), #P-520, \$14/28/56
Standard General Conditions for Procurement Contracts, (2000), #P-700, \$25/50/100
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Suggested Bid Form for Procurement Contracts, (2000), #P-400, \$14/28/56
Performance Bond for Procurement Contracts, (2000), #P-610, \$14/28/56
Guide to the Preparation of Supplementary Conditions for Procurement Contracts, (2000), # P-800, \$14/28/56

Commentaries, Bibliographies, References

Commentary on Agreements for Engineering Services & Construction Related Documents by John R. Clark, Esq. (1993), #1910-9, \$43/86
Contract Documents Bibliography (1996), #1910-24, \$6/12
Focus on Shop Drawings by John R. Clark, Esq. (1985), #1910-9-C, \$22/44
Indemnification by Engineers--A Warning (1990), #1910-9-G, \$22/44
Limitation of Liability in Design Professional Contracts (1986), #1910-9-E, \$18/36
Recommended Competitive Bidding Procedures for Construction Projects by Robert J. Smith, Esq. (1987), #1910-9-D, \$22/44
Standard Form of Coordinated Multi-Prime Design Agreement Between Owner and Design Professional for Construction Projects (1993), #1910-30-A-B, \$26/52
Uniform Location of Subject Matter (1995), #1910-16, \$7/14

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Standard General Conditions of the Contract Between Owner and Design-Builder (1995), #1910-40, \$25/50/100
Standard Form of Agreement Between Owner and Design-Builder on the Basis of a Stipulated Price (1995), #1910-40-A, \$14/28/56
Standard Form of Agreement Between Owner and Design-Builder on the Basis of Cost Plus (1995), #1910-40-B, \$14/28/56
Standard Form of Sub-agreement Between Design-Builder and Engineer for Design Professional Services (1995), #1910-41, \$14/28/56
Standard General Conditions of the Construction Sub-agreement Between Design-Builder and Subcontractor (1995), #1910-48, \$25/50/100
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NSPE Membership Application (You should have)

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NSPE Order Form (to be copied from the existing catalog)

Glossary

ABET - Accreditation Board for Engineering and Technology. An organization that accredits college and university engineering programs in the United States.

AIChE - American Institute of Chemical Engineers. Professional organization focused toward Chemical Engineering.

ASCE – American Society of Civil Engineers. Professional organization focused toward Civil Engineering.

ASME - American Society of Mechanical Engineers. Professional organization focused toward Mechanical Engineering.

CAD – Canadian Accreditation Board. An organization that accredits college and university engineering programs in Canada.

E.I. – Engineering Intern. Old label given to engineers that have passed the FE.

E.I.T. – Engineer In Training. Present label given to engineers that have passed the FE.

E-Commerce – Commerce through the Internet.

F.E. – Fundamentals of Engineering Examination. Examination taken to become an Engineer in Training.

Internet – Network of computers across the world linked to share information.

IEEE – Institute of Electrical and Electronics Engineers. Professional organization focused toward Electrical and Electronics Engineering.

Link – Feature of a website that allows a jump to another web site, another frame, or another part of the page.

NCEES - National Council of Examiners for Engineering and Surveying. Organization that creates and administrates the PE and FE examinations.

NIEE – National Institute of Engineering Ethics. – Organization that focuses on engineering ethics.

NSPE – National Society of Professional Engineers. Professional Organization focused toward Professional Engineering.

Online – Term used to describe being on the Internet.

P.E. - Principles and Practice Examination. Examination taken to become a Professional Engineer.

WWW – World Wide Web. Client/server hypertext system for retrieving information across the Internet.

Website – Specific locations on the World Wide Web.

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