Technology and Navy Recruiting

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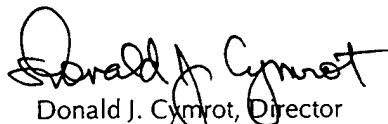
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Since November 1996, CNA has participated on a Technology Task Force established by the Commander, Navy Recruiting Command, to address several issues concerning the use of technology and Navy recruiting. This annotated briefing summarizes our ongoing efforts in three areas: Internet recruiting, Intranet showcase, and interactive multimedia. The unifying theme to these topics is the need for Navy recruiting to keep up with the rapid changes occurring in marketing and the exchange of information. High-tech methods of marketing and processing applicants should be pursued in order r to keep pace with the tremendous changes in the marketplace.

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Outline

- **Internet Recruiting**

- **Intranet Showcase**

- **Interactive Multimedia**

CNA has been working with personnel in Navy Recruiting Command (CNRC) on Internet and other technology-related issues in recruiting since the spring of 1996. Some of the recommendations that we have made in the past are as follows (see [1] and [2]):

- Take more advantage of the Internet.
- Put recruiters on-line to develop contacts and to communicate with potential recruits.
- Improve the marketing effectiveness of the Navy Jobs web site.
- Use the Intranet to streamline CNRC operations.

Since November 1996, we have participated on a Technology Task Force established by the Commander, Navy Recruiting Command, to address several issues, including the use of the Internet and Intranet in recruiting. In addition, CNA has been developing a CD-ROM for use in community college recruiting. This annotated briefing summarizes our ongoing efforts in three areas: Internet recruiting, Intranet showcase, and interactive multimedia.

Internet Recruiting

- **22-23 January 1997 Workshop**
  - **Internet sites**
    - **Colleges**
    - **Advertising**
    - **Job Banks**
  - **NRD Homepages**

The first task that the Technology Task Force chose to pursue was the use of the Internet for recruiting. We felt that it was important to train local effective advertising delivery system (LEADS) center personnel in the 31 Navy Recruiting Districts (NRDs) on the use of the Internet for recruiting, as well as to give them the opportunity to create individual NRD homepages. On 22-23 January 1997, CNRC sponsored an Internet Recruiting Workshop on the campus of the United States Naval Academy. Thirty NRD LEADS centers, four areas, and Navy Recruiting Orientation Unit (NORU) were all represented.

The first day of the workshop was devoted to resources on the Internet that could be useful in generating leads or Personally Developed Contacts (PDCs). Appendix A contains a complete listing of the sites and addresses covered during the workshop. The following is a summary of the topics included:

- Search engines that are useful in finding particular topics, such as job fairs or engineering related sites
- College sites, both 2-year and 4-year, particularly:
  - Student e-mail lists
  - Clubs and organizations
  - Academic calendar
  - Campus maps
  - Placement office news
  - Resume banks of graduating students

- Resume banks, such as:
    - Sites with hot links to resume banks
    - Engineer resume banks
    - America's Talent Bank, sponsored by the Department of Labor
- Sites with hot links to free job posting sites
- A tour of a free advertising site: Yahoo's San Francisco Bay Area Classifieds
- A tour of America's Job Bank (AJB), a free advertising site sponsored by the Department of Labor. At the time of the workshop, CNRC had already been advertising 16 jobs on this site for over 9 months, with over 180,000 hits. In addition, the Department of Labor, working with the American Association of Community Colleges, began work on a project in 1996 to create "Internet Access Zones" for AJB, to be in every community college by Labor Day 1997. This job site was chosen for the workshop because community college recruiting is one of the top priorities of CNRC.
- Instructions were provided on how each NRD could submit these 16 jobs to the appropriate state-level AJB-sponsored site.

The second day of the workshop was devoted to providing each NRD with a prototype homepage and helping them modify it for their own purposes. Each NRD received a CD-ROM containing the prototype homepage written in AOL Press, as well as the AOL Press software and instructions. Much of the day was spent teaching the basics of AOL Press and going over each section of the prototype homepage so that each NRD could make the appropriate changes.

Legal issues pertaining to the use of the Internet by Navy Recruiting, such as spamming,* transmission of confidential information, and the need for the disclosure of the Privacy Act, were also covered.

A questionnaire administered on the last day indicated overwhelmingly positive reaction to the two-day workshop. Respondents agreed that they had benefited greatly by what they had learned and asserted that they were much better prepared, and much more enthusiastic, to recruit using the Internet and to prepare an NRD homepage.

Other feedback from the questionnaire indicated that individual NRDs would eventually like to receive responses from electronic Business Reply Cards (BRCs) on their homepages directly, instead of going through the National LEADS Center.

The responses also indicated that the field would like more guidelines from CNRC on the use of the Internet for recruiting purposes.

Finally, participants were instructed to notify CNRC Code 70 about sites they discover that were not mentioned in the workshop but are useful in recruiting. This includes both free and fee-based sites. If several people recommend the same fee-based site, that can help CNRC in determining whether it would be cost-effective to invest in that particular site.

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* Spamming refers to sending unsolicited e-mail to a large population. It is similar to junk mail sent via the U.S. Postal Service.

Workshop Follow-up

- **NRD homepages**
- **AJB sites**
- **Newsletter**

How has the field used and built on material presented at the workshop? Since the workshop, 1 area (Area 8) and 15 NRDs have added homepages, 11 of which are linked on the CNRC Internet server: ntserv.nrc.navy.mil (Albuquerque, Denver, Indianapolis, Jacksonville, Los Angeles, Minneapolis, Montgomery, Omaha, Philadelphia, Raleigh, San Antonio).* The remaining four NRDs are not linked to the server:

- Buffalo - www.pce.net/navybflo/index.html
- Houston - navyhouston.com
- Nashville - www.nashville.com/~navy/nrdnash.htm
- San Francisco - home.earthlink.net/~nrdsanfran1.

These NRDs join Chicago, Dallas, Kansas City, New England, New York, Pittsburgh, San Diego, Navy Recruiting Orientation Unit (NORU), and Area 5, all of which had existing homepages on the Internet on other servers before the workshop. All, except New York, are also linked on the CNRC server.

It is more difficult to assess the field's utilization of material that was covered in the first day of the workshop. Many job posting and resume sites were covered, and the intention was to provide the tools to find more pertinent sites. For obvious reasons,

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* Since publication of the sponsor review version of this paper, three more NRDs have added a homepage to the CNRC server (Michigan, Miami, and Seattle).

it would be virtually impossible to verify whether the LEADS centers are making use of free resume banks. In addition, verifying which of the free job posting sites had been used would be difficult because each job site has different search criteria and formats for job ads. However, it is much easier to look at AJB state-affiliated sites to determine whether NRDs had submitted their own jobs.

We recently did a random search of nine AJB state-affiliated sites (Alabama, Illinois, Nebraska, New Mexico, New York, North Carolina, Pennsylvania, Tennessee, and Virginia) to see whether the NRDs that encompassed these states had submitted any of the Navy jobs. In all but two (New York and North Carolina), the AJB ads were present. However, most* of the jobs that were on these seven states were the same as the ads that were on AJB. In other words, the NRDs had neither changed the contact information from 1-800-USANAVY to the local LEADS centers' 800 numbers nor (for those that had an NRD homepage) redirected the prospective applicant to that web site versus the Navy Jobs site. After discussing this with a point of contact at AJB, it seems likely that the NRDs did not submit these jobs themselves. Rather, they were submitted because a reciprocal agreement exists between AJB and the state-affiliated sites. Jobs that are posted on one site are automatically submitted to the other. In other words, if an employer in Virginia has a job opening in Richmond and submits a description to the Virginia state job bank, it is also automatically posted to AJB, and vice versa.

For the other two states, only North Carolina had a Navy-specific job. This was a job for a Navy trainee, and was listed under the Lenoir local office only. Thus, it did not appear that any jobs were submitted by the NRDs covering the nine states surveyed.

And what about CNRC follow-up on the workshop? We feel that it is important that CNRC try to keep up interest in the Internet for recruiting purposes, as well as keep the field updated on new sites, legal issues, and so on. Given that, and in response to the request for more guidelines from headquarters on the use of the Internet, it was decided that a newsletter should be established to provide periodic updates to the field on items pertaining to legal issues, LEADS tracking, new or newly discovered Internet sites provided by the field, and other Internet recruiting issues.

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* Tennessee had a job listed for Navy Cooks in Jackson, and Nebraska had a listing for Navy Job Opportunities in Omaha.

The following are a few observations and recommendations from our experiences with this workshop:

- A two-day workshop was not long enough to either train or motivate the NRDs to expand their use of the Internet for recruiting purposes.

- Training needs to be incorporated into NORU for LEADS center personnel on the effective use of the Internet for recruiting. However, NRDs should be advertising and searching **local** sites only.

- Advertising on national job sites and searching of resume banks is probably best done by headquarters, so as to eliminate redundancy (in other words, 31 LEADS centers should not all be looking at the same resumes nor should numerous recruiters try to contact the same person).

- During the week of the workshop, we discovered that the jobs that had been submitted to AJB had "disappeared" because they had not been extended (each job needs to be extended monthly). After the workshop, the job descriptions were rewritten (and some new ones added) and resubmitted. The new jobs modified the job title of the engineering technician to nuclear engineering technician. Since very few people, if any, receive an A.S. in nuclear engineering technology (only 17 community colleges in the country offer a nuclear technology program), and because there is no specific requirement that one be trained in nuclear engineering technology to enter the enlisted nuclear program, it seemed to be unnecessarily restrictive. In fact, the number of people accessing the job under the new title has

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been significantly fewer than under the old title. We recommend that the adjective "nuclear" be removed from any advertisement aimed at recruiting people who might be qualified or interested in the enlisted nuclear field, and keep the title more generic, such as engineering technician.

- Currently, ads for computer technician are listed in only seven states in AJB, and in only two states for electronics technician.* This also implies that these jobs are only cross listed in these limited AJB state-affiliated sites. Given the fact that community colleges are now linked to AJB, and that the Advanced Electronic/Computing Field is critically undermanned because of the difficulty in finding qualified recruits, we urge CNRC to expand the job ads in these two fields to all 50 states.

- There are many free sites to which headquarters could submit ads, particularly in the critically undermanned areas of engineers (both enlisted and officer) and physicians. The number and nature of these sites changes constantly, and headquarters needs to keep current with this market.

- Even sites that cost to advertise on may be cost-effective, and possibly even more cost-effective than "free" sites because all sites cost CNRC in terms of manpower to search , submit ads, and maintain them. Therefore, we recommend that CNRC perform an in-depth market analysis of sites that would cater to the type of market that Navy recruiting is trying to capture. These include Intranet and Internet sites, as well as usenet groups.

- For those sites on which the Navy does choose to advertise, the cost-effectiveness of each site needs to be evaluated, especially because this is a relatively new medium for recruiting. Currently, almost every advertisement and Internet job posting directs the prospective recruit to the Navy Jobs homepage. The original source of the lead, therefore, often gets "lost." The more sites the Navy uses, the more difficult it will be to keep track of the original source. Therefore, a mechanism needs to be developed whereby the precise source of each lead can be identified, with constant updates as new sites are used.

- The usefulness of NRD, as well as the CNRC, homepages needs to be reevaluated. For people looking for employment, these sites will not be the most prominent in a search on the keyword "jobs." (In a recent search on EXCITE on the word "jobs," none of these sites were listed in the top 100. In a search of "engineer"* and "jobs" together on EXCITE, INFOSEEK, and LYCOS, none of these sites, including the Navy Jobs site, was listed in the top 60 hits.) They do, however, serve other purposes. For those who are already interested in the Navy, they can locate their local recruiter on an NRD homepage (if the homepage contains that information, which is not always the case). Or, for those predisposed toward the Navy, they can learn more about specific careers, benefits, and so on, by looking at the Navy Jobs site. So, how important is it that the remaining NRDs put together a homepage? Do NRD homepages serve a purpose for the field? Could they be used as a tool for those in DEP? Or are they useful in terms of advertising (which we believe they are not)? How much does it cost for CNRC to have NRD homepages? Does the benefit outweigh the cost? We believe that these are issues that need to be explored.

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* The number of hits on the two electronics technician jobs was 450 in four months. For the seven computer technician jobs, there were 1,400 hits in the same time period.

Intranet Showcase

- **Improve command-wide communications**
- **Electronically distribute information to avoid costs and delays of printing and distributing time-sensitive information**
- **Give recruiters quick and easy access to information and support materials**
- **Foster collaboration between recruiters**

The second task undertaken by the Technology Task Force was a demonstration of Intranet technologies. Intranets are private networks that incorporate World Wide Web technology to provide easy point-and-click access to diverse information sets. Intranets feature access to on-line document libraries, databases, and communication and collaboration tools, all via the familiar Web browser interface.

The Task Force recognized the potential of an Intranet to improve CNRC's capabilities to communicate with and support the recruiter in the field. The group decided that the best way to communicate this potential to others was to stand up a showcase of prototype Intranet applications. Showcase development started in February with discussions of potential applications to be included. During the spring, input was solicited from the field (more on this later), and applications were developed. The showcase was demonstrated to Commander, Navy Recruiting Command, in June. The content of the showcase includes messages from the Admiral, department homepages describing the mission and services offered by the department, technical help for Rtools and other programs, electronic manuals, electronic versions of *Recruiting* and *SeaWorthy* magazines, electronic forms for ordering supplies on-line, Web RADs (one-page fliers that can be downloaded and customized with the recruiter's name and address), an interactive version of the Headquarters staff directory, and electronic forums where recruiters can post questions or suggestions for other recruiters, and then respond to each other's posts.

The showcase demonstration was met with enthusiastic support. Commander, Navy Recruiting Command, instructed the Task Force to continue developing plans and strategies for Intranet deployment. She suggested an incremental approach and placed a high priority on applications to help streamline day-to-day operations, for example, on line order forms for recruiting materials and office supplies.

Intranet Infrastructure

- **Firewall needed**
- **Increased capacity for field access needed**
- **New Intranet server needed**

CNRC does not currently have the network infrastructure necessary to support a production Intranet. The following improvements need to be made before Intranet development can begin in earnest.

Firewall needed

Intranets use Internet technologies but over private networks, not the Internet. The Internet is a public broadcast medium too insecure for the proprietary or For Official Use Only information carried on Intranets. Currently CNRC's LAN does not qualify as an Intranet because it has an unprotected connection to the Internet. This presents two problems:

(1) Although a web server is available on the LAN, it can be accessed by the entire Internet community. Therefore, it is not appropriate to place anything other than public relations information on the server.

(2) Because the CNRC LAN has an unprotected connection to the Internet, it is susceptible to attack by hackers.

The solution to both of these problems is to implement a firewall, a (usually PC-based) hardware/software device that bridges the LAN and the Internet. Firewalls are designed to:

- Keep electronic traffic on the LAN from inadvertently leaking onto the Internet
- Allow one-way access to the Internet, so the LAN users can access the Internet, but no one on the Internet can access the LAN. Firewalls stop even legitimate users from accessing the LAN from the Internet because it is a trivial matter for hackers to masquerade as legitimate users.

Increased capacity for field access needed

Once a firewall is in place, CNRC will have to find a way for those not physically located in the headquarters building to gain non-Internet-based access to the LAN. This study needs to be done to determine which of the following two methods is most cost-effective for CNRC:*

(1) Significantly increase network dial-up capacity, in effect making CNRC its own Internet Service Provider. CNRC has some network dial-up capability, but it was designed to support e-mail, a relatively lightweight network application. To use it, the user logs in to the LAN, the user's computer exchanges stored e-mail with the server, and the user logs off. This transaction takes only moments. The user then reads and responds to the e-mail off-line.

Intranets, on the other hand, are based on Web technology. Users logged onto the Intranet could spend a significant amount of time accessing information via their Web browsers. To support this, CNRC would need to significantly increase its pool of modems and 1-800 lines.

(2) Contract a national Internet Service Provider to implement a *virtual private network*. ISPs will set up private networks similar to their Internet services. Remote users dial a local number to access the ISP, but instead of being routed to the Internet, they are routed to a private network. CNRC has the option of contracting with a national ISP, or using DOD's unclassified NIPRNET, which is essentially a large virtual private network.

New Intranet server needed

CNRC operates a web server that at times has been described as the "Intranet Server." It is not. The existing server hosts some of the Area and NRD homepages mentioned earlier. It also serves as a backup server for the BUPERs Goal Card application. Both of these are public access web applications. When CNRC's firewall goes on-line, the existing server will need to remain on the Internet side of the firewall. A new server will have to be stood up to support Intranet applications.

CNRC is primarily a Microsoft Windows shop, so a web server based on a Windows NT Server would allow for easy integration into the existing LAN. Microsoft's Internet Information Server (IIS) package would be a good choice because:

- It comes standard with the Windows NT Server, and there are no additional costs after the server has been purchased.

- Microsoft has tightly integrated its Office 97 desktop suite with IIS. The combined packages allow for rapid development of sophisticated Intranet applications.

- It is a scalable solution. CNRC can start with a small NT Server (or even a Windows 95 machine running IIS) and move to larger or multiple NT Servers as demand for Intranet services grows.

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* Since publication of the sponsor review version of this paper, we have become aware of a third option—that of tunneling software on the firewall. However, CNRC has already begun implementing method 1.

New SOPs for a new medium

- Authority to publish moves to the content provider
- Standard operating procedures (SOPs), as well as Intranet development efforts, need to focus on content as much as technology
- A cross-discipline group is needed to address these issues

According to [3],

> The traditional publication model includes a multi-step process including:
> - Creation of content
> - Migration of content to desktop publishing environment
> - Production of draft
> - Revision
> - Final draft production
> - Duplication
> - Distribution

While it is possible to run an Intranet based on this model, doing so negates most of the streamlining and cost reductions that Intranets offer. In fact, if information is published on an Intranet in parallel with publishing via traditional methods, costs go up because of the additional work required. Furthermore, this model produces information that is slightly out of date (as a result of the delays built into the publication process). If information available on an Intranet is too far out of synchronization with the real data, the Intranet will fall into disuse.

Reference [3] goes on to say:

> The Intranet publishing model includes a much shorter process, skipping many of the steps involved in the traditional publication model:
> - Creation of content
> - Migration of content to desktop publishing environment
>
> In this later model, revision becomes part of the updating process while the origininal content is available to the end users, thus dramatically reducing the time it takes for the information to become available to the user of that information. As the information is centrally stored and always presumed to be current, the company will not have to retrieve "old" information from employees to be replaced with new information, thus saving any expenses incurred in updating.

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That is, information is made available on the Intranet in a dynamic manner. If a database is available via a Web interface, and a record is changed in a database, that change is immediately available to everyone on the Intranet. Likewise, if a content provider decides that a new report is necessary, all he or she needs to do is write the report and post it on the Intranet server. The report will instantly be available to all Intranet users.

This streamlining helps reduce costs. This empowerment of content providers helps get needed information out in a timely fashion. But the quality control features of the traditional publication model are missing. New standard operating procedures (SOPs) will be needed to address this.

While it is not obvious what those procedures should be, a couple of observations can be made. First, this is a content problem, not a technical problem. Obviously the IS group will be heavily involved in setting up and running an Intranet, but any SOP that implies that the Web server administrators are responsible for the quality of information available on the Intranet will fail. The server administrators are not trained to make decisions about the quality or appropriateness of content. Second, a large part of the responsibility for the quality of the content will fall on the content providers themselves. To do this job with confidence, the content providers will need training on working with Intranet technologies.

A cross-discipline group is needed to develop Intranet-friendly SOPs, as well as make recommendations on priorities for migrating information to the Intranet. This group could be formed a couple of ways. One suggestion is to expand the Technology Task Force so that it has at least one committed representative from each department, and then give the Task Force the authority it needs to make change. Another suggestion is to form a new department with responsibility for coordinating Intranet content development and training.

Field Response to Intranet Needs
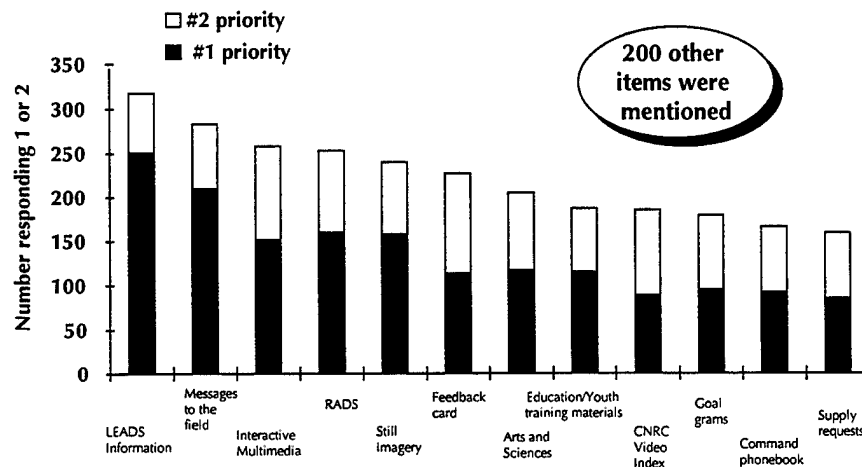
A survey was sent to the field in late March to find out what their priorities were for the Intranet server (the instructions and distribution to the field are in appendix B, and the survey itself is in appendix C). We received 387 responses (154 enlisted recruiters, 138 recruiters in charge (RINCs), and the remaining 95 were other recruiting personnel).

Respondents were asked to put a #1 next to five items that they felt were their top priorities for the server. Top priority was defined as something that they would like to see immediately (in the next 3-4 months). They were informed that, if headquarters devoted resources to putting these materials on first, all other items would probably be delayed. They were instructed to put a #2 next to five (or fewer) of all the topics that they felt were second priority (could wait 6-9 months). And finally, they could put a #3 next to all of the remaining topics that they would benefit from, but whose priority is much lower (in the next year or so).

We rank-ordered the items on the basis of how frequently they were cited as a #1 or #2 priority. This graph illustrates those items that were in the top twelve in this ranking. In addition, we asked for any other items that we had not specifically included. We received over 200 other items for inclusion. This list is in appendix D.

Interactive Multimedia

- **Number 3 in survey response**
- **Uses**
- **Proposed experiment**
- **Costs**
- **Technology**
- **Future needs**

Recall from the survey of the field's desires for an Intranet server that their #3 priority was interactive multimedia. Currently, none exist for recruiters (although some are in development by JRIS and NPRDC). We believe that there is a real need for such a recruiting tool, especially in assisting enlisted recruiters to break into the community college market, which is one of the top priorities of CNRC. However, interactive multimedia applications would be better distributed via CD-ROM than an Intranet.*

We have spoken with the placement directors of several community colleges. They have all enthusiastically offered support for Navy enlisted recruiters to gain access to the college campus. Two options that most recruiters have is to set up a table in a high traffic area (near the student union, the cafeteria, etc.) on a monthly or biweekly basis, and to attend job fairs held usually once a semester. For both of these, the recruiter needs to be able to attract young people to the table, as well as to present an image of the Navy as a high-tech service. We believe that recruiters could benefit tremendously in attracting passers-by if they could use a CD-ROM presentation on a laptop computer. The presentation could run continuously in the background to draw attention and/or be used as an information source. The CD should have

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* Multimedia presentations tend to be too large to download and store, given the current constraints on modem speed and disk drive sizes. Also, multimedia presentations would frequently be used in environments where a network connection is not readily available.

pictures and audio, and be entertaining and informative. It should be interactive so that, if a student is interested in a particular field, the recruiter can stop the presentation, click on the appropriate subject matter, and pull up the requested information. For instance, if the student is studying electronics engineering technology, the recruiter could click to a mini-presentation on that field, or go to an area where the classifier's fact sheet has been scanned into a text file, and either let the student read the information or print it off for the student to take.

Such a tool has several benefits (e.g., versus a video):

- It presents the Navy as high tech.
- Information can be retrieved and printed.
- Segments of the presentation can be accessed very quickly.
- It can be modified very easily (e.g., when an enlistment bonus changes).

In discussions with a few recruiters, they have indicated that they feel that this type of recruiting aid would be beneficial in their efforts to break into the community college market. They expressed the need to have some sort of device that can attract the student to their table. Once one or two are attracted, more students will join to see what the others have found to be interesting.

Our recent experience at a job fair at Montgomery Community College in Maryland verifies this. The job fair was opened to only college students until 4 p.m., at which time it was open to the public. At that time, 53 employers had tables. Most of the employers simply had one or two personnel behind the table to answer questions, with copies of text-only information sheets (mostly pertaining to basic facts about the company, who they were looking for, etc.). Most tables had at most one person inquiring about the company. The exception was the Army (which was the only service represented). Their recruiters were located in front of the desk, with a video playing and lots of colorful RAD and giveaway items. That table had several students—some looking at the video, and some talking to the recruiters. It was apparent that these people were entertained by what they saw, and were attracted enough to talk to a recruiter. The Army was using a video display only, but our conclusion was that if the Navy had also been present, with an interactive CD-ROM presentation, they would have been able to attract as many, if not more, prospective recruits.

Because of our work with Navy Recruiting Command to help recruiters break into the community college market, and our participation on the Technology Task Force, we have proposed to create a prototype interactive CD-ROM and to test its usefulness in recruiting on community college campuses. In addition to determining whether it is an effective recruiting tool, we also want to be able to advise CNRC on what is required for them to develop their own CD-ROMs in-house (currently, the estimates for having a CD-ROM presentation created by an outside company can run $100,000 or more).

We will be using Macromedia Director to create the presentation (it costs approximately $900), but there are many other packages that could be used, including PowerPoint 95 and 97, which are widely available at Recruiting headquarters. However, the more expensive packages provide greater capabilities. In the hands of experts, these high-end packages can be used to create intricate presentations.

The CD-ROM will be developed with the community college market in mind. In other words, we will emphasize the Navy's need for technically trained individuals, the types of enlistment benefits that might appeal more to this market (e.g., college loan repayment, Montgomery G.I. Bill, and tuition assistance programs), as well as special segments on programs that are being targeted for this market (engineering technicians, medical specialties, electronics, foreign languages, and computer technicians).

The proposed experiment will involve distributing the CD-ROM for use in the Boston recruiting zone in the New England NRD that has been chosen for an NPRDC Research and Development project on Computer Communications Technology for Recruiting. This test zone will be supplied by NPRDC with multimedia laptop computers with sound and CD-ROM capabilities, high-speed modems, portable printers and scanners (which could be used for the purpose of our experiment if a potential recruit would like a fact sheet printed off to take home and look over), as well as other equipment. We anticipate having a preliminary version of the CD ready for CNRC approval in January 1998.

Only a limited number of CD-ROMs will be required for this experiment. We will produce the required number in-house at a cost of about $7.00 per CD. If the CD-ROM was being generated for distribution throughout CNRC, it would be sent to a multimedia service bureau for reproduction. Such services can reproduce CDs for $1.00 each for production runs of 1,000 CDs or more.

If the experiment proves successful, and this technology is adopted as a standard recruiting tool, all field computers will need to be upgraded to include the multimedia capabilities described above. Some recruiters may find that they also need external speakers and video monitors to more effectively incorporate the multimedia presentation into "fruit stand" displays.

Summary

- **Use the Internet more for recruiting**
  - Keep up with constantly changing market
  - Assign additional personnel
- **Incorporate the Intranet server into daily operations**
  - Convert old forms
  - Adapt new publications and forms
  - Expand capacity and infrastructure
  - Establish new SOPs
- **Look into the use of interactive multimedia for recruiting purposes**
- **Reengineer the recruiting process**

In this annotated briefing, we have discussed three different topics concerning the use of technology and Navy recruiting. The unifying theme to these topics is the need for Navy recruiting to keep up with the rapid changes occurring in marketing and the exchange of information. Computing capabilities and the reliance on the Internet are growing at a phenomenal pace, and are the driving force behind these changes. Conventional methods of marketing will become increasingly less effective as young people, even those in the elementary grades, are exposed to these high-tech forms of marketing.

To keep pace, CNRC will need to rethink how it allocates resources, including its staff. Instead of adding more responsiblities to those whose time is already filled with using conventional recruiting methodologies, their time might be more productively spent pursuing more high-tech methods of reaching the target market. The same could be said for the methods used for processing an applicant. Each time a new form is created, or an old one modified, why not devote the time instead to determining how to make use of the relatively faster and often cheaper electronic medium? Why not make the processing of an applicant as paperless and as efficient as possible?

This leads us to the final recommendation. Given the tremendous changes in the marketplace in the recent past, we would recommend that CNRC reengineer the process of recruiting, including both processing and marketing. Given the impending move to Millington, now is an opportune time to make such changes.

Appendix A:
Sites Visited During Workshop

How to use search engines

Excite   http://www.excite.com
Infoseek   http://guide.infoseek.com
Lycos   http://www.Lycos.com
Yahoo!   http://www.yahoo.com
Magellan   http://www.mckinley.com
Altavista   http://www.altavista.com
Webcrawler http://www.webcrawler.com

Introduction to the World Wide Web

Internet 101: http://www.sisna.com/users/scotting/101/internet.html
Guide to Cyberspace 6.1: http://www.utmb.edu/guide/guide.10.html

Recruiting on the Web

I. List of Two Year Colleges: http://www.sp.utoledo.edu/twoyrcol.html

2. Navajo Community College (AZ):
http://crystal.ncc.cc.nm.us/index.html
    A. Directory
        1. Ts students E-mail
    B. Attending NCC
        1. What's on Campus
            a. Clubs and organizations: American Indian Science and Engineering Society
        2. Getting into NCC
            a. 1996/97 Academic Calendar
        3. Campuses: Clickable map of Tsaile Campus

3. Northern Virginia Community College: http://www.nv.cc.va.us
   A. Catalogue
      1. College calendar
      2. Student development services
         a. Student activities
         b. Annandale campus

4. Triton College (IL): http://www.triton.cc.il.us
   A. Campus map
   B. Academic departments
      1. Mathematics
   C. Office of student life
      1. Current schedule of events
   D. FAQ: Office of student life
      1. Does Trition have any student activities?
      2. Can I post things on campus?

5. Web U.S. Universities by State:
http://www.utexas.edu/world/univ/state

6. Washington & Lee (VA): http://liberty.us.wlu.edu
   A. Student life
      1. Student individual home pages
      2. Organizations: Trident (student newspaper)
   B. Career development and placement

7. Rensselaer Polytechnic Institute (NY): http://www.rpi.edu
   A. Student life and services/career services
      1. Rensselaer's hypertext resume book
         a. For employers
            (1) Bachelor's degree candidates

8. How to find College Resume pages:
http://www.occ.com/occ/CollegeResumePages.html

9. Listing of Resume Databases on the World Wide Web:
http://amsquare.com/america/registry.html

10. INFOSEEK's list of resume data bases on the World Wide Web:
http://www.infoseek.com/Business/Find_a_job/Resume_banks?sv=N3

11. Riley Guide: http://www.jobtrak.com/jobguide/local.html
   A. Quick list of the files
      1. Recruiting on line
         a. Search posted resumes
            (1) Job banks
      2. Recruiters and Resources with Listings in Multiple Fields
      3. Engineering
      4. Resources for jobs in each state of the U.S.

12. Search engineering resumes: http://www.engineeringjobs.com
   A. Resume listings
   B. Other resume posting sites

13. America's Talent Bank: http://www.mesc.state.mi.us/cti-bin/michigan
   A. Welcome to Talent Bank!
   B. Employers

14. How to submit to local sites: San Francisco Bay Area Web Guide:
http://www.hyperion.com/ba/sfbay.html
   A. Employment
      1. Yahoo! Job Classifieds
         a. Submit your free classified ad
      2. Yahoo! Resumes
      3. Job Fairs

15. America's Job Bank: http://www.ajb.dni.us
    A. About America's Job Bank
    B. Job Search Index
        1. Links to State Employment Web Sites
    C. Employer's Services
    D. Keyword Search

Some other interesting sites:

CareerCity: http://www.adamsonline.com
Physicians Employment: http://www.physemp.com
MinistryLink: http://www.csbsju.edu/sot/MinistryLink
IEEE:http://www.ieee.com
College Grad Job Hunter: http://www.collegegrad.com
Online Career Center: http://www.occ.com
Jobtrak: http://www.jobtrak.com
Black Collegian Online: http://www.black-collegian.com

Appendix B:
Instructions for Intranet Survey Sent to Field

To: All Area CSOs
     All District XOs

CC: All Area SysAds
     All District SysAds

Subj: DISTRIBUTION OF INTRANET SURVEYS

Encl: (1) Intranet Surveys

1. We are in the process of establishing an Intranet server here at headquarters. This server will host e-mail, the Navy Goal Card and corporate data. As you already know, the effort to give each of our field recruiters e-mail is already in progress. Most of the stations in our prototype NRDs (Chicago and Richmond) now have accounts as well as access to the Navy Goal Card.

2. In the interest of gaining insight from the field, we respectfully request your assistance in disseminating enclosure (1) to your field recruiters as well as anyone else interested in voicing an opinion regarding the proposed CNRC Intranet. This survey will determine priorities for which corporate data to develop first for the Intranet. Therefore, response is critical.

3. I have e-mailed enclosure (1) to your SysAds as well. The deadline for reply is 4 April. Apologize for springing this on the recruiter at the end of the month, but the survey should only take 15 minutes to complete. Thank you for your assistance.

Appendix C:
Intranet Server Survey

CNRC is currently making plans to offer an Intranet service to all of Navy Recruiting Command. Basically, an Intranet is an electronic connection between everyone in the field and recruiting headquarters, accessible by your computer terminal. It is a smaller version of the Internet, with the same capability to download material and send messages. In order to ensure the safe transmission of sensitive information, including privacy act information, waivers, applications, etc., the service will be made available only to Navy recruiting and affiliated personnel.

An Intranet is not exclusively devoted to e-mail capabilities, but certainly that is a large component of it. How does everyone benefit by Intranet e-mail? Think of all of the first-class mail that you send or receive from headquarters, NRD headquarters, other stations, etc. Now, think of all of the phone messages you leave for RINCs, Zone Supervisors, headquarters personnel, other recruiters, etc., and time spent playing phone tag. Intranet e-mail abilities will reduce the cost of these transactions, in both financial terms and in time saved. If you could e-mail anyone in recruiting, you could leave messages, and send documents that would be received virtually immediately for the minimal cost of the hook-up time (an 800 number). You would save days and the cost of postage (which can be significant if the documents need to be sent Federal Express or if they are heavy).

But an Intranet capability can be used for more than just internal mail distribution. For instance, CNRC could make important documents available on a file accessible by everyone. To read the document, or to print your own copy, you would simply need to sign on to the CNRC Intranet server, locate the file with the document of interest, open it up, and read it and/or print it. Or, if you needed to submit a report to the NRD or to headquarters, you could fill it out electronically and send it immediately (possibly with a follow-up paper copy sent later for record keeping purposes).

What kinds of documents could be made available? That's what CNRC would like to know from you - what would make your life easier? What would save you time, money (mail costs, phone and fax charges, etc.)? Would it be useful to have the recruiting manual on the Intranet? The Arts and Sciences of Recruiting? Production statistics? Training material? What if RADS (such as date/time/place flyers, fact sheets, congratulatory letters for successfully completing the NFQT, etc., - with all of them being able to be updated immediately when bonus amounts or other current information changes) could be put in a file so that you could either download them and print them in your station, or else take them on disk to your local copier center for printing in color?

The potential for putting information on an Intranet server is virtually limitless, but there are constraints. Therefore, priorities will have to be set for what is made available when, based on certain criteria, including what is the most cost effective (in terms of time and finances), what is "easiest" to convert to electronic form, etc.

Your inputs will be used to stand up a "showcase" of Intranet applications that will be available to you via a dial-in solution to CNRC. We will let you know as soon as the showcase is available for viewing. In parallel, we are in the process of getting you the software to access our Intranet. In the following months, you will get an e-mail account as well as a browser with which you can access the Navy Goal Card. The account will reside on your laptop and you will be able to check your mail via a modem.

In order to best serve Navy Recruiting, WE NEED YOUR INPUT NOW. Please complete the attached survey, and fax it to CNRC Code 70 (703-696-5928) no later than COB Friday, 4 April. We will summarize the findings and use them to build the CNRC Intranet server. Therefore, your input is important! Thank you for your assistance.

INTRANET SURVEY

1. What is your position (circle the appropriate letter):
   - a. Enlisted Recruiter
   - b. Officer Recruiter
   - c. RINC
   - d. Zone Supervisor
   - e. NRD LEADS Center
   - f. EPO
   - g. OPO
   - h. Area LEADS Center
   - i. NRD CO/XO
   - j. Area CO/XO
   - k. NRD EdSpec
   - l. Area EdSpec
   - m. Headquarters personnel
   - n. Classifier
   - o. MEPS personnel other than classifier
   - p. NORU personnel
   - q. Other _____

We have divided the types of materials to be made available into 6 topics: library, LEADS, production, reports, training, and administration. Under each of these topics listed below, we have listed some materials that could be included on an Intranet server. Please feel free to add your own suggestions as well, under the appropriate topic. Then, put a #1 next to five (or fewer) of all the topics listed that would be your first priorities for an Intranet server. These would be the topics that you would like to see immediately on an Intranet server (in the next 3-4 months). Bear in mind that, if headquarters devotes resources to putting these materials on first, all other items would probably be delayed. Therefore, put a #2 next to five (or fewer) of all the topics that you feel are second priority (in the 6-9 months). Finally, put a #3 next to all the remaining topics that you, personally, would benefit from, but whose priority is much lower (in the next year or so).

LIBRARY

___	Recruiter magazine
___	A/V Inventory
___	A/V purchases and dispositions
___	CNRC video Index
___	Still imagery (photos for public use)
___	Interactive multimedia programs
___	RADS
___	Other _____
___	Other _____

LEADS

___	LEADS information
___	Feedback card
___	Peformance team schedules and related prospecting contracts
___	Other _____
___	Other _____

PRODUCTION

__ Forms (other than those available on RTOOLS)

Specify _____

_____

_____

_____

__ Other _____

__ Other _____

REPORTS

__ EdSpec reports

__ Other _____

__ Other _____

TRAINING

__ Education/Youth training materials

__ Arts and Sciences

__ Other _____

__ Other _____

ADMINISTRATION

__ Messages to the field

__ Goal grams

Forms

__ Leave chits

__ Special request chits

__ Travel orders

__ Travel claims

__ Supply requests

__ Other _____

__ Other _____

__ Other _____

__ Command phone book

__ Other _____

__ Other _____

__ Other _____

Appendix D:
List of Responses That Recruiters Gave for Other Intranet Needs

Suggestion	# responding
1306	3
1966	15
5305	11
1133/53	4
1133/57	1
1133/65	9
1133/77	2
Ability to pull test scores and phys info - but not to edit it	1
ADP714A	3
Address of all NRS and recruiters names	1
Advertisement schedule	3
ADP purchases	1
AFter action reports	1
Accident report	1
All Hands	5
All service accession report	2
Analysis tools	3
"Applicant log, planner, RQS"	1
Area 8 engineering reports	1
Area stats	1
ASVAB and NFQT schedule	1
ASVAB updates	4
Award inputs	2
Awards - recruiter/station	1
"Benefits update (MGI bill, etc.)"	1
BEERS	1
BMR	1
Board updates	2
Bonuses	3
BUMED stats	1
BUMED waiver status	1
Bus ticket	1
Calendar	1
CAT surveys	1

Clean slate disclosure form	1
CNRC AJB jobs	3
CNRC-wide e-mail list	2
CNRC zip code and NRS listing	2
Civil change sheet	1
Code 20 Facts	1
Code 30 daily report	1
Code 33/pers24	1
College materials	1
Command tickler	1
Competition/standing	1
Courtesy ships	2
Cruitman	17
DAR	1
Daily production report	5
DAEs	4
DD2246	9
DD368	3
DD370	9
DD372-Birth ver	6
DD714	5
DEP action requests	3
DEP indoctrination checklist (72 hour)	1
DEP info	2
DEP recert forms	1
DEP report	2
DLAB test results	1
"Documentation of active duty members (after RTC, first few years)"	1
DOD	1
Drug Screen matrix	2
Drug and alcohol	1
EDM daily states	1

Educational opportunities	1
Education verification	2
Enlistment prep kits	1
End of month reports	4
Enlistment kit (army does entire kit by computer)	4
EST score/calculation sheet	2
Eval/Fitrep program	1
Eval instruction/correspondance mannual	1
Field ideas	3
Financial statement	3
Goal cards	6
Goal updates	1
GMT	8
HCPQ	1
Healthcare provider questionnaire	1
Hometown news release	1
Homepage for DEPPERS	1
HS ASVAB lists	9
Information on ships/aircraft/subs	1
In rate questions bank	1
In stock supply list	1
Instruction and directives	3
"Integrate RTOOLS into system so Area, NRS, stations could share pass on p-cards"	1
Interview questionnaire	1
IRD	1
Items for upcoming events	1
Kit deadlines	1
Jane's Fighing Ships	1
Letter of past issuance	1
LINK magazine	1
Link to JASS	1
LSO required pubs and instructions	2

Mail outs	1
Market data	1
MASS	1
MATH	2
Medical apps for officers	1
Medical program manager updates	1
MED supps	1
Medical Recruiting Herald	2
Medical Questionnaire	3
MEPS schedule and put applicants on it	2
Monthly stats	1
MSC billet openings	1
NAQ	2
Nation NUC Navy	1
National stats on recruiting	2
Navcruit 1100/11	1
Naval Aviation News Magazine	1
Navy history	2
Navy news messages	1
NETCOM for nation and NRDs	2
New training info	1
Notices	1
NFQT tests	1
NRD DPR	2
NRD RIS sheets	1
"NR & R/sexual harrassment, etc."	1
NTT schedule	2
Objection handling-different scenerios and how to handle	1
Occupational field descriptions	3
Officer PRN requests from NRD to area	1
Officer apps forms	1
OPE	7
OPR	2

OPO paperless kit	2
OPO applications	1
Orders for AD posters	1
Page 8	3
Page 13	1
PATE	4
Physical training	1
"Places of where to place ads, papers"	1
Plan of week	1
Policygrams	1
PORT/PRIDE	1
POW	7
PMOAs	1
PRC	5
Predictions	1
"Production reports for stations,zones, districts"	3
PSA usage and $ amount	1
R-sheet	1
RADgrams from the past	1
RAD distribution	1
Ranking report (LEADS)	2
Rate training	2
Rate descriptions	1
Recruiter ideas for self generated LEADS posters	1
Recruiter refresher schools/RINCS too	1
Recruiter stacking report	1
Recall bill	1
Recruiter standings in NRD	2
Reimbursables	1
Results of tests/physical	1
RIS	3
ROTC pre-app	2
RQS recruiter/RINC	1

RTOOL FAQ and manual	1
Scheduling sheet	1
School accreditation	1
Security questionnaire	1
SEALS (BUDS)	1
Select/accessed for medical programs	1
Servicemembers locater	1
SF86	32
SF93	2
SSN privacy act statement	1
SS-5	2
Stamp requests	1
Stamp log	2
State police forms for record checks	2
Statement of understanding	6
STEAM	5
Supply training	2
Supply stock number list	1
Telephonic pers 2 24 hour waivers	1
Training syllabus	1
Troubleshooting guide for recruiters	1
TV ads	1
"Updates or changes to processing, commissioning and enlistment forms"	1
Upcoming training schedules	3
USMEPCOM 714 update	1
USMEPCOM 601-15	2
Various job displays	1
Vehicle report	2
Videos to be displayed on computer video conferencing	1
Waiver forms	1
Waiver cover letter	1
"Waivers to CNRC, BUMED, NRD, field, MEPS"	1

References

[1] Scott E. Smith and Peggy A. Golfin. *Recruiting on the World Wide Web,* Jan 1997 (CNA Annotated Briefing 96-99)

[2] Peggy A. Golfin. *FY 1996 Navy Recruiting Efforts in Community Colleges: A Summary Report,* Feb 1997 (CNA Research Memorandum 97-10)

[3] Process Software Corporation, *Intranets: Internet Technologies Deployed Behind the Firewall for Corporate Productivity,* 1996 (http://www.process.com/Intranets/wp2.htp)

Distribution list

Annotated Briefing 97-60

SNDL
FJB1   COMNAVCRUITCOM WASHINGTON DC (CNRC)
            Attn: COMMANDING OFFICER
            Attn: 00B
            Attn: 20
            Attn: 30
            Attn: 50
            Attn: 70
            Attn: 80

OPNAV
N12
N13
N1322F
N813