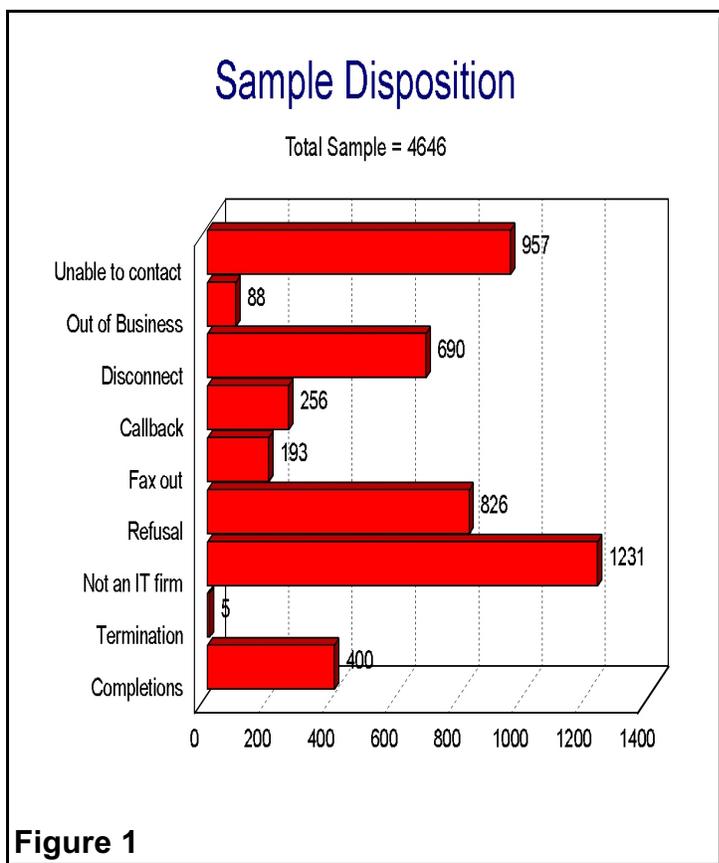


Survey of Information Technology Firms

Between July 24th, 2003 and August 20th, 2003, the Schaefer Center for Public Policy at the University of Baltimore conducted a survey of Information Technology firms for the Center for Technology and National Security Policy (CTNSP), National Defense University, Fort McNair, Washington, D.C. The survey purpose was to examine IT industry attitudes about doing business with the Department of Defense (DoD). Specifically, questions addressed why some businesses forego competing for DoD business and what businesses who do contract with DoD think should be done to improve the contracting process.

Section 1: Survey Methodology



Sample Selection. The goal of the survey was to obtain responses from 400 firms in the IT sector. This gives the results a margin of error of approximately +/- 5 percentage points. A random sample of firms was that met criteria specified by CTNSP was selected from the Dunn and Bradstreet Business database. Selection criteria required that each firm be within the IT sectors as defined by CTNSP using NAICS codes. Specifically, manufacturers of Information Technology included "Original equipment manufacturers" or "OEM" firm as well as software development firms. Retail or merchandising firms such as Circuit City, Best Buy and so forth were excluded from the survey during the interview process.

Initially, 4,000 sample records using the SIC codes were translated from NAICS codes. D&B lists up to four SIC codes for any business. Only the first SIC code appears in the database even though the program used to select data will select any firm if any of its SIC codes matches the selection criteria. Upon review of the records, we discovered that such firms as Bail

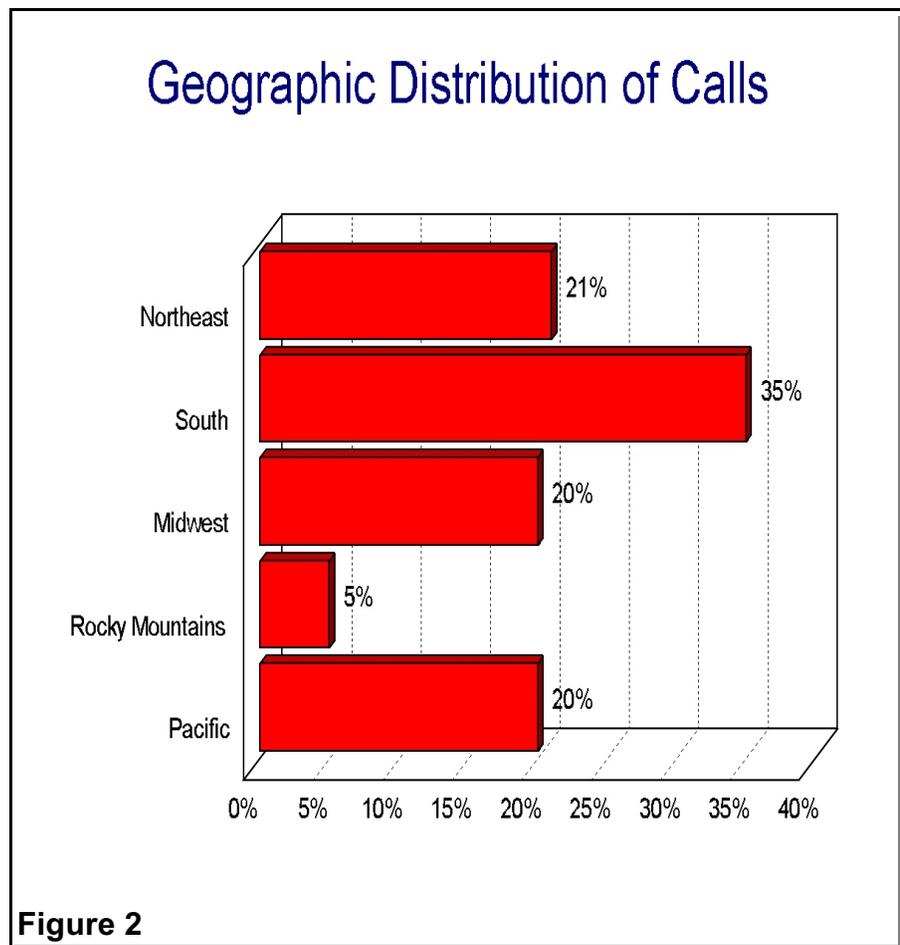
Bondsmen and so forth were in the database: the majority of these were in the category of Business services. In order to increase efficiency, we eliminated any record whose *listed* SIC code did not match those in the selection criteria. This resulted in the deletion of some 1521 records. A second sample of 2000 firms was added to the data. A final working sample of 4646 records was used

The dispositions of the calls are shown in Figure 1. The interesting disposition is for “not an IT firm”. This was the response to a screening question that asked the respondent whether or not the firm was part of the IT industry. The high level of “not an IT firms” responses, given the sample selection criteria, raises the question of whether an understanding of the term “IT firm” is widespread in the industry.

Cold calling on firms – calling without prior notification or identification of an appropriate contact -- often results in a large proportion of non-contacts and refusals particularly when there are time constraints on the time the survey is in the field and it is necessary to contact specific individual within the firm, in this case, the listed CEO.

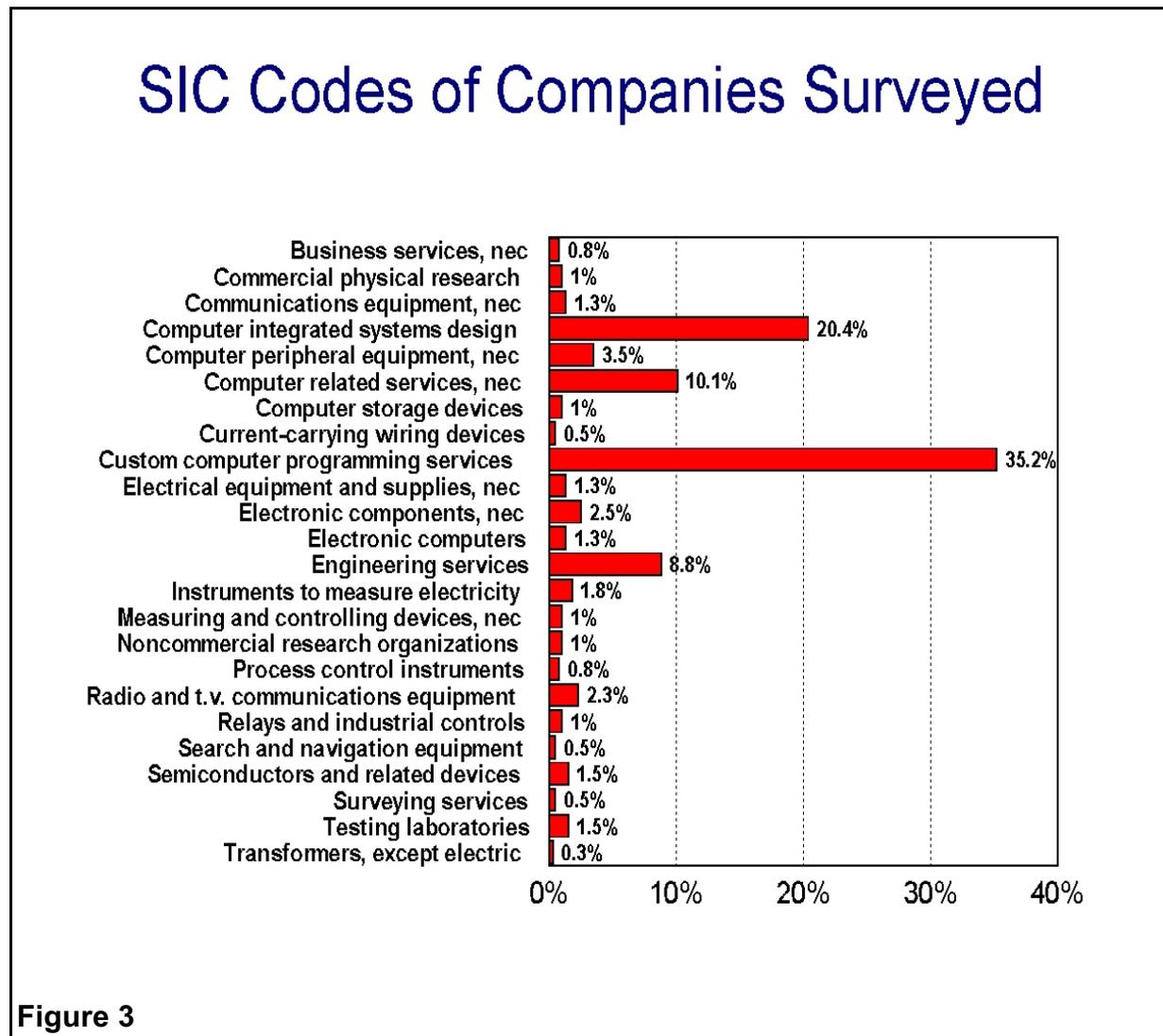
The survey was implemented by phone from the Schaefer Center’s Computer Aided Telephone Interviewing (CATI) System lab located at 1304 St. Paul St, Baltimore, MD. Calls were made during normal business hours adjusted for time zone.

Figure 2 and 3 provide information about the distribution of firms in the completed sample. Geographically, the responses came from a wide variety of states. About 35% come from Southern states which includes Maryland and

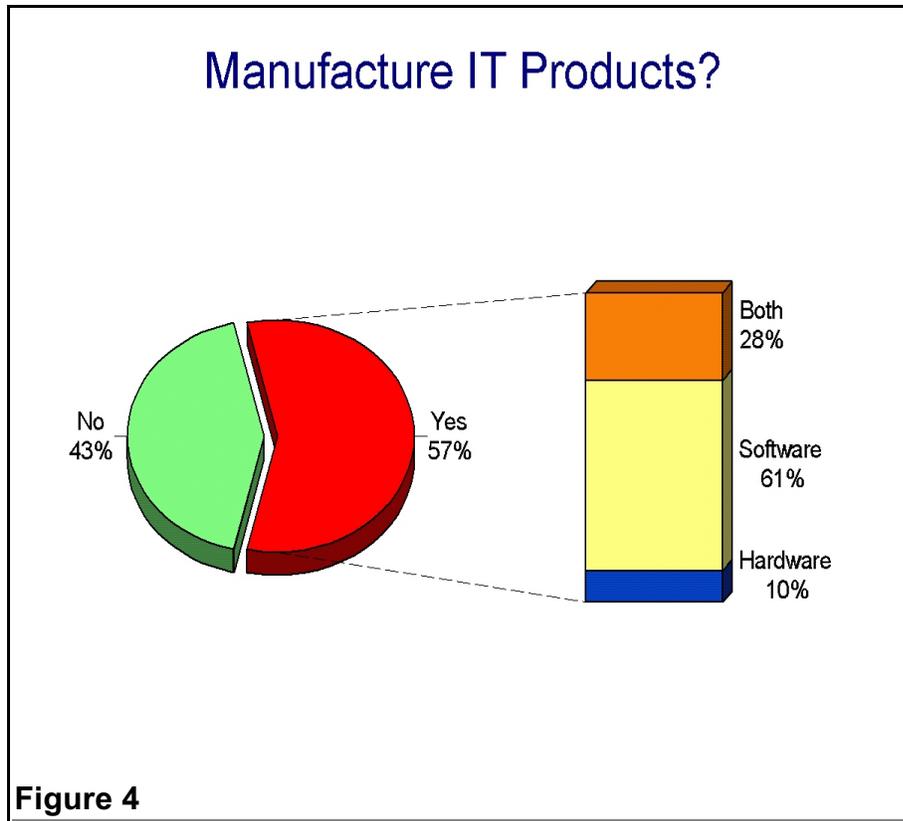


Virginia. Midwest states and Pacific states – California, Oregon, and Washington – each accounted for another 20% of the surveys. Finally, about 21% of the surveys were with firms in the Northeast. Very few (5% of the final surveys) were from firms in the Rocky Mountain states.

Completed surveys also represented a wide variety of firms throughout the IT industry. Figure 3 shows the frequency of each firm by four digit SIC sector. Note that computer programming services and integrated systems design accounted for a large share of the completed surveys.



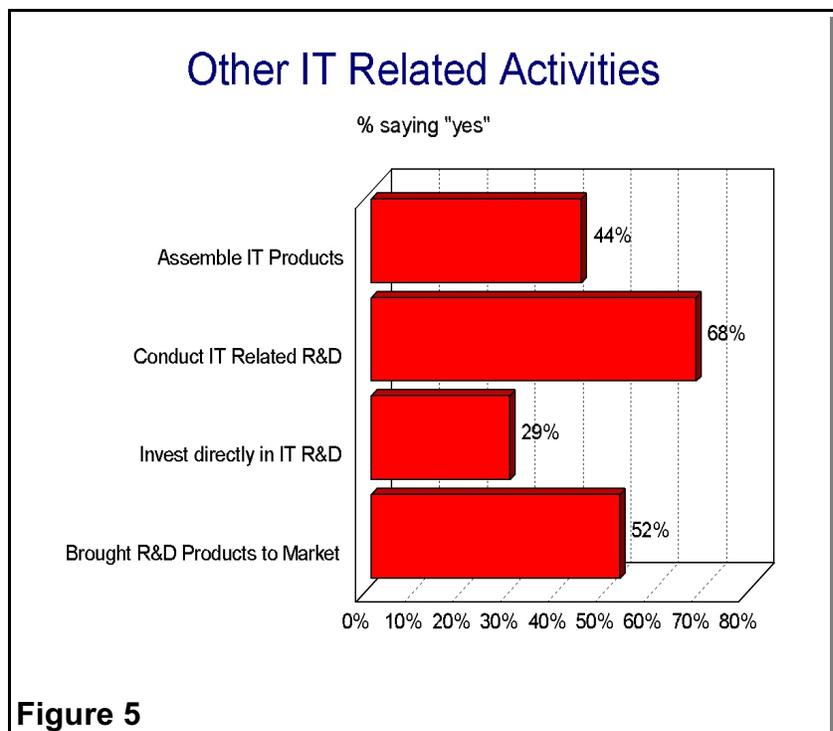
Section 2: Characteristics of Firms



The first set of questions screened respondents to insure that the firms met selection criteria. Figure 4 shows that about 57% of firms surveyed said they manufactured IT products. Of this number, 61% said they were primarily software developers and 10% said they were hardware developers. Twenty eight percent (28%) said they did both.

Figure 5 shows other characteristics of the final sample.

Some 44% of those surveyed said they “assemble IT products acquired from other manufacturers or suppliers.” Sixty eight percent (68%) of the firms said they conduct IT related Research and Development while 29% said they invest directly in IT related R&D done by others. A little over half of those surveyed say they have brought IT products to market as a result of their Research and Development activities.



Kinds of Products Produced by Firms

% saying "yes"

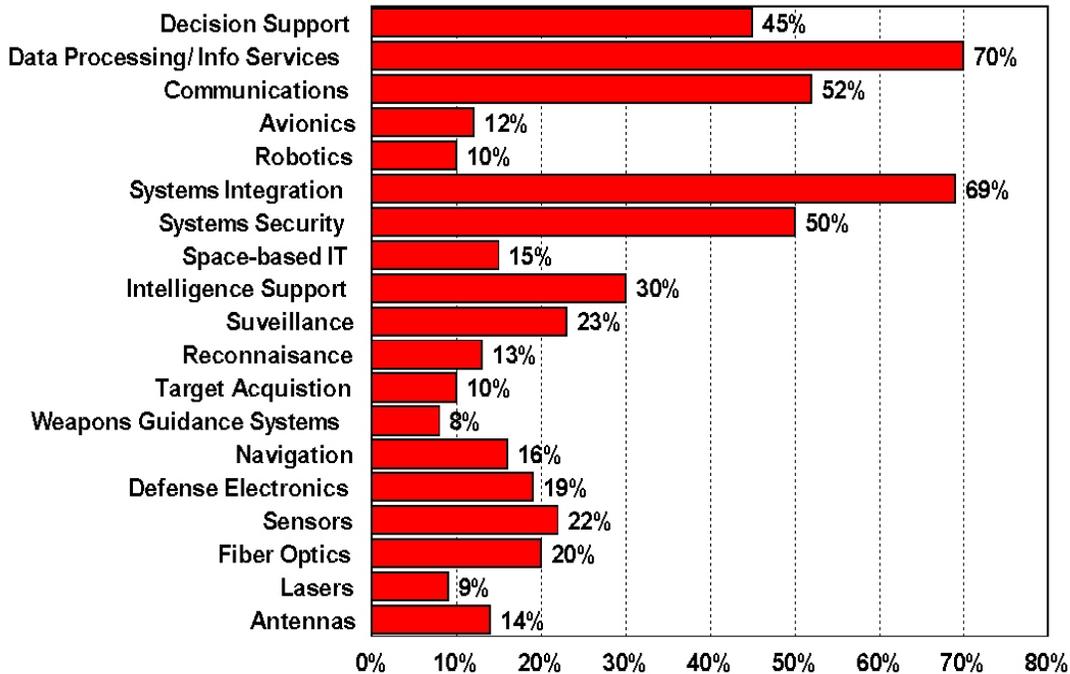


Figure 6

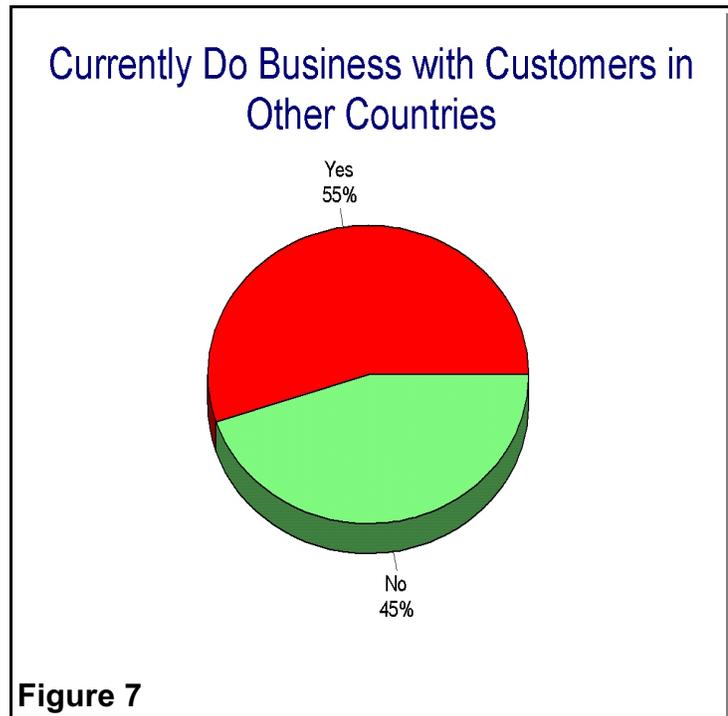
Respondents were asked: "For each of the following IT related product areas, please indicate the areas for which your firm is engaged in producing, assembling, or marketing products." Respondents were read a list of 19 product categories supplied by CTNSP. The product categories are shown in Figure 6 along with the distribution of responses. Respondents could select as many categories as appropriate.

The dominant category was "Data Processing and Information Services" with 70% saying they produced products for this sector. This was followed closely by "Systems Integration products with 69% saying they produced in this sector. Other products accounting for a high proportion of responses were "Systems Security" (50%), "Communications" (52%) and "Decision Support" (45%). The remaining sectors each obtained 30% or less responses.

Table 1 Other IT products that might interest DoD	
Category of Product	N responding
Ethernet communications hardware/software	5
Website development and maintenance	5
Healthcare hardware/software	6
Television/Audio hardware	7
Hardware	9
Telecommunications software	10
Management software	13
General software (unspecified)	15
Security software and applications	18
Data archiving and management	23

Respondents were also asked to identify other products and services produced by their firm that might be of interest to DoD. Table 1 shows the categories of those items mentioned, as constructed by the Schaefer Center, and the number (not percentage) of those mentioning an item that fell into that category. The verbatim responses are included as an Appendix to this document. The most frequently mentioned “other” items fell into the categories representing software development. These included data archiving and management, security software, general software, management software and telecommunications software.

Respondents were asked if they currently do business with customers in other countries. Fifty-five percent (55%) responded affirmatively.



Last, respondents were asked whether or not they currently do business with DoD. Some 60% of those surveyed

Currently Do/Seeking Business with DoD?

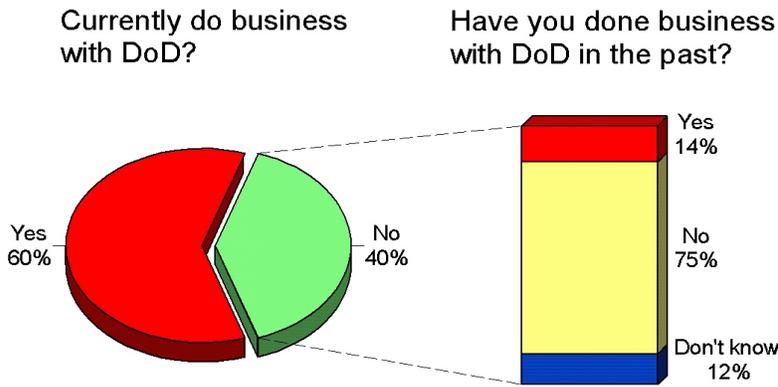


Figure 8

reported that they are currently doing business or seeking to do business with the Department of Defense while 40% said they were not.

Of those who said they were not doing business or seeking to do business with DoD, 14% said they had done business with DoD in the past. Seventy five percent (75%) said they had not done business with DoD in the past.

Firms that do not do business with DoD offer a host of reasons for their decision. The top six categories of reasons are presented in Table 2. Some firms say that they do not want to work with DoD, but did not specify why. Other firms say the application/bid process is too long and confusing and that there are too many barriers to doing business with DoD. There is also a perception that DoD only wants to do business with small firms. The verbatim responses to this question are included in the Appendix.

Table 2 What reasons do you have for not doing business with the DoD?
<ul style="list-style-type: none"> ● Don't know what they want. ● Application/Bid process is too long and confusing. ● DoD only wants to deal with large companies. ● Our products are not needed by DoD. ● We do not want to work with the DoD. ● Too many barriers to the bid process.

Section 3: Sources of Information about Contracting with DoD

For the remainder of the survey, firms who were currently seeking or doing business with DoD and firms who were not doing business with DoD were asked slightly different questions. These are reported in separate figures.

First, CTNSP was interested in how firms got information about obtaining DoD business. Respondents were read a series of sources of information and were asked to indicate whether or not they used that source or not. The primary difference is that firms doing business with DoD were asked which sources they currently use while firms not doing business with DoD were asked which sources they would be likely to use. Respondents were asked if they obtained information:

- By attending DoD IT related conferences*
- By subscribing to defense related publications that address IT issues*
- By making marketing presentations to defense officials*
- By accessing official public announcements of solicitations*
- By being a member of IT trade association*
- By being a member of a defense-related association*
- By conducting on-line research*

Figures 9 and 10 show how respondents answered the question. Patterns of responses between the two groups were fairly similar though the absolute proportion of those not doing business with DoD is lower in each category as would be expected.

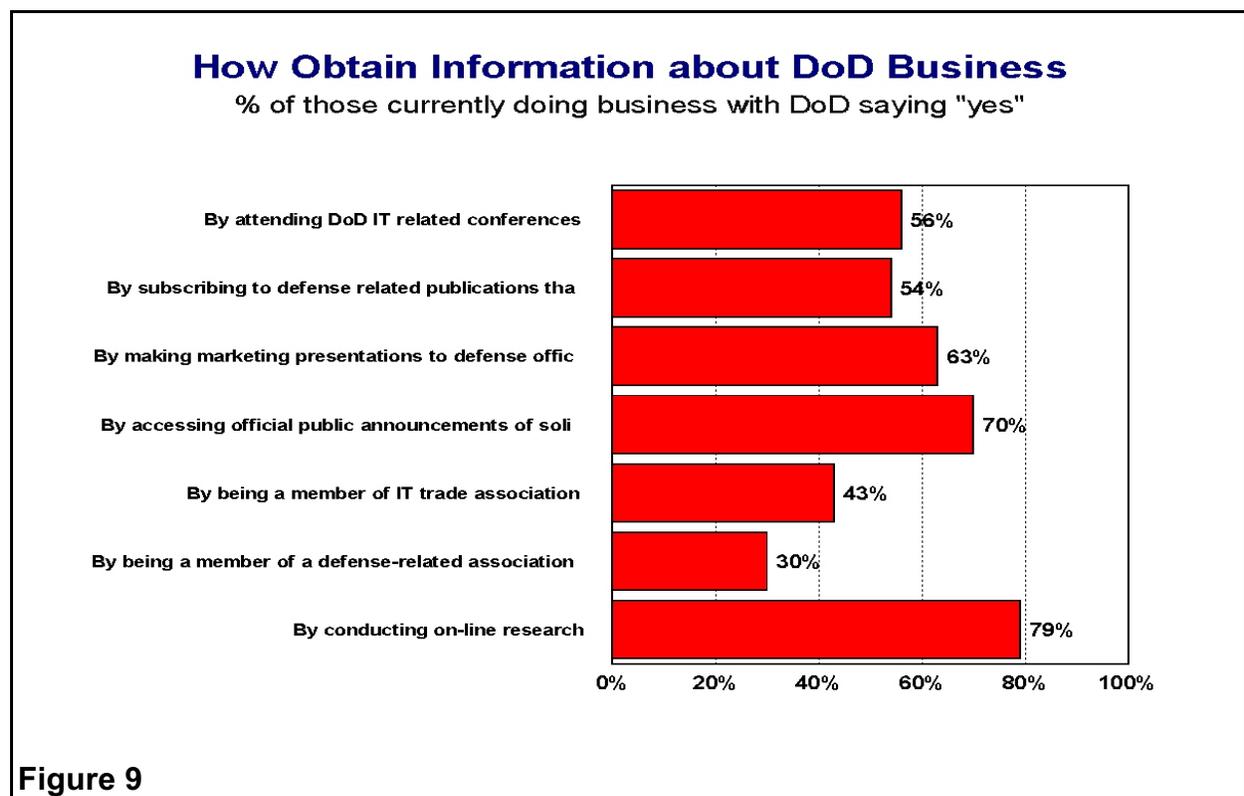


Figure 9

How Obtain Information about DoD Business

% of those not currently doing business with DoD saying "yes"

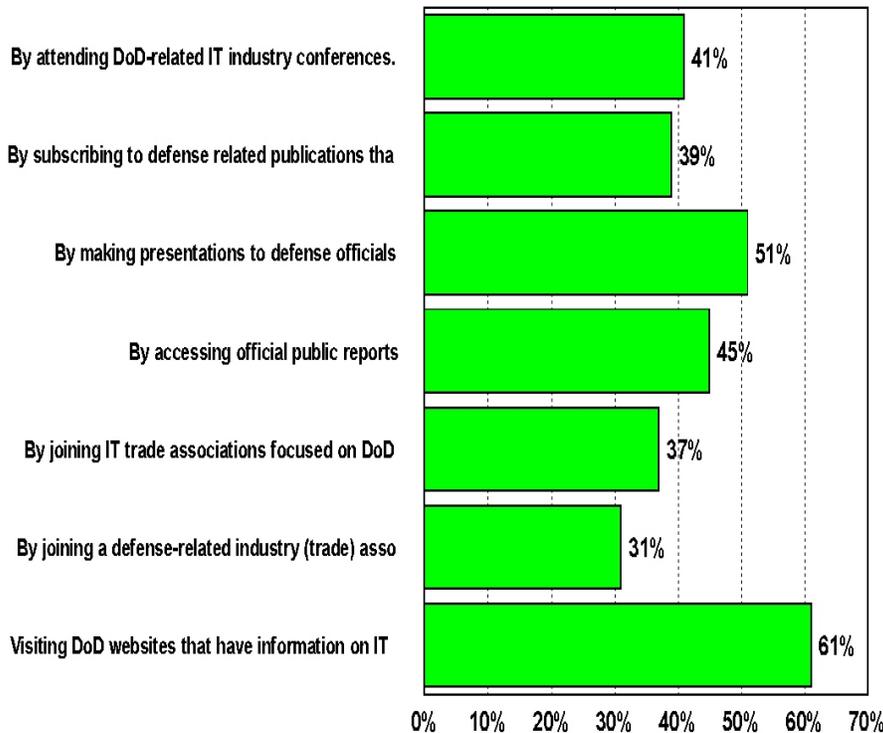


Figure 10

For both groups the most frequently used (or likely to be used) method of obtaining information is by doing on-line research. Seventy-nine percent of firms doing business with DoD said they use this method while 61% of those not doing business with DoD said they would be likely to use this method. Accessing

official public announcements (70%) was the next most utilized source of information about DoD business for firms currently doing business with DoD. For those not doing business with DoD making marketing presentations to defense officials (51%) was the next most probable source of information about defense related business. Sixty-three percent (63%) of those doing business indicated they used this method. In both cases, the least used method of those currently doing business with DoD and those not doing business with DoD was "by being a member of a defense-related association". Less than a third (30% and 31% respectively) said they either did or would do this.

Follow up questions asking how many conferences they attended and how many publications they received were asked of those who currently do business with DoD. Figure 11 shows the distribution for both questions. A typical DoD contractor attended 3 or fewer defense related conferences in the past year – 56% answered three or less – and receives three or fewer defense related publications a year – 61%.

Conference and Publication Activity

% of those currently doing business with DoD

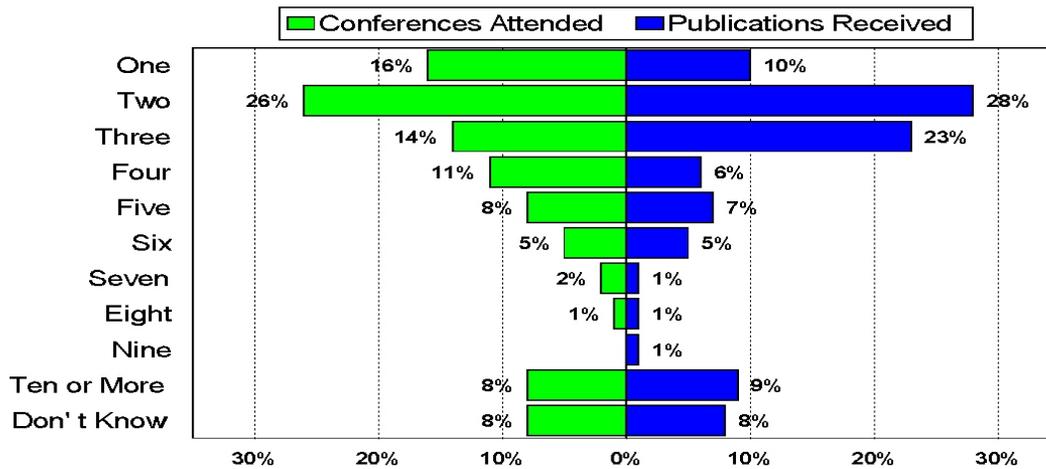


Figure 11

Is there enough sources of Information to know what DoD is looking for?

% of those currently doing business with DoD

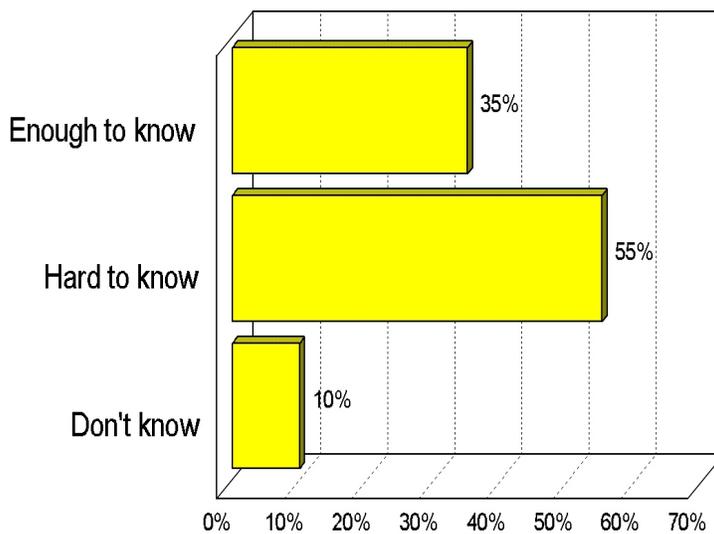


Figure 12

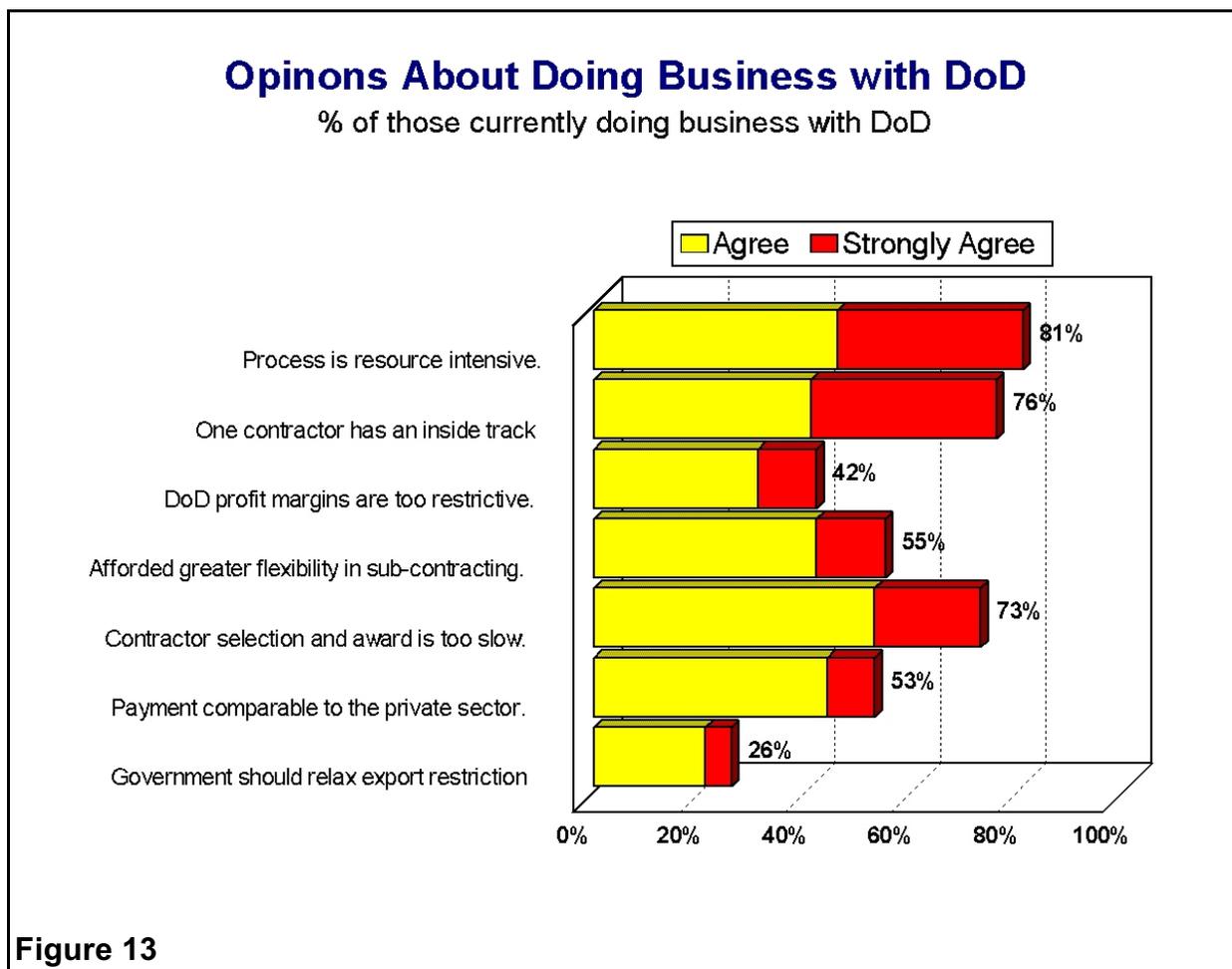
Last, those who do business with DoD were asked if they thought there was enough information available to know what DoD is looking for. Respondents were asked to choose between the following statements:

1. Enough information to know what DoD is looking for.
2. Hard to know despite the sources of information

Figure 12 shows that over half (55%) said it was hard to know despite information.

Section 4: Opinions of Doing Business with DoD

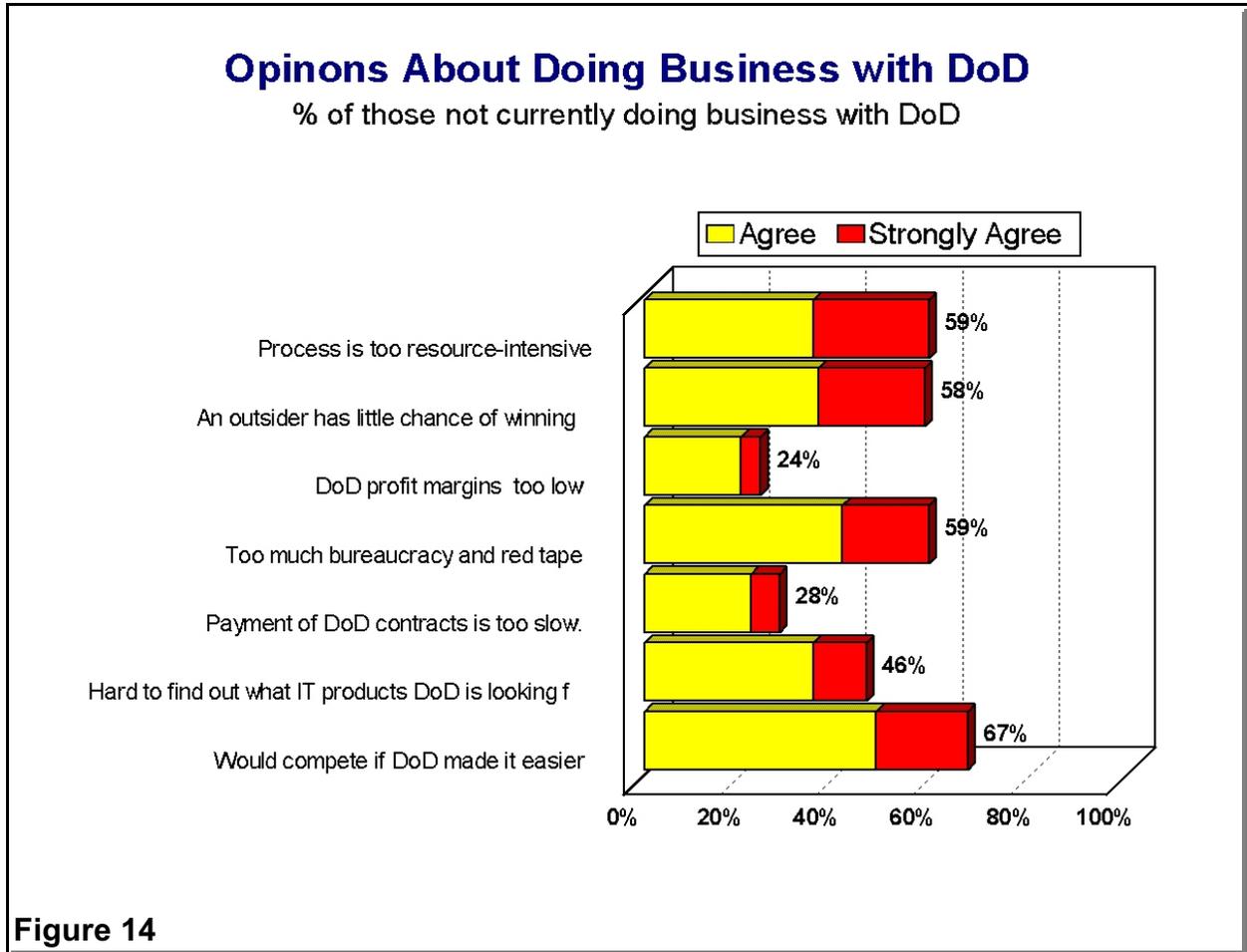
Vendors and non-vendors were asked their opinions about doing business with DoD. The results are summarized in Figures 13 and 14 and Table 3. The overwhelming majority of vendors think the process is resource intensive (81%) compared with just over half of non-vendors (59%). Most vendors believe one contractor has the inside track (76%) while 58% of non-vendors share a similar belief. Most vendors think contractor selection and award process is too slow (73%). Most vendors think contractor selection and award process is too slow (73%).



Almost half of vendors think the greater flexibility should be allowed in the subcontract process (55%). However, only a quarter of vendors (26%) think export restrictions should be relaxed.

While 42% of vendors think that government profit margins are too restrictive, over half (53%) think government payment is comparable with the private sector. A minority of non vendors think DoD profit margins are too small (24%) and the DoD payments are too slow (28%).

Almost half of non-vendors (46%) think it is hard to find out what DoD is looking for in IT products. A majority (59%) agree that there is too much bureaucracy and red tape involved in DoD contracting. The majority of non-vendors (67%) felt they would compete for DoD contracts if the process was made easier.



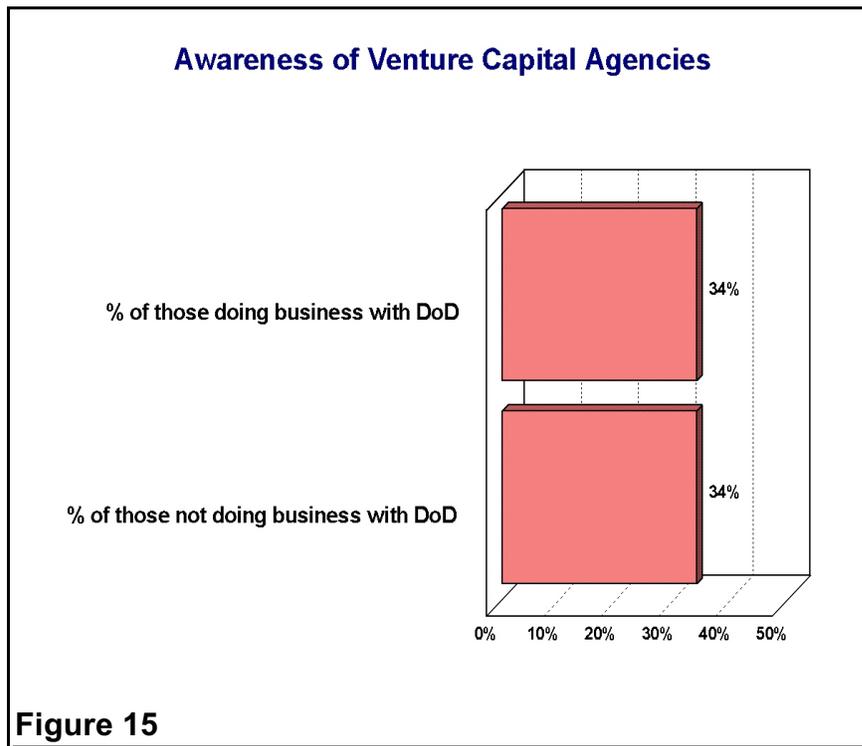
As would be expected, there are much higher levels of don't know responses among non-vendors than vendors. Table 3 shows that 41% of non-vendors don't know if the DoD payment process is too slow. Forty-two percent (42%) of non-vendors don't know if DoD profit margins are too low compared to only 20% of vendors. A significant minority of non-vendors admit that they don't know if it is difficult to find out what IT products the DoD is looking for. Almost 24% of non-vendors don't know if the DoD bid and proposal process is too resource intensive compared to only 7% of vendors.

Table 3
Opinions of Doing Business with DoD
percentages of respondents

	Strongly Agree	Agree	Neutral	Dis-agree	Strongly Disagree	Don't know
Business that are doing or seeking business with DoD (n = 236)						
The bid and proposal process is resource intensive.	36	46	6	5	.4	7
It often seems one contractor has an inside track on an award.	38	41	7	6	.4	11
DoD profit margins are too restrictive.	11	31	17	21	0	20
Prime contractors should be afforded greater flexibility in sub-contracting.	13	42	15	13	3	14
The process of contractor selection and contract award is too slow.	20	53	9	10	0	11
Payment of accounts payable is at least comparable to the private sector.	9	44	6	19	4	19
The federal government should relax export restrictions on IT products.	5	21	16	33	8	17
Business that are not currently doing business with DoD (n = 162)						
The bid and proposal process is too resource-intensive for our company to invest the resources in competing for DoD contracts	24	36	8	9	0	24
An outsider has little chance of winning a DoD contract because a few companies predominate in the DoD market.	22	36	12	8	2	20
DoD dictates profit margins that are too low for us to pursue their market.	4	20	17	15	1	42
There is too much bureaucracy and red tape associated with DoD contracting.	18	41	12	6	1	22
Payment of DoD contracts is too slow.	6	22	17	13	1	41
It is too hard to find out what IT products DoD is looking for.	11	35	15	11	0	27
If DoD made it easier and faster to contract, we would compete for DoD IT business.	19	48	9	9	1	15

Section 5: Venture Capital Firms and Matchmaker Sites

The Venture Capital Initiative and matchmaker sites provide opportunities for IT firms to



secure business with DoD. This section compares those firms who currently do business with DoD and those who do not on their awareness of the venture capital initiative and how more R&D firms can be brought in to the initiative.

There is generally a low level of awareness of the venture capital agencies among both DoD contractors and non-contractors alike. Just over a third (34%) of the

respondents in both groups report knowing about the venture capital initiative. The lack of awareness naturally leads to the next question about how to attract more firms to the initiative.

How should DoD attract more R&D firms to the Venture Capital Initiative?

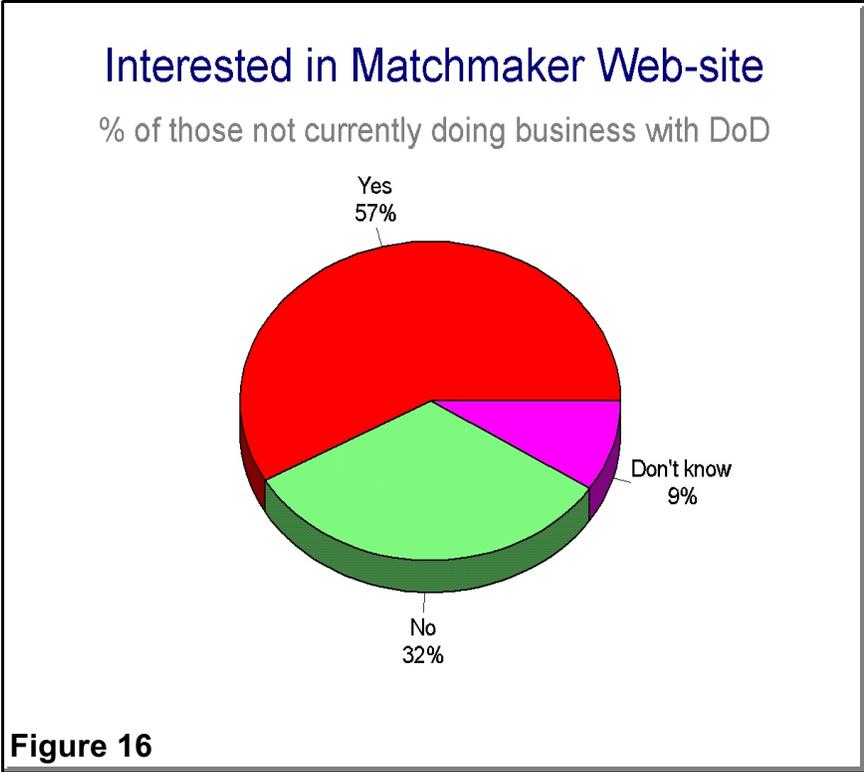
Respondents were asked the following open ended question, “How should DoD attract more R&D firms to the Venture Capital Initiative?” The six most common categories responses of contractors and non-contractors are presented in Table 4. Full remarks for these questions are included in the Appendix. Communication and outreach appear to be the most promising strategies for bring R&D firms into the initiative. Both groups recommend that DoD provides more detailed and accurate information about the program. This should be done through the website, mail, fax, and email communications. Increased outreach is another viable strategy for increasing participation. Both contractors and non-contractors recommend promoting the initiative at conferences, trade shows, and in trade publications. Other suggestions include targeting small businesses by providing information tailored to their needs. Non-contractors recommend making the application process easier and providing specific contact information.

Table 4 How should DoD attract more R&D firms to the Venture Capital Initiative?	
Firms doing businesses with DoD	Firms not doing businesses with DoD
<ul style="list-style-type: none"> ● Provide firms with more detailed and accurate information. ● Pay more attention and provide specific information to small businesses. ● Promote the initiative in trade papers and at trade conferences. ● Post more detailed information on the DoD website. ● Provide outreach to firms in the IT business. ● Compile and disseminate information through mailing lists including fax, email, and regular mail. 	<ul style="list-style-type: none"> ● Provide firms with more detailed and accurate information. ● Promote the initiative in trade papers and at trade conferences. ● Post more detailed information on the DoD website. ● Make the application process easier. ● Target IT industry. ● Provide contact information.

Matchmaker Internet Portal

The survey asked three questions regarding a DoD hosted Matchmaker Internet portal. The first, asked non-vendors if they would be interested in a Matchmaker Internet portal. As shown in Figure 16, a majority of non-vendors (57%) would be interested in such a site. One third of the respondents (32%) indicated that they would not be interested.

The remaining questions addressed the content of a Matchmaker Internet Portal. Table 5 shows the specific questions and the six most common responses to open-ended questions regarding the respondents' suggestions for features they would like to see on a DoD hosted Internet-



based 'matchmaker' portal. Both vendors and non-vendors would like the portal to contain information the maximum information possible. The specific content recommendations from the two groups include information about project specifications and guidelines, resource requirements, and DoD contract officer contact information. Vendors also suggested that more specific information be provided about projects. While vendors would like the site to contain as much information as possible, they would also like the site to present information more concisely. Non-vendors would also like the site to be simple, with easy to locate information and an easy enrollment process.

Table 5 Suggested Matchmaker Portal Attributes	
Firms doing businesses with DoD What information should DoD have on a "matchmaker" Internet portal?	Firms not doing businesses with DoD What features should DoD have on a "matchmaker" Internet portal to interest non-DoD IT vendors?
<ul style="list-style-type: none"> ● Project specifications and guidelines. ● The "who/what/where/when/why" of the project. ● The maximum information it can provide. ● The same information currently available more concisely presented. ● DoD contract officer contact information. ● Resource requirements. 	<ul style="list-style-type: none"> ● The maximum information it can provide. ● Easy enrollment process. ● Make it simple with easy to find information. ● Make information pertinent to the small DoD contract officer contact information. ● Resource requirements. ● Project specifications and guidelines

Section 6: Improving the DoD Contracting Process

Vendors and non-vendors were asked open-ended questions about the government contracting process. In general, vendors would like access to more detailed information about the contracts and the contracting process. Particular outreach should be directed to small businesses who may feel excluded by the process or overwhelmed by the requirements.

Current vendors were asked about their concerns about government contracting. The top six responses are presented in Table 6. There is a general belief that the process is too slow and difficult, and that firms without a prior government experience are excluded from opportunities. Other suggestions, such as erasing the security requirements, may not be possible to implement given the nature of the work performed by DoD IT contractors.

Table 6. Do you have any concerns about government contracting?

- The process is too difficult, too slow, and too confusing.
- Increase the amount to information to small businesses.
- There is a lack of opportunity for firms that have never won government contracts.
- Ease the security clearance requirements.
- It is an exclusionary process.
- There is a lack of clear information about government contracting.

**Table 7
Sugsesions for Improving the DoD contracting process for IT firms**

Firms doing businesses with DoD How can DoD improve the contracting process for IT firms?	Firms not doing businesses with DoD Do you have suggestions on making DoD contracting process attractive to IT firms such as yours?
<ul style="list-style-type: none"> ● Streamline the process. Make process more efficient. ● Automate the process. ● Send announcements via fax, email, and regular mail. ● Improve for small businesses. ● Have more resources available. ● Have information on the process on the web. 	<ul style="list-style-type: none"> ● Reduce red tape and bureaucracy ● Post more detailed information on the DoD website. ● Provide firms with more detailed and accurate information. ● Provide small businesses with more detailed and accurate information ● Make contracts less confusing. ● Provide project contact information

Vendors would like to see the contracting process become more streamlined. They recommend automating the process and providing bout process specifics provided on the Web. Vendor’s would also like to have regular announcements provided via fax, email, and regular mail. Vendors also suggest improving the process for small businesses.

Non-vendors would like to see a reduction in the amount of red tape and bureaucracy associated with government contracting. They would also like for process to be less confusing with more detailed information made available via the Web. Non-vendors also suggest particular outreach to small businesses with detailed and accurate

information. It was also recommended that specific project contact information be made available.

Section 7: Contact by DoD

As indicated in Figure 17, a majority of firms (57%) who do not work with DoD would like to be contacted by a DoD representative. However, a significant minority of firms (36%) are not interested in being contacted.

