**Priorities for Relating Career Information Delivery Systems (CIDS)
and Federal Initiatives: Technical Report Number 19**

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Abstract

This paper reports the results of a symposium held in June, 1995, in Washington, D.C., to examine new Federal initiatives in the development of career information and the design and use of computer-based career information delivery systems (CIDS). Using a nominal group technique, participants developed 29 prioritized recommendations in response to the question: What do you as a CIDS developer recommend by done to better relate CIDS development to federal initiatives? These recommendations were directed to seven major groups of stakeholders in the design and use of career information for solving individual career problems and making career decisions. Improved communication between the Federal-State governments, NOICC, and ACSCI was one of the highest priority recommendations.

Background

Over the past few years, numerous changes have taken place that will have an important impact on the delivery of career, educational, and employment services in the United States. Changes have occurred in the content and delivery of services provided by the Federal government. Changes have also occurred in the content and delivery of computer-based career information delivery systems.

The Federal government has initiated, with the assistance of many States, numerous efforts to improve school-to-work, work-to-school, work-to-work, and school-to school transitions. These initiatives have often involved creating the information content and delivery mechanisms that the States use in the provision of direct services to employed and unemployed adults and adolescents. Some recent initiatives have included, America's Labor Market Information System, the Occupational and Labor Market Information Database, America's Job Bank, O*NET, and Voluntary Skills Certification. One-Stop Career Centers and school-to-work transition programs, such as Tech-Prep, are anticipated to benefit from these initiatives.

Computer-based career-information delivery systems (CIDS) have evolved to be a key resource in the delivery of career services, with numerous sites delivering information in each state (ACSCI, 1994; NOICC, 1994). CIDS are "computer-based resources that provide information on occupations and related education and training opportunities" (Lester & Ollis, p. 205). CIDS are commonly used to provide "career and employment counseling, job placement, educational planning and vocational and career education programs" (NOICC, 1989, p. 1). The assessment, information, and instructional content of CIDS continues to expand on a yearly basis (Sampson, et al., 1994). The growing use of multimedia is an important enhancement in the delivery of career information.

Statement of the Problem

Both the Federal government and CIDS developers are experiencing an increasing rate of change in the content and delivery of information. This rapid rate of change poses a particular problem given the interdependence of the Federal government and CIDS developers. The Federal government relies on CIDS developers to provide a delivery mechanism for Federally-developed labor market information. CIDS provide a crucial link between Federal information developers and the adults and adolescents who use the information to solve their career problems and make career decisions. CIDS developers rely on the Federal government to create taxonomies for organizing information and to provide a significant portion of the career information contained in a CIDS. Earlier efforts have been made to better integrate planing among CIDS developers and Federal government personnel (refer to Sampson, Reardon, Norris, Wilde, & Dietrich, 1994), but these efforts were focused specifically on one-stop career centers, military downsizing, and school-to-work transitions.

Purpose

The purpose of this project was to facilitate communication and coordinated public sector-private sector collaboration in the design and delivery of career services for employed and unemployed adults and adolescents. By improving communication among Federal government staff and CIDS developers, Federal staff can more clearly understand the opportunities and constraints involved in the computer-based delivery of information. By better understanding the context of information delivery, Federal staff can take better advantage of these resources. Based on their experience with diverse users, CIDS developers can help to shape the development of taxonomies and information in ways that facilitate effective delivery of information. Given the increasing limitations in the availability of public funding, collaboration among Federal staff and CIDS developers can help to ensure that future projects produce information that is delivered effectively to the public at the lowest possible cost.

Methodology

Participants

An invitational symposium was held in Washington, DC on June 21-23 for the purpose of increasing communication and collaboration among CACG system developers and Federal government personnel. The

symposium was jointly sponsored by the U. S. Department of Labor, the National Occupational Information Coordinating Committee (NOICC), and the Association of Computer-Based Systems for Career Information (ACSCI). All nationally active CIDS developers were invited to attend. Selected Federal government personnel, involved in the Federal initiatives identified above, were also invited. More than 65 persons attended all or part of the symposium. Symposium participants who contributed to the discussion groups and the drafting of recommendations are identified in Appendix A.

Procedures

Participants were informed in advance that in addition to providing opportunities for bringing all parties up-to-date on recent and anticipated developments in information content and delivery, time would be available to discuss issues related to effective communication and collaboration. Participants were also informed that the final activity would involve the development of recommendations for better relating CIDS development and Federal initiatives. Upon arrival, each symposium participant was provided with a notebook that contained an agenda, a list of participants, and a series of fact sheets on the various Federal initiatives that would be discussed. Participants also received reports describing the content of CIDS (Sampson, et al., 1994), the use of CIDS in employment services (Janis, 1994), prior recommendations for improved CIDS - Federal government integration (Sampson, Reardon, Norris, Wilde, & Dietrich, 1994), prior recommendations on the improved design and use of CIDS (Sampson, Reardon, Lenz, & Morgenthau, 1990), and the status of CIDS (Hopkins, Kinnison, Morgenthau, and Ollis, 1992). Participants were instructed to review these materials to better inform the discussions and subsequent drafting of recommendations.

Discussions and the subsequent drafting of recommendations were also informed during the symposium by alternating panels of government personnel and CIDS developers. Presenters were asked to indicate potential opportunities for collaboration in addition to presenting on their systems or initiatives. Question and answer periods after presentations and more informal gatherings were provided to further facilitate the clarification of issues. After the completion of the presentations, participants had the opportunity for more interactive discussion of issues and opportunities. Each symposium participant was randomly assigned to two groups identified as blue (group 1) and orange (group 2). There were 14 participants registered in group 1 and 17 in group 2. In situations where multiple participants from one organization where present, the participants were placed in separate groups to create more diversity of experience and opinions. Participants remained in these assigned groups for the discussion period and the drafting of recommendations. An agenda for the symposium is provided in Appendix B.

A nominal group technique (Delbecq, Van de Ven, & Gustafson, 1975) was used to guide the development of recommendations. Two facilitators monitored and guided the interaction of each group. A third person served as the recorder for each group. Each participant was asked to begin by silently generating brief statements to answer the following stimulus question: What do you as a CIDS developer recommend be done to better relate CIDS development and Federal initiatives? Each participant then reported their ideas in turn which were noted on a large pad of paper. Participants were asked not to discuss individual ideas until all ideas had been generated. Then participants clarified the meaning of their individual contribution and responded to questions. After all questions were answered, each group eliminated duplicate statements and combined similar statements. Participants were finally asked to vote for the three statements that potentially made the best recommendation in response to the stimulus question. These responses were used to place the statements for each group in priority order. Recommendations that did not receive any votes were placed on the final priority list in the order in which they were reported in the group.

Limitations

The value of the recommendations produced by the nominal group technique may have been potentially limited by the following constraints. Given the complexity of the issues and opportunities discussed during the previous one and one-half days, the three hours allocated for the development of recommendations may not have been adequate to fully develop all of the relevant ideas. Also the specific mixture of presentation content and participants may have significantly influenced the results and the generalizability of this effort. As a result, the recommendations contained in this report should be best viewed as a starting point for continued discussion and development, rather that as a final definitive statement.

Results

Tables 1 and 2 contain the discussion notes from groups one and two. These data are provided to aid the reader in better understanding the full context for the recommendations presented in this report. Tables 3 and 4 contain the recommendations made by each group. To enhance the usefulness of the recommendations, individual recommendations are directed to one or more of the following seven groups for action: A = Association of Computer-Based Systems for Career Information (ACSCI), F = The Federal Government, S = State Governments, P = Practitioners, R = Researchers, E = Educators and Trainers, and N = The NOICC - SOICC Network.

Discussion

The question guiding discussion in the two nominal groups was: What do you as a CIDS developer recommend be done to better relate CIDS development and Federal initiatives? The discussion notes (See Tables 1 and 2) provide a rich mix of observations and suggestions offered by group participants relative to current and future relationships between CIDS and federal initiatives. Inspection suggests there more than 75 items included in these two tables and, although there is some duplication, each item merits attention by those seeking to improve the design and delivery of career information in the nation.

Tables 3 and 4 present the 29 recommendations made by the two groups of symposium participants. The recommendations ranked highest in priority by each group were those most fully endorsed by the participants in each group. Each of the 29 recommendations merits careful review by the seven groups designated as those most likely to be in positions to act on the recommendations.

It is important to note that the first, highest priority, recommendation by both groups involves improved communication between CIDS developers and Federal-State personnel directing new labor market initiatives. Indeed, several of the top five recommendations of each group focus on communication and information exchanges between the groups.

While many recommendations were directed to more than one group, it is interesting to note that the Federal government was specified 23 times; NOICC, 13; State governments, 12; and ACSCI, 11. Researchers, Practitioners, and Educators were mentioned 4, 3, and 2 times, respectively. The participants clearly view Federal State governments and NOICC, along with ACSCI, as the most critical groups to be involved in the improved design and delivery of career information used in CIDS.

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Table 1

Discussion Notes from Group 1[1]

Bob Reardon asked the group members to consider what are the "gaps" between where we are now and where we want to be regarding: a) CIDS influence on Federal initiatives, and b) Federal initiatives influence on CIDS.

1) Communications/Sharing Expertise

    a) ETA staff reported that they heard concerns about what entities are going to be filling which roles in the future. They emphasized that while some of the players might change, the important thing to focus on is that in all of the pertinent legislation being proposed in Congress, labor market and career information are prominent features. There is also support for the One-Stop Career Centers and the concept of America's Labor Market Information System (ALMIS). There is plenty of work to be done to implement those visions and so far there are resources to undertake that; what needs to be figured out is how we are going to do everything that needs to be done to achieve those visions and who will be doing which parts. DOL has been focused on working with State partners rather than bringing in private system developers.

    b) Recommendation for continuing dialogue, team and relationship-building to help private vendors do what they do even better that can integrate with and help to bring about One-Stops and ALMIS.

    c) Federal officials, CIDS developers, and the State ALMIS consortia and State One-Stop implementation teams all need greater communication and exchange of information and education among them. For example, a lot is happening with the development of O*NET, and CIDS developers need to know more specifics about it.

    d) CIDS developers would like opportunity to have input on design of O*NET database. If it is already designed, CIDS developers would like to have the opportunity to discuss with O*NET developers how they want to receive that data and in what formats they can use so they can think about how to integrate it into their systems. It appears that it will provide very detailed data that will be updated much more rapidly than was the case with the DOT. There is a concern that O*NET will develop its own delivery systems and the investment and expertise of CIDS developers might be rendered obsolete.

    e) If a major new database comes out that CIDS need to incorporate, they need to be informed about it so can allocate resources for reprogramming.

    f) There are no vehicles in place for public-private knowledge exchange.

    g) How can we formalize or make such communication more regular? One of the reasons there hasn't been much communication to date is that the consortia have only been in place for three months; more information should be forthcoming in the next 9-12 months.

    h) ACSCI is holding its conference in Denver on November 22-24, just prior to the American Vocational Association convention. This would be another opportunity for the players here to communicate. ACSCI welcomes suggestions for specific topics for workshops that would bring together CIDS developers, Federal partners, and State One-Stop developers and operators.

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[1] This discussion was held in Washington, D.C. on June 22, 1995 at "Career Information Delivery System (CIDS) & National Initiatives: A symposium." The discussion was moderated by Robert C. Reardon and Eleanor Dietrich. The record of the discussion was compiled and edited for grammatical clarity by Pam Frugoli.

i) The Federal government is filling 100,000 federal positions a year, even with cutbacks, and would like that information on job openings to get into the equation, so CIDS and One-Stops need to be aware of it. The Office of Personnel Management is developing a system to replace FOCIS, called CareerCounselor. They need to continue to be included in these communications.

j) There is a role here for a future-oriented, coordinating entity to facilitate such communication like NOICC/SOICC.

2) Importance of/Need for Training

   a) As part of capacity-building there is a need for lots of training. Initially, the Federal initiatives have focused on trying to get products out in order to deliver something and thereby convince policy and budget makers to continue and fund programs.

   b) CIDS expertise in the career development process could help inform the Federal database developers about the type of information needed. Again, this points to the need for training counselors and other One-Stop staff on labor market, occupational, and career information.

   c) Ten local learning labs will be up to train One-Stop staff and State staff who want to implement One-Stops, and to facilitate the three-year process of implementing One-Stops across the country.

   d) There is a need to inform and train CIDS developers about data development efforts and data quality.

3) Role of Counselors

   a) Concern about what is the role of counseling and counselors in One-Stops, which may differ from State to State. The general culture is tending away from counselor intervention.

   b) Some of the focus on self-service is an attempt to save resources spent on salaries and not to increase the size of the government workforce. However, many see the changes in the labor market and workplace and the transitions that workers are faced with as factors that will cause individuals to need more assistance. They will need more guidance to relate themselves to the changing world of work.

   c) Users often don't know what information they want, what information they need, or what to do with the information they get. This is where counselors can assist.

   d) The information gap is being addressed by many of the current initiatives; what remains is an 'advisor gap.'

   e) Counselors can assist users in sifting through the wealth of information and deciding what is pertinent to their situation, what is useful, and what is worthwhile and of good quality.

   f) CIDS developers and Federal initiatives are developing tools and products. The public is going to be dependent on how we present our tools. When a user obtains it through remote access they may think the tool or product is all they need; there will be no counselor to assist them with a reality-check, particularly on whether they are doing a valid self-assessment.

g) Staff designing, implementing, and operating One-Stops need to be included in dialogue and communications. Concerns about the need for counselors in that environment needs to be shared with them also.

h) One-Stops are in a pilot, experimental, developmental phase in the first year of implementation; their final form is not yet cast in concrete.

4) Development of Skills Taxonomy

a) Presentations seemed to indicate that a number of different databases and taxonomies of skills are being developed both by private developers and different Federal initiatives. What is needed is a common well-validated set of skills so that everyone could use the same terminology. If employers move to a system of profiling potential workers against a profile of a position or job, problems will occur if there are a lot of different skills taxonomies.

b) Are (or will) employers really moving to skills-based rather than position-title based job search and matching?

c) If databases only focus on skills that are generalized or cross-functional and common to many occupations, you may lose the uniqueness of specific applicants and positions. There is a need for specific information to get to a customized match. In other words, how do you capture unique aspects of individuals in resume forms and hiring procedures based on broad skill sets.?

5) Common Occupational Classification System

a) There is a desire to know more about what is happening with development of a common occupational classification system.

b) Concern that it is difficult to develop a classification system in such a fluid and changing environment. Different bundles of skills may be the way to get a handle on what is meant by new job titles and emerging occupations (e.g., Web Page Editor).

c) There is a need to be able to connect multiple (job/occupation) titles to relevant information, and to be able to get to titles from skills.

6) Other Types of Occupational Information Gaps

a) Skills information is not the only thing people need to know about occupations. Knowledges are also an important component. Task information is also relevant. How tasks are performed may change (architect using CAD rather than a drafting table), but the underlying objective is the same--to develop plans for a building.

b) More comprehensive and consistent wage and salary data on occupations are also an important need. This is one of the pieces of information users are most interested in. There is an ALMIS State consortium working on the issue of improved wage data.

c) There are other vital components not included on the ALMIS chart that are vital to serve the career development needs of clients. In particular, O*NET and the Occupational Outlook Handbook (OOH) need to be listed there also. The OOH is developed by the Bureau of Labor Statistics but it is a major resource for CIDS developers.

7) Interlinkages Among Different Sources of Information

    a) CIDS information developers get information from a lot of different sources. It is important to them that these new Federal initiatives that are developing information will relate to each other.

    b) Need to keep education and training in the equation as well as occupational information, because the information on skills will also have implications for curriculum.

8) Assessment

    a) There is a need to get a handle on the various assessment tools and look at the issue of linking assessments to occupations in a valid way. There are some efforts regarding assessment going on in DOL now; there is increased demand for assessment tools, especially for One-Stops.

    b) How do assessments link together? We can link Holland codes to occupations, Strong vocational interests to occupations, but how do Holland and Strong interrelate?

    c) Personal characteristics and working styles are also an important element to assess and have information about, especially since this is relevant to the ability to work in cross-functional teams.

9) Common information - State/Regional/National

    a) Are States going their own way or will it be possible to develop regional information. Will there be a role for national information?

    b) As part of the ALMIS effort, States have agreed to work in consortia on the development of many common protocols, platforms, etc. as well as on common, standardized information items such as standard wage data, consumer reports on education and training institutions, and common benchmarks and methods for developing employment projections. They are also receiving funds from the national level to carry out these common data programs. The efforts to develop ALMIS for One-Stops is bringing people and agencies together across States.

10) Charging of Fees

    a) Concern about licensing fees for sites if information available over Internet. If schools and colleges have dial-in access, how do you charge for access. There is a need for a paradigm on how that could be set up.

    b) DOL has focused on access to public employment services and public data programs through One-Stops; but there is a need to consider issues involved in delivery of information from private vendors. While many CIDS sites are in high schools and community colleges, they do not just serve the student population; they have been adding modules tailored to the needs of adults. CIDS are in 638 Employment Service offices nationwide.

Table 2

Discussion Notes from Group 2[1]

Dr. Sampson asked the participants to consider gaps and related issues between where we are now and where we would like to be related to CIDS and Federal initiatives. Each participant in the group offered an item(s) to include on the list. Jim Sampson then asked the group to discuss in more detail, those gaps that they felt were most significant for further discussion. The gaps, issues, and discussion points listed below are organized around the summary points highlighted by Dr. Sampson at the close of Thursday's session. Many items, in all probability, relate to more than one category, but for purposes of this summary these items are included only once.

1) DOL Policy Relative to Career Information Delivery and the Role of CIDS

    a) A clear understanding DOL's policy relative to career information delivery, and in particular the role that CIDS might play in some of the new initiatives was raised. Related items included:

        * Policies related to public/private partnerships, specifically a concern that there may be duplication of efforts in the private and public sector, unless we have more communication/collaboration between DOL, CIDS, and other appropriate parties.

        * There may not be a single set of Federal policies in this area, or perhaps even within DOL.

        * A specific issue raised was on whether ALMIS was leading to a single delivery system.

    b) A specific gap in understanding DOL's policy related to whether DOL was supporting database development and/or specific applications, and how would CIDS fit into this mix. Did DOL see its role as a collector and/or interpreter of data?

        * Some group members felt that DOL's emphasis should be on building the databases, which could be used in turn by CIDS and other applications developed in the public/private sector. DOL may not have the experience in working with customers to design applications that reflect customer needs. It was suggested that the very fact that there were many different CIDS was a good example of the need for more than one single approach, since this provided choice to customers and stimulated innovation in the development of applications. Also many customers, including schools want information in different ways and CIDS provide flexibility in meeting such needs.

        * O*NET seems to be taking a good/effective direction, by focusing on building a database and appropriate applications that would make the data more accessible to other deliverers of information such as CIDS. The presentation on O*NET was very useful to some group members in clarifying O*NET and how CIDS may exploit the database to better serve customers.

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c) Concern was expressed on definition of terms including One-Stop Career Centers and interpretation of terms. We need a common language [this is also a communication issue -- but it has significant policy implications]. What do we mean by One-Stop Career Centers? Does DOL see all information being delivered through career centers in One-Stops? Does the CIDS acronym itself cause some confusion, leading DOL and others to view CIDS as only delivering information, while in fact, they provide training to customers, interpretation and analysis of data, technical support to systems operators, innovative new approaches to information delivery, etc.? What does dissemination mean in the legislation? Dissemination to the end user, to intermediaries that can deliver the information? We may not be using the same language as DOL.

d) The group discussed whether DOL has a coherent research program in this area, noting that there are many related efforts, including several discussed in this symposium, e.g., development of skills data, job matching approaches, O*NET. The positive aspect was that DOL was funding several significant initiatives that could impact on the quality of information available in the future, but that concern was expressed on whether these efforts were linked in any way.

e) An observation was offered that the Federal government (through State entities such as State Employment Security Agencies) may be doing some things that no one else is doing, such as collecting occupational characteristics information. Who is collecting information on job opportunities across States? These may be important roles that perhaps no other organization is in a position to tackle, at least across the nation.

f) Concern was expressed that down the road some of the ALMIS and O*NET applications might be used in lieu of CIDS, simply because they may cost less or be viewed as the standard systems. The issue here seems to revolve around the possibility that application software that makes the data much more accessible could be adopted in One-Stop centers, schools, and other sites because of a low cost, even if it does not provide career information in a meaningful career guidance/counseling process. Some group members felt that CIDS would be competitive, but would need to clearly articulate and demonstrate the "value added" features and benefits.

2) Communication and Collaboration

a) There was a strong feeling among the group that there had been insufficient communication between CIDS and DOL and that this symposium offered an excellent beginning point. The question was raised on how we could maintain the communication/dialogue in the future to foster a stronger partnership between DOL efforts and CIDS. Specifically, what will happen after this conference is over to ensure dialogue?

b) There is a possible Federal misunderstanding of what CIDS are doing as well the converse -- need for more joint collaboration between Feds/CIDS.

c) One suggestion to help keep interested parties informed was to use the World Wide Web and TTRC as a means of providing updates on continuing and new initiatives. While these approaches alone would not provide the necessary dialogue, they could serve as an effective way of providing timely information on new developments. It was suggested that NOICC has good experience in working directly with States and CIDS and could provide information from ALMIS, O*NET, the skills standards effort, etc. One member noted that NOICC is a member of the ALMIS team and that the soon to be released report on the LMI systems could be distributed by NOICC to CIDS and symposium participants. [Editorial note: ALMIS now produces a Newsletter and this should be distributed to the CIDS developers, operators, and symposium participants.]

d) A specific question was raised on what is coming out from O*NET, particularly related to skills data. The group was informed that a report on the content model will soon be released ("big as a truck!") -- it will cover the taxonomies of skills, cross- functional skills, benchmarks and scales for collecting skills data, etc. It would be useful for CIDS developers to receive a copy of this report.

3) Need and Opportunity for CIDS to Help Shape DOL Activities Related to Career Information Delivery (This area relates closely to issue area (2) above.)

a) The question was offered, do CIDS represent a legitimate customer of DOL, and if so, how can we better influence DOL which has this customer emphasis? The suggestion was made that DOL is taking a strong customer approach in providing in developing service strategies. This being the case, CIDS should in fact approach DOL as a key customer constituency that can provide input to DOL efforts -- a strong proactive voice!

b) O*NET staff indicated a strong interest in getting input in the design process, and the best ways to provide access to the database to meet the needs of CIDS developers.

4) Issues Related to Data Availability and Costs

a) Simply stated, CIDS need data in usable form. Many participants seemed to feel comfortable with the O*NET approach.

b) One gap noted was the need for information about individuals on the supply side so we can make the match between the skill requirements of the job and the individuals' skills and experience.

c) One area that needs to be further addressed is the confidentiality and availability of data: what's private and what's public?

d) Are we serving employer needs through our systems, was a question raised by the group. How do we relate to major employers who have gone beyond skills building -- employers who are already looking at competencies. How can we integrate such information into CIDS -- minimum core competencies for hiring.

e) The question was raised as to whether DOL will charge for data, such as data in O*NET. Will there be a charge for some of the applications developed? In the past much of the data were developed through a "socialized" system. If fees are to be charged, it is important to keep CIDS developers and others informed, so that they can take these costs into account in developing their future plans.

5) Use of Information: Delivery, Applications, Relationship to Guidance/Counseling Process

a) One area of concern that was raised addressed the role of the human factor, the counselor, in One-Stop centers, and in some of the "self-service" plans envisioned in ALMIS). Will stand alone systems meet the needs of most customers? Is this issue being addressed in One-Stop centers nationally, or is this primarily a State decision?

b) One suggestion made was that our information systems need to fit into career guidance process, to provide a context for career decision-making.

c) We need to be aware of two key applications in offering our services and in designing a skills matching system(s):1) People that want a job right now, and 2) A match is just a first step in a longer term career exploration process. The difference in applications has significant implications. One observation made was that we may often be in between these applications. People that need a job fairly quickly, but are also exploring career options and relatively short term training that combined with their current set of skills and experience opens up other career opportunities.

d) One concern expressed was that we are fostering a perception that One-Stop Career Centers will be the place that everyone goes to get information. Does this go against the trend of making more information available at home and through other sources? This may not be the case, since part of the ALMIS vision is to make more information available off-site through Internet, bulletin boards, etc.

e) Some users and SOICCs may be pushing for as much information as possible. Is that an ultimate or even useful goal?

6) Methodological Issues Related to Development, Validation, and Testing of Systems

a) It was suggested that we have methodological gaps in system development, particularly in new areas such as skills matching. How can we develop, test, and validate new approaches? Do we need to?

b) How do you validate that these skills are appropriate (demand and/or supply side). Up to now, the focus was more on first time job entrants -- now we face greater needs to serve workers in transition.

c) It was suggested that we may not have great measures to use in validating features of our systems, including skills matching, but that we need to confront and address this issue. For example, ETS at least runs correlations between SAT scores and grade point averages. We at least need to adequately describe the features of our systems and analyze whether they seem to make sense. Do they seem to make sense to system users? Do the skills data and any new "skills matching" systems make sense to employers? The work at Florida State University was cited as being useful to the basic level of validation.

d) One suggestion made is that we should develop an effective resume writer for use in CIDS, One-Stop s, etc. [Editorial note: it would seem that such a resume writer should be designed in a way that it can be adapted to any future skills matching systems.]

e) One area of concern was the rate of change of technology. How quickly do we need to modify our systems to take advantage of new technology? How many versions of products and systems need to be offered because of the range of hardware available in different sites?

Table 3

Priority Order of CACG Developer Recommendations from Group One[1]

Direction[2]	Recommendation
FSN	1. A series of meetings and electronic forums, i.e., TTRC, be established for CIDS developers, researchers, counselors, etc., to review the (1) basic descriptions, (2) technical descriptions, (3) delivery methods, (4) roll-out schedules, and (5) fees of federal initiatives, and to provide direct feedback on these five matters.
AFSRN	2. Broaden the multiple database concept to connect other key sources of career information, e.g., OOH, O-NET, MOTD, SOC, Skills, clusters.
FS	3. Invite CIDS developers to ALMIS, One-Stop, and other meetings and to be on the programs.
AN	4. Federal staff be informed about related associations and their meetings, with the option of attending/receiving meeting outcomes information.
AFRN	5. A series of live workshops be held for CIDS providers, et al., to provide feedback on the data sets return.
FS	6. Access job orders to CIDS developers outside of One-Stop Centers via contract.
AFN	7. Increase coordination between CDTI and LMI Institute to provide training programs for CIDS developers.
FSN	8. Make an electronic version of the OOH available by December, 1995.
FRN	9. Align the various LMI taxonomies.
F	10. Build a statistical data collection on the back end and publish access profiles.
SFN	11. .Data bases be created at the state level be disseminated nationally as quickly and thoroughly as possible.
AS	12. Send in examples of impediments from states and other situations to federal staff to free the flow of information.
FSAN	13. Insure coordination among federal agencies, state counterparts, and CIDS via NOICC/SOICCs.
FSPEN	14. Encourage the role of counseling support in One-Stop Centers.
AN	15. Identify members of the CIDS developers group.

[1] Stimulus question: What do you as a CIDS developer recommend be done to better relate CIDS development and Federal initiatives?
[2] Each recommendation was directed to one or more of the following groups: A = Association of Computer-Based Systems for Career Information (ACSCI), F = The Federal Government, S = State Governments, P = Practitioners, R = Researchers, E = Educators and Trainers, and N = The NOICC - SOICC Network.

Table 4

Priority Order of CACG Developer Recommendations from Group Two[1]

Direction[2]	Recommendation
AFN	1. Promote better communication and constructive dialogue among CIDS developers and Federal staff through: 1) the internet, 2) newsletters, 3) semi-annual meetings.
F	2. Clear understanding of the goals and products of the various Federal initiatives.
FR	3. Evidence of the validity of qualitative & quantitative information contained in Federal products.
F	4. Early release of the technical specifications, including data dictionaries on new Fed systems, including O#NET.
FS	5. Clarify the roles of state and Federal information developers.
FSPEN	6. Consider the role of the counselor in CIDS delivery within Federal initiatives.
FN	7. The role of the Federal government should continue to focus on data standardization and collection.
AN	8. Use a NOICC/ACSCI task force to facilitate communication among CIDS developers and Federal staff.
FN	9. Quickly establish a clearinghouse for information on goals & products of various Federal initiatives.
FSN	10. Dissemination of data from the pilot projects for specific populations.
F	11. Reconcile apparent duplication of information development, e.g. skills in O#NET and Skills Standards Board and O#NET and SOC.
F	12. More specificity of the research model, data, format & delivery vehicle for Federal products.
A	13. CIDS developers , working through ACSCI, should challenge/encourage Federal leaders to provide coordinated resources.
PA	14. Include input from customers and counselors in the evolution of CIDS and Federal initiatives.

[1] Stimulus question: What do you as a CIDS developer recommend be done to better relate CIDS development and Federal initiatives?
[2] Each recommendation was directed to one or more of the following groups: A = Association of Computer-Based Systems for Career Information (ACSCI), F = The Federal Government, S = State Governments, P = Practitioners, R = Researchers, E = Educators and Trainers, and N = The NOICC - SOICC Network

Participants in Discussion Group 1

JoAnn Bowlsbey, ACT
Jim Conley, ETA *
Mike Dymmel, ETA
Brynn Keith, Alaska SOICC *
David Lipnicky, ETA *
Matthew Mariani, BLS
Phil Manzi, Maryland SOICC
Barbara McCallum, ISM Careerware *
Loch Miwa, Riverside Publishing *
Carolyn Rackley, ETS *
Bill Robinson, OPM
Laurence Shatkin, ETS *
Kevin Shelley, Wisconsin CIS *
Alice Worrell, Ohio SESA

Bob Reardon, FSU - Facilitator
Eleanor Dietrich, Directions in Work, Inc. - Facilitator
Pam Frugoli, NOICC - Recorder

Participants in Discussion Group 2

Cynthia Alvarez, Riverside Publishing Co. *
Bill Belz, DOL, VETS - Denver
Peter Cohen, DOL, ETA Region 1
Fran Ferry, CFKR Career Materials, Inc. *
Bob Goldberg, COIN
Les Janis, Georgia Career Information Center
Julie Lester, NOICC
Vicki Magsamen, Peterson's
Karen McChesney, ACT *
Mike Neill, CIS *
George Richard, DOL, TTRC
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Don Phillips, ISM/CHOICES *
Lynn Seiler, Peterson's
Curtis Shumaker, Oklahoma SOICC, NTSC
Mary M Walker, NOICC
Jeffrey Worst, Booz, Allen, & Hamilton, Inc.

Jim Sampson, FSU - Facilitator
Harvey Ollis, NOICC - Facilitator
Jim Woods, NOICC - Recorder

An asterisk (*) indicates that the participant also contributed to the recommendations contained in Tables 3 and 4.

CIDS & National Initiatives: A Symposium

June 21 - 23, 1995
Doubletree Hotel Park Terrace
1515 Rhode Island Avenue, N.W.
Washington, D.C. 20005
202-232-7000

WEDNESDAY, JUNE 21, 1995

7:30 a.m. - 8:30 a.m.	Continental Breakfast	Terrace Foyer

WELCOME & INTRODUCTIONS

8:30 a.m. - 9:00 a.m.	Jim Sampson & Bob Reardon, FSU Jim Woods, NOICC Brynn Keith, President Elect, ACSCI	Terrace Ballroom

ISSUE NUMBER 1 - "LABOR MARKET INFORMATION"

9:00 a.m. - 10:30 a.m.	**Federal & State Panel**
	Jim Vollman, DOL / ETA
	    ALMIS - America's LMI System
	Brynn Keith, Alaska SOICC
	    State LMI & CIDS Data
	Harvey Ollis, NOICC (OLMID)
	Questions and Discussion
		Terrace Ballroom

10:30 a.m. - 10:45 a.m.	Break	Terrace Foyer
10:45 a.m. - 12:00 p.m.	**CIDS Developers Panel** Don Phillips, CHOICES Curtis Shumaker, Oklahoma SOICC Bob Goldberg, COIN Educational Products Questions and Discussion	Terrace Ballroom
12:00 p.m. - 1:20 p.m.	Lunch	Garden Terrace

ISSUE NUMBER 2 - "JOB MATCHING"

1:30 p.m. - 3:15 p.m.	**Federal & State Panel** Richard Hardin, DOL / ETA Roger Freestone, NY State Dept. of Labor AJB - America's Job Bank Von Logan, Michigan SESA / LMI (Talent Bank) Questions and Discussion	Terrace Ballroom
3:15 p.m. - 3:30 p.m.	Break	Terrace Foyer
3:30 p.m. - 4:30 p.m.	**CIDS Developers Panel** JoAnn Bowlsbey, ACT/Discover Les Janis, Georgia CIS Questions and Discussion	Terrace Ballroom
5:00 p.m. - 6:30 p.m.	***CIDS System Demonstration and Reception***	Consulate Room

THURSDAY, JUNE 22, 1995

7:30 a.m. - 8:30 a.m.	Continental Breakfast	Terrace Foyer

ISSUE NUMBER 3 - "SKILLS DATA"

8:30 a.m. - 10:15 a.m.	**Federal & State Panel**
	 Mike Dymmel, DOL / ETA
	     DOT Re-invention
	 Norm Peterson & Andy Rose, American
	     Institute for Research / O*NET
	 Michaela Meehan, DOL/ETA
	     National Skills Standards Board
	 Alice Worrell, Ohio SESA (Best Practices)
	 Questions and Discussion
		Terrace Ballroom

10:15 a.m. - 10:30 a.m.	Break	Terrace Foyer
10:30 a.m. - 12:00 p.m.	**CIDS Developers Panel** JoAnn Bowlsbey, ACT/Discover Barbara MacCallum, CHOICES Kevin Shelley, Wisconsin CIS Questions and Discussion	Terrace Ballroom
12:00 p.m. - 1:20 p.m.	**Luncheon** Juliette Lester, NOICC Hugh Davies & Carol Walter Maryland's One-Stop Career Center	Consulate Room

Working Together on Common Goals: CIDS & Federal Initiatives

1:30 p.m. - 3:30 p.m.	Group Discussion Number One (Blue) Group Discussion Number Two (Orange)	Cabinet Room Chairman's Suite
3:30 p.m. - 3:45 p.m.	Break	Terrace Ballroom
3:45 p.m. - 4:30 p.m.	Questions and Discussion	Terrace Ballroom
5:00 p.m. - 6:30 p.m.	Evening Reception	Consulate Room

FRIDAY, JUNE 23, 1995

8:00 a.m. - 8:30 a.m.	Continental Breakfast	Second Floor Foyer

CIDS DEVELOPERS DISCUSSIONS & RECOMMENDATIONS

8:30 a.m. - 11:30 a.m.	Group Discussion Number One (Blue) Group Discussion Number Two (Orange)	Cabinet Room Chairman's Suite
11:30 a.m. - Noon	Group Report Back for Discussion	Chairman's Suite