890767

Knowledge Systems Center

Mirage Summary

STATE OF MINNESOTA

**Department of
Administration**

InterTechnologies
Group

October
1989

Department of Administration

1. The Vendor Manager

An expert system to capture the expertise of the applications analyst who verifies the legitimacy and suitability of Socially and Economically Disadvantaged Certification (S.E.D.) applications. The long-term vision for the system would be to have a central system in place to allow potential vendors to apply only once to become a vendor to all State agencies. The benefits include the shortening of the application process, more up-to-date vendor lists, a decrease in the number of unsuitable vendors, an increase in customer satisfaction, a reduction in duplication, and a shortened training time for new staff.

2. The Materials Management Help Desk

An expert system which would capture the expertise on extracting information from existing Materials Management computer systems. The system allows less experienced personnel to perform the Help Desk function. The Help Desk would provide faster answers to questions about procurement of materials. The use of the system would improve service to State agencies and State suppliers.

3. The Space Planning Advisor

An expert system to assist Real Estate Management in the allocation of space in existing State properties. The system would take the user through a series of questions to determine their needs and make a recommendation for space based on known space openings. The system would be used by the Real Estate Management office and Facility Managers.

The system would provide a quick, accurate, and central store for space knowledge.

Department of Administration

4. Communications Center Assistance System

An expert system to capture the years of knowledge and experience of the Communications Center staff in routing telephone assistance calls to the proper contact. The system will be used by the Communication Center staff and may be distributed directly to other agencies. The system will be a training aid for less experienced operators and increase the accuracy of information given to callers.

5. Information Policy Technical Assistance

An expert system to assist State agencies in developing their information baseline and in determining the resources necessary to document and analyze the baseline. The Information Policy Technical Assistance software is designed to simplify the job of developing a plan and could be used to compile an overall picture of the State management of information.

6. The Administration Advisor

An expert system to assist employees throughout State Government in carrying out administrative, financial, and personnel policies and procedures. The benefits of the system include improved efficiency of all administrative functions, clearer accountability, and a reduction in frustration.

7. The InterTech Help Desk

The InterTech Help Desk is intended to capture the years of knowledge and experience of senior staff members in the area of computer hardware and software problem resolution. The system will significantly increase the accuracy and speed of the problem resolution and allow less experienced staff members to answer more difficult questions. The system will be used by InterTech and may be distributed to other agencies who support their own help desks.

8. Application Analysis System

An expert system that analyzes grant and program applications data as the information is entered. This system would permit a major portion of the front end application review process to be done by clerical staff, thereby freeing up the professional staff for other important tasks, such as technical assistance and special situations analysis.

Department of Corrections

9. The Inmate Assessment

A knowledge based system which aids caseworkers in the assessment and assignment of inmates to a variety of treatment programs, (psychological, work, educational). The system would increase the consistency of assessment, save time and improve the management of the treatment programs. The system could be distributed on personal computers throughout the correctional system and later be centralized through a network or mainframe linkage.

The proposed system is viewed as one module in a larger system which would track a case from arrest to incarceration. The proposed larger system, shown in the mirage as the "Comprehensive Case manager", is similar to a system the Province of Ottawa is implementing named "Offender Manager".

10. Sentencing Guidelines

A knowledge based system which aids the judiciary in its decision-making process in felony sentencing. The system will provide recommendations for sentencing based on criminal history, conviction information and Sentencing Guidelines. This will increase the consistency of sentencing and help the courts system with their backlog of cases. It is similar to a system developed by the Province of Ottawa. The system could be distributed on personal computers throughout the state courts and later be centralized through a network or mainframe linkage. The system will impact on multiple agencies and in the future it could be tied to a larger system shown on the mirage as the Comprehensive Case Manager.

11. Curriculum Development

The Curriculum expert system helps schools and school districts plan curriculum for grades K-12, in accordance with state and district mandated Expected Learning Objectives (ELO's). A major curriculum planning challenge is to ensure that all the mandated ELO's are covered somewhere in the K-12 curriculum, without repetition of activities. The Curriculum expert system runs on a Macintosh computer, accessing a database of required ELO's provided by the state Department of Education. The system allows curriculum planners to follow each ELO through the K-12 grades, and to see how each ELO relates to other ELO's and to class activities.

12. DOER Help Desk

A system to assist State employees and outside applicants for State jobs to better understand the conditions of their employment and to provide answers to frequently-asked questions. The system will provide receptionists and telephone operators with fast, accurate, and complete information in response to questions, and could become part of a future DOER Personnel Knowledge Base on Position Descriptions, Career Planning, and Staffing Options. The system may be distributed on diskettes.

13. EOD Compliance Assistant

A system to (1) assist the Equal Opportunity Division to monitor the compliance of State Agencies and (2) to provide tools to agencies to achieve EOD compliance. The system will add Protected Group Reports generated by the Agencies into a database and update and display the current status, will assist the agencies in completing the Reports, may interface with the Staffing Options system to assist in finding protected class candidates for openings, and may become part of a future Human Resources Knowledge Base for Career Planning, Staffing Option, and other Employee Relations functions. The system may be distributed on diskettes.

14. Career Planning

The purpose of Career Planning is to assist each State employee in developing a personal career plan. Career Planning software will make it easier for the employee to develop a plan by providing extensive help and reference material. All State employees will be able to use this software.

15. Staffing Options

A system to assist management and personnel staff within each State agency in filling position openings. The system allows the user to examine all available options for expanding the candidate list and testing the suitability of a particular

candidate, and could become part of a future Human Resources Knowledge Base for Career Planning, Position Descriptions, EOD Compliance and other Employee Relations functions. The system may be distributed on diskettes.

16. How to Get a Job

A system that maintains information on jobs available within State Government and has a knowledge based portion that aids an applicant in completing the employment form. Implementation of the system relieves the clerical personnel of the duty of supplying information to job applicants. It will also provide a wider range of information to applicants about jobs and employment related subjects.

17. Position Description

The system will automate the Employee Relations Office's written guidelines to help employees prepare their own position descriptions. The intended benefit is to improve the quality of position descriptions to the point where they can be compared and summarized. In addition the system will simplify the process of developing the descriptions.

Department of Finance

18. Statewide Accounting Training Advisor

A knowledge-based system which captures the expertise of the trainer for the Statewide Accounting System (SWAS). The system will enable agency personnel to receive instruction quickly, reduce the cost of outstate travel, and increase the productivity of the trainer. The system may be distributed on diskette throughout the State.

19. System Scheduling Advisor

A knowledge-based system which captures the expertise of a few persons that have the know-how to process the daily computer job schedule. The scheduling program will reduce errors, aid in the training of new or lesser experienced personnel, reduce the time to prepare the schedule and increase accuracy. This application may be useful to other agencies.

20. The Finance Help Desk

A knowledge-based system to capture the years of experience and knowledge of the Accounting Services Unit in providing telephone assistance for their Statewide Accounting System, Payroll/Personnel System, and the Biennial Budget. The system will be used by the staff of the InterTech Help Desk and may be distributed to other agency staff that answer questions concerning Finance applications.

21. The Withholding Advisor

A system to replace the current tax calculation spreadsheet. The system will reduce the support given by Central Payroll and increase the accuracy of the calculations.

22. The Social Security Advisor

A system to aid payroll personnel in classifying employees for Social Security withholding. The system in a distributable format, will increase the accuracy and reduce the need for direct support from Central Payroll.

Department of Finance

23.   The Labor Agreement Analyst

A knowledge-based system to capture the expertise of DOER
personnel and information from the Management Plan and Labor
Agreement manuals. The system will give immediate answers,
document arbitration ruling, and locate new information from
previous agreements and plans. The system will be used by
people dealing with personnel policy within an agency.

24.   Intelligent Access Station

The Intelligent Access Station will permit users to access HECB system resources and data (4 to 5 databases, some owned by other agencies) using standard SPSS protocol or via a natural language type of query. It would permit a researcher to formulate hypotheses, for simple to moderately complex questions, and obtain information in both text and graphic formats. The system will free-up highly skilled staff from involvement in relatively simple tasks and permit them to focus on the most complex problems. The system will also speed up many of the activities of highly skilled staff.

25. Printer Problems Help Desk

An expert system to capture the expertise of the technical support person in the Human Services Division and the InterTechnologies Group Help Desk personnel. The primary users will be personnel of county agencies. The system is expected to reduce telephone expense and increase the productivity of the technical support person.

26. Case Planning for Developmental Disabilities

A system that aids in the management and providing of training to persons having developmental disabilities. Case information is available on the client and a knowledge based section of the system aids in developing a needs profile from current information. The system allows case managers to better manage cases.

27. Quality Assurance Tutorial

An expert system to provide training/understanding of the basic components/steps of the monitoring and evaluation process of the quality of care in hospitals. The system would improve utilization of hospital resources and provide consistency across the hospital network. Savings may be realized by reducing the need for consultants. The system would be used by healthcare workers, development, and administration personnel.

29. Prior Authorization

An expert system to capture the knowledge of a medical consultant on the payment authorization of medical care equipment. The system will speed the decision process, ensure consistent decisions and reduce the need for the medical consultant. The system will be used by program administrators who are employees of the Health Care Policy Office.

30. Maxis Training Scheduling System

An expert system for scheduling of Maxis training based on a set of variables, such as trainee, trainer, course, and location. The system provides for better planning, assures the following of procedures, and saves time. The users will be the clerical staff who schedule the training. The system may be utilized for other scheduling problems.

Department of Jobs and Training

28. Research and Statistics Help Desk

An intelligent help desk system to help the Research and Statistics Office's support staff answer telephone queries that are currently handled by their researchers. By distributing the researcher knowledge, support personnel will be able to provide callers with a higher degree of service and researchers will have more time for their research.

31.   Intelligent Forms Generator

A knowledge based program to generate another program that is an intelligent data entry form. Based on predefined data in the form generator, forms with rules and relationships defined for the data to collect are generated. The advantage of this form generator is that new forms can be created or existing forms modified quickly. The generated form is actually a computer program to be executed independently of the generator.

Smart Form Data Entry

A knowledge based smart form to aid companies and individuals making workers compensation claims and other claims in correctly entering the form data. The form is generated by the previously described Form Generator or could be a complete program by itself. The more accurately entered data would increase the speed of the forms processing and create a increased accuracy in the data collected.

32.   Automatic Route Scheduling System

The Code Enforcement Agency within the Department of Labor and Industry ensures boilers, pressure vessels, and high pressure piping installations are manufactured, installed, repaired and operated in accordance with the requirements of law, codes and established standards. The Automatic Route Scheduling System will increase productivity by assuring inspections are scheduled on a structured basis with appropriate frequency and assurance that a site is not inadvertently bypassed.

33. Personalized Information Seeking Plan Advisor

A system which captures the expertise of a few people who know how to navigate through the flood of new library reference tools which have been created to deal with the explosion of information. The function of the system is to direct users to reference tools indexes which relate to specific information for (1) accessing existing information and (2) for disseminating new information. This system will serve approximately seven hundred public, private, school, and state agency libraries in the metropolitan area. The system will teach the user a search strategy, serve as an additional interface between citizen and library, improve awareness of available information, reduce the search time, increase the productivity of the librarians, provide better access to information resources, provide better distribution of information resources, enable resource-based learning programs in public school systems. The system may be distributed on diskettes.

34. Data Center Information Distribution System

A knowledge based system to access census data for the 1970/80/90 census. Public information assistants answer inquiries about census data. This system would allow these assistants to answer a broader range of questions and service an increased number of clients.

35. The Housing Hotline

A knowledge based system which captures the expertise of the receptionist staff to screen large numbers of callers and match their needs with programs in an accurate and consistent manner. The voice mail type of system would connect to the telephone system and provide waiting and vacancy list information to callers. Applicants will find housing sooner because of fast and up-to-date information. The agency's cash flow will improve because they are reimbursed for their administrative costs after a client has found housing. The system will also reduce the number of blocked calls and free staff for other duties.

36. The Solid Waste Information System

A knowledge based system which expands the current Metropolitan Council's recycling hotline to include additional governmental, commercial and residential information and services. Currently residents in the seven-county area are allowed free-of-charge to call the hotline and receive information from live operators, direct personal computer access and an automated voice response system. The expanded system will allow the information to be more comprehensive and up-to-date, more accessible and easier to maintain. It will increase the sophistication of the system and allow it to respond to crises and rapidly changing needs.

37.   Sales Tax Audit Assistant

A system to capture the expertise of experienced auditors to assist field auditors in planning and knowing what kinds of things to look for, based on the type of business. The system will increase the effectiveness and efficiency of the field auditors. The system may be distributed on diskettes.

38.   Tax Issue Identification Expert System.

A knowledge-based system which captures the expertise of agency experts, will provide advice, consultation, and mathematical checks as Sales Tax Returns are being examined. This would enhance the quality and quantity of the returns being selected for an audit that result in Taxes owed and would provide standardization, fairness, and equality for all Minnesota companies.

39.   Penalty Abatement Advisor

An advisory system which assists Revenue employees in making penalty abatement decisions in all areas of taxation. It will distribute expert policy interpretation to many employees, improve consistency in abatement decisions, and reduce time required to process abatement requests.

40.   Electronic Tax Return

A knowledge-based system to provide electronic filing for all Income Tax returns. This system would allow the tax return to be audited as it is being entered and would provide instant resolution of many errors. This system would be used by the general public. The Department of Revenue estimates this system could save over three million dollars a year.

41.   Sales Tax Help Desk

A knowledge-based system which captures the expertise of the personnel in the Taxpayer Service Division and incorporates this expertise with an on-line text retrieval system. The system would be used by the agency staff to resolve sales tax issues, by the public through use of a lap-top and a modem, and by agency auditors in the field. This system would expedite resolution of sales tax issues and provide direct access to sales tax laws and publications.

42. Form Design Advisor

A system to aid all state agencies in the development of forms by insuring that all characteristics unique to each form are considered and evaluated. This system will provide a basis for the design of all forms and ultimately allow the user to capture needed information in a clear and concise manner.

Department of Trade and Economic Development

43-46. Trade and Economic Development Help Desk

A knowledge-based system to capture the experience and knowledge of Trade and Economic Development Department staff in responding to information requests from the general public, businesses, and communities. The system will provide answers to common questions, make referrals to individuals or agencies for further information, and find needed reference material or publications.

The Help Desk system will improve customer service, response quality, and departmental effectiveness and efficiency. The system will be expanded to include additional agencies.

47. Business Plan Assistant

This system captures the knowledge and process of one of the State's foremost business planning advisors. The system helps people who are thinking of creating a new business in Minnesota. The expert system assists the user in the conceptualization process, insuring that the new business person considers necessary factors about starting a business. The output of the expert system is the business plan for the start up business. As a component of the output the new business person is also advised about necessary information that is necessary to complete the plan.

People starting businesses now are sent a 200 page manual. This system could replace or supplement the manual. In addition, this system could be located in libraries, public offices, and Technical Institutes.

48. Quality Assessment in State Agencies

This knowledge based system captures the process that quality experts use in assessing quality in businesses. The system is directed at managers, line staff, clerical and any other staff functions in a business or agency. Beginning with the process of information gathering, the knowledge based system has the ability to gather data from multiple sources and to use that data to make a quality assessment with recommendations for proceeding.

Quality has been a nebulous concept. This system helps apply quality to a number of different situations while providing the users with a road map to improving quality within their agency.