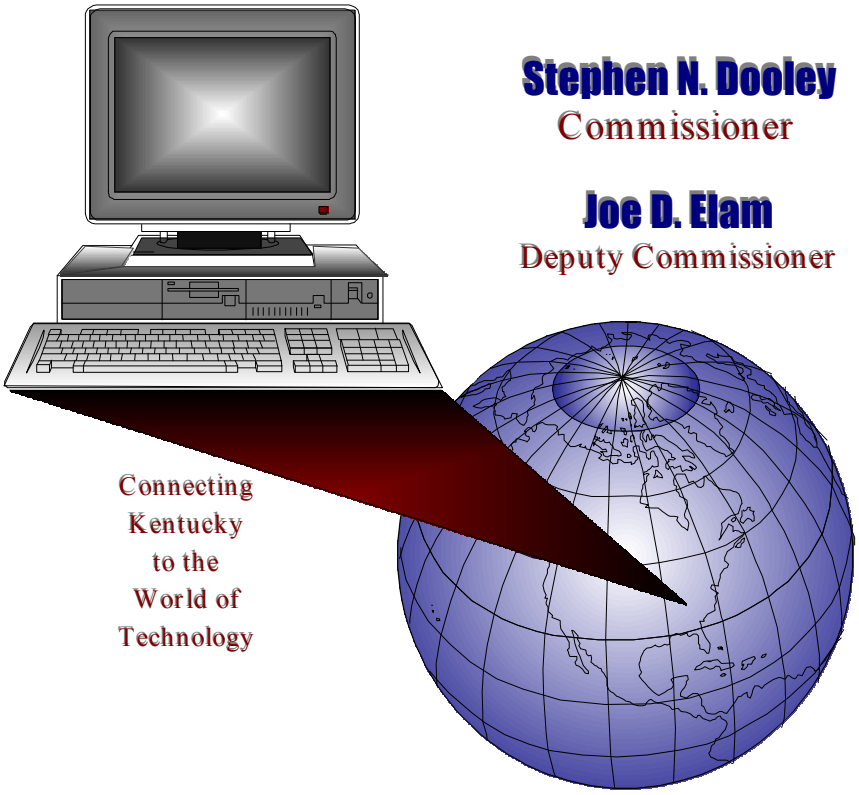
Finance and Administration Cabinet

Department of Information Systems

Annual Report
Fiscal Year 1994/95



Stephen N. Dooley
Commissioner

Joe D. Elam
Deputy Commissioner

Paul E. Patton
Governor

John P. McCarty
Secretary

Table of Contents

Table of Contents (cont'd.)

Organization and Responsibilities

The Department of Information Systems (DIS) is responsible for providing leadership, policy direction, and technical support to all executive agencies of state government in the application of information technology. This broad statement of responsibility encompasses major information resource functions such as data center operations, data communications, application development, data administration, computer and data communications hardware selection and installation, and related end-user and customer support services.

The department is organized into the Commissioner's Office, five divisions, and one standalone branch, all under the authority of KRS 42.029. These are outlined below:

The ***Commissioner's Office*** is responsible for policy direction and general management of the department.

The ***Information Resources Management Branch*** is responsible for budget management, financial analysis, information resources planning, performance evaluation, and capacity planning.

The ***Division of Computer Services*** is responsible for computer operations, systems programming, technical support services, data storage, and database management services. This division is composed of three branches: Computer Operations, Systems Support, and Data Services.

The ***Division of Network Services*** is responsible for network planning, network design, network management, systems administration, research and evaluation of desktop and departmental computer technologies, end-user computing support, information dissemination, and problem management. This division is composed of two branches: Customer Support and Network Support.

The ***Division of Systems Development*** is responsible for providing comprehensive systems analysis, design, and development services, and applications consulting services to designated state agencies with primary responsibility for supporting education and human services systems. This division is composed of three branches: Social Insurance Systems, Human Services Systems, and Education Reform Support.

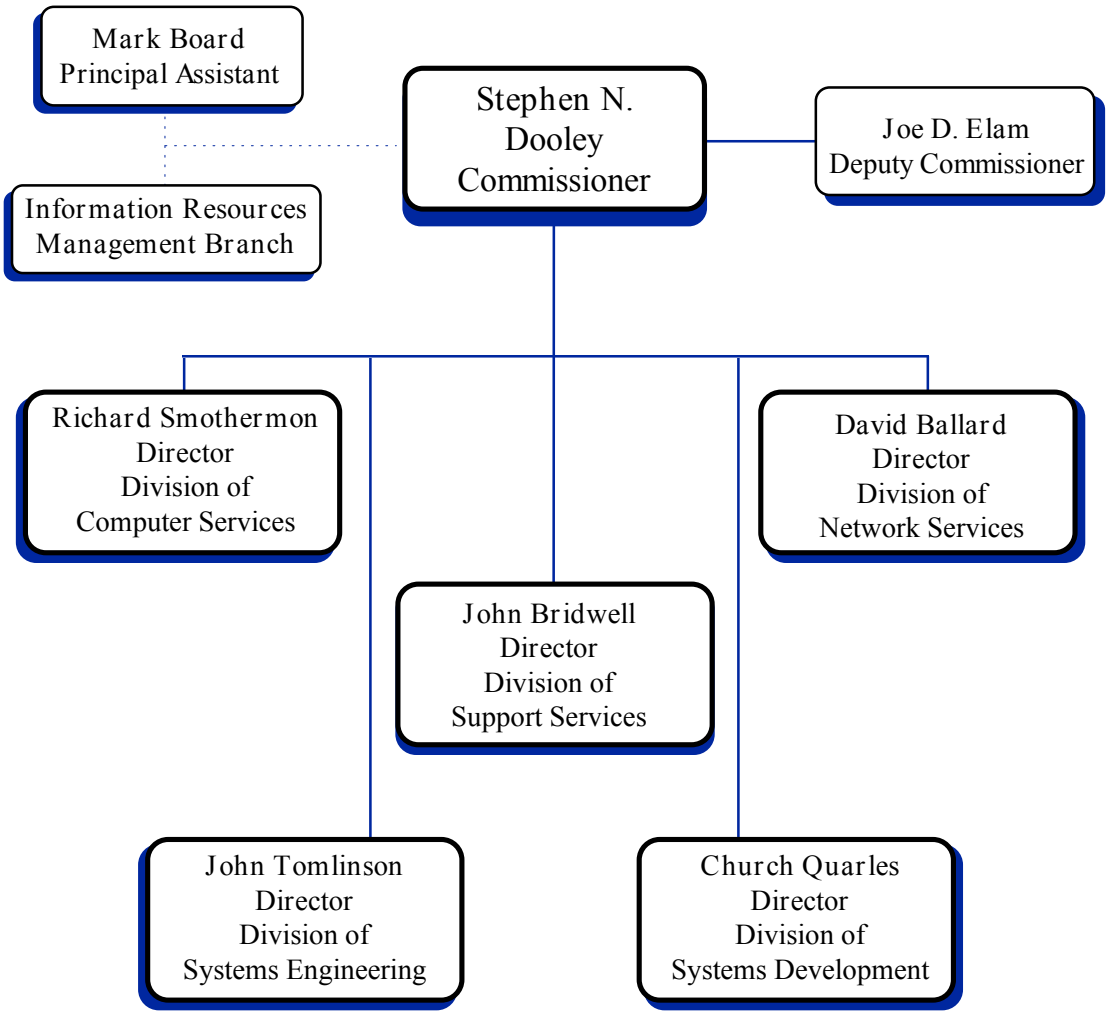
The ***Division of Systems Engineering*** is responsible for providing comprehensive systems analysis, design, and development services, and applications consulting services to designated state agencies with primary responsibility for supporting economic development, environmental, financial, justice, labor, personnel, revenue, safety, public protection, tourism, and transportation systems. This division is composed of four branches: Revenue Systems, Transportation and Environmental Systems, Vehicle Information Systems, and Financial Systems.

The ***Division of Support Services*** is responsible for planning and procurement assistance, service coordination, applications development standards, data security, disaster recovery planning, technical training, fiscal administration, technical publications, and facilities support. This division is composed of six branches: Agency Liaison, Applications Development Center, Facilities Support, Security and Recovery Services, Systems Training, and Administration.

DIS has traditionally provided staff support for the Kentucky Information Systems Commission (KISC), which was created by the 1984 General Assembly. However, the 1994 GA restructured the Commission as an independent agency (Kentucky Information Resources Management Commission) with its own staff and operating budget.

Exhibit 1

Organization of the Department of Information Systems



DIS Core Values

Quality: We are committed to responsive and reliable service that provides satisfaction and value to internal and external customers.

Integrity: We are committed to conducting the Departments' business with ethical standards, and strong work ethic, while displaying mutual respect for all employees and client agencies.

Partnership: We are committed to working together within our department and with our customers by being flexible and cooperative, having a positive attitude and providing open communications and mutual support.

Leadership: We are committed to proactive, visionary leadership that inspires and enables the achievement of common goals, that recognizes employees as our most valuable resource, and that promotes involvement, skill advancement, and continuous learning.

Professionalism: We are committed to being technically knowledgeable, innovative and creative in the pursuit of our mission - clearly communicating ideas and showing respect for the diverse views of our customers.

DIS Vision

We aspire to be an organization that is:

- a trusted business partner with our customers,
- recognized as a center of expertise for information technology,
- a catalyst for emerging technologies, and
- a desirable place to work ----maintaining an environment where employees may excel.

DIS Mission

To lead and assist state agencies in meeting the needs of Kentucky's citizens by addressing business problems and opportunities through the effective use of information technology and services.

DIS Goals

- Create an improved work environment that fosters a well trained and motivate workforce.
- Improve cooperative partnerships among DIS, clients, and third party providers.
- Achieve a secure effective statewide information technology infrastructure.
- Improve internal management processes through reengineering.
- Attain customer satisfaction through delivery of efficient and effective information technology services.
- Become a center of expertise for Information Technology.
- Enhance the availability and accessibility of commonwealth information.

Strategic Issues

Architecture Planning Committee - The Department of Information Systems recognizes that providing leadership in today's networked information technology environment constitutes helping formulate an architecture upon which to build. An Architecture Planning Committee, composed of senior managers and technical leaders, consider practical direction among the wide variety of hardware, software, and communication products. Working with the Kentucky Information Resources Management (KIRM) Commission, this committee has focused on policies, standards, and specific products which, based on research and predictable analysis, can be recommended to state agencies to use to formulate basic functions and application development on the client/server network. The continual publishing and updating of the Recommended Information Technology Standards and Products (formerly the Recommended List) provides not only technology direction, but a focus for developing training and procurement strategies.

Commonwealth Integrated Network System (CINS) - CINS has become part of the new Kentucky Information Highway (KIH). As new applications and additional users come online, we expect there to be additional bandwidth capacity demands. The available resources between the CINS nodes will be increased over the next few months in order to allow for increased traffic throughout the Commonwealth. Enhancements are planned for the Microsoft Mail Backoffice infrastructure. This should add stability to e-mail routing and increase its effectiveness. Asynchronous (dial-up) services are also being expanded. We expect an increased need for remote access to network resources and will being expanding both remote control and remote node types of access. We will also be evaluating the need for ISDN remote access. All 176 of Kentucky's school districts have access to the KIH. Schools in each district will be coming online as resources and budgets permit. State agencies have begun plans to bring their remote offices online soon. We anticipate a substantial increase in these type of additions to the KIH.

The Kentucky Information Highway: A Statewide Integrated Communications Network - The Kentucky Information Highway (KIH) is a major state initiative to develop the Commonwealth's public sector communications network as a publicly available and affordable infrastructure resource which can be used to break the barriers traditionally imposed by geography, demographics, or ability to pay. The KIH is a statewide digital network providing for the high speed, high capacity delivery of voice, data, video, image, and radio transmissions. The KIH incorporates the existing communication systems used by the state for voice, data, and video with advanced capabilities and expanded services. A robust communications infrastructure means a competitive advantage for the state with tremendous implications for communities and citizens - in government services, education, health care, economic development, public safety, the environment, and access to information resources in general.

The Commonwealth solicited input from outside communication experts, private statewide sources, internal technical staff, and end-users in developing a plan for an integrated communications network. A Request for Information (RFI) was issued to determine the feasibility of undertaking such a major project and to obtain information from perspective vendors. A Request for Proposal (RFP) was prepared by the state and issued July 12, 1994, outlining the intent of the Commonwealth and visions for the future. Responses from four Offerors were received on October 14, 1994. An evaluation of both the technical and cost proposals was undertaken, and on December 22, 1994, Governor Jones announced the winning bidder. The contract was awarded to the Local Exchange Carrier Telephone Group (LECTG) and LCI International. Planning and initial implementation is under way and cut-over of existing services will begin in July 1995. As the largest consumer of communications service in the Commonwealth, state government has the opportunity to influence the development of this communication resource through the public-private partnership created by this contract. The major goal of the Kentucky Information Highway is to deploy at least one "on-ramp" (Network Access Point) in each county of the Commonwealth.

Creating this network is a huge undertaking, but is necessary because advances in information technology will have a major impact on the cost of economic development, health care, education, and public safety. The KIH will open a storehouse of information services to any area of the state, rural or urban. Proposed projects for state agencies, universities, school districts, libraries, and local government will exploit the services offered by the statewide network and position these users to provide a direct link to state information resources.

The development of a statewide network will make the use of communication intensive technologies, such as large file transfers, image transmission, interactive video conferencing, and electronic data interchange (EDI), economically feasible. The deployment of the KIH will also establish economic development opportunities for private business and citizens, since the network will be owned by the LECTG. Not only will enhanced network services be accommodated at a reduced unit cost, but high speed connections will be available to national and international resources such as Internet and the proposed National Information Infrastructure (NII).

The KIH contract was signed July 12, 1995, with the Local Exchange Carrier Telephone Group (LECTG) and LCI International. All voice and data communications services currently used by the state are being moved to the KIH and should be completed by January 1996. The KIH will provide frame relay, switched megabit data services (SMDS), integrated services digital network (ISDN), broadband (BISDN), and asyncronous transfer mode (ATM) communications services not currently used by the state on a specified schedule defined in the KIH contract. The KIH has:

- Reduced voice, data, and video communication unit costs.
- Given the Commonwealth a definite time line for new communications services (i.e., ISDN, Frame Relay, Asynchronous Transfer Services).
- Created opportunities for small users of communications services to take advantages of the Commonwealth's significant buying power.
- Reduced the rate disparity for network access in each of the 120 counties of the Commonwealth.
- Stimulated the creation of an information infrastructure to support Kentucky educational and economic development initiatives .

Before the KIH, the Department of Information Systems had begun deployment of the Commonwealth Integrated Network System, a statewide, digital backbone network of high speed communications links connecting the major cities throughout the state. The KIH has consolidated this network and other limited capability, single user networks, that agencies had used in the past. As the cost of communications services is reduced, more persons have access to the Commonwealth's wide array of services. As the vastly improved network is created, the state's information highway and the "on ramp" to the National Information Infrastructure (NII) are naturally created. Other communications services and proposed projects for state agencies, which were cost prohibitive, will become more viable as the communications services become more widely available throughout the statewide network.

The ultimate goal of the Kentucky Information Highway is to deploy one point of presence in each county. A local point of presence will reduce long distance costs and provide gateways to the private sector and other information services.

The KIH will enable state agencies and other users to economically incorporate communications intensive technologies, such as interactive video conferences, large file transfers, image transmission, spatial data dissemination and electronic data interchange (EDI) into their service delivery strategies.

Video Conferencing: Kentucky TeleLinking Network - Video conferencing is the real-time transmission of both audio and video images between two locations. In March 1993, the Commonwealth established the Kentucky Video Conference Center in Frankfort, which serves as the central hub for connectivity between state agencies and 18 Kentucky universities and community colleges to form the

Kentucky TeleLinking Network (KTLN).

In September 1994, the Commonwealth was awarded a $4 million grant by the U.S. Department of Education, which has allowed expansion of the KTLN to an additional 48 centers. The service not only will provide increased educational opportunities, but improved management communication among agencies.

Internet Connectivity And Support - The Department provides a full range of services to customer agencies that want to access the Internet. These services include:

- Direct connectivity through the Kentucky Information Highway and OARnet, our regional Internet service provider.
- E-Mail services and gateway services to the Microsoft Mail environment.
- UseNet news services.
- Software installation for TCP/IP protocol suite and browser software.
- Web application development and assistance.
- Procurement recommendations for hardware and software for agencies to establish their own Web server.

The Commonwealth's Web server will provide another facility to advertise state services and provide public access to a wide range of public information.

The Internet infrastructure also holds promise to compliment our internal wide area networking initiatives. Dial-up access to the Internet will provide local offices throughout the state with an economical means to use E-Mail, Host Terminal Emulation, and access to the World Wide Web.

Client/Server Development -Both development divisions within DIS are actively embracing client/server technology and its potential benefits for state government. This technology, if successfully employed, offers to empower users in ways that the mainframe has historically been deficient. Users working from desktop personal computers have access to a full office suite (word processing, electronic mail, spreadsheets, scheduling systems), to the INTERNET, and can access and manipulate data from various databases with report writers. Building on that, client/server technology is introducing new tools that will allow developers, such as DIS, to build systems with graphical user interfaces that will further augment state employees in their job performance. These benefits are marketed by vendors as being attainable while lowering the overall cost of technology for state government.

DIS's strategy for client/server support has been multifaceted and by necessity will continue to be. Besides having our own in-house personnel, we maintain a number of contracts that allow state government access to additional trained technical staff. These contracts supply programmers, analysts, systems consultants, network engineers, network administrators, production technicians, etc. In addition, DIS will recommend procuring the necessary resources via a Request for Proposal (RFP) process when a project is of such magnitude that this is a preferred course. DIS serves to a great degree as a facilitator for the technology needs of the state agencies.

Services Expansion - Recognizing the changes that network computing and the client/server environment bring to information technology, the Department of Information Systems is expanding and changing the services offered. Not only are diverse computing environments, which include the mainframe multi platform and distributed applications, supported, but an ever expanding computing network is available to provide electronic mail, 3270 emulation and Internet access. The Commonwealth Integrated Network (CINS) is becoming part of the Kentucky Information Highway.

Consulting services for network computing include business analysis, configuration analysis, site preparation and planning, and break fix and operational support. Other technical consulting services include ongoing

support for computer operations, development of systems backup and recovery procedures, and systems performance monitoring and tuning.

For agencies who want to share in the development of applications or other services, the department also offers a full range of individually packaged Business Process Engineering services, Project Management, Joint Application Design (JAD), Cost Estimating, and Database Management services. In this manner DIS offers flexible options in service utilization and can participate with agency staff to facilitate project completion.

Application Issues

Major Systems

The Worker's Information System (TWIST) - During FY 94/95, a two phased approach was approved to implement a statewide TWIST system. Phase I was approved in January 1995. This phase included the delivery of 500 PC workstations and 170 printers. The workstations have office automation capabilities and will be available to social workers in each local office throughout the state. Phase I also included the development of a Request for Proposal (RFP) to select a vendor for the development of the TWIST software. The project team was given approval to proceed with Phase II in May 1995, to contract with a vendor (Unisys Corporation) for the development. A contract was awarded July 1, 1995, with a projected schedule to implement TWIST software on a pilot basis in April 1996.

Kentucky Automated Support and Enforcement System (KASES) -The primary goal for KASES in FY 94/95 was to meet the Federally mandated requirements for certification by October 1, 1995. This included adding all functionality required by FSA-88 regulations and adding Jefferson County cases which would complete the requirement for KASES to be state-wide. In December, 1994 the Jefferson County regional office cases were converted to KASES and the old child support system (CSS) was discontinued.

During the year many large projects were completed which accomplished FSA-88 processing functions and enhancements for Jefferson County needs. Among them were: fast pathing, credit bureau reporting, collections processing, charging on the first, genetic testing, service of process, tracking support orders, support obligation calculation, and medical only case types. In addition, a major modification to KASES navigation of screens was completed. Also, several database modifications were made to accommodate additional data needed for the new processes.

In May, 1995 a significant change in direction for the project was undertaken. The Federal government granted a waiver from the Commonwealth requesting the existing Jefferson County computer system be allowed to electronically interface with KASES rather than their converting entirely to using the KASES system. The Federal certification date of October 1, 1995 was stipulated to remain.

Kentucky Automated Management Eligibility System (KAMES) - In August 1993, the KAMES system became operational statewide with one-fourth of the caseworkers in each county using KAMES for the application process. The remaining caseworkers and functions were transitioned onto KAMES based on a schedule determined by the Cabinet for Human Resources with the last group being added to the system in February 1994. During FY 93/94, the project team was focused on meeting a federally mandated time frame of May 31, 1994, in which all AFDC cases had to be loaded on KAMES, or the Commonwealth could have suffered financial sanctions amounting in the millions. This objective required an extensive effort by the project team and the caseworkers; and by working together, this goal was achieved. At the end of FY 93/94, there were approximately 200,000 active cases on the system.

During FY 94-95 the caseload on the system rose to in excess of 325,000 active cases. The project team concentrated on KenPac related processing issues and reducing the batch cycles.

Statewide Reporting and Information Management System (SRIM) - As a project within the Kentucky Education Technology System (KETS) the Department of Information Systems developed a client server application for the Department of Education (KDE). The initial implementation provided a user friendly view and access to frequently requested education related information. This first phase of the Statewide Reporting and Information System (SRIM) included directory data for all school and districts, lead

contacts (principals/superintendents), membership counts by grade, gender, ethnicity, attendance rates, free and reduced lunch participation, and summaries of accountability/assessment scores. The scope of the first phase of SRIM was intentionally designed to provide a foundation to support future application requirements. The first phase of SRIM, developed as a pilot, was completed in December 94.

In February 95 a second phase of SRIM was initiated, referred to as: The School Change Projects and Human Resources (SCHR) system. The School Change Projects and Human Resources system provides users with a facility to manage Kentucky Education Reform Act (KERA) projects and staff resources throughout Kentucky.
Management of KERA has required KDE program administrators to track participation in KERA and related programs and projects, such as Extended School Services (ESS), High School Restructuring, Kentucky Early Learning Profile (KELP), and the National Alliance for Restructuring Education (NARE), to name just a few. In addition, KDE administrators track personnel resources throughout the state who have some relationship to KERA initiatives. These personnel resources, referred to as cadres, are considered critical to KERA success. The cadres include: Professional Development Coordinators, Distinguished Educators, KERA Assessment Fellows, Regional Service Center (RSC) contacts, Technology Coordinators, and many others.

SRIM/SCHR provides a graphic view of Kentucky (statewide, regionally, and by county) to identify districts and schools participating in KERA projects and to identify personnel resources (cadres) throughout the state. SRIM/SCHR addresses a critical need for KDE administrators to have quick, integrated access to the location of KERA projects or resources and, just as important, where KERA projects and resources are not located. SRIM/SCHR is intended to provide a single facility for KDE administrators to manage their respective KERA programs and to provide a resource directory of KERA projects, programs, contacts, and resources.

The SRIM and SCHR applications were developed in partnership with the Department of Education using Bachman Analyst for data modeling, Oracle as the database, and Gupta's SQLWindows for the graphical user interface.

Kentucky Vehicle Information System (Presently, named AVIS) - The Transportation Cabinet and DIS have released a Request for Proposal for competitive bids to develop the new Vehicle Information System. The RFP is two phased. The Commonwealth desires to acquire consulting services to assist in documenting and analyzing the current Kentucky Vehicle Information System (KVIS) and in creating a new Kentucky Vehicle Information System that will promote efficiency in the registration, titling, and collection of taxes for vehicles and boats. A contract should be awarded and the tasks for Phase I started prior to the end of 1995. This includes Business Process Re-engineering, Requirements Analysis, and General Design. Following the completion of Phase I, and funding by the 1996 General Assembly, Phase II will begin, consisting of the Detailed Design and Implementation.

Kentucky Drivers' License Information System (KDLIS) - Federal mandates required that all states participate in the Problem Driver Pointer System (PDPS) by April 30, 1995. The KDLIS system underwent major modifications in FY 94/95 with the conversion to the Nationwide Problem Driver Pointer System (PDPS) and the implementation of the Driver License Reciprocity (DLR). PDPS & DLR were implemented in April 1995. PDPS is a Pointer System containing problem drivers which is maintained by all states. DLR will allow states to electronically exchange driver history information on all drivers. Beginning in July 1995, the requirements were defined to implement House Bill 171 (1994 General Assembly), which eliminates the Social Security Number as the license number. While SSN will still be maintained in the driver's record a generated number will now become the driver's license number. This is scheduled to be operational January 1, 1996.

Voter Registration System (Motor Voter) - The federally mandated Motor Voter System was implemented January 1, 1995. The system receives electronic voter registration applications and electronic

registered voter changes. Motor Voter also receives signed voter registration application cards from the Kentucky Drivers License Information System (KDLIS) and the Kentucky Automated Management Eligibility System (KAMES) to be processed by the County Clerks to update the Voter Registration System.

Voter Registration Federal Reporting Subsystem - In order to comply with the National Voter Registration Act of 1993 (Motor-Voter), a Federal Reporting Subsystem must be developed. The Act requires all States to report voter registration activities to Congress every two years. There is a joint effort between DIS and the State Board of Elections to determine how to meet the requirements defined by the Federal Government.

International Registration Plan (IRP) - This system is being redeveloped and moved into a Client Server environment. This is being accomplished by partnering personnel from the Transportation Cabinet and DIS. The system is scheduled to be ready for the 1996 registration period.

Compliance and Receivables System (CARS) - Phase 1 of this system began implementation on June 30, 1995. This included the replacement of the Accounts Receivable (AR) system, and the enhanced communications and redesign of the Collections System. Projections are for an increase of $5 million per year in new tax collections of new money due to increased productivity and additional penalty collections. This system enhances the information available to and the communications with the taxpayer. In CARS the user can create, display, maintain, and approve tax notices in real time. Interest, penalties and fees can be assessed automatically or at the discretion of the user. The requirements analysis and design planning for Phase II has begun. This phase will include the implementation of the online Journal Voucher System and its interface to CARS, an interface from the refund systems to CARS, and a Compliance subsystem.

Kentucky Automated Purchasing System (KAPS) - KAP's functionality is being expanded significantly with provisions for online purchase orders and receiving reports. Agencies will be given this functionality upon completion of training. An interface between KAPS and the statewide accounting system (STARS) will be implemented to enhanced the editing and reporting capability of this statewide administrative system.

Fish and Wildlife Project "Direct Sales" - This project will automate the issuance of Kentucky hunting and fishing licenses through the installation of 1,300+ point of sale units in retail outlets. The system will provide detail license holder information, by periodic polling of the retail outlets, and automate administrative functions within the agency. The project is a cooperative development effort with Digital Equipment, DIS and agency personnel.

Century Date Change (CDC) - CDC refers to the change in the calendar date that will occur on January 1, 2000, i.e. '20' instead of '19' for century designator. Since many DIS legacy systems will not accommodate this change, a project team has been established to evaluate alternative solutions and develop an agency strategy and methodology.

Education, Arts & Humanities Cabinet

Department of Education

Migration from Honeywell System -DIS has completed the migration of all Kentucky Department of Education and Workforce Development Cabinet systems from the Honeywell platform to the IBM platform. The Honeywell mainframe was officially disconnected in March, 1995. This migration provided numerous benefits. Foremost it replaced use of an antiquated computer with a state of the art mainframe currently

utilized at the data center for the Commonwealth. A secondary benefit was the use of new technology for the storing and retrieval of data. The School and Community Nutrition and Teacher Certification systems were redesigned using a relational DB2 database. Finally as systems were converted, many data problems were discovered and corrected providing reliable reports.

Cabinet for Human Resources

Department for Employment Services

Unemployment Insurance Benefits System (UIB) - Redesigned the portion of this system which calculates the overpayment amounts due from each claimant and sends the appropriate billing. It automatically produces a lien to be filed against the claimant when the time limits expire. All on-line screens and programs were also revised. This was implemented in April, 1995. Implemented claimant profiling as part of a Federal pilot project award. This process assesses the profile of each claimant to determine those most likely to draw unemployment insurance for an extended period of time. Those claimants are targeted for additional services. This procedure was implemented in October, 1995.

Unemployment Insurance Transferred Wages (UIT) - Revised this entire system to increase the size of all amount fields and to provide for the use of the century indicator. This revision was implemented March 1, 1995.

Automated Labor Exchange System (ALE) - Implemented the PC version of this system which is a self-help on-line prompter designed for use by the general public to search the state's Job Bank files without assistance from Job Service personnel. This was implemented in April, 1995, and provides portability for the Job Service field staff.

Department for Social Services (DSS)

Family Activity Client Tracking System (FACTS) - Created the out-of-home/Termination of Parental Rights History file with on-line inquiry access; modified the initial print of DSS-1280 to eliminate the print of documents for clients for which a raw DSS-1280 had been submitted; added new Average Worker Caseload report to system; and converted Social Services Case Inquiry from COBOL IMS programs to TELON.

Adult Protective Services (SAP) - Made KY State Police domestic violence inquiry available to staff of the Administrative Office of the Courts, as well as, to the Department for Social Services Adult Protective Services staff; converted fiscal year report programs from SAS to COBOL; and provided file download capability and report programs for use on personal computer, as well as, on the mainframe.

Department for Health Services (DHS)

Birth Certificate (BRC) - Loaded 1911-1975 birth certificates to the Birth Certificate database for on-line inquiry, update and printing for these years as well as the existing 1976 to date births; added option to allow on-line addition of in-transfer birth certificates where mother is KY resident but birth took place out of state; and reformatted files in compliance with the federal National Center for Health Statistics.

Women, Infants and Children (WIC) - Modified the Vendor Commensurate Pricing process to accommodate new pricing form; implemented numerous new issuance and certification reports; refined

Mainframe reconciliation methods; refined edit/update process to use date/time stamp; revised the Federal Minimum Data Set; converted clinic number from district clinic to independent clinic; completed miscellaneous utility modifications; developed PC system to flag high-risk vendors; and began Phase I of Vendor Monitoring PC subsystem enhancements.

Department for Social Insurance (DSI)

Bridge the Gap Child Care (BTG) - Developed new system, to be implemented August, 1995, to assist AFDC families with child care payment when employment begins.

Food Stamps Employment & Training (FST) - Modified system to reflect client moves between counties; created various one-time reports to keep users updated on current issues within the system; implemented edits to identify data with blank approval dates, invalid disqualified referrals, and lack of target codes submitted by KAMES; created the yearly 1099 child care forms; modified disqualified referrals process; modified on-line correction screen to allow for further edits and addition of fields; and reorganized target system edits.

KAMES Active Claims (KCA) - Completed the development and implementation of the Automated Claims System which applies benefit reduction to over-payments of active cases. Currently 110 counties have completed training and are utilizing this system; the remaining counties are scheduled for training in August and September of 1995.

KAMES Inactive Claims (KCL) - Added the county-to and county-from fields to KCL processing; modified KCL jobs to reset beginning balances on January 1; assigned cases to collectors that are transferred to KCL; expanded system to allow for Medicaid Estate Recovery on-line processing (including new ME letters 01 - 09 , addition of letters 16, 17 and 18, and simultaneous multiple payments); incorporated new county clerk/ commonwealth attorney address file into letter processing; created several new listings and changed others; incorporated the 1995 Federal Tax Offset updates.

Public Assistance (PAS) - Modified programs and data to accommodate KAMES files processing, eliminated AFDC-MA processing from Negative-QC and developed and implemented Positive-QC for MA from KAMES data; implemented 1995 RSDI conversion for MA recipients eligibility for QMB/SLMB based on cost of living increases; created list of KenPAC doctors in ADD's and numerous other one-time client/caseload reports; worked with KAMES staff on the creation of new PA and MA Quality Control check lists; completed file conversion for QMB and SLMB; developed and implemented PA, SDX and MA daily transaction wire-to-wire transmission to EDS, Dallas, Texas, process; and modified the MS-264 Reporting and Numident subsystems.

Department for Medicaid Services (DMS)

Medical Transportation Program (MTP) - Implemented voucher modifications to allow for the reporting of trips outside service area without referrals and revised pricing amounts for all provider types for FY96; also added provider and recipient monthly reports including total number and dollar amounts.

Kentucky Information Resources Management (KIRM)

Plan Collection and Management System (PCMS) - PCMS is made up of three distinct functions: Planning, Management, and Review. PCMS was revised to use a new model for Information

Resources Plans. It also allowed users the ability to view the previous plan under the previous model. PCMS was modified to allow the Capital Planning portion to interface with the Capital Planning System.

Public Protection and Regulation Cabinet

Department of Housing, Building and Construction (DHBC) - In response to 1994 legislation, DHBC was charged with administering regulations for specified trade personnel within the Commonwealth. A Visual Basic/Access solution was developed that tracked historical information for applicants (examinations, certifications, and disciplinary hearings) and issued certificates.

Secretary of State

The Governmental Electronic Network Express Information System (GENESIS) - Was implemented in May 1995, in a CICS DB2 environment. The system provides access to 250,000 Kentucky corporate records regarding articles of incorporation and corporate officer information. The system was designed to assist the agency by providing public access to public records via Internet which will significantly reduce the 500 daily calls and improving the scope and functionality of the office procedures.

Transportation Cabinet

Equipment Management System (EMS) - FY 94/95 enhancements include the transfer of 2,000 vehicles from the Division of Equipment to the Division of Fleet Management and modifications to the computation of rental rates and repair orders.

Legislation - The following laws regarding AVIS were enacted in the 1994 Legislative Session and implemented during FY 94/95:

- Issuance of decaled, multi-year recreational vehicle license plates. Multi-year farm plates will be issued beginning January 1996.
- Limiting the number of dealer license plates that each vehicle dealer can purchase during the year based on sales.
- Permanent branding of titles of previously salvaged or water damaged vehicles that have been rebuilt.
- Issuance of the new two year environmental license plates.
- Increasing the county clerks' fees for vehicle and boat online and mail-in transactions.
- Requiring payments of delinquent ad-valorem taxes only on the vehicle being transferred even if there are delinquencies on other vehicles owned by the seller.

Client Server Development - The Six Year Plan and Coal Haul Systems were implemented during the fiscal year. These client server systems were developed with partnering personnel from the Transportation Cabinet and DIS using ORACLE tools and data base.

Department of Information Systems

Maintenance and Enhancement Workload - The Divisions of Systems Engineering and Systems Development are responsible for the maintenance and enhancement that is required for 527 systems containing 28,200 programs. These divisions received and acted upon 2,535 requests for action against those systems during FY 94/95.

Customer Services

Computer Training - DIS provided training services to 3,911 students during FY 94/95. The Department has also extended its service delivery of training classes by making LAN-based training courses available over the wide area network. This means that state employees as far away as Paducah can now enroll in information technology training and receive instruction without ever having to leave their office. This transition only further enhances DIS's leadership role in the provision of training services on a statewide basis to all of state government.

DIS will continue discussions with the Community College system to develop strategies for providing instructor-led training on a statewide basis if determined to be economically feasible and a useful service for some of our larger agencies with local offices. The Department is also looking into the use of video conferencing and the Internet as vehicles for the delivery of training services directly to our customers which would reduce travel costs for agencies needing to train employees at remote locations. A pilot will be implemented during the biennium to provide remote access to the training records database so that agencies can monitor employee training requirements and utilization which further enhances state employee career development and thereby the delivery of services.

Enterprise Wide Licensing/Contract - In an effort to provide additional products that represent significant cost savings and service delivery, DIS has negotiated, on behalf of all state agencies, state price contracts based on enterprise-wide software license agreements for the following products:

- The Sybase agreement is a three year contract at a 35% discount off of the U.S. Primary License Price Master. DIS is presently utilizing the Sybase database for the Kentucky Legislative Review System.

- A two year contract with Oracle is available at a 25% discount. The contract includes customer support, education services, computer software maintenance which includes telephone support, and software upgrades.

- A Microsoft Select/Microsoft Variable License Pak Master Agreement is in effect for purchase of all Microsoft software licenses, maintenance, documentation, disks, and cd-roms.

In addition, the Commonwealth has negotiated software state price contracts for the following products which can be utilized by all state agencies at substantially reduced costs to the Commonwealth:

- Novell products, including WordPerfect
- AutoCAD Software
- Intel Lan Desk Virus Protect and Lan Desk Manager

The past five to six years has seen amazing change in the way hardware and software is deployed across state agencies to manage data and information. DIS recognized a need for agencies to supplement their staff to develop systems, manage and maintain the rapidly increasing number of networks, and provide the necessary analysis and design for implementation. The following contracts were awarded to numerous vendors based on Invitations for Bid:

- ***Network Computing Support*** - Six contracts were awarded to provide system integrators that can be deployed statewide to provide a full range of support services (business analysis, configuration analysis, site preparation planning, installation/roll-out, break/fix support, and operations support).

- ***Programming and Network Administration*** - Five contracts were awarded that supply resources to assist with application development, including client/server development and the ability to acquire System Administrator/s to work on-site to provide operational support.

- ***Hardware Maintenance*** - Three contracts were awarded which allows an agency to use one provider to maintain all of the various hardware and peripherals within an agency. With the establishment of these contracts, all state agencies now have the option of contracting their maintenance needs with one vendor. These contracts result in major savings for state government.

- ***Imaging*** - Ten contracts were awarded to support agency needs in the Imaging area. These contracts are different from the other contracts in that hardware, software, and support services for imaging are all inclusive through these contracts.

Through contract negotiation and management skills, agencies have the potential to acquire the most competitive pricing available for their particular information technology needs.

Exhibit 2
Service Usage Comparison

Exhibit 2 compares usage of all rated services for the last two fiscal years.

Service	Units Provided FY 93/94	Units Provided FY 94/95	Variance	% of increase/ decrease	Service Unit
Professional Services:					
Programming (DIS)	251,227	267,428	16,201	6.45%	hour
Programming (Contractor)	147,440	233,248	85,808	58.20%	hour
Data Base Analyst	7,582	11,654	4,072	53.71%	hour
Technical Services:					
CPU Process	4,591	6,159	1,568	34.15%	CPU hour
Laser Print	124,618	115,200	(9,418)	-7.56%	100 pages
Microfiche Services:					
Masters	223,206	244,532	21,326	9.55%	master
Duplicates	601,590	640,250	38,660	6.43%	duplicate
Tape Library:					
Tape Services	555,345	686,924	131,579	23.69%	per 10,000
Disk Services:					
Disk Storage	3,964,807	4,590,078	625,271	15.77%	cylinder
Disk I/O	1,741,419	2,031,997	290,578	16.69%	per 10,000
Telecommunications:					
CINS	N/A	95		New	average connects per month
Host Access	15,107	16,253	1,146	7.58%	
RJE	56	54	(2)	-3.57%	
Communications-Frankfort Basic	57	68	11	19.30%	
Communications-Frankfort Enhanced	15	14	(1)	-6.66%	
Communications-Frankfort High	9	32	23	255.55%	
Communications-Statewide Basic	818	781	(37)	-4.52%	
Communications-Statewide Enhanced	5	30	25	5.00%	
Communications-Statewide High	0	3	3	New	
Online Services:					
IMS Transactions	243.0	259.056	16.056	6.61%	million transac-
IMS Minutes	39,077	41,418	2,341	5.99%	IMS minute
CICS Transactions	538.9	640.393	101.493	18.83%	million transac-
CICS Minutes	76,347	114,594	38,247	50.10%	CICS minute
Video 370	351,823	263,641	(88,182)	-25.06%	1,000 keystrokes
Video Conferencing	112	197	85	75.89%	hour
External Training	511	3,542	3,031	593.15%	per class

Operational Improvements

DIS continues to explore methods to enhance operational support for both the department and other state agencies. This section discusses improvements that are in the planning stage or have been implemented.

Help Desk Automation and Staff Restructuring - Earlier organizational changes consolidated support staff from the SNA and personal computer networking areas. To further enhance customer service, all Customer Support Branch staff are now located at the Commonwealth Data Center (CDC). All Help Desk staff are equipped with networked personal computers which provides them with the ability to connect to all application and communications services available through CINS.

Statistics for the past several months indicate a growing acceptance by our customers to utilize the "do-it-yourself" services which the ANSWERS voice response unit provides for restarting equipment, opening problem tickets, etc. The Automated Network Support With Electronic Response System (ANSWERS) began statewide production in November 1993. Phase II of the Help Desk automation effort is underway. A new Client/Server Service Management System is being implemented within the Customer Support Branch. This system contains a built-in knowledge base of problems that will shorten resolution time for service requests.

COM Replacement for Improved Productivity - In May, 1995, DIS acquired a combination of hardware and software that, together, will offer state agencies a way to replace most computer-output-to-microfiche (COM). For many years, state agencies have made extensive use of microfiche, or COM, for storing information that is voluminous or infrequently accessed. Although microfiche can be a useful tool, it is notorious for being cumbersome and difficult to search. The new technology uses a combination of software from Mobius, optical disks from IBM, and traditional mainframe DASD storage to store economically large volumes of computer output. The software product that will manage this activity is called ViewDirect, from Mobius. Once output is sent to ViewDirect, it can then be searched at electronic speeds, thus saving considerable time and expense.

Once the new facility is fully operational, agency output can be directed to this new software and, as long as the information is frequently accessed, will remain stored on mainframe DASD. While stored on mainframe DASD, the information is accessible instantaneously, usually within a couple of seconds. Once its activity pattern diminishes, it can be migrated automatically to inexpensive optical storage where it can still be retrieved in about 10 seconds or less, with full electronic searching capability. This will allow agencies to improve productivity by migrating as much of their COM work as desired to a modern environment with vastly superior search and retrieval capability. This new approach, however, does not address archival requirements, and some agencies may choose to continue using COM for that purpose. However, DIS hopes the state's COM activity will eventually diminish to a point where it can be contracted out to an outside source.

Data Center Effectiveness Study - In September, DIS received the final results of a lengthy, comprehensive study of the Commonwealth Data Center (CDC). The study covered fiscal year 94/95 and was conducted by Real Decisions Corporation, which is a subsidiary of the Gartner Group. Real Decisions, located in Stamford, Connecticut, is generally recognized as the leading company in large data center benchmarking and comparison studies. In the study, the CDC was compared to 80 large data centers, from both the public and private sectors, in the following areas: operational expenses vs. workload produced vs. service levels delivered. This exhaustive study concluded that the CDC was 41% more efficient than the average government data center studied by Real Decisions, 27% more efficient than the data center of the average Real Decisions client, and 16% more efficient than the average for data centers of comparable size. As one might expect, the completed study was both lengthy and detailed, including over 175 pages of complex charts, analysis, and comparisons. However, the bottom line to data center customers is much more simple and concise: Kentucky's Commonwealth Data Center has distinguished itself as one of the most efficient government data centers in the United States, and state agency customers are getting their money's worth when they process mission critical work at the CDC.

Network Growth

Kentucky Information Highway: Commonwealth Integrated Network System (CINS) - There are currently twelve CINS nodes throughout the Commonwealth. The locations are in Frankfort, Lexington, Richmond, Pikeville, Somerset, Morehead, Highland Heights, Louisville, Owensboro, Murray, Bowling Green, and Glasgow. We plan to increase the bandwidth available between nodes in order to address the expanding network traffic. DIS provides access to the Internet via Ornet to all state agencies and K - 12 schools. Internet is fast becoming a mission critical application for a number of agencies and schools.

There are over 10,000 devices connected to the KIH. This includes over 8,000 workstations and over 600 file servers, with both continuing to grow rapidly. There are also over 30,000 Microsoft Mail users. This growth in shown in Exhibits 3 and 4 below. While these numbers may not be exact, they represent the significant trend toward the CINS environment. Mainframe statistics are shown on the next page in Exhibits 5 and 6.

DIS will continue to provide support services to assist our customers in realizing their networking requirements. These services include requirements analysis, procurement recommendations, hardware/software installation assistance, and on-going support services.

Education Communications Network (ECN) - The Kentucky Education Reform Act of 1990 mandated a statewide communications technology systems for use by all schools in the Commonwealth. During the past twelve months, we worked with KDE to connect all 176 school districts to the KIH. This implementation was completed ahead of schedule and now allows each district to communicate using electronic mail and provides Internet access.

Router Technology - Wellfleet, now Bay Networks, Inc., routers have been deployed throughout the regional nodes, most of the Frankfort campus area, and to all 176 school district offices. TCP/IP and IPX are the standard protocols that have been implemented across the network. A substantial portion of the old "bridged" network in Frankfort has been converted to routers. The remaining sites will be migrated as the need arises.

Exhibit 3

Growth of CINS Devices

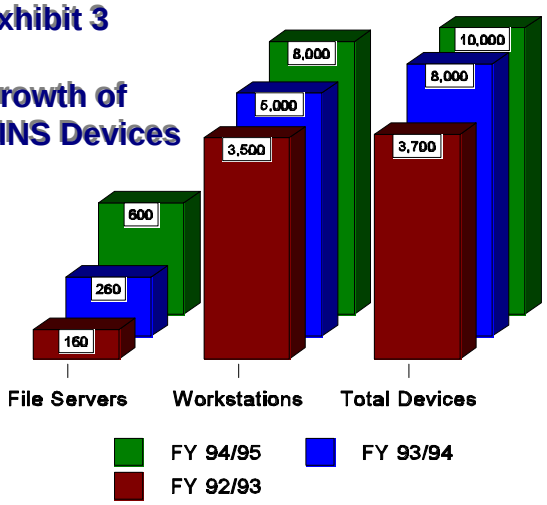
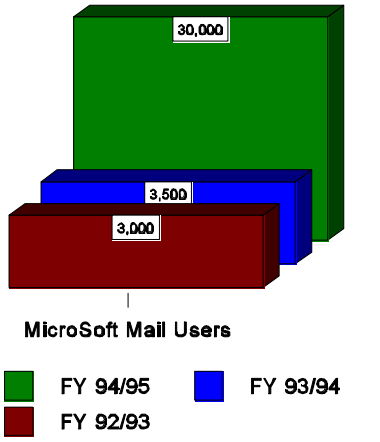


Exhibit 4

Growth of MicroSoft Mail Users



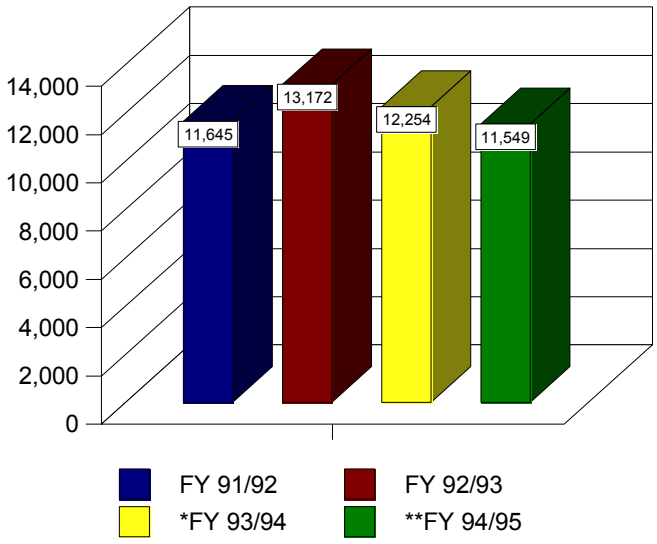


Exhibit 5
Growth of Network Devices
(Traditional Mainframe)

As indicated in Exhibit 5, the growth of traditional mainframe devices has decreased over the past two years. This decrease can be directly attributed to basic technology changes currently underway, with increasing numbers of users moving off the mainframe and onto the client/server platform.

*Total Installed Network Devices by type as of 06/30/94

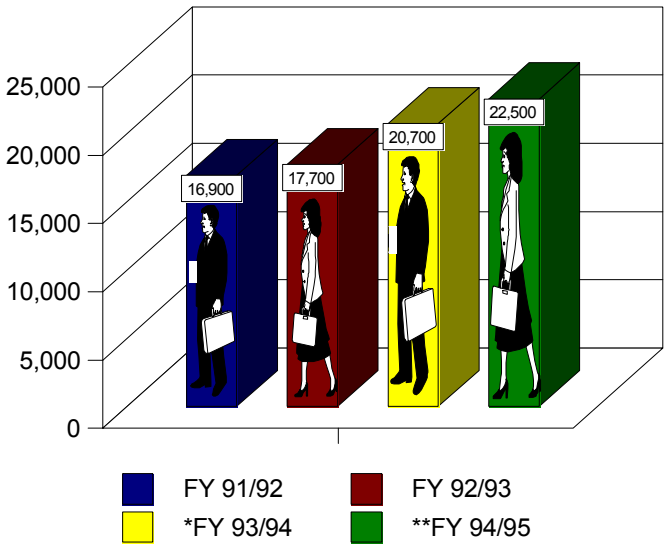
8,965	Terminals
2,319	Printers
970	Controllers
12,254	Total

**Total Installed Network Devices by type as of 06/30/95

8,507	Terminals
2,143	Printers
899	Controllers
11,549	Total

Exhibit 6
Growth of Network Users
(Traditional Mainframe)

The continued growth of network users is attributed to the general growth on the network as well as expanded application use by state agencies.



Performance Statistics

The Department of Information Systems (DIS) had a total of 374 permanent full-time employees at the end of FY 94/95. These positions included managers, data processing professionals, administrative professionals, and clerical support staff.

Exhibit 7 indicates the percentage of employees in each of these categories.

There were 684 data processing and network support personnel employed by other executive branch agencies at the end of FY 94/95. The vast majority (505) of these employees perform data entry and computer operations functions.

Exhibit 8 reflects the distribution of non-DIS personnel by functional category.

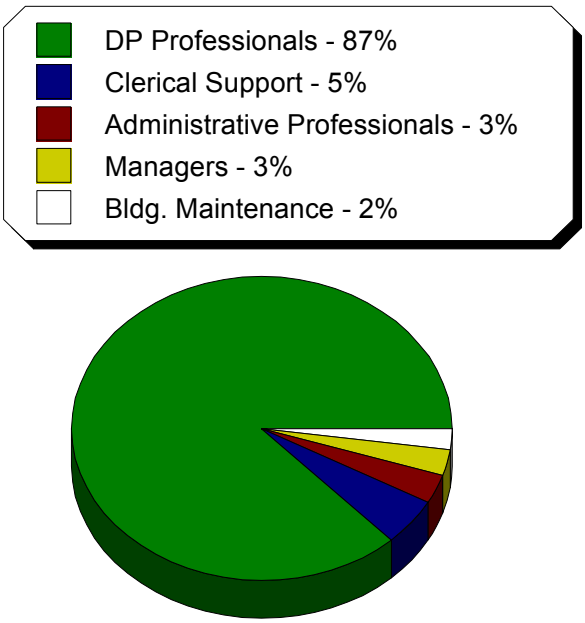


Exhibit 7

DIS Staff Analysis as of June 30, 1995

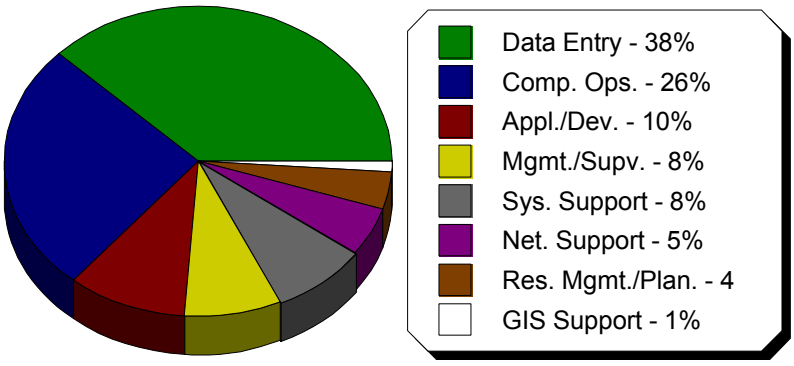


Exhibit 8

Non-DIS DP Staff as of June 30, 1995

Agency Usage of DIS Services - DIS provides rated professional and technical services to users on a statewide basis. The major users of all technical rated services provided by DIS are shown in Exhibit 9. The major users of professional rated services are shown in Exhibit 10.

Exhibit 9

Commonwealth Data Center

Usage by Agency

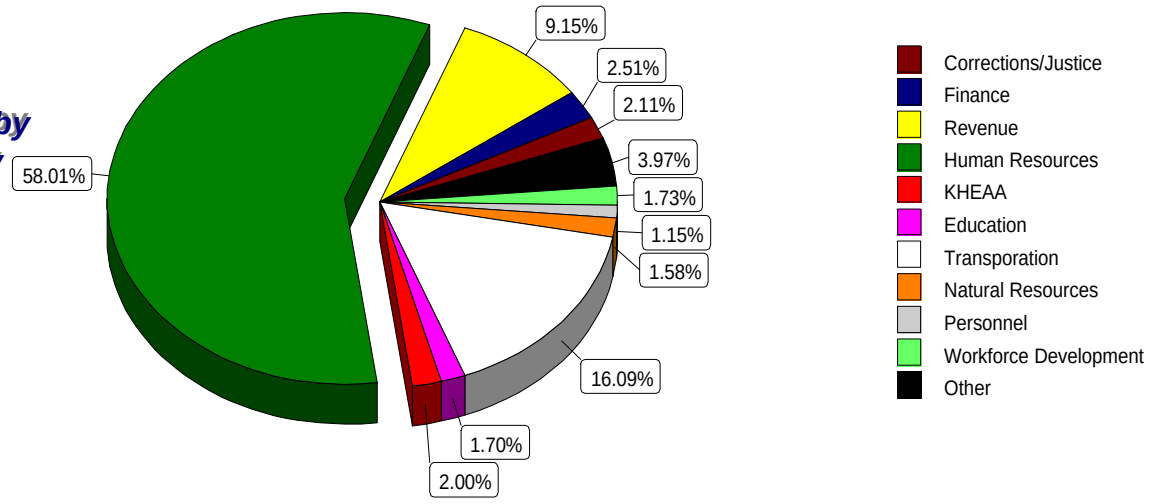
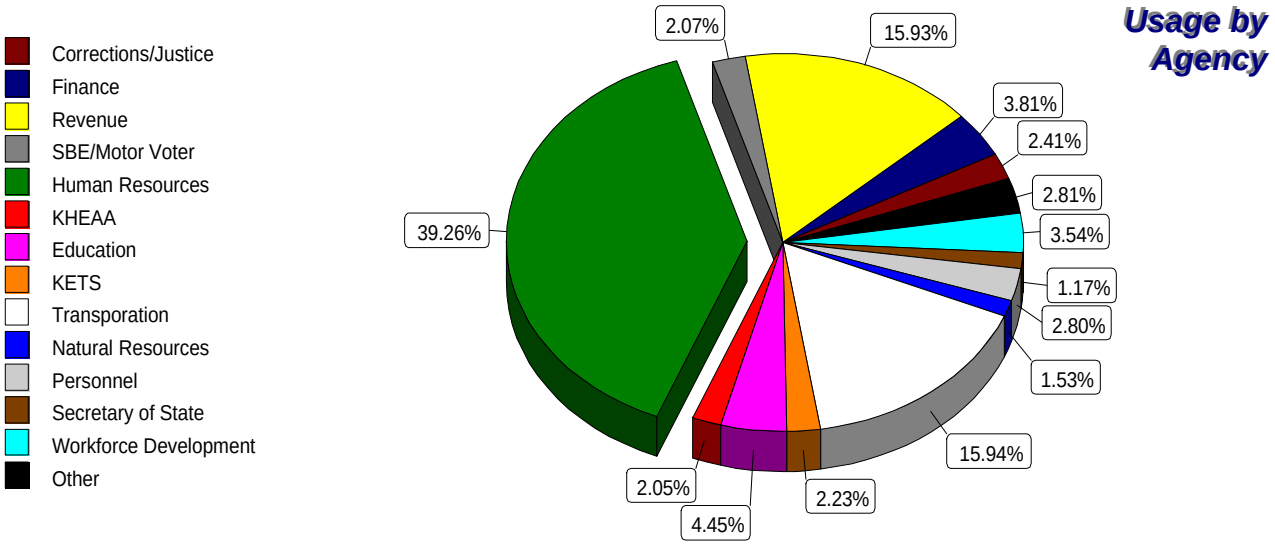


Exhibit 10

Professional Services

Usage by Agency



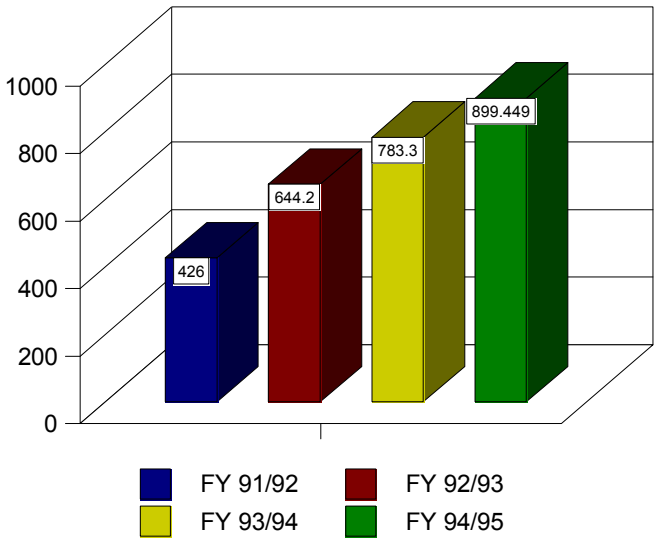
Online Transactions - During FY 94/95, DIS processed 899.449 million, billable online transactions. This is an increase of approximately 15.8% over FY 93/94. Of this 899.449 million transactions, 259.056 were IMS, and 640.393 million were CICS transactions. A detailed breakdown by month and transaction type, is shown in Exhibit 12 below.

CICS accounts for most of the increase in transaction volume during FY 94/95, an increase of approximately 18.5%. This increase can be attributed mainly to the increased utilization of the KAMES Income Maintenance System.

IMS transaction counts increased slightly over the level for FY 93/94. For IMS, there was an increase of approximately 6.6%. This change in transaction volume is likely due to the implementation of Kentucky Drivers' License Information System (KDLIS) and normal growth in the utilization of information systems.

Exhibit 11

Annual Transaction Totals in Millions



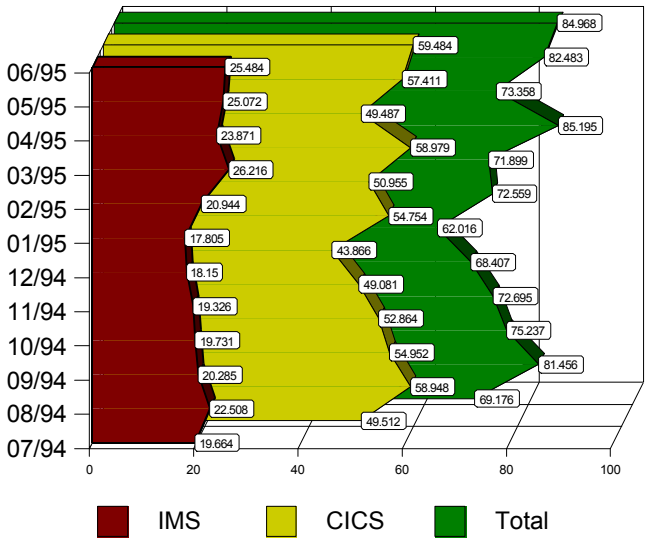


Exhibit 12

Monthly Totals in Millions

Systems Availability - Overall, availability of major statewide online systems improved slightly during FY 94/95 in comparison to FY 93/94. This increased availability can be attributed to a more stable mainframe environment and an increased effort in reducing the number and frequency of required mainframe interruptions each month.

DIS is committed to improving current levels of service of all users and constantly strives to maintain availability levels of 98-99% on all major statewide online applications.

Exhibit 13

Systems Availability
(Monthly Average for Major Subsystems)

Month	TSO	IMS	CICS
July	99.89	100.00	100.00
August	98.52	98.86	97.73
September	99.59	99.56	99.95
October	97.53	98.00	96.64
November	98.43	98.70	97.88
December	99.34	99.45	98.84
January	99.34	99.55	98.87
February	99.20	99.56	99.10
March	97.03	96.77	94.26
April	99.59	100.00	98.87
May	99.19	98.75	98.92
June	99.62	99.88	99.41
Average	98.94	99.09	98.37

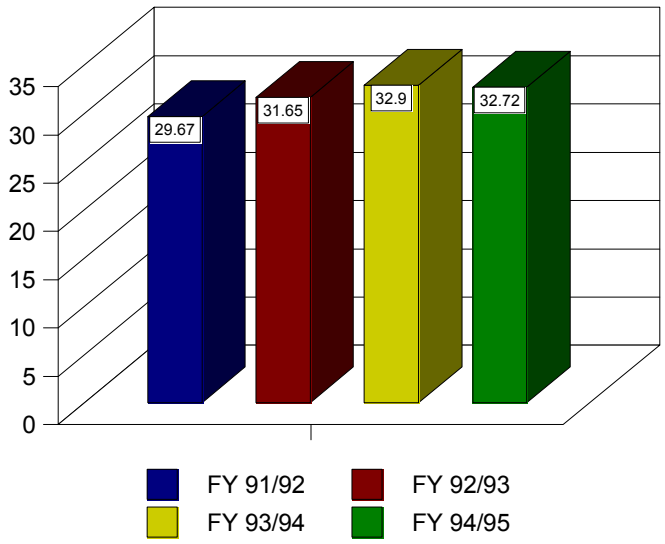
Expenditure Trends

Annual Expenditures - The Department of Information Systems (DIS) is totally funded by agency receipts for rated services provided to user agencies. The receipts for these rated services are derived through a federally mandated and approved cost allocation plan. This plan accounts for the cost of providing the rated service and distributes the cost based on the total service utilization. The workload of DIS is highly sensitive to each agency's need for programmatic enhancements resulting from changes in state and federal legislation.

DIS expenditure for FY 94/95 were $32.72 million. This represents a decrease of $.18 million, or 1.61% under FY 93/94. With the budget cap of $33.25 million, DIS expenditures came within 1.59% of the budgeted allotment. These expenditures are shown in Exhibit 14.

Exhibit 14

DIS Annual Expenditures Comparison (In Millions)



Distribution of Major Expenses - Personnel costs comprised the majority of DIS expenditure for FY 94/95, representing 54.62% of the total costs. This represents a 2.22% increase over FY 93/94. Capital outlay expenditures were second in ranking with 22.8% of the total DIS expenditures. This represented an increase of 1.6% over FY 93/94. Operating expenditures were slightly lower than FY 93/94. Total operating expenditures represented 22.6% of the total DIS expenditures. The breakdown of these expenditures is shown in Exhibit 15.

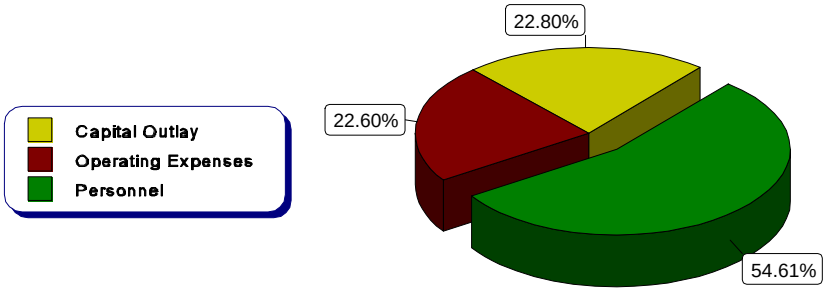


Exhibit 15

Distribution of Major Expenses

Profile of the Commonwealth Data Center (CDC)

It is the goal of DIS to maintain sufficient computer hardware, software, and communications capacity to accommodate, at minimal cost, the current and future data processing demands of agencies of the Commonwealth. Most of the data processing resources required to meet this goal are located at the Commonwealth Data Center (CDC) in Frankfort, Kentucky. To meet the diversity of user demands, processors produced by IBM and DEC are utilized by the CDC. The CDC also houses the central hub of the Commonwealth Integrated Network System (CINS), which is a wide area network (WAN).

The most powerful computing resource at the CDC is an ***IBM 9021 Model 982*** mainframe. This mainframe is configured with eight central processing units (CPUs), 1 gigabyte of main memory, 2 gigabytes of expanded storage, and 619 gigabytes of DASD storage. The mainframe is divided into two logical production partitions, one of which has access to eight CPUs and the other having access to five CPUs. This allows the workload to be separated with IMS, TSO, and batch in one logical partition and CICS in the other. This configuration provides the maximum amount of flexibility, workload balancing, and efficiency while reducing the likelihood of a total system outage.

The CDC also operates a ***Digital Micro VAX II*** with 15 megabytes of central memory, two DASD storage devices, one TK50 cartridge tape drive, one reel tape drive, and one gateway processor connected to the IBM 9021. The operating system utilized on this processor is VMS.

Profile of the Kentucky Information Highway

The ***Commonwealth Integrated Network System (CINS)*** is a Wide Area Network (WAN) that provides interconnection between geographic areas using common high-speed communications media. Within the campus or intra-city environment, CINS connects individual Local Area Networks (LAN) to each other, to CINS resources, to the SNA statewide network, where state-level resources reside, and to the Internet.

The topology of CINS consists of dedicated leased T-1 or 56KB digital lines connected by protocol independent, architecturally compatible bridges and routers. The network is configured to support future use of Fiber Digital Data Interface (FDDI) and analysis is being implemented to review the potential use of Asynchronous Transfer Mode (ATM) technology.

Protocols used to manage the network include: Hierarchical Data Link Control (HDLC) from bridge to bridge, Source Routing Algorithm (IBM), and Spanning Tree Algorithm (IEEE802). Communication is achieved by the WAN being connected to state-level (SNA) and several departmental system (proprietary interfaces). Direction calls for the integration of all LANs into CINS. The physical connections are realized through high-speed leased digital lines. The network is managed by proprietary management software supplied by bridge and network operating system manufacturers. IPX and TCP/IP are the recommended protocols supported for use on CINS. Novell NetWare is the recommended network operating system, and user interface is accomplished by utilizing a graphical user interface (GUI) package such as Windows or OS/2.

Services available on CINS include shared resources (i.e., printers, scanners, etc.) And terminal emulation (i.e., IBM 3270, Digital VT100, and IBM 5250). File and printer services, electronic mail, backup services, word processing, desktop management, calendaring, and Internet access are also other valuable services available through CINS.