Approved	3-26-92	
* *	Date	

MINUTES OF THE House COMMITTEE ON Computers, Communications&Technology

George Dean

Chairperson

Chairperson

All members were present except:

Rep. McKechnie - Excused
Rep. Mead - Excused
Rep. Mead - Excused
Rep. Kline - Excused
Rep. Patrick - Excused

Julian Efird - Research Jim Wilson - Revisor

Donna Stadel - Committee Secretary

Rep. Rock - Excused

Conferees appearing before the committee:

John Roberts - Director of Administration, Kansas Lottery

Others attending: See attached list.

Chairman Dean opened the meeting at approximately 12:30 P.M., and apologized for the tardiness of the Committee due to the House still in session. He said he felt obligated, as Chairman, to go ahead and hear their presentation, which would start a Legislative Post Audit Study.

John Roberts appeared to address the issue of the Lottery's Data Processing Acquisition Justification document pursuant to DISC Guideline 3608 (attachment 1). In his testimony he covered the major points contained within the document and provided supporting documents relating to past Legislative Post Audit studies and recommendations of the Kansas Lottery and its' software, hardware and accounting functions (attachment 2); and provided a list of other lottery states with hardware/software configurations listed (attachment 3). In conclusion of his testimony, he stated to fully address their obligations to the State of Kansas and its' residents, the Lottery must be able to respond to ever-changing market trends with timely, accurate, financial and marketing information.

Chairman Dean addressed questions to Mr. Roberts as it related to the definition of ACCLAIMS, other alternatives, and the video lottery.

Mr. Roberts further informed the Committee they were in the process of interviewing for a Data Processing Manager and had received approximately 75 applications. None of the applicants had experience with Tandem, a significant number had experience with IBM and ten applicants had experience working with the AS 400 System. He stated they are requesting DISC be a part of the selection process.

Chairman Dean addressed a question to Barb Hinton, Legislative Post Audit, regarding the 100 Hour Study Omnibus Bill. She stated the scope of the work was being prepared and would be ready for post audit the week of April 6. Chairman Dean stated he would like to have the report no later than the 27th of April, in time for the Omnibus Bill.

CONTINUATION SHEET

MINUTES OF THE	House	COMMITTEE ON	Computers,	Communication	& Technology,
room 529-S, Statel	nouse, at 12 N	oon axx pxxxxx		March 18,	, 19_92
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With no further business, Chairman Dean adjourned the meeting until Thursday, March 19, 1992.

GUEST LIST

COMMITTEE: House OCT Committee

DATE: 3-18-92

NAME (PLEASE PRINT)	ADDRESS	COMPANY/ORGANIZATIO
John N. Roberts	topeka	Kansas hottery
MUSE WOSCICKY	. "	: 1008
MARY SAVILLE	TOPEKA	KANSAS LOTTERY
Keum Scott	TOPEKA	KANSAS LOHONY
FRANK CAWILLA	TOPEILA	KANSAS Lottery
JERRY CLIVER	TOPEKA	KANSAS DOTTIFRY
WARREN NEUDORF	17	DISC
MATT BAUER	TOPEICA	DSI
DARRELL ADKINS	TOPEKA	KANSAS LUTTERY
Jon McKenzie	Tope Ka	FCC
Dave Andrews	Ke	Anderson Consulting
RANDALL REEVES	TOPEKA	LEG. POST AUGSET
Vim Davis	1 (11 11
Barb Hinton	t(10
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EXECUTIVE SUMMARY, presented by John N. Roberts, Director of Administration, Kansas Lottery, to the House Committee on Computers, Communications and Technology, March 18, 1992.

Mr. Chairman, members of the committee, I appreciate the opportunity to address the Committee this morning on the issue of the Lottery's Data Processing Acquisition Justification document pursuant to DISC guideline 3608. At the conclusion of our last meeting a number of recommendations were made by the committee to the Lottery with reference to the proposed acquisition of a new computer system by the These recommendations included a needs analysis, a systems requirements and definitions document, detail specifications, deliverables, other options available to the Lottery, a list of how many vendors of hardware and software would be allowed to bid, whether the proposed ACCLAIMS software acquisition would run on other computers, a detailed schedule for implementation, and an estimate on how much time would be spent by state employees fitting the software and hardware to the Lottery's specifications. Further, it was recommended that Lottery staff review the post audit report on KFIS and review the recommendations put forth by the Legislative Post Audit committee. Also, an update on the Texas software issue was requested, a list of state lotteries hardware and software configurations, and a request for information regarding the hardware and software used by the lottery in France.

The Lottery has extensively revised its DISC guideline 3608 Data Processing Acquisition Justification document. Contained within the document is a detailed needs analysis that was done in January 1989, a systems requirements and definitions document, detailed specifications, other options available to the Lottery, a detailed schedule for implementation, estimates of the amount of time needed to be spent by state employees fitting the proposed hardware and software to agency specifications.

Rather to go into great length and detail at this time, I would prefer to cover a few of the major points contained within the document. The first point I want to emphasize is that it is imperative for all of us to understand that the Lottery, although a state agency, actually must operate in much the same manner as a wholesale distributor. The Lottery buys products, must control all phases of inventory, qualifies it retailers, sells products to these retailers, provides advertising and other sales promotions to stimulate sales by these retailers, invoices and collects money from the retailers for products sold, handles returns for unsold products, monitors performance of retailers, keeps detailed financial records, maintains tight security over information, and most importantly ensures maximum return to the owner, that is the State of Kansas. The Lottery basically is a business run by the state with sales in excess of \$70 million a year, with a return to the state of over \$20 million a year.

The decision to purchase a new computer system has been the result of over three years of ongoing study and review of viable alternatives for the Kansas Lottery. The present system does not support our business functions to allow sufficient business decisions to be made. Careful consideration has been given by the Lottery to the management and effective use of information systems. As stated

previously, the Lottery has spent the previous three years evaluating our current hardware and software systems in terms of both their overall functionality and maintainability and how our system compares to systems in use in other lotteries across the United States.

Following a rapid development installation schedule, instant tickets went on sale November 12, 1987. Almost immediately the Lottery began to experience shortcomings in our LottoSTARTS software. This led to a series of discussions and negotiations with BABN (British American Bank Note) who was also the Lottery's instant ticket vendor. Following these discussions Lotto-STARTS was modified. These modifications, known as Generation II, still failed to meet agency needs, and perhaps more importantly they fell far short of addressing legislative concerns.

I have also supplied separate supporting documents relating to past Legislative Post Audit studies and recommendations of the Kansas Lottery and its software, hardware and accounting functions. Among the major concerns voiced by the Legislative committees were that the agency's computer systems were not integrated and that financial data had to be reconciled manually. These factors obviously contributed to errors in financial and operational reports and the ability to provide these reports in a timely manner. During its review of agency operations Legislative Post Audit committee recommended that the Lottery explore the possibility of software enhancements and modifications to allow the installation of a fully integrated general ledger package to work with LottoSTARTS on the Tandem. Following a review by the Lottery's outside auditing firm, Myers and Stauffer,

the overall cost for the procurement and integration of general ledger packages along with necessary upgrades of the Tandem were estimated to be between \$225,000 and \$390,000. The cost of this fix to LottoSTARTS along with the other numerous inadequacies which would also eventually need fixing led the Lottery to decide to investigate other alternatives which would better address the long term needs of the agency and presumably save money in the long run.

Basically we have broken our document into a brief summary in the beginning, a business case for the acquisition of ACCLAIMS system, a detailed costs system, related savings and benefits, options evaluated, a systems requirements document, and detailed implementation schedule from Andersen Consulting. specifically for Ks. Instery.

We revised our budget request upwards from \$930,000 to approximately \$1,426,326. Also contained in the related savings and benefits section of the document, is a comparison of our current system with the ACCLAIMS system which represents five-year operational costs associated with maintaining our existing system versus implementation of the ACCLAIMS system. It is our opinion that there will be even more benefits both tangible and intangible than these documented. However what is reflected here in the document are the most easily identified and are conservatively quantified. The end result is a minimum five-year advantage of the ACCLAIMS system of \$1,149,115. must stress that the \$1,400,000 figure is a maximum amount figure. The Lottery does not intend nor would it consider paying this amount for this system. Essentially what we have done is include items that were omitted from the original budget proposal but that are necessary

from a business and financial point of view. We have also included in this figure the inclusion of a five-year extended warranty with the purchase of the hardware. We feel this is attractive for two reasons. First, it gives the ability to avoid inevitable annual maintenance charge increases. And second is the time value of money savings by prepaying. We believe that these costs are inclusive of everything necessary to become fully operational with ACCLAIMS. It is anticipated that certain of these costs can be negotiated to lower amounts, that the Lottery can procure this system as desired using a negotiated sole-source procurement with Andersen Consulting for the ACCLAIMS with all necessary implementation and conversion support and using a Request for Quotation for all of the specified hardware and systems software and all associated implementation support. The Lottery would require the assistance of DISC and Division of Purchases in both of these acquisitions.

Essentially the ACCLAIMS software runs only on the AS/400. As stated previously the Lottery would put the AS/400 out for bid as opposed to securing this from Andersen Consulting.

We have also provided a list of other Lottery states with hardware/software configurations listed. Essentially the prepackaged systems which are available for purchase by lotteries include ACCLAIMS and Game Plan. Idaho, Indiana, Kentucky, Minnesota and Arizona all utilize ACCLAIMS. Louisiana utilizes Game Plan. Maine uses a program written by Scientific Games. New Hampshire uses Scientific Games as does Wisconsin. Please note that Delaware, New Jersey, New York and Washington State utilize in-house software. It should be noted that

many of the earlier lotteries did not have the option of selecting previously written software. Many states like California hired consultants to develop and write their software. Texas has awarded GTECH the contract for its D.P. operations using Game Plan software. France uses software developed by a French company. As the interest and experience in gaming software grew, vendors were able to prepackage instant and on-line software. The ACCLAIMS systems is a by-product of this experience and interest. It would take me the better part of half an hour to point out some of the major advantages of the ACCLAIMS system. What I would recommend is as I earlier stated is that the Lottery will work closely with the Legislative Post Audit committee in reviewing the methodology employed by the Lottery in arriving at its present decision. After Post Audit has had the opportunity to review the hundreds of pages of documents and studies that the Lottery has utilized, Post Audit can then make its concise, factual recommendation to this committee. At that time relevant issues and questions can be addressed at a great savings of time to both this committee and the Lottery. Should you have specific questions relating to the advantages to our financial and sales and marketing department I have brought along qualified individuals from the Lottery to address those questions.

In conclusion, I can only say that the Lottery and its staff endeavors to be the most cost-effective, efficient state agency with the highest end results to the state. We are in the business to make money for the state with the lowest possible cost of sales. We do not take lightly the expenditure of a million plus dollars for the

acquisition of a new computer system. Nor do we wish a repeat of the KFIS situation as it impacted the State of Kansas. As with any successful business a certain amount of the profits of the business must be returned into the business for research and development and the acquisition of new technology necessary to maintain its standing in its competitive field. In order to fully address its obligations to the State of Kansas and its residents, the Lottery must be able to respond to ever-changing market trends with timely and accurate financial and marketing information. This request for new computer system is simply a bi-product of the business environment within which the State of Kansas and the Kansas Lottery operates. I feel that my staff with the assistance of individuals from DISC have put together a viable acquisition justification. All I ask is that you keep an open mind and review the information seriously.

KANSAS LOTTERY

Data Processing Acquisition Justification

Per

DISC Guideline 3608.00

March 17, 1992

CCT March 18,1992 Attachment2

I. Summary

The Kansas Lottery was authorized by statute to implement and run a lottery, with a percentage of the revenues generated by the lottery to be placed into the State Gaming Fund. Monies from the fund are distributed according to the dictates of the Legislature. The primary goal of the information management function is to provide a fully integrated software support system which will provide lottery personnel with the information and tools they need in order to maximize revenues, minimize administrative costs, and be flexible enough to accommodate the growth of the agency and stay current with the continual advances which are taking place in the lottery industry.

It is imperative for people reading this document to understand that the Kansas Lottery, although truly a State of Kansas agency, actually must operate in much the same manner as a wholesale distributor. The lottery buys product (i.e. instant tickets and pull-tabs), must control all phases of inventory, qualifies retailers, sells product to retailers, provides advertising and other sales promotions to stimulate sales by the retailers, invoices and collects money from the retailers for product sold, handles returns for unsold product by the retailer, monitors performance of their retailers, keeps detailed financial records, maintains and, information, their security over importantly, ensure a maximum return to the owner (the State of Kansas). The key significant difference is that the lottery must deal with the validation of and payment for winning tickets.

Careful consideration has been given by this agency to the management and effective use of information systems. lottery has spent the previous three-plus years evaluating their current hardware and software systems in terms of both their overall functionality and maintainability, and how they compare to systems in use in other lotteries across the This effort has demonstrated to the United States. personnel of the Kansas Lottery that the current application systems in place do not provide the support to effectively conduct lottery business and this has been documented in the This decision, attached Kansas Lottery Information Plan. coupled with the recent announcement that the primary hardware system in use will soon (July 1993) be unsupported for operating system software maintenance, has culminated with this recommendation.

I. Summary, continued

The Kansas Lottery recommends moving forward with the immediate replacement of the two existing systems and their conversion and consolidation to the Andersen Consulting Comprehensive Lottery Accounting and Information Management System, more commonly referred to as ACCLAIMS. As will be discussed further, the ACCLAIMS alternative is the only option which clearly addresses all of the requirements of implemented be Lottery and can the Kansas It is the desire of the cost-effective and timely manner. Kansas Lottery to acquire ACCLAIMS through a formally negotiated sole-source procurement and purchase all of the required hardware and system software through a Request for Ouotation.

ACCLAIMS, and the IBM AS/400 hardware platform it operates on, has been estimated to serve as the foundation for all information management activities for the Kansas Lottery for at least seven to ten years. From the ACCLAIMS perspective, this estimate is based on the long term stability of Andersen Consulting, the pervasive use of this product in other State lotteries with the corresponding built-in users group to deal with problems and share enhancements with, the richness in terms of functionality of this product to meet the current and even foreseeable needs of the Kansas Lottery, the apparent completeness of integration between all functions, and the modular design of the system which facilitates the lottery's ability to be self-sufficient.

From the AS/400 perspective, this estimate is based upon the widespread use of AS/400's across the country and especially in other State of Kansas agencies (over 20 currently installed), the long term stability of IBM and abundance of local support, the product's position on the product life cycle curve along with IBM's track record for an "evolutionary" style with regard to the introduction of technological advancements, and the fact that the model of the AS/400 being proposed to handle the production ACCLAIMS workload (Model E35) is the smallest member of the "rack mounted" AS/400 family thus affording this agency a great deal of flexibility because of the extensive upgrade path (over 10 times) and the ability to add needed features, like disk storage or terminal support, in a very modular manner.

The Kansas Lottery would like to acknowledge the support provided by the Division of Information Systems and Communications, and Warren Neudorff in particular, during our evaluation of alternatives and in the development of this document.

II. Business Case

Background

Kansas Lottery currently utilizes two different The information processing systems. In 1987, because of the start-up nature of the Lottery, an RFP was issued to solicit responses from companies to facilitate the informational requirements of the agency. Because of the time consuming nature of the RFP process, it was decided to implement an IBM System/36 as quickly as possible in order to not delay the necessary retailer licensing process and for word The S/36 was chosen processing and office automation. because of its use in a large number of State of Kansas agencies, because experienced programming personnel were abundant in Topeka, and its position on state contract. This same S/36 is still in use performing these same functions as well as now being a file server for the personal computers currently in use.

It should be noted that, during the start-up of the lottery, the Kansas Lottery was exempt from DISC involvement regarding the procurement of any of the automated systems.

The low bidder on the RFP was British American Bank Note Although the Corporation (BABN) of Montreal, Canada. company had a strong reputation in the banking industry in Canada and had a track record for the creation of instant tickets (they also won that RFP from the Kansas Lottery), it had no experience in the actual lottery business, and more importantly, did not have any instant ticket (also known as "back office accounting") software developed at the time the bid was awarded to them. Consequently, their understanding of the requirements of a U.S. state lottery, and Kansas' specifically, lead to many problems in development of the system, and naturally, in the delivered application software product, now known as LottoSTARTS. BABN also delivered a Tandem computer for LottoSTARTS to operate on. BABN chose Tandem for two basic reasons. First, it was the only computer environment with which BABN programming personnel were familiar with. Secondly, Tandem offered a fault tolerant system which, at the time, was believed to be necessary for all lottery operations. Since initial start-up, fault tolerance has proven to be unnecessary. is also important to note at this point that the development of LottoSTARTS was the first and only attempt by BABN to develop instant ticket software. BABN no longer markets this instant ticket software product nor does BABN or any other company support LottoSTARTS software. Kansas is the only state using the LottoSTARTS system.

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Following a rapid development and installation schedule, instant tickets went on sale November 12, 1987. experience to immediately, the lottery began shortcomings in the LottoSTARTS software. This lead to a series of discussions and negotiations with BABN, following These modifications, known which LottoSTARTS was modified. as Generation II, still failed to meet agency needs, and perhaps more importantly, they fell far short of addressing Another serious limitation emerging legislative concerns. experienced with LottoSTARTS was the lack of addressing the approximately (Pull-tabs account for games \$ 2 million dollars per year of revenue and are currently pull-tab accounted for by methods which the lottery has implemented since BABN has left). Among the major concerns being voiced by legislative committees was that the agency's computer systems still were not integrated and that financial data These factors obviously had to be reconciled manually. contributed to errors in financial and operational reports, and the ability to provide these reports in a timely During its review of agency operations, Legislative Post Audit Committee recommended that the manner. lottery explore the possibility of software enhancements and modifications to allow the installation of a fully integrated general ledger package to work with LottoSTARTS on the Tandem.

The Kansas Lottery's outside auditing firm (Myers and Stauffer) received the contract to perform this study and make recommendations concerning solutions. Their study was strictly limited to trying to develop and recommend inexpensive solutions to satisfy the Legislative Post Audit Committee's concerns with financial data management and full integration of a general ledger system for the Tandem. were not attempting to address or solve any of the myriad of other problems associated with the BABN instant games It was determined that there were two businesses which offered general ledger packages for the Tandem software. The overall cost for the procurement and architecture. integration of these general ledger packages, along with the necessary upgrades to the Tandem, was estimated to be about The cost of this small "fix" to \$225,743 to \$390,860. LottoSTARTS, along with the other numerous inadequacies which would eventually also need "fixing", led the Kansas Lottery to decide to investigate into other alternatives which would better address the long term needs of the agency and presumably save money in the long run.

Business Case, continued II.

Needs Requirement Analysis

The Kansas Lottery decided to address the overall business needs which an information management system would need to address along three specific areas; Back Office Application Software, General Purpose and System Software, and Hardware.

Back Office Application Software is obviously the most important of these three areas and will be the most detailed in terms of requirements. This larger area has subsequently been broken into the functional areas which are addressed by a typical wholesale distributor/state lottery:

- * Retailer Management
- * Inventory Control
- * Order Entry and Processing
- * Billing
- * Accounts Receivable
- * Claims
- * Financial Management

The retailer management component of the system must provide the facilities to track both instant and on-line retailers throughout the entire approval process (i.e. security clearance, marketing approval, initial submission, resubmit, etc.) including completed dates with separate screens for maintenance of and for entry application Since on-line retailers must also be applicants/retailers. an instant retailer, there needs to be a facility to keep constant information in a single location (i.e. retailer demographics, location information, EFT account and routing information, identification of telemarketing or marketing representatives, etc.) versus separate databases, such as currently experienced between the System/36 and the Tandem. A key disadvantage which the Lottery experiences today that must be addressed is the ability to review, on a retailer specific basis, sales performance and trends. This is the primary tool by which Lottery personnel can determine which retailers are doing well with which games and take any necessary actions to maintain retailer satisfaction and This type of analysis is done today via boost sales. The Kansas Lottery should be strictly manual methods. allowed to customize clearance types.

The inventory control component must provide detailed information on all physical tickets and packs or split packs of tickets. This information must include current status (unconsigned, reject, void, in transit, stolen, etc.) and historical location. Warehouse inventory levels must be automatically maintained through the interface with order entry thereby showing the flow of tickets between different physical statuses for each game as well as the historical activity. Inventory control must also be able to update the status information whether the effect is the result of normal batch order processing, or an order placed in person for immediate filling at a regional office, or a field transfer of packs from one location to another.

The inventory control component must also have the capability to handle the inventory of at least twenty to twenty-five games operating concurrently and allow pack size to differ from game-to-game. This feature would be very beneficial to sales by allowing retailers to order packs that suit their individual inventory requirements.

Bar code tracking is an industry trend which the Kansas Lottery would like to take advantage of. Bar coding would not only save time and money in the tracking of individual tickets, but also provide on-line validation of all winners at the retailer location like the state of Minnesota does today, regardless of which retailer sold the winning ticket.

The order entry and processing component must be able to fully support both telemarketing and in-person marketing. From a telemarketing perspective, the system must provide the operator with a single screen which not only affords them the ability to sell a given game(s) to retailers on/off their scheduled call day, but also provide the retailer with often requested information (initial allocation quantity, pending EFT sweep amount and date, invoice print day, sold, promotional net tickets information, billing involvement, etc.). Initial allocation of tickets for new games must be allocated to retailers in one of two ways, either trigger a telemarketing operator to contact all of their retailers regardless of specified day, or to distribute a predetermined number of tickets to all retailers across the state.

Most other state lotteries support the payment of commissions to their internal sales personnel. This is a trend which the Kansas Lottery must seriously consider in order to boost sales and retain marketing professionals. The new system should provide the capability to automatically calculate commissions based on sales/issues credited to specific representative or sales team.

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Another requirement of this component is for issue verification of all deliveries to the retailer and automatic update of the status within inventory control. Full and partial pack returns must also be validated and automatically make the necessary adjustments to the retailers account and to inventory. Issue and return transactions must also be allowed to occur at the same point in time.

The order entry system must also allow pack sizes to differ from game-to-game. This would enhance overall sales by giving retailers the ability to order packs suited to their individual inventory requirements.

The retailer billing component must be able to be generated in a variety of ways via a variety of methods. Billing runs should be able to be scheduled on regular periods of time (monthly, weekly, etc.) or on balance or activity based parameters. Billing methods supported should include EFT, COD, no bill, and alternate billing. Alternate billing applies a chain store balance automatically to a headquarter billing account.

Another critical component of the retailer billing component is the capability to generate combined bills for all games played (instant, pull tabs, online, etc.). In addition these invoices must be able to be generated on a location or headquarters basis. This problem is exemplified today in that the Kansas Lottery's largest retailer chain currently gets its headquarters sent one weekly EFT transaction for all of the instant tickets procured by all 60+ locations and also gets 60+ EFT transactions per week for each individual location's online ticket sales.

The accounts receivable function must offer automated and manual maintenance of retailer and headquarter account activity, including up-to-date balances. Sales and returns must be automatically posted to a retailer's account along with any payments received through EFT sweeps. Adjustments must be able to be applied through the use of a credit memo, debit memo, or payment entry processing.

The system must allow for prenoting and the creation of an EFT tape to be processed by the Kansas Lottery's bank, including the override of a sweep amount for a given retailer. Non-Sufficient Funds information, whether from EFT or checks, must be able to be posted in a manner which facilitates the lottery's ability to collect all unpaid amounts and/or automatically stop any further issuance activity.

Claims processing by this system must include validation and entry of all low- (not currently computer validated), mid-, or high-tier claims, whether instant game or online game. This application needs to also be able to facilitate the capturing of certain demographic information regarding a claimant, both for future analysis and to ensure the claim is not by any restricted person (i.e. an employee or member of their household).

A significant trend which is already in use in many lotteries is to automatically write a winner's check once a claim has been validated. The system must not only be able to do this, but also allow for the withholding of taxes based upon different parameters, to be able to be processed against a state debt setoff system (including withholding if necessary), and create a Federal W2G form. This ability to promptly pay a winner has been shown to increase play which, in turn, increases revenues.

The financial management component is, in many respects, the most critical component as evidenced by the background information regarding the findings of the personnel of the Kansas Lottery, the Legislative Post Audit Committee, and This system must have extensive independent consultants. capabilities to generate a general ledger, balance sheet(s), income statement(s), transaction reports, and facilitate budget preparation and maintenance. The system must be able to automatically interface with inventory control, accounts receivable, and claims components. On-line facilities need and processing, standard journal entry include statistical journal entry and processing, recurring journal entry and processing, automated reversal journal entry and rejected and maintenance processing, suspension transactions, account/center master maintenance.

Strong financial management systems are at the heart of all other activities within a Lottery. The lack of financial management capabilities will adversely impact sales analysis, game design, marketing, and all levels of decision making. Attachment A to this document graphically represents the components which comprise the Infrastructure of a Lottery Organization and clearly shows financial management as the foundation for all of the other components.

Business Case, continued II.

Attachment B to this document is a study performed by Andersen Consulting in January 1989 for the Kansas Lottery which lists, in detail, the requirements for a comprehensive back office accounting system. This study was undertaken at the request of the lottery due to the problems being experienced with LottoSTARTS (even after Generation II) and the increasing industry-wide view of Andersen Consulting as the premier instant ticket software support organization.

General Purpose and System Software covers a wide range of miscellaneous capabilities. The most critical is the ability to have an easy-to-use ad-hoc report generator. As has been evidenced by the current LottoSTARTS system and documented by the Myers and Stauffer study, a system which is not flexible enough to provide a user with information in a format and style which that user needs can be extremely frustrating and costly.

This ability for a variety of user-driven reports will have a positive impact in every operational area within the lottery. The most critical areas needing this ability are sales and marketing and financial management. Specific examples of the types of reports these functional areas are desperately needing (but cannot get except through manual methods) are as follows:

- * Sales and Marketing
 - which retailers are selling the most/least?
 - which retailers are having increases/decreases in sales over given periods?
 - which games are selling best and by which region or retailer?
 - which internal sales representatives are selling the most/least?
 - advertising and sales promotion impact analysis
 - what do historical trends reflect regarding sales impact with regard to life of game, by sales promotion, by region, by retailer, etc.?
 - how much did each channel sell, broken down by individual product types, this period compared to a previous period?
 - how much did the entire lottery sell (combined product totals)?
- * Financial Management
 - which functional areas spend the most on specific expenditures?
 - which functional areas increased/decreased expenditures from a previous period?
 - the ability to generate timely revenue statements to retailers detailing total annual sales results (by individual retailer and headquarter) and total dollar amount of commission paid. These required year-end account summaries over 3000 person-hours annually to manually calculate and develop into individualized reports.

A word processing facility must be available which can be <u>easily integrated</u> with data from the back office accounting system for the generation of polished reports and correspondence. This word processor should also have the capability to migrate all existing documents from Displaywrite/36 so that all historical information is available without re-keying.

Because of the abundance of personal computers in use at the lottery, the new system should provide a facility which can help manage and support these personal computers, preferably in a client/server type of relationship. Specific user features include terminal emulation into the back office system, file upload/download, and virtual disk storage and printer support. Specific management features include the capability to maintain and update all personal computer software (including release levels) in one source.

While it is very clear that fault tolerance is not required for back office accounting systems by themselves, the Kansas Lottery does intend that this new system is also going to address the needs of the online Internal Control System (ICS) which currently operates on the Tandem. The Multi-State Lottery (MUSL) organization (the formal group that currently governs Lotto America and soon, Powerball) requires that ICS operate on a fault tolerant system or with a "hot" back-up system capability.

A key advantage to any new system would be the availability of an electronic mail and/or messaging system. The lottery currently utilizes such an offering which runs on the IBM System/36. If such a system could operate within the security constraints the lottery requires, another advantage would be to be able to participate with the State PROFS network.

Good, well written documentation on any instant ticket system would be of utmost important. The current LottoSTARTS documentation has been found to be lacking in many areas by many people. In fact, there are several instances where the application documentation has been written in French Canadian apparently due to the development by BABN.

Probably the most important general purpose aspect of this system will be the security of that system. Security must be maintained to ensure users are not given unauthorized access to information maintained by the instant ticket system. It is anticipated that security must be able to address and provide an audit trail for, as a minimum; employee security (background check information, game playing prohibitions, etc.), retail license data (license status, delivery address, billing address, etc.), claims security by-pass on exempt player or "held" claims, game parameter maintenance, and pack numbers and winning validation numbers. The system must also have user profile and sign-on security and menu access security.

The Hardware needs of any new system are few, but very specific. The Kansas Lottery must have a system which has the capability to have local on-site maintenance service and support. Additionally, due to the situation which the lottery currently finds itself with regard to the Tandem system's cancellation of support, it would be imperative to utilize a system which appears to have the potential for many years of support by the manufacturer.

It is important to utilize a system which has a proven base of other users in the Topeka community, thereby expanding the lottery's base of available experienced support and contract programming resources. The lottery has found themselves rather isolated with regard to the Tandem, even though there is one other Tandem system in use in the State (albeit not a similar Tandem system).

The hardware platform must be able grow easily (and inexpensively) as the lottery's needs grow. This covers not only a processing performance upgrade, but also additions of memory and disk storage. Due to the inclusion of the ICS function the hardware platform must be either fault tolerant or be a dual system configuration.

A desire of the Kansas Lottery is for a system which the manufacturer commits will participate with Open Systems Interconnect (OSI) standards. The OSI protocols are an evolving set of international standards for systems inter-connection that are being established by the International Standards Organization (ISO) and the CCITT. The desire for OSI support is clearly not for systems inter-connection purposes due to security issues, but to protect the long-term investment in any new back office accounting system by, once the standards are fully defined, potentially allowing the lottery to consider alternative hardware platforms whenever upgrades are necessary.

It must be understood that the Kansas Lottery, with the support of DISC, feels the hardware selection is an important, but secondary decision to the application software.

III. Hardware configuration

A. Current Configuration

LottoSTARTS system
Tandem EXT25 (2 cpus)
Tandem TXP (2 cpus)
10MB memory per cpu
3.584GB disk storage
16 128MB disk units
6 256MB disk units

Retailer/WP system
IBM 5360/D2K
2MB memory
716MB disk storage

B. Proposed Configuration

ACCLAIMS Production
IBM AS/400 Model E35
48MB memory
4.88GB disk storage

WP/Test/ICS Back-up
IBM AS/400 Model E20
48MB memory
2.96GB disk storage

IV. State Communications Network Connectivity

No communications link currently exists between the State of Kansas mainframe systems and the Kansas Lottery computer systems. Maintaining the security of information residing on the lottery computer systems is the primary reason that no communication link has been established.

The lottery does have a dedicated data circuit network in place connecting all of the regional offices to the LottoSTARTS system and a separate dedicated circuit into the Unisys at DISC for KIPPS and STARS.

The lottery also has a single personal computer with the communications capability to connect to the state PROFS system and a second personal computer able to connect to the Legislative Bill Tracking system.

V. Detailed Costs

The following sheets represent the costs associated with converting to ACCLAIMS and ICS on an AS/400 platform. Because of the Multi-State Lottery's requirement that ICS run in an environment that provides a fault-tolerant or "hot" back-up, we have split the anticipated workloads of the Kansas Lottery onto two separate, but inter-connected, In this manner, the lottery not only meets the ICS also minimizes the overall hardware requirement, but investment by not bearing the higher overall cost of fault tolerant systems and by balancing workloads between two systems (versus installing two systems each individually capable of effectively handling the total processing requirements of the lottery). Users, regardless of which system physically attached to, will have the ability to get to whatever information or applications they need without separately accessing individual hardware systems. This type of "seamless" interface for users is capable under this recommendation.

The lottery has broken this cost section into four separate components for discussion purposes. They are:

- * Production ACCLAIMS and ICS processing system
- * Office Automation, Test and Development, and the ICS back-up processing system
- * The replacement equipment needed for the operation of regional offices
- * The estimated cost of five-year warranties on all hardware

The lottery feels the inclusion of a five-year extended warranty with the purchase of the hardware is attractive for two reasons. First is the ability to avoid the inevitable annual maintenance charge increases which manufacturers seem to pass on and second is the "time value of money" savings by pre-paying.

The Kansas Lottery believes these costs are inclusive of everything that is necessary to become fully operational with ACCLAIMS. It is also anticipated that certain of these costs can be negotiated to lower amounts if the Lottery can procure this system as desired (negotiated sole-source procurement with Andersen Consulting for ACCLAIMS with all necessary implementation and conversion support thereof and a Request for Quotation for all of the specified hardware, implementation all associated and software, The Kansas Lottery would need the assistance of support). DISC and the Division of Purchases in both of these acquisitions.

ACCLAIMS and ICS Production System

IBM Hardware	Purchase Pr	ice
AS/400 Model E35	\$ 58,944	
- 48MB memory		
- 1.28GB disk		
- 3 RS232 communications lines		
- 1 V.35 communications line		
- base rack enclosure		
battery back-up		
1600 BPI Reel-to-Reel Tape Drive	7,338	
8mm Cartridge Tape Drive (2.3GB capacity	5,538	
8-inch Diskette Unit	3,468	
3.56GB Disk Storage	49,024	
Rack Enclosure	2,597	
Electronic Customer Support Modem	699	
Color Console	1,272	
40 Replacement Color Terminals	50,880	
4 Replacement Dot Matrix Printers	17,582	
1 Replacement Line Printer	7,860	
1 Laser Printer	5,596	
SUB-TOTAL	\$ 210,798	

IBM Systems Software	One	-Time-Charge
OS/400	\$	14,608
 including support publications 		
Performance Tools/400		2,771
Advanced Function Printing		4,548
Ouery		2,126
Point-of-Sale Communications Utilities		4,380
Communications Utilities		7,312
PC Support		3,240
SUB-TOTAL	\$	38,985

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ACCLAIMS Software

One-Time-Charge \$ 460,000

Base System w/ ICS

- GLEPS processing
- Telemarketing
- Inventory control
- Billing, including consolidated billing with other games
- EFT support
- Accounts receivable
- Claims validation and payment
- Financial management
- Directors information system
- Enhanced, Kansas specific, sales reporting
- Sales and regional analysis reporting
- Pull tabs support

System Installation Assistance*

400,000

- set-up
- identified modifications
- conversion of existing data
- operational training
- user training
- documentation
- post conversion support

Estimated Out-of-Pocket Expenses**

97,200

- \$2700 per person per month
- 6 people
- 6 months

SUB-TOTAL

\$ 957,200

TOTAL PRODUCTION SYSTEM COST SUB-TOTAL

\$ 1,206,983

- * Please refer to Section VI. Implementation Issues and Costs and Attachment C for more detail on the activities included under this offering.
- ** Andersen Consulting has provided this estimated cost based on their experience with implementing ACCLAIMS and with the specific requirements of the Kansas Lottery. The \$2700 figure is based on two people sharing one apartment and one rental car, with a flight back home approximately every two weeks.

An option which DISC has made the Kansas Lottery aware of which may lower the production system costs is to acquire the AS/400 currently installed, but not in use, at the Kansas Corporation Commission. If this system can be transferred to the lottery, and subsequently upgraded to an equivalent capacity as the system specified here, at a lower cost, then it is the lottery's intent to utilize this soon-to-be surplus property.

Word Processing/Test/ICS Back-up System

IBM Hardware	Purc	chase Price
AS/400 Model E20	\$	62,002
- 48MB memory		
- 2.964GB disk storage		
- 2 RS232 communications lines		
- 1 V.35 communications line		
 base rack enclosure 		
- 525MB cartridge tape drive		
battery back-up		
8mm Cartridge Tape Drive (2.3GB capacity	у)	5,538
Electronic Customer Support Modem		699
Color Console		1,272
Laser Printer		5 , 596
SUB-TOTAL	\$	75,107

IBM Systems Software	One	e-Time-Charge
os/400	\$	9,007
RPG/400		2,028
COBOL/400		2,136
Application Program Driver		1,065
Performance Tools		1,428
Application Development Tools		2,028
Advanced Function Printing		2,325
Business Graphics		2,028
OfficeVision/400		5,482
- includes U.S. dictionary		
Query		1,443
Point-of-Sale Communications Utility		2,238
Communications Utility		3,731
PC Support		2,126
Computer Assisted Training		
 Base AS/400 Education Series 		1,111
 Facilities and Implementati 		
- Intro. to Data Communicatio	ns	
- Intro. to OfficeVision		
 Application Design and Developme 	nt	450
 OfficeVision Advanced Topics 		406
- RPG/400 Programming		1,044
- Manage/400		1,163
SUB-TOTAL	\$	41,242

Remote Regional Office Equipment

IBM Hardware	Purchase Price
Remote Control Unit	\$ 3,465
3 Replacement Color Terminals	3,816
1 Replacement Dot Matrix Printer	4,121
1 Laser Printer	5,596
SUB-TOTAL	\$ 16,998
	X 3 Reg. Off
TOTAL	\$ 50,994

Summation of costs from previous pages

TOTAL PROJECTED MAXIMUM COST	\$ 1,426,326
Estimated five-year warranty on all equipment	52,000
Remote Regional Office Equipment	50,994
Word Processing/Test/ICS Back-up System Cost	116,349
ACCLAIMS and ICS Production System Cost	\$ 1,206,983

One option which the Kansas Lottery can utilize to minimize the impact of this noticeable up-front cost is to finance this \$ 1,426,326 acquisition through the Kansas Development Finance Authority (KDFA) over a five-year period. Using an interest rate of 8% as recommended in this years' Budget Cost Indices, the annual payments for the entire system would be \$ 330,771 (or \$ 344,748 per year if monthly payments were utilized).

The Kansas Lottery will be using only funds generated from the sales of games to pay for this acquisition.

VI. Implementation/Issues and Costs

The Kansas Lottery will be forced to rely heavily on the support of Andersen Consulting throughout the conversion process to the new system, but must also ensure that this is a joint project. As noted earlier in this document under detailed costs, the Lottery is allocating \$ 400,000 to ensure that the implementation follows a detailed schedule and takes place as smoothly as possible. Andersen has the experience of implementing ACCLAIMS in at least five other states (Virginia, Indiana, Idaho, Kentucky, and Minnesota) and all are considered successful. Based on their past experience, Andersen indicates that the Kansas Lottery could be operational on ACCLAIMS in four months and This aggressive time self-sufficient in six months. schedule is consistent with those of the other state lotteries utilizing ACCLAIMS, and has been established after involvement with various functional areas within the Kansas Lottery to ensure understanding of the required processing options and necessary modifications to ACCLAIMS. Please refer to Attachment C for the overview implementation schedule which Andersen has provided and for an example of a detailed work plan. Before any agreement is established Andersen Consulting, a detailed implementation schedule, specific to the Kansas Lottery, would need to be jointly developed between Andersen Consulting, DISC, and the Kansas Lottery.

The conversion process and ongoing operations of ACCLAIMS from a data processing staff perspective will require no additional personnel. During the conversion process the current technical support staff will divert their energies from maintaining LottoSTARTS to working with Andersen staff. The monies targeted to Andersen for installation assistance includes operational training for this staff on both the ACCLAIMS system and the AS/400. It is estimated that over 2000 person-hours of time will be dedicated by the data processing staff during this six-month full implementation schedule.

User involvement by all personnel will be important to the overall success of ACCLAIMS. Most have already spent time to express their concerns with LottoSTARTS and with which enhancements are required and desirable. Also, as reflected by Attachment C, Andersen will need to, with the assistance of the joint project committee, at the outset of the implementation project validate with appropriate lottery personnel the details of the modifications to be addressed. User training is probably the most critical component of this entire implementation plan because of its impact on the ability for the Kansas Lottery to maximize the financial benefits which ACCLAIMS is projected to provide.

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VI. Implementation/Issues and Costs, continued

Besides ACCLAIMS, lottery personnel will need to be provided training and migration support assistance on the new office automation products. Since, under this recommendation, the migrating from will be processing/calendars/E-mail of the IBM System/36 to those of the IBM AS/400, this migration will be relatively easy. All existing documents will be restored, unmodified, to run on There are some user interaction and the new system. functional differences between the Displaywrite and Personal Services products on the System/36 and the OfficeVision A local IBM Business Partner, Data product on the AS/400. Systems International, Inc. (DSI) will provide the Kansas Lottery with a series of "Differences" classes to facilitate bridging any gaps in understanding how to use OfficeVision for these users. Under the IBM Business Partner program, these classes will be offered at no charge to the Kansas Lottery.

If the Kansas Lottery is able to proceed with the combination negotiated sole-source/RFQ procurement discussed earlier, the entire implementation responsibilities and costs issue can be fully addressed. It may become apparent that splitting the installation support activities, including training, along the lines of ACCLAIMS and the IBM hardware and software products may be more cost effective than strictly using Andersen Consulting.

Also, as has been documented earlier under 'Detailed Costs', the Kansas Lottery will be procuring a large number of computer assisted training packages which will be resident on the AS/400. These packages do not address ACCLAIMS, but will address a great deal of AS/400 operational and management information for the data processing staff, as well as OfficeVision information for those users. These packages will not only assist the lottery personnel through the conversion process, but will also provide ongoing reference material for current users and training for future lottery personnel.

VII. Related Savings and Benefits

Acquisition of the proposed hardware and software will result in a number of quantifiable benefits, especially in the area of financial reporting. The following represents a very few specific annual savings which the Kansas Lottery will realize from the use of the ACCLAIMS system.

As was mentioned earlier, over 3000 person-hours will be expended annually to provide Year-End Account Summaries to all retailers. This function would be entirely automated through the use of ACCLAIMS and would save the agency a minimum of \$ 36,000 per year.

Total hours Hourly rate	per retailer	2,000 <u>X 1.5</u> 3,000 <u>X \$12</u> \$36,000	(Accountant/OA	avg)
Annual	Cost	\$36,000		

The lottery is required to produce certain financial statements on a weekly basis. While this function has been automated as much as possible on a PC-based spreadsheet, this still requires at least five hours per week of manually compiling the necessary information and simply keying it into the personal computer.

Hours spent per week	5	
Hourly rate	X \$17.50	(Accounting Mgr)
Cost per week	\$87.50	
Cost per year	\$ 4,550	
0000 F 1		

Sales and Marketing personnel, even though the current system does not allow for the automatic, or easy, creation of necessary reports, still must have certain information on a weekly basis to perform their job. The Accounting Manager and Accountant manually generate this information and spend a minimum of 15 hours creating these reports.

Hours per week	15		
Hourly rate	x \$16.25 (avg)		
Cost per week	\$ 243.75		
Cost per year	\$ 12,675		

VII. Related Savings and Benefits, continued

The current limitation of only being able fully support the concurrent operation of three instant games has some serious costs associated with it in addition to lost revenue. lottery has modified LottoSTARTS to be able to address the sales of up to six games, but this has not been accomplished Because the design of LottoSTARTS precluded without cost. the sales of more than three games, any data kept on the fourth and subsequent games overwrites historical data Obviously, this is a severe maintained on previous games. detriment for sales and marketing analysis.) Lottery trends indicate a new game should be introduced approximately once a month to keep a players interest fresh. Now the Kansas Lottery must end a current game if it wants to start a new one because of this system limitation. Therefore games have a very short life expectancy, necessitating the lottery to order the minimum order quantity of 3.75 million tickets per game. If a game had a longer life, the lottery could make a larger order for tickets, get a better cost per ticket AND still keep player interest by offering what appears to be (via regional movement of games and promotions) and is a greater variety of games to play.

The analysis below is the comparison of the results if the Kansas Lottery ordered that same number of total tickets each year under two different scenarios. The first scenario represents how the lottery operates today, while the second represents the changes which are anticipated if a more efficient ticket management system is implemented. lottery would still want to start new games on a frequent basis, however since the life of a game would no longer be dependent on the limitations of the current computer system, the lottery could actively sell a game until it was a "sell-out". This would clearly allow the Kansas Lottery to lower its annual costs by receiving published discounts to the per ticket cost by ordering larger quantities. scenario assumes 37,500,000 tickets are ordered each year, which is consistent with current practice. (Please note that these scenarios are valid only if assuming that the Kansas Lottery wishes to maintain sales at their current Effectively introducing more than five games statewide in a year will increase revenue while continuing to drive down per game administrative costs.)

•	Scenario A	Scenario B
Tickets per Game	3,750,000	7,500,000 \$ 15.55
Cost per 1000 tickets	\$ 21.00	\$ 12.22
Cost per game	\$ 78,750 X 10	\$ 116,625 X 5
NEW games per year	<u> </u>	
Annual ticket cost per year Annual savings from ACCLAIMS	\$ 787,500 \$ 204,37 5	\$ 583,125 5

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VII. Related Savings and Benefits, continued

It should also be noted that Scenario B provides additional quantifiable financial benefit in one other related area. Because of the three game limitation, and the corresponding premature ending of old games, old tickets must be shredded. The lottery currently shreds approximately 3.5% of the 3,750,000 tickets purchased for each game, or approximately 131,250 total tickets. Based on the \$ 21.00 per thousand cost of tickets times ten games per year, this results in over \$27,560 in lost revenue per year. Assuming a consistent 3.5% shred rate, the lost revenue in Scenario B would be only \$10,205, or a cost savings of \$ 17,355 per year!.

the biggest impact area for single Probably the implementation of ACCLAIMS, is in increased revenues. has already been discussed, ACCLAIMS would afford the Kansas Lottery the ability to run many more games statewide (up to 99) and to have the necessary information to manage those games effectively on a retailer-to-retailer or regional-to-It is well documented in the gaming regional basis. industry that the better the ticket sales and management information, the larger the prize pools a lottery is able to keep, thereby increasing prize payouts, which in turn increase player interest and, correspondingly, boost sales volumes. While it is very difficult to place an accurate estimate on what the increased revenues will be in Kansas based strictly on ACCLAIMS, the State of Minnesota has attributed a minimum of a 1.5% to 2.0% increase in gross instant ticket sales to strictly the utilization of ACCLAIMS.

As was documented in the attached Information Management Plan, there are also substantial savings in the hardware area alone. For the sake of consistency, this analysis will utilize only the same cost savings as the IMP used. However, there are no dollars associated with the risk that staying with the current Tandem system now poses since Tandem is withdrawing operating system software (and effectively hardware) maintenance support.

VII. Related Savings and Benefits, continued

The following represents the five year operational costs associated with maintaining the existing systems versus the implementation of the ACCLAIMS system on the AS/400s as recommended. It is the opinion of the Kansas Lottery that there will be even more benefits, both tangible and intangible, than what is documented here. However, what is reflected here are the most easily identified and are conservatively quantified.

	Current Systems		ACCLAIMS System
Purchase of Production system Purchase of Office/Test/back-up system Purchase of remote equipment Purchase of five-year warranty	0 0 0 0	\$	1,109,783 116,349 50,994 52,000
Estimated increased revenue	0	(????????)
Financial reporting costs - Year-end account summaries - Weekly financial reports - Weekly sales reports	180,000 22,750 63,375		0 0 0
Ticket related costs - More economic purchasing - Waste from shredding	1,021,875 86,775		0 0
Maintenance cost avoidance - \$133,500/year currently - 7% per year annual increase	767,723		0
Cost of upgrade for Gen. Ledger - minimal amount from Myers and St	225,743 auffer		0
Anticipated trade-in value - Tandem system plus peripherals - IBM S/36	0		(110,000)
TOTALS	\$ 2,368,241	\$	1,219,126
MINIMUM FIVE-YEAR ADVANTAGE FROM ACC	CLAIMS/AS/400	\$	1,149,115

VIII. Hardware Resource Capacity Analysis

Attachment D to this document is the output of the IBM AS/400 Quick Sizer. This Quick Sizer uses information regarding anticipated resource utilization, such as number of active users, types of activities being performed by those users, amount of batch work, amount of spooled output, etc., and then factors in a steady growth rate for each of the identified workloads.

This attachment shows that an AS/400 Model E35 and Model E20 as recommended should last this agency, assuming that there is no deviation from the workloads or growth rates identified, should last this agency for three years without any upgrade. Because of the inherent uncertainty of the future, this type of tool needs to regularly utilized to effectively manage the resources the AS/400s. The Performance Tools software priced earlier with each system will provide this function.

IX. Options Evaluated

As has been stated earlier, the Kansas Lottery began its evaluation of alternatives with a focus on the instant ticket software requirements of the system, followed by the general system requirements, followed by the hardware requirements. This research also focused a great deal on what other state lotteries were utilizing (including site visits) since this is a limited marketplace for industry specific offerings. It has been determined that there are actually only four alternatives for the lottery to consider. They are:

- * Implement only the changes associated with the installation of a general ledger package.
- * Rewrite LottoSTARTS almost entirely from scratch utilizing additional staff or contract personnel.
- * Procure the Lottery Management System (LMS) bundled with a fault tolerant Stratus hardware system from Game Plan International, Inc.
- * Procure the Andersen Consulting Comprehensive Lottery Accounting and Information Management System (ACCLAIMS) from Andersen Consulting and two IBM AS/400 minicomputers.

The first option, as this document has already shown, is very limited in its benefits to the Kansas Lottery, yet is still quite costly. While it does appear to address the need for a general ledger package for \$ 225,743, it also not address any of the other limitations does LottoSTARTS. Many manual methods would still be performed in an attempt to provide critical information upon which to This option also does not address the make decisions. problem with Tandem withdrawing support for the system currently in place (purchasing a new Tandem system and migrating LottoSTARTS or becoming self-reliant for operating system maintenance are both very costly undertakings which will have to be addressed by fiscal year 1994). importantly, the lottery still would not be able to operate multiple games concurrently, thereby limiting revenues and keeping ticket costs high. It was decided that the costs and limitations precluded this option from further review.

IX. Options Evaluated, continued

Rewriting LottoSTARTS from scratch (or take what the State of Washington has developed for a Tandem system thusfar and extensively modify) was the option which was eliminated earliest. A complete rewrite was estimated to be the most costly for the lottery both in terms of financial outlay (for additional staff or contract Tandem programmers) and in limited revenues until the new system was complete. In fact, DISC made it very clear that they would not approve any internal development efforts, especially since there is an availability of "package" solutions which can be modified and implemented in a relatively short time frame. This option also still has all of the problems associated with the loss of support for the Tandem.

Game Plan International, Inc. is a new option and is attractive only in that it is an offering from a company with personnel with a great depth of lottery experience, but they are a small company with currently only five personnel dedicated to their lottery operations (ala BABN five years LMS, with modifications, appears to have the ability to address all of the software requirements identified earlier in this document except four very important areas, the availability of a general ledger component, the ICS, an easy-to-use ad-hoc query offering (there is a structured specific reports providing component and an integrated word processing/office information) These missing components would still automation offering. need to be addressed by either Kansas Lottery personnel themselves or separately with Game Plan International, Inc. LMS operates on a Stratus fault tolerant hardware system, and would be a very viable product (especially if there was Unfortunately, there are no other an ICS component). Stratus systems in use in the State or, it appears, even in Hardware support and service coming out of Kansas City would also be a significant drawback. Additionally, Game Plan, International, Inc. has only one state lottery, Louisiana, using LMS and they are so new as an operating lottery that there is no track record to gain confidence These limitations, coupled with the base price tag of (plus additional costs software for million 1.7 modifications, general ledger and ICS development, and out-of-pocket expenses) has eliminated this option from further consideration.

IX. Options Evaluated, continued

The ACCLAIMS and AS/400 option has been determined to offer the best solution for the Kansas Lottery, not only for the present but for the future as well. The following list represents the reasons for this decision:

- * ACCLAIMS, with minor modifications, meets or exceeds each of the Back Office Accounting System requirements reviewed earlier.
- * ACCLAIMS and the AS/400 meets or exceeds each of the requirements outlined earlier under General Purpose and Systems Software.
- * ACCLAIMS has already demonstrated the ability to address potential Kansas Lottery expansion activities, to include protected check writing, bar coding, and on-line validation.
- * The IBM AS/400 meets or exceeds each of the Hardware requirements highlighted earlier, including a commitment to OSI.
- * ACCLAIMS has an established track record by being implemented in six of the eight most recent lotteries which have procured systems. They also already have a functioning users group which meets regularly to share ideas and information with. Andersen also has a full-time systems development center for their lottery products.
- * The AS/400 has a proven record of performance within the State of Kansas, and in Topeka. There are over 20 AS/400 systems in use in state agencies alone, thereby providing a strong and viable user support base.
- * The long-term organizational and financial stability of Andersen Consulting and IBM is unquestioned.
- * The cost to fully deliver and implement ACCLAIMS (including modifications and conversion) and the AS/400s is less than \$ 1.5 million, and can be financially justified.

The Kansas Lottery is very confident that the implementation of this recommended ACCLAIMS solution will be the foundation for Lottery operations for a minimum of seven years. Enhancements may need to be addressed or new hardware technologies utilized, but the core ACCLAIMS system will still be in use.



The Infrastructure of a Lottery

Result of an Automated & Integrated Infrastructure:

- 1) Timely Financial Statements
- 2) Timely Analysis of Sales
- 3) Effective Game Design
- 4) Effective & Efficient Marketing Plans
- 5) Effective & Timely Decision Making

ANDERSEN CONSULTING ARTHUR ANDERSEN & CO.



LOTTERY BACK OFFICE SYSTEM

REQUIREMENTS

January, 1989

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Lottery Back Office System Detailed System Schematic

AS/400 P/C **Base System Components Applications** Automated Retailer Tel-Sel Ticket **Applicant** Claims Order Control Processing Processing Retailer å Player Instant Ticket Analysis Issue and Financial Systems Security Return Management Processing 6 Other Reporting Apllications Electronic Accounts Billing Funds Receivable Transfer Related Hardware and Software Director's Office Electronic Information Phone System Automation System Interface

Online CPU Interfaces On-Line Claims Interface Financial Reporting Retail Sales Interface On-Line Game Transaction Audit

AS/400 -

1/89

Lottery Back Office System Requirements P/C Applications

1. Retailer Applicant Processing

Recording of applicant inquiries
Tracking of applicant status
On-line update of applicants
Reporting of applicant in many sequences
Automated upload to Lottery Back Office System retailer database

2. Retailer & Player Analysis

On-line retailer sales information inquiry by game
On-line retailer location and type of business inquiry
Retailer Game analysis by retailer reporting
Chain analysis reporting
Retailer analysis reporting
Business code analysis reporting
Historical sales data down-load facility
User controlled report generation
Automated interface with high tier winners data from the Claims System
User controlled code tables and values
Player demographics reporting
Player trends reporting
Marketing analysis of players

3. Other Reporting Applications

IBM Link between P.C. and Mainframe
User-friendly, on-line report development
User programmable selection of data base information
Integration of Lottery Back Office System's word processing for custom letter retailer's player communications

Lottery Back Office System Requirements Base System Components

1.Automated Tel-Marketing System

On-line Facilities

System prompted user driven telephone marketing order processing

Integrated P.O.S. merchandise ordering

Marketing data maintenance

Summary communication to retailer of high tier payments

Communication (via invoice) with retailer and marketing representative Communication (via picking summary) with marketing representative

Retailer routing for marketing representative product delivery

Tel-marketing reminder facility

Order maintenance

Retailer individual and summary order inquiry

User Controlled

Tel-marketing sequence driven by user based parameters (i.e., operator number, routes)

Automated Interfacing

Reservation of ticket stock

System Balancing and Control

Audit reporting of uncalled retailers

Automated reconciliation of ticket orders

Financial Reporting System Interface

Automated interface to Financial Management System

Reporting

Immediate invoice and picking slip printing

Deferred invoice printing based on route, print day, and delivery schedules

Invoice routing

Back-up call Listing

2. Ticket Control

On-line Facilities

Warehouse ticket stock summary and detail inquiry

Ticket stock transfers

Pack and ticket maintenance

Pack and individual instant ticket inquiry

Marketing representatives stock inquiry

User Controlled

Summary communication to retailer of high tier payments

Categories of ticket stock statuses

Number, name, and location of warehouses and relationship to marketing representation

Automated Interfacing

Claims system validation of ticket status

Tel-marketing system for pack reservation

Order processing system for issues and returns

System Balancing and Controls

Automatic Nightly Reporting of Warehouse statistics

Security reporting of all ticket maintenance

(cont.)

Lottery Back Office System Requirements Base System Components

2. Ticket Control (cont.)

Financial Reporting System Interface

Summarized accounting reporting

Reporting

Pack tracking listing

Pack report by status

Pack report by location

3. Claims

On-line Facilities

Entry, validation and on-line real-time summary of winning payments of walk-in low, mid, and hightier claims

Entry, validation and payment of mail-in low, mid, and high tier claims

Automatic check generation and optional W2G generation

Collection (through offset processing) of other state agency liabilities

Collection of player demographics

Validation of ticket validation number, offset conditions and employee conditions

Update of controlled winning ticket and validation number

Security bypass processing

Claimant name inquiry

Claim number inquiry

Check number inquiry

Ticket number inquiry

Retailer summary inquiry

Automated Interfacing

Accounts receivable collection of low tier

Financial Reporting System Interface

Summarized accounting reporting

Automated interface to Financial Management System

Reporting

Daily check register

Daily winners list

Year end Federal W2G reporting and Federal W2G tape

Down-load Facilities

Periodic interface with Player Analysis System

Other

Participating agencies offset data loading

4. Instant Ticket Issue and Return Processing

On-line Facilities

Immediate pack issuance and invoice printing

Issue verification of ticket deliveries

Inventory update of delivered tickets

Return ticket validation and processing

Collection of retailer and marketing representative statistics

Outstanding/unverified order inquiry

Reconciled order inquiry

Accounts Receivable invoicing

Lottery Back Office System Requirements Base System Components

4. Instant Ticket Issue and Return Processing (cont.)

Automated Interfacing

Warehouse and/or marketing representative and retailer ticket inventory adjustment

System Balancing and Control

Exception reporting of retailer accounts not reconciled

Summarized daily activity by marketing representative

Day-to-day reconciliation of ticket stock by status

Financial Reporting System Interfacing

Summarized accounting reporting

Reporting

Summarized verified route and retailer accounts

Unverified route and retailer account

5. Financial Management

On-line Facilities

Journal entry and processing

Account file maintenance

Report setup

Recurring journal entries

Automatic reversing entries

Suspension and maintenance of rejected transactions

Account balance inquiry

User Controlled

Period closings

Financial report formats

Coding block structure

Automated Interfacing

Instant ticket sales and returns

Prize fund liability calculations

Prize fund payments

Collections of accounts receivable

Other subsystems financial activity

System Balancing and Controls

Subsystem reconciliation reporting

System maintenance reporting

Reporting

General ledger

Balance sheets

Income statements

Transaction ledgers

6. Security

On-line Facilities

Employee database maintenance

Employee inquiry by name

Employee inquiry by social security number

System access security

User programmed menus

Lottery Back Office System Requirements Base System Components

6. Security (cont.)

Automated Interfacing

Claims system

System Balancing and Controls

Automated Security Notification printing of security sensitive transactions

Automated intersystem balancing

Nightly maintenance reporting

Reporting

Employee listings by name, status and social security number

7. Accounts Receivable

On-line Facilities

Credit memo, debit memo, and payment entry, validation and processing

Maintenance of new, active, inactive, and rejected retailers

Maintenance of retailer name and address

Maintenance of billing information

Maintenance of EFT bank data

Automated updating of individual and chain headquarters

Detailed data by retailer number inquiry

Summary data by retailer number inquiry

Summary data by retailer name inquiry

User Controlled

System accounting parameters maintenance

Interfacing systems options

Automated Interfacing

Instant ticket issues

Instant ticket returns

Lottery redeemed low tier tickets

Electronic funds transfer transactions

Third party payment receipts (i.e. collection center)

External system chargers (i.e. license fees)

System Balancing and Control

Day-to-day reconciliation of subsystems balances

Financial Reporting System Interface

Summarized accounting reporting

Automated interface to Financial Management System

Reporting

Retailer listing by name

Retailer list by county

Retailer list by business code

Retailer list by retailer number

Retailer list by route

Up-load Facilities

Applicant Processing System - Retailer Adds

Lottery Back Office System Requirements Base System Components

8. Billing

On-line Facilities

Retailer's previous months bill inquiry

Billing summary data

Retailer's current accounting data

User Controlled

On-line cut-off date and billing message maintenance

Custom retailer message maintenance

System Balancing and Control

Aging of outstanding retailer balances

Control amount reporting

Automated Interface

Electronic Funds Transfer System

Financial Reporting System Interfacing

Summarized accounting reporting

Financial Reporting System Interface

Automated interface to Financial Management System

Reporting

Billing generation with user controlled sequence, chain store summaries, and detailed

Retailer balance by name or retailer number

9. Electronic Funds Transfer

On-line Facilities

Maintenance of sweep accounts

Maintenance of retailer bank account data

User Controlled

Selection of sweep dates and other related parameters

Automated Interfacing

Accounts Receivable System

Automated interface to Financial Management System

Lottery Back Office System Requirements Related Hardware and Software

1. Director's Information System

On-line Facilities

On-line Real-time mid and high tier prize payment summary information

On-line Real-time of estimated sales information

On-line Real-time of inventory balances information

On-line Real-time game status activity information

2. Office Automation

Word Processing and Query Facilities

User defined-on-line inquiries to system Data Bases

User controlled ad hoc reporting

Editing, custom printing, mail merger, and spell check

Electronic Mail

On-line mail, calendaring, and scheduling

Database

Search facilities, user inquiry, maintenance, and word processing interface

Table Maintenance Facility

On-line maintenance of static data (i.e. claims offices and addresses, warehouse, operators, routes, marketing representatives, valid pack states, set-off parameters, and tax rates)

On-line maintenance of variable data (i.e. users, security options)

Automated maintenance reporting

Restart and Recovery Processing

Journalization of all on-line transactions

Automated transaction backout and reapplication

Multiple Security

User defined security via table maintenance facility

System defined security (i.e. terminal access security, subsystem access security, and software access control)

3. Electronic Phone System Interface

On-line Facilities

Mid tier prize validation

Retailer account balance inquiry

Phone System Interface to Address

General public inquiries such as general information, winning ticket information, game information

Lottery Back Office system information and processing such as validating instant tickets, responding to account balances, processing ticket order requests

Lottery Back Office System Requirements Additional System Requirements

1. Hardware

Standard, readily available central processing unit capable of utilizing and supporting devices, including:

· Locally attached terminals (both monochrome and color) capable of running

multiple sessions

· Locally attached personal computers capable of running standard spreadsheet, word processing, database and desktop publishing applications such as Lotus, Wordstar, DBase III Plus, Aldus Desktop Publishing

Locally attached high speed printers

Remote sites containing:

Cice opiniers.

Terminals

Report/Invoice Printers

Vendor Support

Software previously installed in existing lottery

Hardware installed in many existing companies

Training facilities including the same type of central processing unit, terminals, and

printers
Large installed base of like central processing units, terminals, and printers

Local technical and functional support personnel

Full-time software support staff

Software and Tools

Requirements

On-line help text

On-line education modules covering the basic hardware terminology, concepts, facilities, and operations

On-line education modules providing more advanced training

Structured query language to access and manipulate data
Multiple programming language and interactive debugging and testing facilities Data file utility

Screen design aid

Associated program, user and operations documentation

Relational data base and associated on-line query tools usable by data processing, marketing, sales, director and audit personnel

Dynamic disk management tools which can optimize data storage

Performance measurement tools to help monitor and optimize performance

inherent security system to control access to devices, applications, files, and fields Menu driven

Sinuctured programs

Design programming and testing standards

IMPLEMENTATION SCHEDULE

Base Services

Months

Organization

Fit Analysis

Package Install

Modification Program

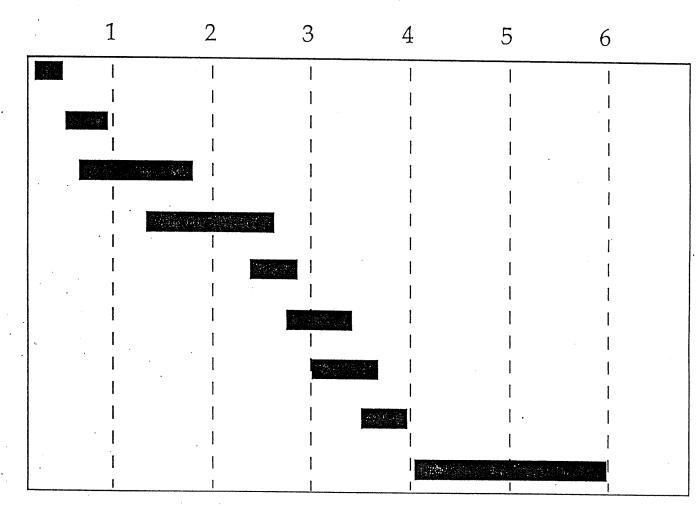
Conversion Program

Train/Procedures

System Test

Conversion

On-going Support



demo York plan Na plan and AC papers
York plan
ay liease and agreement Wilease and agreement Illeston Celendar
Project control worksheets
Admin. documentation
Secretary and equipment

1 Review processing options with management

Processing options memo

KANSAS STATE LOTTERY IMPLEMENTATION WORK PLAI

KANSAS STATE LOTTENT IMPLEMENTATION WORK PLA	N				
TÁSKI STÉRESSESSESSESSESTÁGKIÐ VERÐUÐ NESSESSESSESSESSESSESSESSESSESSESSESSESS		Working Papery Deliverable			
- Game leatures	نمكسد			J-41.	
 Regions and H.Q.'s 					
- Deliver method					
 Valdation procedures 					
- Licensing					
- Order/billing/cycles					
- Initial allocation - Accounting					
- EFT					
- Debt ollset					
- Tax rates					
7-44 1-4-1					
C Hardware			floor		
1 Finalize computer room tayouts		Computer room layout			
2 Verify cabling/wiring requirements with IBM		Wiring schematic/jayout HW schmatic and list			
3 Finalize hardware requirements with 1BM 4 Verity construct requirements with building regent.		Floor layout			
- Electrician		1 tool tayout			
- Heat, veni, AC (HVAC), and plumbing					
- Mechanical engineer					
5 Order hardware and cabling/witing		Purchase order			
8 Order HQ supplies		Purchase order			
- Tapes					
 Impact printer ribbons 					
- Tape deaner list					
 Printer paper 					
- Tape rack					
- Console stand					
- Modern tack					
- Additional user manuals					
7 Verify/follow-up on delivery schedules					
D Forms	Г	T	П		-
	_				_
1 Initialize all form requirements		Form designs			
- Checks					
- Invalces					
- Statements		•			
- Ticket returns/rejects					
- Applications					
- Licenses					
- EFT forms					

II. HANDWAHEISCHTWARE INSTALLATION

- Claim forms

TASK STER	Working Paperu Delverable
IGOS INSTALLATION	
A Hardware Installation	
Monitor hardware installation Monitor cabiling/mining	Installed AS/400 - IGOS
Configure system for new devices Run diagnostics on hardware/peripherals Document hardware configuration	Diagnostics Report/Memo Hardware Configuration
B Application software implementation (ACCLAIMS)	
Complete AS/400 system installation Establish base user profiles/libraries Load application software (V 3.0) Load application software (V 2.0) to test Review installation Begin planning system security Establish environments for development C [initial acceptance test (ACCLAME)]	ACCLAIMS operational ACCLAIMS 2.0 for develop. Security Matrix
C [initial acceptance test (ACCLAIMS)	
Establish acceptance test plan Develop logical test areas Create acceptance test data Execute trial acceptance test	Acceptance Test Plan
Execute initial acceptance test Review with key users	Acceptance Test Script Acceptance Test Memo
LMOS INSTALLATION A Hardware installation	
Monitor hardware installation Monitor cabiling/Miling Configure system for new devices.	Installed AS/400 - LMOS
Run diagnostics on hardware/peripherals Document hardware configuration	Diagnostics Rpt/Memo Hardware Configuration
B Application software implementation (JD Edwards)	
Complete AS/400 system installation Establish base user profilealibraries Load application software (JD Edwards) Review installation Begin planning system security	JD Edwards operational

Kansas State Lottery IMPLEMENTATION WORK PLAN

TASK STEP TASK DESCRIPTION C Initial acceptance test (JD Edwards)	WORKING PAPERI DELINERABLE
Establish ecceptance test plan Develop logical test areas Create acceptance test data	
Execute trial acceptance test Execute Initial acceptance test Review with key users	
REMOTE SITES A General	
Finalize hardware requirements	
Doc each sites cabling, comm and HW regs	Site Configurations
Review supplies/equipment order	Purchase Order
Order remote site data lines	
Finalize delivery dates Establish site security requirements	Cast with a Diam
Draft device naming conventions	Security Plan Naming Standards
Train stall for remote site installations	Training Stateards Training Memo
Install remote site hardware	traiting mento
Configure system for new devices	Configurations
Run diagnostics on hardware/peripherals	Configured System Diagnostics RpVMemo
Run dlagnostics on hardware/peripherals	Diagnostics Rpt/Memo
Run diagnostics on hardware/peripherals	Diagnostics Rpt/Memo
Run diagnostics on hardware/peripherals IL COMPUTER OPERATIONS SUPPORT A Establish policies and procedures 1 Complete operations standards 2 Complete design standards	Diagnostics Rpt/Memo
Run diagnostics on hardware/peripherals ILL COMPUTER OPERATIONS SUPPLOR A Establish policies and procedures 1 Complete operations standards 2 Complete design standards 3 Complete programming standards	Diagnostics Rpt/Memo Operations Manual Ops Standard Manual
Run diagnostics on hardware/peripherals ILL COMPUTER OPERATIONS SUPPLOY: A Establish policies and procedures 1 Complete operations standards 2 Complete design standards 3 Complete programming standards 4 Complete production support policies	Diagnostics Rpt/Memo Operations Manual
Run diagnostics on hardware/peripherals III. COMPUTER OPERATIONS SUPPLOY: A Establish policies and procedures 1 Complete operations standards 2 Complete design standards 3 Complete programming standards 4 Complete production support policies 5 Complete fraining/reporting procedures	Diagnostics Rpt/Memo Operations Manual Ops Standard Manual
Run diagnostics on hardware/peripherals ILL COMPUTER OPERATIONS SUPPLOY: A Establish policies and procedures 1 Complete operations standards 2 Complete design standards 3 Complete programming standards 4 Complete production support policies	Diagnostics Rpt/Memo Operations Manual Ops Standard Manual
Run diagnostics on hardware/peripherals	Diagnostics Rpt/Memo Operations Manual Ops Standard Manual Programming Standards
Run diagnostics on hardware/peripherals III. COMPUTER OPERATIONS SUPPLOY: A Establish policies and procedures 1 Complete operations standards 2 Complete design standards 3 Complete programming standards 4 Complete production support policies 5 Complete fraining/reporting procedures	Diagnostics Rpt/Memo Operations Manual Ops Standard Manual Programming Standards
Run diagnostics on hardware/peripherals	Operations Manual Ops Standard Manual Programming Standards Help Desk Procedures
Run diagnostics on hardware/peripherals	Diagnostics Rpt/Memo Operations Manual Ops Standard Manual Programming Standards Help Desk Procedures Training Packet
Run diagnostics on hardware/peripherals	Operations Manual Ops Standard Manual Programming Standards Help Desk Procedures
Run diagnostics on hardware/peripherals ILL COMPUTER OPERATIONS SUPPLOB: A Establish policies and procedures 1 Complete operations standards 2 Complete design standards 3 Complete programming standards 4 Complete production support policies 5 Complete training/reporting procedures 6 Complete help desk procedures B Train operations personnel Devetop training material Establish training schedule Conduct operations training	Diagnostics Rpt/Memo Operations Manual Ops Standard Manual Programming Standards Help Desk Procedures Training Packet
Run diagnostics on hardware/peripherals	Diagnostics Rpt/Memo Operations Manual Ops Standard Manual Programming Standards Help Desk Procedures Training Packet Training Schedule
Run diagnostics on hardware/peripherals III. COMPUTER OPERATIONS SUPPLOY A Establish policies and procedures 1 Complete operations standards 2 Complete design standards 3 Complete programming standards 4 Complete production support policies 5 Complete training/reporting procedures 6 Complete help desk procedures B Train operations personnel Develop training material Establish training schedule Conduct operations training Evaluate operations training Review training with Lottery mgmt	Diagnostics Rpt/Memo Operations Manual Ops Standard Manual Programming Standards Help Desk Procedures Training Packet
Run diagnostics on hardware/peripherals ILL COMPUTER OPERATIONS SUPPLOB: A Establish policies and procedures 1 Complete operations standards 2 Complete design standards 3 Complete programming standards 4 Complete production support policies 5 Complete training/reporting procedures 6 Complete help desk procedures B Train operations personnel Develop training material Establish training schedule Conduct operations training Evaluate operations training	Diagnostics Rpt/Memo Operations Manual Ops Standard Manual Programming Standards Help Desk Procedures Training Packet Training Schedule

Assist computer room activity/control

TASK DESCRIPTION Assist hat line control and response	DELVEPABLE
Assist with system backups	
eackage configuration	
A Plan	
1 Coordinate ticket vendors	
 Tape delivery 	
Tape layout	
2 Priorilize modification requests	
 Schedule required modifications 	Modifications Work Plan
B Taltor	
1 Finafize processing options	
2 Complete system talloring	
3 Test modifications	
4 Migrate modifications	Tallored ACCLAIMS
A Finalize functionality of new applications	
1 Review functions with Lottery	
A LIGHT TO TOTAL COLLEGE	•
2 Create Functional Specs report	Fucintional Spec Apt
2 Create Functional Specs report 3 Review Report with management	Fucntional Spec Apt
Create Functional Specs report Review Report with management Prioritize enhancements	Enhancement Work Plan
2 Create Functional Specs report 3 Review Report with management	
Create Functional Specs report Review Report with management Prioritize enhancements	Enhancement Work Plan
Create Functional Specs report Review Report with management Prioritize enhancements Obtain Lottery signoif on enhancements	Enhancement Work Plan Lottery Approval Design Specifications Enhanced Modules
2 Create Functional Specs report 3 Review Report with management 4 Prioritize enhancements 5 Obtain Lettery signost on enhancements B Design enhancement modules	Enhancement Work Plan Lottery Approval Design Specifications
2 Create Functional Specs report 3 Review Report with management 4 Prioritize enhancements 5 Obtain Lettery signost on enhancements B Design enhancement modules	Enhancement Work Plan Lottery Approval Design Specifications Enhanced Modules
2 Create Functional Specs report 3 Review Report with management 4 Provitize enhancements 5 Obtain Lottery signoif on enhancements B Design enhancement modules C Program and test enhancements D Test Planning 1 Develop testing environment	Enhancement Work Plan Lottery Approval Design Specifications Enhanced Modules
2 Create Functional Specs report 3 Review Report with management 4 Prioritize enhancements 5 Obtain Lottery signoif on enhancements B Design enhancement modules C Program and test enhancements D Test Planning 1 Develop testing environment 2 Prepare common test data	Enhancement Work Plan Lottery Approval Design Specifications Enhanced Modules
2 Create Functional Specs report 3 Review Report with management 4 Provitize enhancements 5 Obtain Lottery signoif on enhancements B Design enhancement modules C Program and test enhancements D Test Planning 1 Develop testing environment 2 Prepare common test data 3 Plan system test	Enhancement Work Plan Lottery Approval Design Specifications Enhanced Modules
2 Create Functional Specs report 3 Review Report with management 4 Prioritize enhancements 5 Obtain Lottery signost on enhancements B Design enhancement modules C Program and test enhancements D Test Planning 1 Develop testing environment 2 Prepare common test data 3 Plan system test 4 Plan integration test	Enhancement Work Plan Lottery Approval Design Specifications Enhanced Modules Program Documentation System Test Plan Integration Test Plan
2 Create Functional Specs report 3 Review Report with management 4 Provitize enhancements 5 Obtain Lottery signoif on enhancements B Design enhancement modules C Program and test enhancements D Test Planning 1 Develop testing environment 2 Prepare common test data 3 Plan system test	Enhancement Work Plan Lottery Approval Design Specifications Enhanced Modules Program Documentation System Test Plan
2 Create Functional Specs report 3 Review Report with management 4 Prioritize enhancements 5 Obtain Lottery signost on enhancements B Design enhancement modules C Program and test enhancements D Test Planning 1 Develop testing environment 2 Prepare common test data 3 Plan system test 4 Plan integration test	Enhancement Work Plan Lottery Approval Design Specifications Enhanced Modules Program Documentation System Test Plan Integration Test Plan
2 Create Functional Specs report 3 Review Report with management 4 Prioritize enhancements 5 Obtain Lottery signoif on enhancements B Design enhancement modules C Program and test enhancements D Test Planning 1 Develop testing environment 2 Prepare common test data 3 Plan system test 4 Pfan final acceptance test	Enhancement Work Plan Lottery Approval Design Specifications Enhanced Modules Program Documentation System Test Plan Integration Test Plan

Kansas State Lottery Implementation Work Plan

XS K	Working Paperi
STEP TASK DESCRIPTION	DELYCHABLE
2 Create expected results	Expected Results
3 Perform system test	
4 Perform stress tast	
5 Check detailed results	
6 Identify Inconsistencies	Custom Took ktomo
7 Resolve issues/errors	System Test Memo
F Integration test	
1 Prepare test scripts	Integration Test Scripts
2 Create expected results	Expected Results
3 Execute Integralion tests	Expected (tobalto
4 Check detailed results	
5 Document Integration test results	
6 Execute acceptance test	Integration Test Memo
O Execute acceluance (es)	anegraturi rea monto
G Implement enhancements into production	
	•
1 Convert data for new applications	
2 Migrate programs into production	
Migrate programs into production Verity migration of new applications	
Migrate programs into production Verity migration of new applications Monitor production	Enhanceri & CCI AIMS
Migrate programs into production Verity migration of new applications	Enhanced ACCLAIMS
2 Migrate programs into production 3 Verity migration of new applications 4 Monitor production 5 Document enhancements	
2 Migrate programs into production 3 Verity migration of new applications 4 Monitor production 5 Document enhancements WACCOUNTING SETUP AND SUPPORT	
2 Migrate programs into production 3 Verity migration of new applications 4 Monitor production 5 Document enhancements WE ACCOUNTING SETUP AND SUPPORT	
2 Migrate programs into production 3 Verity migration of new applications 4 Monitor production 5 Document enhancements WACCOUNTING SETUP AND SUPPORT	
2 Migrate programs into production 3 Verity migration of new applications 4 Monitor production 5 Document enhancements VALACCOUNTING SETUP AND SUPPORT LMOS SETUP A Implement AP and Purchasing	
2 Migrate programs into production 3 Verity migration of new applications 4 Monitor production 5 Document enhancements VM ACCOUNTING SETUP AND SUPPORT LMOS SETUP A Implement AP and Purchasing 1 Design purchasing forms	
2 Migrate programs into production 3 Verity migration of new applications 4 Monitor production 5 Document enhancements VM ACCOUNTING SETUP AND SUPPORT LMOS SETUP A Implement AP and Purchasing 1 Design purchasing forms 2 Order forms (checks, P.Os)	
2 Migrate programs into production 3 Verity migration of new applications 4 Monitor production 5 Document enhancements LMOS SETUP A Implement AP and Purchasing 1 Design purchasing forms 2 Order forms (checks, P.Os) 3 Install software	Purchasing Forms
2 Migrate programs into production 3 Verity migration of new applications 4 Monitor production 5 Document enhancements LMOS SETUP A Implement AP and Purchasing 1 Design purchasing forms 2 Order forms (checks, P.Os) 3 Install software 4 Conduct training for A/P - purchase staff	
2 Migrate programs into production 3 Verity migration of new applications 4 Monitor production 5 Document enhancements ********* ************ **********	Purchasing Forms
2 Migrate programs into production 3 Verity migration of new applications 4 Monitor production 5 Document enhancements VALCOUNTING SETUP AND SUPPORT LMOS SETUP A Implement AP and Purchasing 1 Design purchasing forms 2 Order forms (checks, P.Os) 3 Install software 4 Conduct training for A/P - purchase stall - Enter backlog of purchase and payments - Purchase order processing	Purchasing Forms
2 Migrate programs into production 3 Verity migration of new applications 4 Monitor production 5 Document enhancements VALCOUNTING SETUP AND SUPPORT LMOS SETUP A implement AP and Purchasing 1 Design purchasing forms 2 Order forms (checks, P.Os) 3 Install software 4 Conduct training for A/P - purchase stall - Enter backlog of purchase and payments - Purchase order processing - Accounts payable (Payment) processing	Purchasing Forms
2 Migrate programs into production 3 Verity migration of new applications 4 Monitor production 5 Document enhancements VALCOUNTING SETUP AND SUPPORT LMOS SETUP A Implement AP and Purchasing 1 Design purchasing forms 2 Order forms (checks, P.Os) 3 Install software 4 Conduct training for A/P - purchase stall - Enter backlog of purchase and payments - Purchase order processing - Accounts payable (Payment) processing - Month-end processing	Purchasing Forms
2 Migrate programs into production 3 Verity migration of new applications 4 Monitor production 5 Document enhancements VALCOUNTING SETUP AND SUPPORT LMOS SETUP A implement AP and Purchasing 1 Design purchasing forms 2 Order forms (checks, P.Os) 3 Install software 4 Conduct training for A/P - purchase staff - Enter backlog of purchase and payments - Purchase order processing - Accounts payable (Payment) processing - Month-end processing - Year-end processing	Purchasing Forms Trained users
2 Migrate programs into production 3 Verify migration of new applications 4 Monitor production 5 Document enhancements VALCOUNTING SETUP AND SUPPORT LMOS SETUP A implement AP and Purchasing 1 Design purchasing forms 2 Order forms (checks, P.Os) 3 Install software 4 Conduct training for A/P - purchase staff - Enter backlog of purchase and payments - Purchase order processing - Accounts payable (Payment) processing - Month-end processing - Year-end processing 5 Review general procedures with managment	Purchasing Forms Trained users Procedures
2 Migrate programs into production 3 Verify migration of new applications 4 Monitor production 5 Document enhancements VALCOUNTING SETUP AND SUPPORT LMOS SETUP A Implement AP and Purchasing 1 Design purchasing forms 2 Order forms (checks, P.Os) 3 Install software 4 Conduct training for A/P - purchase staff - Enter backlog of purchase and payments - Purchase order processing - Accounts payable (Payment) processing - Month-end processing 5 Review general procedures with managment 8 Obtain user signoif	Purchasing Forms Trained users Procedures Sign-oil
2 Migrate programs into production 3 Verify migration of new applications 4 Monitor production 5 Document enhancements VALCOUNTING SETUP AND SUPPORT LMOS SETUP A implement AP and Purchasing 1 Design purchasing forms 2 Order forms (checks, P.Os) 3 Install software 4 Conduct training for A/P - purchase staff - Enter backlog of purchase and payments - Purchase order processing - Accounts payable (Payment) processing - Month-end processing - Year-end processing 5 Review general procedures with managment	Purchasing Forms Trained users Procedures
2 Migrate programs into production 3 Verity migration of new applications 4 Monitor production 5 Document enhancements VM ACCOUNTING SETUP AND SUPPORT LMOS SETUP A Implement AP and Purchasing 1 Design purchasing forms 2 Order forms (checks, P.Os) 3 Install software 4 Conduct training for AIP - purchase staff - Enter backlog of purchase and payments - Purchase order processing - Accounts payable (Payment) processing - Month-end processing 5 Review general procedures with managment 8 Obtain user signoff 7 Write final memo	Purchasing Forms Trained users Procedures Sign-oil
2 Migrate programs into production 3 Verity migration of new applications 4 Monitor production 5 Document enhancements W. ACCOUNTING SHIPP AND SUPPORT LMOS SETUP A Implement AP and Purchasing 1 Design purchasing forms 2 Order forms (checks, P.Os) 3 Install software 4 Conduct training for A/P - purchase stall - Enter backlog of purchase and payments - Purchase order processing - Accounts payable (Payment) processing - Year-end processing 5 Review general procedures with managment 8 Obtain user signoil 7 Write final memo B Establish accounting environment	Purchasing Forms Trained users Procedures Sign-oil Final memo
2 Migrate programs into production 3 Verity migration of new applications 4 Monitor production 5 Document enhancements VALCOUNTING SETUP AND SUPPORT LMOS SETUP A Implement AP and Purchasing 1 Design purchasing forms 2 Order forms (checks, P.Os) 3 Install software 4 Conduct training for A/P - purchase stall - Enter backlog of purchase and payments - Purchase order processing - Accounts payable (Payment) processing - Month-end processing 5 Review general procedures with managment 8 Obtain user signoil 7 Write final memo B Establish accounting environment 1 Define coding block	Purchasing Forms Trained users Procedures Sign-oif Final memo
2 Migrate programs into production 3 Verity migration of new applications 4 Monitor production 5 Document enhancements W. ACCOUNTING SHIPP AND SUPPORT LMOS SETUP A Implement AP and Purchasing 1 Design purchasing forms 2 Order forms (checks, P.Os) 3 Install software 4 Conduct training for A/P - purchase stall - Enter backlog of purchase and payments - Purchase order processing - Accounts payable (Payment) processing - Year-end processing 5 Review general procedures with managment 8 Obtain user signoil 7 Write final memo B Establish accounting environment	Purchasing Forms Trained users Procedures Sign-oil Final memo

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Kansas State Lottery Implementation Work Plan

3 Deline chart of accounts 4 Obtain management approval on chart of accounts 5 Define financial statements 6 Detine account roll-up to statements 7 Obtain management approval of FIN statements 8 Map IGOS transaction to journal entries 9 Obtain management approval of '8"	SELVERABLE Chart of accounts Sign-oil Report formats Roll-up memo Sign-oil Matriximap Approval
C Resolve open accounting issues	
1 Establish permanent policies - Ticket expenditures - Revenue recognition - Capital Expensitures - Checks/NSF	Memo
- Archiving	
2 Review tax Issues	Memo .
- Reporting	
- W2G's	
- Tax collection	
D Inhitalize JD Edwards - Train users	
1 Conduct general overview	User notes
2 Train sers to set-up chart of accounts	User notes
3 Set-up chart of accounts	Chart of accounts
4 Train users to set-up statements	User notes
5 Set-up financial statements	Draft statements
6 Enter historical data	Data
7 Produce historical statements	Oraft History
8 Review with Lottery and AC personnel	Alternations
9 Train users to set up L34 table	User notes
10 Set-up L34 lable	L34
11 Create DDM Interlace, GLU1/GLU2 to LMOS	
12 Modify AR130P for JD Edwards Interface	
13 Establish quarterly APT procedures	Procedures
14 Establish annual computerized W2Gs	W2Gs set-up
15 Review system set-up	Notes
19 Makisa symetti sanah	11414-
E Deline manual journal entries	
Tr. Todino (Berwal Johnst Allies)	
Outline other system interlaces Payroll Capital Expenditures	Memo
- Fixed Expenses	Descriptions
2 Outline procedures for journal entries	Procedures

Kansas State Lottery Implementation Work Plan

TASK STEER TAKER DESCRIENDIN	Vojeking Paperi Deaverable
3 Review with management	Procedures
F IMPLEMENT INVENTORY CONTROL (IGOS)	
1 Design inv Control forms/balancing procs 2 Order forms 3 Update flows and procedures 4 Create program for DDM initio to JD Edwards 5 Conduct training for Inv Control staff - Enter orders for Inventory items - inventory control processing - Montre and processing	Forms Purchase orders Flows Trained users
 Year-end processing Review general procedures with managment Obtain user signoif Write linal memo 	Procedures Sign-off Final memo
G SUPPORT ACCOUNTING FUNCTIONS	
1 Support bill processing 2 Support EFT processing 3 Support end of game 4 Ad noc report training VII TRAINING AND USER SUPPORT	Assistance Assistance Assistance Training
A PLAN TRAINING	
1 Determine training requirements 2 Devetop training schedule 3 Orait and distribute training memo.	Training Schedule Training Mamo
B USER MANUALS	
1 Print 2 Add forms and screens (update) 3 Deliver to dient personnel	User Manuals Updated User Manuals
C BALANCING PROCEDURES AND FORMS	
1 Print existing procedures 2 Develop forms 3 Tallor procedure to client 4 Review procedures with client 5 Obtain management approval of proce	Balanding Procedures Balanding Forms

XX-6

TXSK STEP		Working Paper! Degverable
6 Publish procedures	(<u> </u>	Published Procedures
D TRAINING PREPARATION	I	
Develop training scripts Develop other training data		Training Scripts
E CONDUCT TRAINING	I	Trained Users
YOU SYSTEM START OF		
A CONVERT		
Refresh illes Load table file Verify files are prepared for operations Verify accounting parameters Load Game 1 inventory/validation tape Verify upload results		Loaded ACCLÁIMS data
8 REMOTE SITE USER SUPPORT - PLAN		
1 Plan regional support meeting 2 Schedule participants 3 Schedule lodging/fransportation 4 Quiline regional support meeting 5 Quiline required materials 6 Quiline site reports - General - Logistics - HW/Space - Enhancements - Stating (training/levels) - Controls (inv/dalms/checks) 7 Conduct pre-support meeting		Meeting Agenda Meeting Packet
C REMOTE SITE SUPPORT - SUPPORT		
Test all hardware Review device setups Support users		Tested Hardware
4 Review ilrst day activities 5 Assist in Ilrst night belanding and reporting 6 Supervise 2 - 4 days activity		Completed Balance Forms
ID REMOTE SITE SUPPORT - FOLLOW-UP	Т	

KANSAS STATE LOTTERY IMPLEMENTATION WORK PLAN

TASK STEP TASK DESCRIPTION	Working Paper Delverable
1 Conduct briefling	Memo
2 Document each sites activities	Site Activity Memo
3 Conduct tout of Taxas	
4 Publish final memo	Memo
E START-UP FOLLOWUP	
i General	
a Review first EFT process	
b Review first billing cycle	
c Review end-of-game returns	
d Reconcile ticket inventory to sales	
e Reconcife accounts receivable to GL	
f Assist in accounting close procedures g Prepare final arrangement letter	Arrangement Letter
h Prepare QA memorandum	QA Memo
-	
X PROJECT MANAGEMENT AND ADMINISTRATION	
1 Review project scope	
2 Report semi-monthly status	Status Reports
3 Management review/meelings	Meeting Minutes
4 Revise work plan	Work Plan
5 Assist in hiring personnel	- 14
•	

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Disclaimer

The performance estimates presented are approximations which are believed to be sound. The degree of success which you may achieve in the use of IBM equipment and programs is dependent upon numerous factors, many of which are not under IBM's control. Thus IBM neither warrants nor guarantees that you can or will achieve similar results. It is your responsibility to validate the estimates furnished and to determine their relevance to your operation.

Refer to MDLSYS to analyze response times and/or workloads that are not supported in this Quick Sizer.

YOU HAVE RESTRICTED YOUR OPTION TO A E35 ONLY.

The quicksizer has included allowances for ; checksum ; journalling ; DDM. The journalling is for physical files and access paths.

The following is your workload summary. The Key+Think is in seconds and throughput is per hour, except for Spooled Print, which is in Lines Per Minute (LPM). Batch throughput is estimated in disk I/Os per second under the proposed configurations section.

•					T	nruput/h	our
Workload	ID	Users	Key+Think	Disk	Growth%	Trans	Tasks
System Activity	. 1	1.5	15.0	0.	5.	300.	300.
Programmer	2	0.5	15.0	38.	10.	106.	106.
Batch (Seq.)	19	1.0			0.		
Batch (Idx. Rndm.)	21	1.0			0.		
Spooled Print Writer	22	8.0			20.	1200.	LPM
Simple (Query)	30	2.0	80.0	38.	10.	87.	87.
Simple (Native RAMP-C)	3	10.0	15.0	38.	10.	2250.	2250.
Average (Native)	4	3.0	20.0	38.	10.	480.	480.
Complex (Native)	5	- 2.0	25.0	38.	10.	248.	248.
5250 DSPT	24	2.0	15.0	0.	10.	450.	450.
Complex (Query)	32	2.0	180.0	38.	10.	35.	35.

Proposed Configurations

								DRIV	VES] (Not	Arms)
								Disk	Drives/Pe	ercent Busy
		Inter.	CPU	CPU%	Memory	Batch	Res.	9336 or	9335 or	9332
		Users	Mdl	Busy	(Mb)	IO/Sec	time	(857Mb)	(850Mb)	(600Mb)
System	1:	23.0	E35	54	12.0	9.6	2.1	3/36%	2/40%	2/47%
OR										
System	2:	23.0	E35	52	14.0	10.0	1.7	3/29%	2/33%	2/39%

System 2 has 15% more memory, and was analyzed to determine if this additional memory could reduce the cpu model or number of drives required. For the workload you have defined, and because the CPU and Disk %Busy are low, additional memory will not reduce your CPU or Disk requirements. You should note however, that the additional memory does lower the CPU and Disk %Busy and improves the response time.

System 1 Growth Analysis

The System 1 table assumes a CALCULATED MINIMUM MEMORY REQUIREMENT. DO NOT ROUND DOWN THIS MEMORY AMOUNT. ROUND UP.

Refer to disclaimer.

							DRIV	VES] (Not	Arms)
Elapsed									ccent Busy
Months	Inter.	CPU	CPU%	Memory	Batch	Res.	9336 or	9335 or	9332
	Users	Mdl	Busy	(Mb)	IO/Sec	time	(857Mb)	(850Mb)	(600Mb)
0	23.0	E35	54	12.0	9.6	2.1	3/36%	2/40%	2/47%
3	23.6	E35	55	12.5	9.3	2.1	3/36%	2/41%	2/48%
6	24.1	E35	57	12.5	9.0	2.1	3/37%	2/41%	3/32%
9	24.7	E35	58	12.5	8.8	2.2	3/37%	2/42%	3/32%
12	25.3	E35	60	13.0	8.5	2.2	3/38%	2/42%	3/33%
15	25.9	E35	61	13.0	8.2	2.2	3/38%	2/43%	3/33%
18	26.5	E35	62	13.0	7.8	2.3	3/39%	2/44%	3/34%
21	27.2	E35	64	13.5	7.5	2.3	3/39%	2/44%	3/34%
24	27.9	E35	66	13.5	7.2	2.4	3/40%	2/45%	3/35%
27	28.5	E35	67	13.5	6.8	2.5	3/41%	2/46%	3/35%
30	29.2	E35	69	14.0	6.5	2.5	3/41%	2/46%	3/36%
33	29.9	E35	70	14.0	6.1	2.6	3/42%	3/31%	3/37%
36	30.7	E35	72	14.5	5.8	2.7	3/43%	3/32%	3/37%
WARNING1	Above (CPU %	Busv	greater	than 70	%. Gr	owth mav	be limite	ed.

System 2 Growth Analysis

The System 2 table has 15% more memory than the preceding table. This will provide better response time and lower CPU and Disk %busy. DO NOT ROUND DOWN THIS MEMORY AMOUNT. ROUND UP.

Refer to disclaimer.

•					•		DRIV	VES] (Not	Arms)
Elapsed							Disk I	Drives/Pe	rcent Busy
Months	Inter.	CPU	CPU%	Memory	Batch	Res.	9336 or	9335 or	9332
	Users	Mdl	Busy	(Mb)	IO/Sec	time	(857Mb)	(850Mb)	(600Mb)
0	23.0	E35	52	14.0	10.0	1.7	3/29%	2/33%	2/39%
3	23.6	E35	54	14.0	9.7	1.7	3/30%	2/33%	2/39%
6	24.1	E35	55	14.5	9.4	1.7	3/30%	2/34%	2/40%
9	24.7	E35	. 56	14.5	9.1	1.8	3/30%	2/34%	2/40%
12	25.3	E35	58	15.0	8.8	1.8	3/31%	2/35%	2/41%
15	25.9	E35	59	15.0	8.5	1.8	3/31%	2/35%	2/41%
18	26.5	E35	61	15.0	8.2	1.9	3/32%	2/36%	2/42%
21	27.2	E35	62	15.5	7.9	1.9	3/32%	2/36%	2/42%
24	27.9	E35.	64	15.5	7.6	2.0	3/32%	2/37%	2/43%
27	28.5	E35	65	15.5	7.3	2.0	3/33%	2/37%	2/43%
30	29.2	E35	67	16.0	6.9	2.1	3/33%	2/38%	2/44%
33	29.9	E35	68	16.0	6.6	2.1	3/34%	2/38%	2/45%
36	30.7	E35	70	16.5	6.2	2.2	3/34%	2/39%	2/45%

QSIZE400 will not select models marked with '*'.

In the preceding tables, the memory listed is a calculated amount of memory and therefore may not be in the increments offered. Round up to the nearest increment of memory

that s available for the listed system unit. DO NOT ROUND DOWN.

NOTE: Disks are specified as drives, with each drive containing the amount of space listed (Mb = megabytes).

Use the configurator to determine how you can mix drive types on each system, as Quicksizer does not provide for that capability. The Disk Drive % should be less than or equal to 40.% (percent busy). For systems requiring only one actuator, the Disk Drive % can be up to 55.%, higher if batch is active. If the Disk Drive % is much less than these guidelines, then more drives were added due to your disk space per user requirements.

The CPU %Busy does NOT include the batch processing. This is because batch is at lower priority than interactives, and batch will most always cause the CPU %Busy to be high (> 70%), which is normal.

The following average response times are provided to give you a rough idea of the response time you could expect. These are not meant to be a guarantee, but are meant to show the range of AVERAGE response times for these benchmarks. Individual response times for a workload may range from very small (0.5 seconds) to large (15 seconds), even though the average for the workload is small (2.0-3.0). The response times listed below are AVERAGES, not the range of individual response times.

The response times shown in the above tables are weighted averages of the individual average workload response times appearing below.

These response times include the cpu, disk, workstation controller, and memory components of response time for this AS/400 system only; remote line and target system components of the response time are not included.

Measured profile response times do NOT include workstation controller time.

	RESPONSE TIME	1E AVERAGE
	with the Minimum	with the Minimum
Workload	Calculated Memory+15%	Calculated Memory
System Activity	2.4	3.2
Programmer	1.6	2.1
Simple (Query)	4.3	5.5
Simple (Native RAMP-C)	1.0	1.2
Average (Native)	1.7	2.1
Complex (Native)	2.3	3.0
5250 DSPT	0.3	0.3
Complex (Query)	48.9	55.0

Disclaimer

The performance estimates presented are approximations which are believed to be sound. The degree of success which you may achieve in the use of IBM equipment and programs is dependent upon numerous factors, many of which are not under IBM's control. Thus IBM neither warrants nor guarantees that you can or will achieve similar results. It is your responsibility to validate the estimates furnished and to determine their relevance to your operation.

Refer to MDLSYS to analyze response times and/or workloads that are not supported in this Quick Sizer.

YOU HAVE RESTRICTED YOUR OPTION TO A E20 ONLY.

The quicksizer has included allowances for ; checksum ; journalling ; DDM. The journalling is for physical files and access paths.

The following is your workload summary. The Key+Think is in seconds and throughput is per hour, except for Spooled Print, which is in Lines Per Minute (LPM). Batch throughput is estimated in disk I/Os per second under the proposed configurations section.

						hruput/h	our
Workload	ID	Users	Key+Think	Disk	Growth%	Trans	Tasks
System Activity	1	1.0	30.0	. 0.		109.	109.
Programmer	2	6.0	15.0	38.	20.	1271.	1271.
IBM Office Benchmark V2	9	4.0	23.0	38.	20.	565.	195.
Correspondence Center	14	8.0	12.5	38.	20.	1920.	1600.
Batch (50/50)	20	1.0	•	•	. 0.		
5250 DSPT	24	2.0	15.0	0.	10.	450.	450.
Spooled Print Writer	22	5.0			20.	500.	LPM

Proposed Configurations

DRIVES! (Not Arms)
Disk Drives/Percent Busy

Inter. CPU CPU% Memory Batch Res. 6109 or 6107 or 6105 or 6100 Users Mdl Busy IO/Sec (Mb) time (988Mb) (400Mb) (320Mb) (315Mb)System 1: 21.0 E20 47 16.0 8.5 2.2 4/37% 4/39% 4/41% 4/45% System 2: 21.0 E20 42 18.5 9.2 1.9 3/41% 3/43% 4/34% 4/38%

System 2 has 15% more memory, which allows you to configure a system with a smaller CPU model, fewer disk drives, or both.

System 1 Growth Analysis

The System 1 table assumes a CALCULATED MINIMUM MEMORY REQUIREMENT. DO NOT ROUND DOWN THIS MEMORY AMOUNT. ROUND UP.

Refer to disclaimer.

DRIVES! (Not Arms)
Elapsed
Disk Drives/Percent Busy
Months Inter. CPU CPU% Memory Batch Res. 6109 or 6107 or 6105 or 6100

5x-K

	Users	Mdl	Busy	(Mb)	IO/Sec	time	(988Mb)	(400МЬ)	(320Mb)	(315Mb)
0	21.0	E20	47	16.0	8.5	2.2	4/37%	4/39%	4/41%	4/45%
3	22.0	E20	49	16.5	8.2	2.3	4/38%	4/40%	4/42%	5/38%
6	23.0	E20	52	17.0	7.9	2.4	4/40%	4/42%	4/44%	5/39%
9	24.0	E20	54	17.5	7.6	2.5	4/41%	4/43%	4/46%	5/41%
12	25.1	E20	57	18.0	7.2	2`.5	4/43%	4/45%	5/38%	5/42%
· 15	26.3	E20	60	18.5	6.9	2.6	4/44%	5/37%	5/39%	5/44%
18	27.5			19.0	6.4	2.5	5/37%	5/39%	5/41%	6/38%
21	28.8	E20	66	19.5	6.0	2.6	5/38%	5/40%	5/43%	6/39%
24	30.1		69	20.0	5.5	2.8	5/40%	5/42%	6/37%	6/41%
27	31.5			21.0	5.0	3.0	5/42%	5/44%	6/38%	6/43%
WARNING!	Above (CPU 2	Busy	greater	than 70	%. Gr	owth may	be limit	ed.	
30			76		4.4	3.2		6/38%	6/40%	7/38%
WARNING!						%. Gr	owth may	be limit	ed.	
33	34.6				3.8		6/37%	6/39%	6/42%	7/40%
					than 70	%. Gr	owth may	be limit	ed.	
36	36.2			23.0	3.1	3.8		6/41%	7/37%	7/41%
WARNING!	Above (CPU :	Busy	greater	than 70	%. Gr	owth may	be limit	ed.	

System 2 Growth Analysis
The System 2 table has 15% more memory than the preceding table.
This will provide better response time and lower CPU and Disk %busy.
DO NOT ROUND DOWN THIS MEMORY AMOUNT. ROUND UP.

Refer to disclaimer.

							DRIV	/ES! (Not	Arms)	
Elapsed							Disk I	Prives/Per	cent Busy	,
Months	Inter.	CPU	CPU%	Memory	Batch	Res.	6109 or	6107 or	6105 or	6100
	Users	Mdl	Busy	· (Mb)	IO/Sec	time	(988Mb)	(400Mb)	(320Mb)	(315Mb)
0	21.0		42	18.5	9.2	1.9	3/41%	3/43%	4/34%	4/38%
3	22.0	E20	44	19.0	8.9	1.9	3/43%	3/45%	4/35%	4/39%
6	23.0	E20	46	19.5	8.7	2.0	3/44%	3/47%	4/37%	4/41%
9	24.0	E20	48	20.0	8.4	2.0	3/46%	4/36%	4/38%	4/43%
12	25.1	E20	50	20.5	8.1	2.1	3/48%	4/38%	4/40%	4/44%
15	26.3	E20	53	21.0	7.8	1.9	4/37%	4/39%	5/33%	5/37%
18	27.5	E20	55	22.0	7.5	2.0	4/38%	4/41%	5/34%	5/38%
21	28.8	E20	58	22.5	7.1	2.1	4/40%	4/42%	5/35%	5/39%
24	30.1	E20	61	23.0	6.7	2.2	4/42%	4/44%	5/37%	5/41%
27	31.5	E20	64	24.0	6.3	2.3	4/43%	5/36%	5/38%	5/43%
30	33.0	E20	67	24.5	5.8	2.4	4/45%	5/38%	5/40%	6/37%
33	34.6	E20	71	25.5	5.3	2.3	5/37%	5/39%	5/42%	6/38%
36	36.2	E20	74	26.5	4.7	2.5	5/39%	5/41%	6/36%	6/40%
WARNING!	Above	CPU :	%Busy	greater	than 70	%. Gr	rowth may	be limite	ed.	

QSIZE400 will not select models marked with '*'.

In the preceding tables, the memory listed is a calculated amount of memory and therefore may not be in the increments offered. Round up to the nearest increment of memory that is available for the listed system unit. DO NOT ROUND DOWN.

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	RESPONSE TIM with the Minimum	E AVERAGE with the Minimum
Workload	Calculated Memory+15%	
System Activity	3.4	4.0
Programmer	1.9	2.3
IBM Office Benchmark V2	2 1.6	2.1
Correspondence Center	2.2	2.6
5250 DSPT	0.3	0.3

STATE	EQUIPMENT	SOFTWARE
Arizona		This software is the foundation for ACCLAIMS
California	IBM3090 Stratus XA2000 Stratus XA600	Note 1
Colorado		
Connecticut	Bull DPS 6/PLUS Quad Processors Nixdorf 8850/85	
Delaware	Sun 410 SPARCstation 1+ PC's	In-house programs
Florida	Digital VAX cluster IBM4381 PC's	
Idaho	IBM AS/400 40B	Acclaims
	Concurrent 3212	GTech
Illinois	Nixdorf 8890 D18 Nixdorf 8890 D28 Burroughs B25 & B20	
Indiana	IBM AS/400 B70 PC's	ACCLAIMS
Iowa	Stratus XA-600 PC's	Note 1
Kansas	Tandem TXP & Ext25 IBM System36 PC's	LottoSTARTS
Kentucky	IBM AS/400	ACCLAIMS
Louisiana	Stratus XA-600	Game Plan
Maine	AT&T 3B2/1000 PC's	Scientific Games
Maryland		
Massachusetts		

Unisys A17-F

Michigan

Computers, Communications & Technology March 18, 1992 Attachment 3 PC's

Minnesota

IBM AS/400

PC's

ACCLAIMS

Missouri

Stratus

Note 1

Montana

Stratus XA-600

Note 1

New Hampshire Stratus XA1000

Bull DPS90

IBM 3081

Scientific Games Instant tickets

Accounting

New Jersey

Wang VS 8460

PC's

In-house

New York

IBM ES/9000-500

IBM AS/400

PC's

In-house

Ohio

Oregon

Stratus Xa-2000

PC's

Note 1

Pennsylvania

IBM 3090/400

IBM SYS/38

Unisys 5000/50

South Dakota

Texas

undecided at this

time

Vermont

PC's

Off the Shelf

Virginia

IBM AS/400

PC's

Washington DC Perkin-Elmer 3210

Bull Sys DPS 6 PLUS Wang 7010 & 7020

Wang PC's

Washington

Tandem VLX

In-house

West Virginia

Wisconsin

Stratus XA-2000

Scientific Games

PC's

Notel: These states use a system which was developed for

them by the makers of GamePlan. The Gameplan

software is not used but the expertise of the vendor was used to construct a system tailored to the users

needs. GamePlan was written for the Stratus hardware just as ACCLAIMS is written for the AS/400.

It should be noted that many of the earlier Lotterys did not have the option of selecting previously written software. Many states like California hired consultants to develop and write their software. As the interest and experience in gaming software grew vendors were able to prepackage instant and online software.