Nebraska Information Technology Commission

Recommendations on Technology Investments to the Governor and Legislature

FY2005-07 Biennium

November 15, 2004

State of Nebraska
Nebraska Information Technology Commission
521 S. 14th Street, Suite 301
Lincoln, NE 68508-2707
(402) 471-3560

Contents

Cover Letter

STATE OF NEBRASKA

DAVID HEINEMAN
Lieutenant Governor
State Capitol, Room 2315
P.O. Box 94863
Lincoln, Nebraska 68509-4863
Phone (402) 471-2256
Dave.Heineman@email.state.ne.us

November 22, 2004

Mike Johanns
Governor

The Honorable Mike Johanns
Governor
State Capitol
Lincoln, Nebraska 68509

The Honorable Curt Bromm
Speaker of the Legislature
State Capitol, Room 2103
Lincoln, Nebraska 68509

Dear Governor Johanns and Speaker Bromm:

I am pleased to provide you the Nebraska Information Technology Commission's prioritized list of recommended investment technology investments for fiscal years 2006 and 2007. The NITC recommendations are based upon a combination of the technical review process, testimony and discussion with the project sponsors, the cost, scope and overall importance to the State.

The NITC divided the recommended new projects into two categories (Tier I and Tier II). Tier I includes five projects that have a high technical review score and that have high strategic importance to the agency and/or the State. Tier II includes four projects that have relatively high technical review score and that have significant strategic importance but in general have an overall lower priority than the Tier I projects.

I should note for your attention that a key Tier I project is the Department of Education's Distance Learning – Infrastructure, Programming and Training Project that would promote Network Nebraska, the eLearning Initiative and the Statewide Synchronous Video Network Initiative. The NITC is very supportive of continued efforts to seek non-general funds to implement the Distance Learning proposal.

Included in our recommendations is a summary sheet about each Tier I and Tier II projects. Complete project proposals for every submitted project are available for your review at the NITC website (www.nitc.state.ne.us).

Thank you for your continued support of the NITC. Please be assured that we will continue to seek opportunities to assist you in coordinating information technology investments for the State.

Sincerely,

Dave Heineman

Dave Heineman
Lieutenant Governor and
Chairman, NITC

cc: Appropriations Committee
Clerk of the Legislature
NITC Commissioners

Enclosure

NITC Recommendations

On November 10, 2004, the NITC approved the following prioritized list of projects (see the cover letter for a description of these categories):

Project #	Agency	Project Title	FY2005-06	FY2006-07	Score
Tier 1					
13-01	Department of Education	Distance Learning—Infrastructure, Programming, and Training	$ 10,000,000	$ 10,000,000	85
27-06	Department of Roads	PioneerNET	$ 1,500,000	$ 1,500,000	82
51-01	University of Nebraska	University Enterprise Server Upgrade	$ 925,000	$ 925,000	92
05-03	Supreme Court	Trial Court Automation Strategy	$ 125,000	$ 125,000	79
65-01	DAS - CIO	Security Audits	$ 50,000	$ 50,000	92
Tier 2					
27-07	Department of Roads	Project Scheduling & Program Management System	$ 750,000	$ 50,000	78
05-01	Supreme Court	Install Personal Computers for Courts	$ 294,866	$ 456,148	85
37-01	Workers Compensation Court	Court Re-engineering - Vocational Rehabilitation	$ 55,900	$ 56,290	74
37-02	Workers Compensation Court	Court Re-engineering - Coverage and Claims	$ 58,250	$ 6,508	72

Addendum: On March 15, 2005, the NITC reviewed the revised Workers Compensation Court project entitled "Court Re-engineering – Adjudication" (37-03) and placed it in Tier 1. The revised proposal and summary sheet are available at: http://www.nitc.state.ne.us/nitc/documents/FY2005-07/

Appendix

Project Proposal Summary Sheets

(Full text of proposals posted at: http://www.nitc.state.ne.us/nitc/documents/FY2005-07/index.html)

Agency	Project	FY2005-06	FY2006-07
Department of Education	Distance Learning—Infrastructure, Programming, and Training	$10,000,000	$10,000,000

SUMMARY OF REQUEST (Executive Summary from the Proposal)

The Distance Learning—Infrastructure, Programming and Training Project intends to capitalize on the three strategic initiatives of the NITC in order to improve the access, content and training opportunities of distance learning to address the essential education expectations for all Nebraska schools. These initiatives include:

- Network Nebraska. The primary objective of Network Nebraska is to develop a broadband, scalable telecommunications infrastructure that optimizes the quality of service to every public entity in the State of Nebraska. Potential benefits of Network Nebraska include lower network costs, greater efficiency, interoperability of systems providing video courses and conferencing, increased collaboration among educational entities, and better use of public investments. Specific technologies required: Network routers that can ensure differentiated qualities of service for various data applications.

- Statewide Synchronous Video Network. This initiative will establish an Internet Protocol-based, high bandwidth network that will interconnect all existing and future distance learning and videoconferencing facilities in the state. Benefits include greater sharing of educational courses and resources; more efficient use of available resources; and one-to-many videoconferencing capabilities for alerts and emergency situations. Specific technologies required: School site routers, Aggregation point routers, School site Codecs (Coder-Decoders), School LAN upgrades, Distance learning scheduling/management system.

- Nebraska eLearning Initiative. This initiative will promote the effective and efficient integration of technology into the instructional process and will utilize server-based course management software to deliver enhanced educational opportunities through web-based instruction. A standards-based eKnowledge repository will provide students and teachers equitable access to rich instructional resources. Specific technologies required: Primary and Secondary course management software servers, Digital content library, School site content servers, eKnowledge repository server.

FUNDING SUMMARY

Network Nebraska

Account Description	FY 06 Adj Req	FY 07 Adj Req	Ongoing
Backbone Transport Costs (preK-12)	$ 500,000	$ 1,000,000	$ 1,500,000
Subtotal	**$ 500,000**	**$ 1,000,000**	**$ 1,500,000**

Statewide Synchronous Video Network

Account Description	FY 06 Adj Req	FY 07 Adj Req	Ongoing
School Site Router Hardware	$ 800,000	$ 800,000	$ 0
School Site Router Maintenance	$ 250,000	$ 250,000	$ 250,000
Aggregation Point Router Hardware	$ 1,300,000	$ 0	$ 0
Aggregation Router Maintenance	$ 200,000	$ 200,000	$ 200,000
School Site Codec Hardware	$ 1,500,000	$ 1,500,000	$ 0
School site Codec Maintenance	$ 200,000	$ 200,000	$ 200,000
Ancillary Equipment/LAN upgrades	$ 1,200,000	$ 1,700,000	$ 500,000
Scheduling/Management system	$ 745,000	$ 725,000	$ 350,000
Training and Support	$ 200,000	$ 200,000	$ 200,000
Subtotal	**$ 6,395,000**	**$ 5,575,000**	**$ 1,700,000**

eLearning Initiative and Knowledge Repository

Account Description	FY 06 Adj Req	FY 07 Adj Req	Ongoing
Course Mgt Software Licensing	$ 60,000	$ 100,000	$ 160,000
Primary, Secondary Server/Licensing	$ 175,000	$ 330,000	$ 295,000
Discovery Digital content library	$ 125,000	$ 250,000	$ 250,000
Site-based content servers	$ 1,650,000	$ 1,650,000	$ 0
Content server installation	$ 300,000	$ 300,000	$ 0
Training and Support	$ 245,000	$ 245,000	$ 245,000
eKnowledge Repository	$ 300,000	$ 300,000	$ 300,000
Acute content shortage resources	$ 250,000	$ 250,000	$ 250,000
Subtotal	**$ 3,105,000**	**$ 3,425,000**	**$ 1,500,000**

PROJECT SCORE

Section	Reviewer 1	Reviewer 2	Reviewer 3	**Mean**	Maximum Possible
III: Goals, Objectives, and Projected Outcomes	12	14	14	13.3	15
IV: Project Justification / Business Case	25	20	25	23.3	25
V: Technical Impact	16	20	18	18.0	20
IV: Preliminary Plan for Implementation	6	8	9	7.7	10
VII: Risk Assessment	6	8	10	8.0	10
VIII: Financial Analysis and Budget	10	15	19	14.7	20
			TOTAL	**85**	100

REVIEWER COMMENTS

Section	Strengths	Weaknesses
III: Goals, Objectives, and Projected Outcomes	- The narrative provides a good overview of the scope and intent of the project. - Strong tie to the objectives of the Ed Council - Outcomes and beneficiaries very well defined. Outcomes are clearly in line with current NITC direction of Network Nebraska in terms of traffic aggregation, collaboration and open standards support.	- The narrative does not include any indication of how the content will be provided. The infrastructure must be put in place to deliver content, however, the content must be readily available and it is not clear how this content will be developed. - Statewide scheduling system is not a given and may not be needed; proposal seems very "centralized" compared to a more robust, regionalized, redundant which would be more a efficient transport bandwidth. - While measurement and assessment methods do appear to be a bit weak they are simply a construct of methods from other projects which are well defined. While this is nominally a weakness it is not a functional problem.
IV: Project Justification / Business Case	- The narrative provides solid fiscal and technical justification for moving forward with this proposal. - The potential benefits to the project are truly phenomenal. In addition to the well stated benefits of the project there is a significant but more esoteric benefit to be gleaned. This project would play a significant role in bridging the digital divide not only from and education perspective but also in a secondary way from an economic development perspective. The presence of high bandwidth IP services in local telco/cable COs will facilitate availability of those services to business, local government and private customers as well as K12.	- Overlooks the value of the current installed infrastructure when only states $20M; tendency to oversell benefits--may not be lower network costs; expand on opportunities there will be; minimizes tech support/role of ESUs; QoS of "carts"--don't oversell
V: Technical	- The narrative provides information on how the	- The narrative does not adequately provide an

Section	Strengths	Weaknesses
Impact	proposed technology offers a better technical fit for K12 schools along with an indication of the greater cost-effectiveness of this solution. - Better use of current bandwidth; in line with current state standards/recommendations - Distance learning specifications are well defined for a document at this level	indication of how "server farms" will be used and the content they will house. Most importantly, ongoing costs of these server farms are not mentioned nor is there any indication of inducements for teachers to provide content. - Network design vague; providers may determine design and price based on $$ available; centralized vs. distributed design a concern (related to eLearning initiative). - E-Learning implementation guidelines are not well defined. While a general plan is in place no standards are specified to guarantee interoperability or upgrade protection.
VI: Preliminary Plan for Implementation	- The narrative addresses the minimum technical information with some mention of the content that will be delivered. - For a document at this level of development this is fine - though obviously there is a tremendous amount of detail work and problem solving that is glossed over.	- The narrative does not adequately address incentives for content development or how this will be funded. - overly optimistic about moving remaining schools not using statewide backbone--July 1, 2005 not possible.
VII: Risk Assessment	- The narrative provides some overview of likely barriers to adoption as the local level. - There are very few risks to this approach from a technology point of view. In fact - this approach moves from a very high-risk implementation (the current non standardized aging implementation) to a standardized lower risk model. The assessment that risk will be in terms of end user buy-in is very accurate and seems to be appropriately anticipated and addressed.	- The narrative does not adequately factor in the likely resistance of those urban districts that may not see the value of distance learning within their district. - overlooks power of local control attitude of local regional DL coordinators; big political battle looms.
VIII: Financial Analysis and Budget	- The narrative provides an accurate overview of how the proposed monies will be spent. - Seems to be reasonable assuming skilled and progressive project management. Good project management and implementation team leadership will be an absolute key to both functionality and staying under budget. This cannot be done in a business as usual fashion but must be designed up as a scalable open standards based future proofed solution - which is not a model that K12 has consistently adopted in the past.	- The notion of achieving postalization of Internet rates in this fashion puts the State in a position of funding schools differentially. Further, unless the plan is tied to consolidation practices the full economic benefit cannot be realized. Finally, no incentive is provided to urban districts that might be interested in producing content if there were financial incentives. - without knowing actual network design, costs of network questionable; schedule system dollars need not established.

EDUCATION COUNCIL COMMENTS

The Education Council encourages continued efforts to seek other funds and to work with providers to keep annual (recurring) costs to schools at or about the same rate as they currently pay. If this funding request is not successful or only partially successful, there is an additional risk that schools will cease to participate in distance learning and the network upgrade project due to increased costs. However, that same risk exists if the system is not upgraded with State sponsorship and the annual costs increase significantly when a new contract comes due. We encourage the NITC, its work groups, task groups, and councils to continue to coordinate discussions to find a mutually beneficial solution for the telecommunications providers and the educational community.

APPENDIX

AGENCY RESPONSE TO REVIEWER COMMENTS

	Agency Response to Reviewer comments in *bold italics*
Section	**Weaknesses**
III: Goals, Objectives, and Projected Outcomes	- The narrative does not include any indication of how the content will be provided. The infrastructure must be put in place to deliver content, however, the content must be readily available and it is not clear how this content will be developed. ***This is an excellent question and due to the brevity and technical nature of the I.T. project proposal, it was not described in detail. The content or programming portion of the proposal will be addressed through several different mechanisms in order to achieve equitable educational opportunity.*** ***First, the Synchronous Video Network Upgrade will allow each school the capacity to send and receive multiple, simultaneous videoconferencing channels in order to enhance their course exchange with other schools. The NITC Technical Panel's Statewide Synchronous Video Work Group has been discussing the implementation of an entrepreneurial approach to course origination that would stimulate content development for small and large schools. The same system also allows ad hoc, just-in-time videoconferencing to occur with science centers, museums, and informal education centers from all over the country.*** ***Secondly, the eLearning Initiative (Section VIII: Financial Analysis and Budget) identifies purchase of a Discovery Digital content library which is the rich media resources that will be accessible to every school, teacher and learner for immediate download or for enhancement of web-based courses.*** ***Thirdly, the eLearning Initiative provides for an eKnowledge Repository that functions as the digital storehouse for teacher-developed and commercial content. Searchable, retrievable, and compliant with SCORM standards, the courses, modules, or units of instruction will be able to be exported to the Repository from any major course management software server. Also, the eLearning Initiative identifies $250,000 per year for acute content shortage resources. This may include the purchase of distance learning teacher contracts who can offer a variety of video and online courses (e.g. Foreign Languages, Calculus, AP courses) to a number of schools across the State throughout the day. It also allows for purchase of content from commercial providers (e.g. Class.com, NovaNet)*** - Statewide scheduling system is not a given and may not be

	Agency Response to Reviewer comments in *bold italics*
Section	**Weaknesses**
	needed; proposal seems very "centralized" compared to a more robust, regionalized, redundant which would be more a efficient transport bandwidth. ***NDE agrees that a statewide scheduling system may not be needed. Regionalization of education programming is an attractive option to reach self-sufficiency and one that is being discussed by the Statewide Synchronous Video Work Group; either within community college areas or within a consortium of schools or Educational Service Units.*** ***True, early results from the IP-based video system used by the Southeast Nebraska Distance Learning Consortium show that school-to-school interaction and course exchange can occur without a scheduling system. However, to facilitate a true Statewide Synchronous Video system, some mechanism needs to be put in place to allow other communities of interest to interface with education and to allow outside entities to view scheduled usage and open opportunities to use videoconferencing facilities without having to place a phone call or e-mail to each site coordinator.*** - While measurement and assessment methods do appear to be a bit weak they are simply a construct of methods from other projects which are well defined. While this is nominally a weakness it is not a functional problem. ***Indeed, each Initiative within the overall project proposal will have its own measurement and assessment methods. The "increased number of educational opportunities and instructional resources should translate into increased student progress and achievement and more equitable learning for students all over the State" is the overall goal that would also lend itself to subsequent measurements.***
IV: Project Justification / Business Case	- Overlooks the value of the current installed infrastructure when only states $20M; tendency to oversell benefits--may not be lower network costs; expand on opportunities there will be; minimizes tech support/role of ESUs; QoS of "carts"--don't oversell ***Although the third paragraph in this section refers to very large bandwidth (DS3 or 45 megabit connections), the wording probably does not adequately address the foresightedness of the original projects to trench fiber to 95% of Nebraska's high schools. The "lower network costs" refers to the cost comparison between upgrading as an entire system versus upgrading as individual schools, ESUs or distance learning consortia.*** ***Under Item #5 Networking, it is true that ESUs have done a great job with Internet aggregation, consolidating 500+ school districts into eight major Internet aggregation points. Network***

	Agency Response to Reviewer comments in *bold italics*
Section	**Weaknesses**
	Nebraska has the capacity to take that arrangement one step further; to allow all schools to combine their Internet demand with other public entities in order to get even lower pricing. Case in point, Network Nebraska's Internet1 unit pricing has decreased by 55% over the past 14 months through leveraged buying power. ***The Quality of Service of the interactive IP video service delivered through the mobile carts will largely be ensured through dedicated bandwidth and packet management software within Network Nebraska or out over Internet2. Only when the videoconferencing connection is made over the commodity Internet will the signal be considered as 'best effort'.***
V: Technical Impact	- The narrative does not adequately provide an indication of how "server farms" will be used and the content they will house. Most importantly, ongoing costs of these server farms are not mentioned nor is there any indication of inducements for teachers to provide content. ***The content that will be housed is the course content that will be developed and stored by individual teachers.*** ***The Financial Analysis and Budget section does mention $295,000 ongoing for acquisition, maintenance and growth of the primary and secondary servers and licensing. Currently, the NWSDAC purchasing consortium for K-12 has one dual-processor server with a capacity to serve 20,000 users. The primary/secondary server farm strategy would link several servers together for course management software and content management while using several load balancing database servers on the front end. The technology of these systems is emerging. Regionalized or distributed design of content and course management services is also an option, in order to scale to 150,000 users statewide.*** ***The planned use "server farms" is intended to provide a server architecture that is more scalable and cost-effective when supporting large numbers of users. Traditional large servers require a large up-front investment in a big server environment, and then smaller investments in extra RAM, processors, network interfaces, etc. up to a point, when another large server is required to replace or complement the original. Server farms, on the other hand, require a larger initial investment in a hardware-based load balancer and a number of servers, but theoretically avoid the long-term capacity/performance cap because as more capacity is needed (or as a machine fails), one simply adds another small server into the farm & extend the capabilities. It is also easier to establish fail-over systems and redundancies***

	Agency Response to Reviewer comments in *bold italics*
Section	**Weaknesses**
	with server farms because they are more modular. Due to the more modular nature of server farms, ongoing costs are expected to be more modest. - Network design vague; providers may determine design and price based on $$ available; centralized vs. distributed design a concern (related to eLearning initiative). ***Detailed network design documents have not been rendered. Early design options from providers suggest a 45mbps ATM infrastructure to each school within a region with aggregation routers used to partition the Internet1 and Internet2 to the statewide backbone.*** ***The eLearning network design will likely be more centralized at the beginning of the project, with one or 2 distributed sites at ESU's that could be used for fail-over or better performance for western Nebraska locations. As the project matures, the network would be widely distributed out to the ESU's with multiple fail-overs, with a problem with the machines or network at one ESU failing over to access the servers at one of the other ESU's.*** ***Ideally, the eLearning network design would complement the larger Network Nebraska Initiative as well--expanding as the network does, and providing value to the institutions that buy in to the project.*** - E-Learning implementation guidelines are not well defined. While a general plan is in place no standards are specified to guarantee interoperability or upgrade protection. ***In terms of technology, there are well-established interoperability standards that vendors must comply with in order to be competitive. Strong compliance with these standards must be a criterion for selection of a vendor. In terms of standards of content across institutions in Nebraska, the eLearning Initiative will work with member institutions to establish these standards.*** ***A few examples of interoperability standards are http://imsproject.org/ and http://www.adlnet.org/index.cfm?fuseaction=ADLTechnologies (SCORM standards being an important example of ADL technologies). SCORM represents a collection of specifications and standards that are built upon standards taken from other organizations [such as IMS] and extends their capabilities.*** ***There are four parts to the SCORM standard: (i) the content description, (ii) the API which is a set of methods that enable***

	Agency Response to Reviewer comments in *bold italics*
Section	**Weaknesses**
	the use of contents by any kind of SCORM compliant Learning Management System (LMS), (iii) the data model, that enables data to be stored in a way related to the use of the content by a LMS, and, (iv) Metadata (LOM), to standardize the attributes which describe the learning content. ***SCORM's main advantage is that it is based on a stable technical standard that is XML. The SCORM API implemented by the learning content object (also called SCO or Sharable Content Object) provides total independence from the LMS.*** ***The eLearning Initiative and eKnowledge Repository will rely on SCORM standards for each Learning Management System (LMS) that interacts with it.***
VI: Preliminary Plan for Implementation	- The narrative does not adequately address incentives for content development or how this will be funded. ***At the outset of the project, the licensing, training, and implementation of course management software for teachers and students will take priority. During the first two semesters of implementation for teachers, they will be converting their existing web material to the course management software system and also be writing new material on the course management system to supplement each of their courses. Once a critical mass of experienced users has been established (2006-08), the content development incentives can be established, primarily at the local level. The Financial Analysis and Budget section does prescribe $250,000 per year for development of acute content shortage resources as well as $300,000 per year for administration of the searchable eKnowledge Repository.*** - overly optimistic about moving remaining schools not using statewide backbone--July 1, 2005 not possible. ***"It is possible that 90%-100% of the remaining school districts could join the network as early as July 1, 2005, pending e-Rate approval and reimbursement." IS an optimistic projection and is also quite feasible.*** ***The State of Nebraska school districts, with the help of the ESUs, have already aggregated themselves into eight Internet purchasing units (ESUs 13-14; ESUs 10, 11, 15, 16; ESUs 1, 2, 7, 8, 17; ESU 3; ESU 9; ESU 18; ESU 19; ESU 4, 5, 6). Of these eight purchasing units, two are already on Network Nebraska (ESUs 10, 11, 15, 16; ESU 18), representing 164 school districts and about 80,000 students. Serious discussions are already underway with the other six purchasing units and each of their Internet Service Provider contracts are either up for bid in 2005-06 or the units are considering purchasing a***

	Agency Response to Reviewer comments in *bold italics*
Section	**Weaknesses**
	portion of their Internet service from Network Nebraska in order to take advantage of Internet2.
VII: Risk Assessment	- The narrative does not adequately factor in the likely resistance of those urban districts that may not see the value of distance learning within their district. ***Correct, resistance could be considerable as long as urban districts continue to view "distance learning" as a series of static classrooms with one course exchanged per class period with one origination site and up to three receive sites. The network upgrade would not only preserve these assets but also add perhaps hundreds of IP video units from carts, desktops, and laptops, enabling students, teachers, and administrators routine access to "just-in-time" learning or videoconferencing. It would also allow unprecedented access to web-based content and totally online classes offered by a remote origination point.*** ***The resulting network of 267 largely rural districts on 45-meg or 100-meg, flexible use circuits allows many entrepreneurial possibilities.*** ***Urban districts may want to explore marketable services addressing acute content shortages, training, advanced courses, and staff development to smaller districts. They are also in a unique position to partner with informal education entities from urban centers (e.g. Henry Doorly Zoo, Folsom Children's Zoo, SAC Museum, etc…) to offer ad hoc content to rural districts.*** - overlooks power of local control attitude of local regional DL coordinators; big political battle looms. ***A number of task group and work group meetings have been held to address the concerns of the DL coordinators. The discussions have focused on increased networking potential to achieve enhanced educational services for every school. The proposed 45 or 100mbps flexible use circuits to every school that carry web-based classes and multiple IP videoconferences will technologically accommodate this goal, regardless of the political or jurisdictional challenges. Providers have shared that the overall network upgrade project is most feasible by using a federated approach that upgrades all the affected schools at the same time, even before their current contracts expire.***
VIII: Financial Analysis and Budget	- The notion of achieving postalization of Internet rates in this fashion puts the State in a position of funding schools differentially. Further, unless the plan is tied to consolidation practices the full economic benefit cannot be realized. Finally, no incentive is provided to urban districts that might be interested in producing

	Agency Response to Reviewer comments in *bold italics*
Section	**Weaknesses**
	content if there were financial incentives. ***The preK-12 Backbone Transport funding attempts to recognize that in order to establish a statewide education network, some intrastate transmission of data would be necessary. Those cost algorithms have not been discussed or allocated. The FY06- FY07 amounts simply create a funding placeholder to make data transport on the backbone non-cost-prohibitive.*** - without knowing actual network design, costs of network questionable; schedule system dollars need not established. ***The estimated costs for the wide area high bandwidth networking and the scheduling system were derived from industry and provider quotes.***

Agency	Project	FY2005-06	FY2006-07
Department of Roads	PioneerNET	$ 1,500,000	$ 1,500,000

SUMMARY OF REQUEST (Executive Summary from the Proposal)

In order to realize the full benefits of Nebraska's Intelligent Transportation Systems (ITS), an integrated software that actively monitors current (and future) field devices is required. The PioneerNET system software will meet those needs unlike commercial, off-the-shelf systems that offer only limited integration and do not provide the necessary flexibility for future changes. Our current systems are not integrated and the software provided by the manufacturers forces redundant entry and multiple programs to manage the system. ITS devices save time, money and lives by reducing delay on the freeway system, improving response and clearance of incidents, as well as reduction in secondary crashes. PioneerNET will be the software package managing the various components which provide functionality to each of the District Operation Centers (DOC).

PioneerNET will be consistent with National Transportation Communication for ITS Protocol (NTCIP) and NITC guidelines and is expected to have positive Benefit/Cost (B/C) Ratios. The system will include video servers, software servers, databases, and archive management servers located in each District. Without PioneerNET, NDOR will struggle to actively manage the freeway system which will result in additional delay and safety issues to the motoring public.

The financial budget is outlined in the Highway Program and the STIP and consists of three projects:
1. Functional Design of the Software
2. System Manager/Integrator
3. Software Development and Implementation

FUNDING SUMMARY

The financial budget is outlined in the Highway Program and the STIP and consists of three projects:
1. Functional Design of the Software
2. System Manager/Integrator
3. Software Development and Implementation

ITSN(2) - 2	**ITSN(2) - 001**	**Statewide & FMS Final Design**		
ITSN(2) - 3a		FMS Planning / Preliminary Engineering Study	$	250,000
ITSN(2) - 3b		Omaha FMS Design	$	400,000
ITSN(2) - 2d		Statewide ITS Element Design / PS & E	$	500,000
ITSN(2) - 2a		Statewide (DOC) Design/Software Functional Design (2000-E1: RFP)	$	900,000
ITSN(2) - 3c		Omaha FMS Software Functional Design	$	250,000
	ITSN(2) - 003	**System Manager**		
ITSN(2) - 2c		Statewide Software System Manager	$	600,000
ITSN(2) - 3e		Omaha FMS Software / Systems Manager	$	350,000
	ITSN(2) - 004	**Software Development/Implementation**		
ITSN(2) - 2b		Statewide Software Development/Implementation	$	1,250,000
ITSN(2) - 3d		Omaha/D-2 Software Development and Implementation	$	750,000
ITSN(2) - 3f		Hardware / Video Design	$	200,000

The Hardware and software will be determined during the first project listed above. New FTE's are not required to develop the software, but ultimately are needed to operate the ITS system. Initial discussions have considered contract staff to operate the system.

Currently, TTG is programming $500,000 annually for system maintenance and enhancements.

State Funds are used to match (50/50) the Federal Dollars of an ITS Deployment Grant.

PROJECT SCORE

Section	Reviewer 1	Reviewer 2	Reviewer 3	**Mean**	Maximum Possible
III: Goals, Objectives, and Projected Outcomes	12	15	13	13.3	15
IV: Project Justification / Business Case	15	22	22	19.7	25
V: Technical Impact	13	19	19	17.0	20
IV: Preliminary Plan for Implementation	8	8	9	8.3	10
VII: Risk Assessment	5	10	9	8.0	10
VIII: Financial Analysis and Budget	14	19	14	15.7	20
			TOTAL	**82**	100

REVIEWER COMMENTS

Section	Strengths	Weaknesses
III: Goals, Objectives, and Projected Outcomes	- Clearly defined benefits and integration. - Examples good for understanding scope.	
IV: Project Justification / Business Case	- B/C ratios useful (if undocumented or explained).	- Another option that should be evaluated is whether it is more cost effective to have a central operations center rather than creating duplicative capabilities in each district office. What are the advantages and disadvantages of locating "video servers, software servers, databases and archive management servers" in each district office? How will data, information and decisions be integrated among district offices? - COTS solutions described as inadequate. The system proposed will be largely a custom system (i.e. one of a kind and proprietary). This means long-time operational costs will be higher and warranty help is more likely to be problematic.
V: Technical Impact		- No explanation of why COTS systems are not appropriate.
VI: Preliminary Plan for Implementation	- The project proposal identifies stakeholders and provides an overall timeframe. - Builds on an existing/ongoing project and requirement development.	- The project team is not identified, and there is no detail regarding the type of training that will be needed.
VII: Risk Assessment	- The barriers/risks stated were those typical of a custom application. There was good thought as to how to minimize the impact of those issues.	- This is a $5.5 million project that has a significant chance for scope creep and cost overruns, based on experience in other states. An additional strategy for mitigating this risk is to implement rigorous project management methods. - The barriers/risks stated were those typical of a custom application. These risks would be lessened by a less custom system, though other risks are then introduced.
VIII: Financial Analysis and Budget	- 50% federal match. - Project broken into phases.	- The financial analysis does not provide much detail about on-going operational costs, including the additional positions necessary to support the

Section	Strengths	Weaknesses
		system. - The budget seems large, though probably correct for development of a system. - Unclear on how amounts were reached (hourly, etc). Unclear on what will be state and/or federally funded. Very difficult to estimate development costs before requirements are completed.

Agency	Project	FY2005-06	FY2006-07
University of Nebraska	University Enterprise Server Upgrade	$ 925,000	$ 925,000

SUMMARY OF REQUEST (Executive Summary from the Proposal)

The University of Nebraska operates an IBM S/390 enterprise server to support our primary administrative business applications. The Enterprise Server supports applications including the Student Information System (SIS+) for UN-L and UNO, Enterprise Resource Planning (SAP), and the PSL/Budget (PSL) systems. Tivoli Storage Manager (TSM) uses an Automatic Tape Library for desktop and server backups and restores. Each of these products/services is continuing to grow as new features and end-users are added to these systems.

The current system is an IBM Z800 with two general purpose engines and two Linux engines. The two general purpose engines are used to support the administrative applications. They provide approximately 350 million instructions per second (mips) or 60 million service units (msu's). The system frequently runs at 100% capacity on this processor and there are times when the daily work load is not completed.

The purpose of this project is to add a new enterprise server to increase the number of processor cycles available in order to complete the ever increasing work load from SIS, SAP, and TSM. Along with the new processor, there will be an increase in software licensing costs.

FUNDING SUMMARY

	FY2005-06 (Year 1)	FY2006-07 (Year 2)	FY2007-08 (Year 3)	FY2008-09 (Year 4)	Future	Total
8. Capital Expenditures						
8.1 Hardware	$ 350,000.00	$ 325,000.00	$ 300,000.00	$ 275,000.00		$ 1,250,000.00
8.2 Software	$ 575,000.00	$ 600,000.00	$ 625,000.00	$ 650,000.00		$ 2,450,000.00
TOTAL COSTS	$ 925,000.00	$ 925,000.00	$ 925,000.00	$ 925,000.00	$ -	$ 3,700,000.00
General Funds	$ 925,000.00	$ 925,000.00	$ 925,000.00	$ 925,000.00		$ 3,700,000.00
TOTAL FUNDS	$ 925,000.00	$ 925,000.00	$ 925,000.00	$ 925,000.00	$ -	$ 3,700,000.00

PROJECT SCORE

Section	Reviewer 1	Reviewer 2	Reviewer 3	**Mean**	Maximum Possible
III: Goals, Objectives, and Projected Outcomes	14	15	13	14.0	15
IV: Project Justification / Business Case	23	23	19	21.7	25
V: Technical Impact	19	20	19	19.3	20
IV: Preliminary Plan for Implementation	10	10	9	9.7	10
VII: Risk Assessment	10	9	9	9.3	10
VIII: Financial Analysis and Budget	20	19	14	17.7	20
			TOTAL	**92**	100

REVIEWER COMMENTS

Section	Strengths	Weaknesses
III: Goals, Objectives, and	- The narrative provides a comprehensive overview of the need for the project to move	- The narrative does not provide any indication of the likely life-cycle of this upgrade. That is,

Section	Strengths	Weaknesses
Projected Outcomes	forward.	growth is expected but at what rate and how quickly is additional hardware likely to be required?
IV: Project Justification / Business Case	- The narrative provides a good overview of the process whereby need was assessed and some of the alternatives.	- The narrative does not provide a very thorough overview of the options that were considered beyond doing nothing. For example, what alternative platforms were considered? - The justification would be strengthened by providing more detail. What types of transactions are impacted, and what are the consequences?
V: Technical Impact	- The narrative provides complete information to support the acquisition of the proposed hardware/software.	- The narrative raises the question of why processor upgrades are available for this model while not being an option for the current hardware.
VI: Preliminary Plan for Implementation	- The narrative is clear and concise in this section and the proposed timelines are reasonable.	
VII: Risk Assessment	- The listed risks and management of them is clear and reasonable.	
VIII: Financial Analysis and Budget	- Costs are broken out and consistent with the scope of the project.	- The timeframe (question 9, Section VI) indicates that the project will be completed by December 2005 (FY06). The budget shows 25% of the costs in FY06 and the balance spread out over the following 3 fiscal years. Are these the most current prices quoted by reputable vendors, and are they subject to much variability?

APPENDIX

AGENCY RESPONSE TO REVIEWER COMMENTS

III. We expect a great deal of changes over the next three years that will affect our growth rate. We will be re-evaluating a student information system and continuing to add features to our ERP environment. In light of these unknowns at this time, it is impossible to accurately predict what the growth rate will be. However, over the past 20-25 years, our life cycle has averaged approximately 3-4 years before we need to upgrade again. Other than a major change in platform support for our major applications, we expect that trend to continue. Based on that typical life cycle, we will need to add processor resources in the 2008-2010 timeframe.

IV. a) The University has looked at several different options/alternatives to this proposal. There are 5 different enterprise server alternatives; however, only one of them meets all of the requirements. The 5 alternatives are:

1) Upgrade the Z800 to a Z890 (low cost and very small increase in resources for initial upgrade, high cost for additional resources)
2) Upgrade the Z800 to a Z900 (high cost and good future expandability)
3) Upgrade the Z800 to a Z990 (high cost and good future expandability, including expandable support for ZLinux on S/390)
4) Remove one of our Z800 Linux processors and replace it with a general purpose processor (medium cost, medium increase in resources)
5) Add an additional Zxxx system (high cost, good expandability, limited expandability for zlinux on S/390)

Of the 5 alternatives listed above, only the 5th one will support the goal of "providing an increased level of disaster recovery".

In addition to evaluating the above upgrade options, we are continually looking at other platforms for our applications. At this time, a platform change would not be cost efficient for our environment. It would require a process of retraining staff to support the new platforms, while at the same time continuing the support for our current systems. A project to change platforms for major operating applications, such as ERP and Student Information, should not be taken lightly. The process would be a multi-year and would not provide support for our current upgrade requirements. As we move forward, we will continue to evaluate other platforms.
Other platforms that have been considered, include moving our ERP to other platforms including:

1) Microsoft Operating System running on Intel processors
2) Unix/Linux Operating System running Intel or Power processors

b) There are numerous transactions that are impacted by the restriction in processor resources. This includes:

1) Student Information Systems: There are too many different processes and features in the Student Information systems to list them all, but the primary ones impacted are:
   a. Student Registration and drop and add: Every semester we go through a process of registering or changing classes for approximately half of the 35,000 students. Delays in accomplishing this registration can delay the start of classes, students missing classes and under the right circumstances; it could even cause us to cancel some classes.
   b. Student requests. We frequently receive requests for transcripts or other pieces of student information. Some of these cases include a student applying for work and

needing their degree verification papers. In extreme cases, a delay could actually affect whether a student would be hired.

c. Perception. If the University is perceived to be having problems supporting its major applications, it could affect the whether students would choose to attend the University.

2) Enterprise Resource Planning: Again, there are too many processes to list all of them, but a sample would be:
   a. Processing payments. A delay in processing payments to vendors can cause the loss of discounts for products purchased. Although we do not have exact numbers, this could be significant.
   b. Payroll processing. All University staff expect to be paid on specific dates throughout the year. Delays in processing the payroll would require alternative methods of paying our employees.
   c. Product Upgrades. We are in the process of upgrading our ERP system. Many of the processes are taking much longer (double or more) than they did the last time we upgraded. This will severely impact the length of time to complete the whole upgrade and extends the cost of the upgrade project.

V. There really are not any processor upgrades for our current Z800. The upgrade path is to upgrade this box to a Z890, which is a model change and processor change. This upgrade path is one of the options we have evaluated. Our initial evaluation of this upgrade (the cheapest), showed a 16% increase in processor power. This small increase would be nice right now, but would not solve our problems for the future. We would require another upgrade almost immediately. To upgrade to the larger Z890 processors will include a high cost and at that point all alternatives (the 5 above) need to be included in the evaluation. This upgrade will not provide any support for improving our disaster recovery capabilities.

VIII. These costs were based on number obtained in April-June of 2004 and came from our IBM business partner and/or used equipment vendors. The University often receives additional “educational discounts” that others do not receive.

This upgrade process will need to follow all University purchasing policies, including the issuance of an RFP. In addition to the potential reduction in cost through the RFP process, we will also explore other options. This includes the possibility of purchasing used equipment (as long as it is eligible for maintenance).

Agency	Project	FY2005-06	FY2006-07
Supreme Court	Trial Court Automation Strategy	$ 125,000.00	$ 125,000.00

SUMMARY OF REQUEST (Executive Summary from the Proposal)

JUSTICE, the current trial court automation system, was designed and built in the early 1990s. Dramatic changes in technology have occurred, but JUSTICE has not been modified to include many of those advances. The Court asks for funds to retain an expert, independent consultant. The result will be a review of how well JUSTICE satisfies the needs of trial courts, and will provide guidance in deciding how long to expect to continue to use JUSTICE and when the Court should move to a new automation system using the latest technology.

FUNDING SUMMARY

	Estimated Prior Expended	FY2005-06 (Year 1)	FY2006-07 (Year 2)	FY2007-08 (Year 3)	FY2008-09 (Year 4)	Total
2. Contractual Services						
2.4 Other	$ -	$ 125,000.00	$ 125,000.00			$ 250,000.00
TOTAL COSTS	$ -	$ 125,000.00	$ 125,000.00			$ 250,000.00
General Funds		$ 125,000.00	$ 125,000.00			$ 250,000.00
TOTAL FUNDS		$ 125,000.00	$ 125,000.00			$ 250,000.00

PROJECT SCORE

Section	Reviewer 1	Reviewer 2	Reviewer 3	**Mean**	Maximum Possible
III: Goals, Objectives, and Projected Outcomes	13	14	11	12.7	15
IV: Project Justification / Business Case	14	20	20	18.0	25
V: Technical Impact	16	18	20	18.0	20
IV: Preliminary Plan for Implementation	6	7	8	7.0	10
VII: Risk Assessment	9	8	8	8.3	10
VIII: Financial Analysis and Budget	13	15	16	14.7	20
			TOTAL	**79**	100

REVIEWER COMMENTS

Section	Strengths	Weaknesses
III: Goals, Objectives, and Projected Outcomes	- The goals and projected outcomes are clear. The proposed study is an essential part of the life cycle of IT investments. A periodic evaluation of requirements, costs, best practices, and options is important. - Goals, etc. are well defined. Door to enhancing existing Justice System was left open. Development of a long range technical plan is critical to the success of the trial court system.	- The project outcomes should include a cost benefit study of the different options under consideration (modify JUSTICE, build a replacement system, buy a replacement system, or do nothing). The study should look at potential changes to processes that would improve the operations of county and district courts. - Measurement methods are too general to assure that the consultant is progressing successfully. In reviewing the Supreme Courts IT Comprehensive Plan, I could not find direct discussion about the need to take a comprehensive look at the trial court system.
IV: Project Justification / Business Case		- This section should list specific deficiencies with JUSTICE cited in the studies by the National Center for State Courts and National Center for Juvenile Justice. How significant are these

Section	Strengths	Weaknesses
		deficiencies? What are some of the major features of the ASFA as they impact courts? - While this section discussed the benefits of a "revitalized" trial court system, it did not answer the question "Why use an outside consultant?". Likewise the other solution did not discuss the use of existing court staff to perform the analysis.
V: Technical Impact	- Analysis projects of this type do not typically have an immediate technical impact, so I awarded all points.	- The impact on other systems that share data with JUSTICE should also be addressed.
VI: Preliminary Plan for Implementation	- Project sponsor was identified. At this point in the project definition stated milestones and deliverables are adequate.	- What is the projected timeline for the study? Will external stakeholders (attorneys, prosecutors, law enforcement) be involved? - There was not a statement that the stakeholders have "bought into" participating in the project.
VII: Risk Assessment	- Risks were well stated.	- Each risk could have been addressed individually with respect to mitigation.
VIII: Financial Analysis and Budget		- Will the $250,000 amount be adequate for the scope of services? Some comparison with other studies would help to determine if this amount is reasonable. Section VII indicated that the State Court Administrator would provide temporary court staff to allow participation of senior staff in the study. Is this cost included in the $250,000? - Detail was not provided to determine if costs such as travel, lodging, etc. are included in the cost projection. Detail was not provided to determine whether temporary staff costs are included. Location in budget request not identified.

Agency	Project	FY2005-06	FY2006-07
DAS - CIO	Security Audits	$ 50,000	$ 50,000

SUMMARY OF REQUEST (Executive Summary from the Proposal)

The purpose of this project is to engage a qualified firm to conduct annual security audits / assessments of the information technology infrastructure for state government. Topics of interest include network security, wireless security, application security, and security policies and procedures. The exact scope of each security assessment will focus on one or more of these areas. The Security Work Group will help set priorities and define the scope of work for each assessment.

The NITC security policies (Information Security Management Policy) provide guidance for establishing effective security programs. One requirement is to conduct regular security audits. The Network Security Policy states, "An audit of network security should be conducted annually."

The HIPAA (Health Insurance Portability and Accountability Act) proposed rule for Security and Electronic Signature Standards (45 CFR Part 142) imposes a comprehensive set of security requirements for "covered entities" that "electronically maintain or transmit any health information relating to an individual." The regulations pertaining to "Administrative Procedures to Guard Data Integrity, Confidentiality, and Availability" includes a requirement for "Security Testing." Given the breadth of HIPAA requirements and the potential penalties for violators, state government requires an independent evaluation of compliance efforts.

Guidelines pertaining to federal Bioterrorism Preparedness and Response grants require "regular independent validataion and verification of Internet security, vulnerability assessment, and security and continuity of operations…" (Critical Capacity #13, Focus Area E – Health Alert Network / Communications and Information Technology).

The National Strategy to Secure Cyberspace recommends that state and local governments "establish IT security programs … including awareness, audits, and standards."

In 2003, the Office of the CIO engaged Omnitech Corporation to conduct an external perimeter security sweep of the state's network. The initial evaluation took place during April to June of 2003. This included an automated vulnerability scan and testing of devices exposed to the Internet. In March 2004, Omnitect conducted a second vulnerability scan of the state's network.

FUNDING SUMMARY

The budget request is for $50,000 per year in cash fund authority. The source of cash fund will be the Information Technology Infrastructure Fund. Effort will be made to identify additional funding sources.

PROJECT SCORE

Section	Reviewer 1	Reviewer 2	Reviewer 3	**Mean**	Maximum Possible
III: Goals, Objectives, and Projected Outcomes	12	14	14	13.3	15
IV: Project Justification / Business Case	23	24	24	23.7	25
V: Technical Impact	18	19	19	18.7	20
IV: Preliminary Plan for Implementation	7	10	9	8.7	10
VII: Risk Assessment	8	9	9	8.7	10
VIII: Financial Analysis and Budget	17	19	20	18.7	20
			TOTAL	**92**	100

REVIEWER COMMENTS

Section	Strengths	Weaknesses
III: Goals, Objectives, and Projected Outcomes	- Very good list of goals, objectives, etc. I recommend this be expanded to include a risk-assessment of any identified vulnerabilities. We'd then not only know what might happen if something is not fixed but we'd also know the odds of it happening at all. - Clear and concise.	- While this contains a clear statement of benefit to the state agencies, isn't there also a case to be made for the "protection" and confidence of the "citizenry" who also directly and indirectly benefit?
IV: Project Justification / Business Case	- We just need to make sure that we get what we pay for in this area (i.e. security assessments)	- Item 5 - might it build a better case if you noted that this a foundation step toward building a security program? What's proposed would be more efficient than individual activities, more comprehensive and objective, and provide a better roadmap for the state.
V: Technical Impact	- This project can, conceivably, have a major technical impact on other projects if installed features and functionality prove to contain major security flaws. Accordingly, this project can have a very long arm into all aspects of information technology.	- In Item 8 - "Project will help with implementing security policies" should be "will provide strategic and tactical inputs for inclusion in framing security policies"?
VI: Preliminary Plan for Implementation	- I appreciate the thoroughness of the Preliminary Implementation Plan although I personally would like to see a more aggressive schedule.	- Item 10. Given the urgency, importance and statute issues with this project, why wait until Nov 2005 to start?
VII: Risk Assessment		- Item 14 - to get "buy-in" should some form on educational awareness and implication to the stakeholders (business and I/T) be part of risk mitigation? Point is to get them to become the partners in the process.
VIII: Financial Analysis and Budget		

Agency	Project	FY2005-06	FY2006-07
Department of Roads	Project Scheduling & Program Management System	$ 750,000	$ 50,000

SUMMARY OF REQUEST (Executive Summary from the Proposal)

To replace the existing 30 year old mainframe Project Scheduling System with new windows based Project Scheduling and Project Management System and to improve communication and overall time management, efficiency and timeliness of roadway projects to better serve the public.

FUNDING SUMMARY

"Cannot accurately determine, very early in the process we have not developed an RFI or RFP yet."

PROJECT SCORE

Section	Reviewer 1	Reviewer 2	Reviewer 3	**Mean**	Maximum Possible
III: Goals, Objectives, and Projected Outcomes	15	13	13	13.7	15
IV: Project Justification / Business Case	25	25	24	24.7	25
V: Technical Impact	10	18	16	14.7	20
IV: Preliminary Plan for Implementation	10	8	8	8.7	10
VII: Risk Assessment	10	8	8	8.7	10
VIII: Financial Analysis and Budget	10	0	13	7.7	20
			TOTAL	**78**	100

REVIEWER COMMENTS

Section	Strengths	Weaknesses
III: Goals, Objectives, and Projected Outcomes	- Well done. Good job in describing the issue and their goal to fix the aging systems	
IV: Project Justification / Business Case	- Well done, explained nicely to make their case - Shifting from mainframe environment to server/web environment.	
V: Technical Impact		- Not to the point yet to make a good assessment of this impact - Would be helpful to know what sorts of general questions/requirements would be included in the RFI/RFP to better understand what the finished product will provide.
VI: Preliminary Plan for Implementation	- Seem to have thought this through and have a good plan	
VII: Risk Assessment	- Seems like they need to do something as anything is better than the current situation	
VIII: Financial Analysis and Budget		- No budget estimates provided - No budget provided. States "cannot be accurately determined," but at leased a list of probable expense categories would have been helpful. I have no idea how much they intend to ask for.

Agency	Project	FY2005-06	FY2006-07
Supreme Court	Install Personal Computers for Courts	$294,866.00	$456,148.00

SUMMARY OF REQUEST (Executive Summary from the Proposal)

Sections 24-228, R.S.S. 2003 (District Court) and 24-514, R.R.S. 1943 (County Court) provide the statutory basis for furnishing equipment to the trial courts.

Dedicated terminals were installed for all district and county court employees as JUSTICE was deployed. Subsequently, most organizations have switched to personal computers rather than terminals. The AS/400 has evolved, dropping Office Vision, which courts used via their terminals for E-Mail, word processing, and calendars. After exploring options, the JUSTICE team agreed with IMS to use standard E-mail, Outlook, and Microsoft Word to replace Office Vision. This will require personal computers rather than terminals. Personal computers will also be required to display graphical images, including documents which have been electronically filed or scanned and stored as images. PCs will also be required to allow JUSTICE to move to a graphical interface.

Courthouses have been rewired statewide to support IP communications. At least one personal computer has been installed in every court to allow the court to be in contact via E-mail. We must now complete the replacement of terminals.

Judges and their staff members (some district judges have bailiffs, secretaries, or both) require personal computers to efficiently complete their work and take full advantage of some JUSTICE enhancements. This plan includes the cost of providing a personal computer to every trial court judge and every court employee.

Computers are leased through the Department of Administrative Services. A dedicated terminal costs $24 per month; a personal computer costs $56 per month, and a laptop personal computer costs about $85 per month. We plan to replace about one third of the remaining dedicated terminals each year during the 2005 fiscal year, which will increase costs by $121,960 including the new DAS E-Mail service. This cost increases to just over $254,000 when all terminals have been replaced.

Personal computers will be installed for each trial court judge and staff member beginning in July, 2005, and is expected to cost $117,000 with E-Mail service in fiscal 2006 and about $155,500 in the next and subsequent years.

Please note the Court will make a separate request in the expansion budget to place personal computers in courtrooms to allow courts to use a new JUSTICE enhancement to streamline the workflow of the courts and eliminate repetitive data entry. Those personal computers are not included in this request.

FUNDING SUMMARY

	Estimated Prior Expended	FY2005-06 (Year 1)	FY2006-07 (Year 2)	FY2007-08 (Year 3)	FY2008-09 (Year 4)	Total
5. Training		$ 12,000.00				$ 12,000.00
8. Capital Expenditures						
8.1 Hardware	$ 190,080.00	$ 281,708.00	$ 454,646.00	$ 454,646.00	$ 454,646.00	$ 1,835,726.00
8.4 Other		$ 1,158.00	$ 1,502.00	$ 1,502.00	$ 1,502.00	$ 5,664.00
TOTAL COSTS	$ 190,080.00	$ 294,866.00	$ 456,148.00	$ 456,148.00	$ 456,148.00	$ 1,853,390.00
Cash Funds	$ 190,080.00	$ 294,866.00	$ 456,148.00	$ 456,148.00	$ 456,148.00	$ 1,853,390.00
TOTAL FUNDS	$ 190,080.00	$ 294,866.00	$ 456,148.00	$ 456,148.00	$ 456,148.00	$ 1,853,390.00

PROJECT SCORE

Section	Reviewer 1	Reviewer 2	Reviewer 3	**Mean**	Maximum Possible
III: Goals, Objectives, and Projected Outcomes	13	13	14	13.3	15
IV: Project Justification / Business Case	24	23	24	23.7	25
V: Technical Impact	19	19	18	18.7	20
IV: Preliminary Plan for Implementation	8	8	8	8.0	10
VII: Risk Assessment	10	8	7	8.3	10
VIII: Financial Analysis and Budget	10	13	16	13.0	20
			TOTAL	**85**	100

REVIEWER COMMENTS

Section	Strengths	Weaknesses
III: Goals, Objectives, and Projected Outcomes	- Goals are valid and need to be met. This project should be considered a requirement. - Project objectives address a critical underlying infrastructure need that is prerequisite to accomplishing the business related objectives of the court.	- Not sure whether this project is listed in their Information Technology plan.
IV: Project Justification / Business Case	- All statements are valid. Old terminals are obsolete. - Technology being replaced is obsolete and unavailable. Failure to implement the project places the court at considerable future risk. Where PC's used to be a luxury, they are now a standard part of all technical infrastructures.	
V: Technical Impact	- Most popular software is planned for these systems. Implies systems will be replaced every 3 years which is common. Move to IP network is also the standard for State Networks. - The court is simply extending their technical strategy that is already in place and is proven successful.	- Doesn't list specific hardware brand, models, speed, etc. Assumption is the hardware will be the latest technology. - The project addresses one technical infrastructure layer and does not discuss or reference other critical areas such as high speed communications.
VI: Preliminary Plan for Implementation	- Looks like there is sufficient support for the project, both from the Supreme Court and from IM Services. Proposed training should be sufficient for most people, but some may need more than just computer based training. - Project sponsor is identified.	- Milestones/deliverables not defined. Preliminary implementation plan could use more definition. - Does not discuss judges acceptability of PC's on their desks and the willingness to use the future applications that they will support.
VII: Risk Assessment		- There are probably additional risks related to training and education. - Risks such as the ability of court staff dependant on technology to perform their duties because of the failure of existing "terminal equipment" and the delay in implementing future business objectives could have been elaborated on.
VIII: Financial Analysis and Budget	- Leasing provides a good mechanism to place equipment under an equipment replacement cycle.	- Although financial information is provided, it does not detail the hardware that will be purchased. Can not determine if spending is appropriate without the detail on number of devices that will be purchased. No answers to questions to 16 and 17. - Terms of lease were not discussed so could not determine whether Yrs 2 through 4 were locked in by agreement or if inflation was taken into account. Details in Executive Summary do provide additional information. Location in budget request not identified.

Agency	Project	FY2005-06	FY2006-07
Workers' Compensation Court	Court Re-engineering - Vocational Rehabilitation	$ 55,900	$ 56,290

SUMMARY OF REQUEST (Executive Summary from the Proposal)

This project will procure, develop, install, and support Court Re-Engineering enhancements in the Vocational Rehabilitation section of the court. This will be based upon the results from current internal re-engineering analysis and the recommendation from a consultant to be engaged in Fiscal Year 2006. From the current internal analysis and court priorities, the first software products to be introduced to the court will be from one or more of the Key Technologies currently identified in the internal analysis that cannot be achieved with existing resources. This project will also provide the court with programming specific contract programmer(s) to work during development phases.

FUNDING SUMMARY

	FY2005-06 (Year 1)	FY2006-07 (Year 2)	FY2007-08 (Year 3)	FY2008-09 (Year 4)	Future	Total
2. Contractual Services						
2.2 Programming	$ 50,000.00	$ 52,500.00	$ 55,125.00	$ 57,881.25	$ 60,775.31	$ 276,281.56
2.4 Other	$ 2,900.00	$ 3,190.00	$ 3,349.50	$ 3,516.98	$ 3,692.82	$ 16,649.30
8. Capital Expenditures						
8.2 Software	$ 3,000.00	$ 600.00	$ 690.00	$ 793.50	$ 912.53	$ 5,996.03
TOTAL COSTS	$ 55,900.00	$ 56,290.00	$ 59,164.50	$ 62,191.73	$ 65,380.66	$ 298,926.88
Cash Funds	$ 55,900.00	$ 56,290.00	$ 59,164.50	$ 62,191.73	$ 65,380.66	$ 298,926.88
TOTAL FUNDS	$ 55,900.00	$ 56,290.00	$ 59,164.50	$ 62,191.73	$ 65,380.66	$ 298,926.88

PROJECT SCORE

Section	Reviewer 1	Reviewer 2	Reviewer 3	**Mean**	Maximum Possible
III: Goals, Objectives, and Projected Outcomes	11	11	12	11.3	15
IV: Project Justification / Business Case	18	16	18	17.3	25
V: Technical Impact	18	13	18	16.3	20
IV: Preliminary Plan for Implementation	8	6	8	7.3	10
VII: Risk Assessment	6	6	7	6.3	10
VIII: Financial Analysis and Budget	18	12	17	15.7	20
			TOTAL	**74**	100

REVIEWER COMMENTS

Section	Strengths	Weaknesses
III: Goals, Objectives, and Projected Outcomes	- Project is tied directly and tightly to comprehensive technology plan - This proposal describes technologies to be adopted in support of the Worker's Compensation Court's strategic plan. The specific project seeks to implement document creation, storage, retrieval within the court, and the subsequent transfer of documents to participants in the case.	- Likely because this project will be based on results of internal analysis and consultant recommendations (to be completed at a later date), specific goals, outcomes, measurements and assessments are unclear.

Section	Strengths	Weaknesses
IV: Project Justification / Business Case	- Good statement of benefits - The two components of the project, enhanced e-files and message management, are necessary to meet the court's strategic plan of a paperless court.	- Assume final statement on page 4 should be "will NOT achieve" - As described in the commentary, prior requests for document management were turned down by the legislature. The proposal makes no mention of any hardware requirements necessary to support the storage of the documents created within the system. The proposal is for a system that will stand alone within the IT systems of the Worker's Compensation Court. Since alternatives exist for both storage and messaging systems, the benefit analysis should include a comparison of the cost for an internal system when compared to IMS alternatives for both storage and message management.
V: Technical Impact	- The key technologies have been tested within the operational environment of the Worker's Compensation Court. These "proof-of-concept" tests greatly reduce the possibility of failure.	- Third party word processing solution seems to be moving to more "closed" rather than open architecture. - From the dialog, the reviewer must assume that existing hardware and operating software are sufficient to meet the needs of the expanded capabilities contemplated in the proposal.
VI: Preliminary Plan for Implementation	- Project staff and key components of the project are listed.	- IT staffing on project may be too light. Internal analysis and consultant recommendations are pending, so plan contains little detail. - The proposal contemplates an in-house developed solution, but the narrative only addresses implementation of message management, and message management deliver. Key milestones leading to implementation are not discussed.
VII: Risk Assessment	- Project narrative indicates that "proof-of-concept" testing has been completed. This will substantially reduce the risk associated with the project. If the technology is secure, the management of business implementation is correctly identified as the risk.	- Project relies on results of "recommendation from a consultant to be engaged in Fiscal Year 2006". There appears to be a risk that the consultant engagement either is not funded, or is unsuccessful…either would impact this project. - Electronic document creation is listed as the first year project, while delivery of these documents is scheduled for the second year. This means that the court will continue to rely on the delivery of paper documents in the first year. Since messaging technology is available, perhaps the court should include electronic messaging in the first year of implementation.
VIII: Financial Analysis and Budget	- Acquisition, custom programming, and hosting fees are listed in the budget. Reviewers must assume that software licensing fees are correctly stated, and that programming fees are within the range of services necessary to achieve the project.	- I would expect hardware requirements in a project of this nature. This project probably needs at least part-time project management resources assigned. - This reviewer believes that electronic storage, enhanced backup procedures and hardware, and messaging components may add additional costs not reflected in the budget form.

APPENDIX

AGENCY RESPONSE TO REVIEWER COMMENTS

37-01 -- Court Re-enginnering - Vocational Rehabilitation

Reviewer(s) Comments
- Likely because this project will be based on results of internal analysis and consultant recommendations (to be completed at a later date), specific goals, outcomes, measurements and assessments are unclear.
WCC Response:
The goals are : Enhanced E-Files (document management) and Message Management (letter and document). Further elaboration was provided in Section IV: Project Justification / Business Case of the document. These objectives were set from analysis that has been completed and will be further explored by an outside consultant. This re-engineering initiative has been in process for several years. There are over two dozen documents that are available for review. Two major documents are Vocational Rehabilitation Counselor Certification Notification and Assignment and Vocational Rehabilitation Case Management System.

Reviewer(s) Comments
- Assume final statement on page 4 should be "will NOT achieve"
WCC Response:
Correct**.** The sentence should read "By doing nothing the court will **NOT** achieve its goal of being paperless." The CIO will correct before submission to the NITC.

Reviewer(s) Comments
- As described in the commentary, prior requests for document management were turned down by the legislature. The proposal makes no mention of any hardware requirements necessary to support the storage of the documents created within the system. The proposal is for a system that will stand alone within the IT systems of the Worker's Compensation Court. Since alternatives exist for both storage and messaging systems, the benefit analysis should include a comparison of the cost for an internal system when compared to
IMS alternatives for both storage and message management.
WCC Response:
The court had only submitted on project request for a document management system. The court currently has excess storage capacity in its current hardware to accommodate the increase in storage needs to store the digital objects for several years into the future. The court has an equipment replacement cycle in place in its continuation budget and assumes that there will be the normal increase in capacity at current levels of cost.

Reviewer(s) Comments
- Third party word processing solution seems to be moving to more "closed" rather than open architecture.
WCC Response:
The statement is correct. The third party word processing components are specific to the Borland Delphi development environment. There is a continual debate as to whether closed or opened architectures is the best. Each has its pros and cons. Our current testing shows that this is the appropriate solution for our development environment.

Reviewer(s) Comments
- From the dialog, the reviewer must assume that existing hardware and operating software are sufficient to meet the needs of the expanded capabilities contemplated in the proposal.
WCC Response:
That is correct and is why they are not included in the request.

Reviewer(s) Comments
- IT staffing on project may be too light.
WCC Response:
This section should have included a resource line for contract programming. The Funding Summary does include dollars for such. In addition, a reading of our Comprehensive IT Plan does explain that the majority of our IT Staff is development resource. We plan and schedule our projects within the constraints of those existing resources.

Reviewer(s) Comments
-Internal analysis and consultant recommendations are pending, so plan contains little detail. Key milestones leading to implementation are not discussed.
WCC Response:
The two major milestones are defined. Any further project detail is speculative at this point and only definable as the project progresses.

Reviewer(s) Comments
- The proposal contemplates an in-house developed solution, but the narrative only addresses implementation of message management, and message management deliver.
WCC Response:
Do not fully understand this comment. The court has structured its technology environment as such that it normally builds custom solutions that meet its needs and purchases those items that meet can be integrated into those custom solutions. There are specific times where purchased solutions make sense.

Reviewer(s) Comments
- Project relies on results of "recommendation from a consultant to be engaged in Fiscal Year 2006". There appears to be a risk that the consultant engagement either is not funded, or is unsuccessful…either would impact this project.
WCC Response:
The consultant is being funding out of existing continuation dollars. The court has tentatively identified several candidate consultants who already have a proven track record in the work that is being requested.

Reviewer(s) Comments
- Electronic document creation is listed as the first year project, while delivery of these documents is scheduled for the second year. This means that the court will continue to rely on the delivery of paper documents in the first year. Since messaging technology is available, perhaps the court should include electronic messaging in the first year of implementation.
WCC Response:
Paper delivery will always need to be an option and it incurs the least risk for the initial deliverable. When the project begins, all current assumptions and preliminary plans will be re-evaluated based upon the changes in the environment.
After the proposal was completed and submitted, technology available through IMServices has come on-line. The court is currently working with IMServices to define and implement the first phase of a concept called MyFiles.From.NE.GOV through the Enterprise Directory / State Portal. Phase One of MyFiles.From.NE.GOV will allow for manual upload and delivery of digital objects in secured way. Phase Two will include electronic acknowledgement of receipt and integration with other computer systems through web services to such systems as the courts planned message management system. The court is already into eFax delivery and plans to incorporate that into system.

Reviewer(s) Comments
- I would expect hardware requirements in a project of this nature. This reviewer believes that electronic storage, enhanced backup procedures and hardware, and

messaging components may add additional costs not reflected in the budget form.

WCC Response:

As stated earlier in this response, the court has adequate capacity for the next several years. The court has built into system replacement dollars for backup replacement systems. The court has already begun discussions with Department of Communications - Server Support on the possible use of the centralized "gator" backup system if enhancements can be made to the system that will accommodate our needs, specifically in the area of records management.

Agency	Project	FY2005-06	FY2006-07
Workers' Compensation Court	Court Re-engineering - Coverage and Claims	$ 58,250	$ 6,508

SUMMARY OF REQUEST (Executive Summary from the Proposal)

This project will procure, develop, install, and support Court Re-Engineering enhancements in the Coverage and Claims section of the court. This will be based upon the results from current internal re-engineering analysis and the recommendation from a consultant to be engaged in Fiscal Year 2006. From the current internal analysis and court priorities, the first hardware / software products to be introduced to the court will be from one or more of the Key Technologies currently identified in the internal analysis that cannot be achieved with existing resources.

FUNDING SUMMARY

	FY2005-06 (Year 1)	FY2006-07 (Year 2)	FY2007-08 (Year 3)	FY2008-09 (Year 4)	Future	Total
7. Other Operating Costs	$4,250	$ 4,462.50	$ 4,685.63	$ 5,165.90	$ 5,424.20	$ 23,988.22
8. Capital Expenditures						
8.1 Hardware	$51,500	$ 1,545.00	$ 1,622.25	$ 1,703.36	$ 59,617.69	$ 115,988.30
8.2 Software	$2,500	$ 500.00	$ 525.00	$ 578.81	$ 607.75	$ 4,711.56
TOTAL COSTS	$ 58,250.00	$ 6,507.50	$ 6,832.88	$ 7,448.07	$ 65,649.64	$ 144,688.08
Cash Funds	$ 58,250.00	$ 6,507.50	$ 6,832.88	$ 7,448.07	$ 65,649.64	$ 144,688.08
TOTAL FUNDS	$ 58,250.00	$ 6,507.50	$ 6,832.88	$ 7,448.07	$ 65,649.64	$ 144,688.08

PROJECT SCORE

Section	Reviewer 1	Reviewer 2	Reviewer 3	**Mean**	Maximum Possible
III: Goals, Objectives, and Projected Outcomes	14	11	11	12.0	15
IV: Project Justification / Business Case	23	18	15	18.7	25
V: Technical Impact	18	13	13	14.7	20
IV: Preliminary Plan for Implementation	8	5	5	6.0	10
VII: Risk Assessment	7	6	6	6.3	10
VIII: Financial Analysis and Budget	17	13	13	14.3	20
			TOTAL	**72**	100

REVIEWER COMMENTS

Section	Strengths	Weaknesses
III: Goals, Objectives, and Projected Outcomes	- Very strong outline of goals, beneficiaries, and method to verify that the project outcomes have been achieved. - Project is tied directly and tightly to comprehensive technology plan - Project describes two additional components of the Worker's Compensation Court strategic plan.	- Likely because this project will be based on results of internal analysis and consultant recommendations (to be completed at a later date), specific goals, outcomes, measurements and assessments are unclear. - The project contemplates an in-house solution that may duplicate services already provided within DAS. The court should consider outsourcing print management to the DAS print shop. Message management should be developed in conjunction with the messaging systems contemplated in the Vocational Rehabilitation proposal.
IV: Project	- Good case as to why things are not working as	- Not clear if consideration has been given to

Section	Strengths	Weaknesses
Justification / Business Case	they are. Not sure there is a strong business case on what direction this is headed. No return on investment analysis. - This project contemplates automating paper correspondence. A reviewer must assume that this correspondence is currently being handled by staff. Justification, then, would be to allow staff to process either additional paper, or reduce staff time devoted to paper processing.	using centralized (Print Shop) printing/inserting service alternative - The Worker's Compensation Court plans to implement electronic messaging as a primary component of the court's business. While the court produces paper today, one must assume that the use of paper will decline over time as electronic messaging is accepted by filers. Since paper cannot be totally eliminated, improving staff ability to process paper communications is a proper goal. However, this request has the court purchasing equipment and operating that equipment within the court. As electronic messaging becomes accepted, the demand for this equipment should diminish. The court should contemplate outsourcing this service rather than purchasing equipment to provide it.
V: Technical Impact	- Good to hear the desire to work with IMS and DOC on compatibility. Also need to include other agencies that may have opportunities to partner in this venture. - Both telephonic response and enhanced print and mail management can function to make staff more efficient.	- Unclear how this interfaces with existing technology - Future costs of this technology is not clear. Staff resources are devoted to care and maintenance of print and mail management. Descriptions of telephonic response technology is vague. There is insufficient cost/benefit detail to allow this reviewer to make a recommendation on the technology.
VI: Preliminary Plan for Implementation		- Would have like specific information on where and how the staff will be training on the Telephonic Response. Voice is a specialized technology that the agency may need some assistance with. - Internal analysis and consultant recommendations are pending, so plan contains little detail. - Milestone and deliverables are not defined beyond the technology to be implemented. Given the priority of contact management in 2006, with print management in 2007, one must conclude that telephonic response represents the greatest benefit to court. The current mail functions would continue. By 2007, the court may find electronic filing may negate the need for mail management equipment.
VII: Risk Assessment	- The proposal identifies potential risks for the projects.	- Other risks include items such as complexity of system outpaces staff knowledge, technology changes, and costs of systems not being able to be sustained. - Project relies on results of "recommendation from a consultant to be engaged in Fiscal Year 2006". There appears to be a risk that the consultant engagement either is not funded, or is unsuccessful…either would impact this project. - Given known volumes of paper production, one would assume that the demands on the system are predictable. The risk assessment leaves open the possibility of future costs to support or modify the system.
VIII: Financial Analysis and Budget	- Costs associated with the project are reasonable.	- Costs seem low, project likely would require interfaces or, at minimum, changes to legacy systems. - Hardware costs are listed one year before project is scheduled. No personnel or programming costs are associated with the project. This would presume that the solution is turnkey. Hardware purchase may duplicate services already available.

APPENDIX

AGENCY RESPONSE TO REVIEWER COMMENTS

37-02 -- Court Re-enginnering - Coverage and Claims

Reviewer(s) Comments
- (Strength) Very strong outline of goals, beneficiaries, and method to verify that the project outcomes have been achieved. - Project is tied directly and tightly to comprehensive technology plan - Project describes two additional components of the Worker's Compensation Court strategic plan.
- (Weakness) Likely because this project will be based on results of internal analysis and consultant recommendations (to be completed at a later date), specific goals, outcomes, measurements and assessments are unclear.

WCC Response:
One reviewer draws one conclusion and second draws another conclusion.
Nine Analysis documents are available that contain detailed problem and objective definitions. They are titled: Coverage and Claims Re-engineering - IME (Stage 1); Automation of LSS Monitoring; Compliance Case System; Insurance Coverage Enforcement System; Automated Feed of Information from the Department of Insurance system; IME (Stage 2); Automation of Awards Monitoring; Self Insurance; and Managed Care System. These documents are available for review.

Reviewer(s) Comments
- The project contemplates an in-house solution that may duplicate services already provided within DAS. The court should consider outsourcing print management to the DAS print shop.

WCC Response:
At the point of the proposal preparation and submission, DAS services were not reviewed as an option. This was because the Proposal Preparer was not aware of the services that the DAS Print Shop currently provides, so the suggestion is appreciated. The current cost projections are based upon the scenario of an housing the hardware within the agency and represents a worst cost scenario. At the time the project commences and requirements are finalized, the court will consider DAS as an option. The appropriation is still needed if the in-house alternative is the best solution based upon the needs.

Reviewer(s) Comments
- Message management should be developed in conjunction with the messaging systems contemplated in the Vocational Rehabilitation proposal.

WCC Response:
Each of the courts "key technologies" will be introduced in one project and then leveraged in other projects. Message Management is part of the Vocational Rehabilitation proposal and will applied to other business areas. Likewise, Enhanced Print and Mail Management and Contact Management (Telephonic Response) will be initiated in Coverage and Claims and then applied to other business areas when deemed beneficial.

Reviewer(s) Comments
- The Worker's Compensation Court plans to implement electronic messaging as a primary component of the court's business. While the court produces paper today, one must assume that the use of paper will decline over time as electronic messaging is accepted by filers. Since paper cannot be totally eliminated, improving staff ability to process paper communications is a proper goal. However, this request has the court purchasing equipment and operating that equipment within the court. As electronic messaging becomes accepted, the demand for this equipment should diminish. The court should contemplate outsourcing this service rather than purchasing equipment to provide it.
- Given the priority of contact management in 2006, with print management in 2007, one must conclude that telephonic response represents the greatest benefit to court. The current mail functions would

continue. By 2007, the court may find electronic filing may negate the need for mail management equipment.
WCC Response:
The reviewer is drawing the same conclusions for out-going and incoming communications. The Proof of Coverage system will always be heavily dependant on using paper for initial out-going communications about a coverage problem because the primary contact is the employer and matching information will not contain the necessary "electronic addresses". The court hopes to facilitate next-step incoming and outgoing communications by offering the employers the use of telephonic and other electronic means of communications as the court brings them on-line.

Reviewer(s) Comments
- Unclear how this interfaces with existing technology
WCC Response:
Both printer and telephonic technology will be integrated into new applications developed by the court using the Borland Delphi development environment.

Reviewer(s) Comments
- Future costs of this technology is not clear.
WCC Response:
The Financial Analysis and Budget Report lays out on-going costs estimates to support the systems in a maintenance mode and to place the systems on an equipment replacement cycle.

Reviewer(s) Comments
- Descriptions of telephonic response technology is vague.
WCC Response:
Telephonic response technology will conceptually function as follows. An employer receiving a communications from the court will receive a phone number and unique key code to call into an automated response system. If the question in the communications is something like "Do you currently have Workers' Compensation Insurance?" and the answer is "Yes", then the employer will be able to using in the key code make a selection to answer "Yes".

Reviewer(s) Comments
- There is insufficient cost/benefit detail to allow this reviewer to make a recommendation on the technology.
WCC Response:
As stated in Section IV: Project Justification / Business Case, "The goal is to improve service as workload increases without increasing staff." Financial projects are outlined in Section VIII: Financial Analysis and Budget. The Preparer is unsure what level of detail is required for the Reviewer to make a recommendation.

Reviewer(s) Comments
- Costs associated with the project are reasonable. - Costs seem low.
WCC Response:
Two separate conclusions by different reviewers.

Reviewer(s) Comments
- Hardware costs are listed one year before project is scheduled.
WCC Response:
Fiscal Year 2006 is the projected year to procure hardware/software, development and implement Telephonic Response. It is also the goal to procure enhanced print and mail management hardware/software at the end of that fiscal year so that testing, developing, and implementation can occur in the next Fiscal Year.

Reviewer(s) Comments
- No personnel or programming costs are associated with the project.

WCC Response:
A reading of our Comprehensive IT Plan does explain that the majority of our IT Staff is development resource. We plan and schedule our projects within the constraints of those existing resources.