

**NEBRASKA INFORMATION TECHNOLOGY COMMISSION**

Project Proposal - Summary Sheet  
Biennial Budget FY2005-2007 (2006 Deficit Budget Requests)

Project #69-01  
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**Project # 69-01**

Agency	Project	FY2005-06	FY2006-07
Nebraska Arts Council	E-Grant System Re-Write		\$108,000

**SUMMARY OF REQUEST (Executive Summary from the Proposal)**

In 2003, the Nebraska Arts Council (NAC) contracted with Nebraska On-Line to produce an e-grant system designed to eliminate the paper grant application. Awarding grants to Nebraska nonprofit organizations for cultural activities is a major function of the NAC, and approximately 70% of the agency's budget, which includes administrative costs, is devoted to this function. The NAC processes between 300-400 grants annually and in FY04, allocated \$1.3 million for support of cultural activities statewide.

The e-grant system was developed at a cost of \$25,000 with an annual \$5,000 maintenance fee. It became operational in February, 2004. Since its inception, the system has been plagued by bugs. Unfortunately for the NAC, Nebraska On-Line (now Nebraska.gov) became increasingly unable to address basic repair issues. During the hiatus until new management took control in October, the e-grant system came close to being unusable, therefore, the NAC began assessing options to repair or replace the system.

A recent assessment by the new management team at Nebraska.gov has concluded that a total re-write of the system will be necessary. The system was apparently built without a style sheet, code map outline, or other administrative documentation, which makes efficient repair and maintenance difficult, and a review of the code base has determined that the system is inherently instable, thus when one set of bugs is repaired, others will take their place. The veracity of this assessment has already been demonstrated – new bugs appear weekly as other problems are repaired. The cost of undertaking this project is estimated at \$108,000. An email from Nebraska.gov, outlining the cost estimates and justifications is also supplied as an attachment.

**FUNDING SUMMARY**

	Estimated Prior Expended	Request for FY2005-06 (Year 1)	Request for FY2006-07 (Year 2)
1. Personnel Costs			
2. Contractual Services			
2.1 Design			
2.2 Programming			\$ 36,000.00
2.3 Project Management			\$ 72,000.00
2.4 Other			
3. Supplies and Materials			
4. Telecommunications			
5. Training			
6. Travel			
7. Other Operating Costs			
8. Capital Expenditures			
8.1 Hardware			
8.2 Software			
8.3 Network			
8.4 Other			
<b>TOTAL COSTS</b>	\$ -	\$ -	\$ 108,000.00
General Funds			\$ 108,000.00
Cash Funds			
Federal Funds			
Revolving Funds			
Other Funds			
<b>TOTAL FUNDS</b>	\$ -	\$ -	\$ 108,000.00

**PROJECT SCORE**

Section	Reviewer 1	Reviewer 2	Reviewer 3	Mean	Maximum Possible
III: Goals, Objectives, and Projected Outcomes	10	15	14	13.0	15
IV: Project Justification / Business Case	16	19	23	19.3	25
V: Technical Impact	8	10	19	12.3	20
IV: Preliminary Plan for Implementation	6	6	10	7.3	10
VII: Risk Assessment	6	5	5	5.3	10
VIII: Financial Analysis and Budget	14	10	10	11.3	20
<b>TOTAL</b>				<b>69</b>	<b>100</b>

**REVIEWER COMMENTS**

Section	Strengths	Weaknesses
<p>III: Goals, Objectives, and Projected Outcomes</p>	<ul style="list-style-type: none"> <li>- There is good justification for moving off or away from the current application. Relationship to strategic planning process seems adequate.</li> <li>- Good measurement approach. The grant system closely ties to the mission and operations of the agency. The error rate (100%!) on the existing system is completely unacceptable and indicates an urgent need for change.</li> <li>- The author clearly outlines the benefits associated with providing a functioning egrant system. Further, in the context of the entire proposal the author provides a solid rationale for addressing problems with the current system rather than starting over with a new vendor. The rationale is user-centric suggesting an understanding of the needs of constituents.</li> </ul>	<ul style="list-style-type: none"> <li>- No requirements doc (i.e. "Phase One"). As such, it is challenging to state the goals, objectives, etc. of a new system. This is true concerning this proposal: it lacks details, requirements, etc. Subsequently, cost estimates are questionable.</li> <li>- The primary weakness is not the fault of the author or NAC but, rather, the difficulties associated with knowing for certain whether the current vendor, even under new management, can truly bring the system on-line for the stated cost.</li> </ul>
<p>IV: Project Justification / Business Case</p>	<ul style="list-style-type: none"> <li>- Information is included about expected productivity improvements.</li> <li>- That author does a fine job of outlining the current problem and provides supporting documentation from the existing vendor. It is clear from all accounts that the current from a process perspective is very valuable, however, the operational inadequacies have reduced its effectiveness</li> </ul>	<ul style="list-style-type: none"> <li>- Project should be justified in terms of value to the organization in addition to any time/cost avoidance. There are organizations across the country that are similar to NAC and yet there is no mention of reviewing these organizations' solutions.</li> <li>- The total time to be saved by the Grants Manager (40%) is clear but it is unclear how many program managers will each save 20%. These figures could be used to assign a monetary value for the time the current system wastes. Would the administrative cost ratio improve as a result of the new system? More details about the other systems that were examined would strengthen this section. Did the NAC talk to the State information technology organization?</li> <li>- Through no apparent fault of the author it is not clear whether the course of action that is being suggested will ultimately be successful. This is due to the reviewer's uncertainty as to the preparedness of the vendor to bring the system on-line for the stated cost. It is clear from the account that serious deficiencies in the vendor's project management have plagued this project.</li> </ul>
<p>V: Technical Impact</p>	<ul style="list-style-type: none"> <li>- The obvious strength of the proposal is that it looks to build atop the "mind share" that has been garnered despite a seriously flawed system. The delivery mechanism is in line with industry standards and consistent with NITC standards and guidelines.</li> </ul>	<ul style="list-style-type: none"> <li>- Without hard requirements, a re-write, unto itself, will not guarantee reliability, security or scalability. Testing to ensure these objectives are met should be performed as part of the requirements.</li> <li>- Not much information is provided. Will the security model be brought to NITC standards for web applications? The technology is not really addressed.</li> <li>- As stated previously this reviewer has serious concerns about the suitability of the current vendor who is expected to fix a very poorly designed system.</li> </ul>

Section	Strengths	Weaknesses
VI: Preliminary Plan for Implementation	<ul style="list-style-type: none"> <li>- The right people from NAC appear to be involved.</li> <li>- Essentially, this is not a new project. The mission and intent of the project is clear. Milestones are clearly mapped, however, it is not clear that the selected vendor can deliver.</li> </ul>	<ul style="list-style-type: none"> <li>- Requirements document deliverable missing. Preliminary Design Review missing. Critical Design Review missing. Acceptance Test development and performance missing. Risk assessment and penetration testing missing.</li> <li>- More attention needs to be given to a testing strategy and to how the new system will be implemented. Will conversion of existing data be attempted? The current system has required much ongoing support from both NOL and the NAC. More attention should be given to future support expectations and requirements.</li> <li>- The selected vendor has shown an inability to deliver on promises. Designing a system for 25,000 and then spending 3,000 of development time only to now suggest that the current system can be rewritten in 960 hours. That would tend to suggest that the current system could have been written 3 times over already.</li> </ul>
VII: Risk Assessment	<ul style="list-style-type: none"> <li>- The risks and mitigation strategies have at least been considered.</li> <li>- The most significant barrier is whether the proposed re-write can be accomplished and brought in on time and budget. Given the history this is a dubious proposition. This ends up reflecting poorly on the NAC and author of this document inasmuch as their stated plan is to continue to trust the vendor. It is unfortunate that this is the best choice.</li> </ul>	<ul style="list-style-type: none"> <li>- No mention of risk of development without a comprehensive requirements document, test plan. No mention of risk with going with current vendor (or alternative vendor.)</li> <li>- It seems to me a major risk is with the choice of NOL to rewrite the system. The first attempt failed miserably. The new NOL GM himself suggests the NAC "look at any potential cost effective alternatives" and says they "are not comfortable modifying the system" and also says he is "concerned with our ability to apply the level of resource allocation that will be required". These are big red flags that should not be ignored.</li> <li>- The current vendor has shown itself to be unreliable and incapable of addressing the needs of the NAC. Despite this history, under new management the current vendor would appear to be the best choice. Additionally, the supporting document from the vendor could be read to suggest that the NAC seriously look at alternatives due to the vendor's constrained resources.</li> </ul>
VIII: Financial Analysis and Budget	<ul style="list-style-type: none"> <li>- The values listed for the project management, development time and associated costs are not unreasonable. The issue is one of credibility given that the vendor indicates they are prepared to do in 1/2 the total time what they have been unsuccessful doing to date. It is unfortunate this is the best choice</li> </ul>	<ul style="list-style-type: none"> <li>- Without a requirements document, estimating the development costs are difficult to impossible.</li> <li>- There is only one estimate from someone who has included numerous caveats, including that the hourly rate could change and the number of hours required could change. While estimates are just that (estimates and not guarantees) evidence of detailed analysis to support the estimate is not present.</li> <li>- The reviewer, based on the evidence provided, has no confidence that the selected vendor can deliver. Given that there was little or no information provided as to the suitability of other solutions/vendors a true analysis of this solution can't be proffered.</li> </ul>

**TECHNICAL PANEL COMMENTS**

- The Technical Panel agrees with the findings of the reviewers.
- The agency should be provided the opportunity to respond to the review.

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**Project # 13-01**

Agency	Project	FY2005-06	FY2006-07
Department of Education	Statewide K-12 Technology Infrastructure Upgrade to Flexible Use IP-based Network		\$3,761,600

**SUMMARY OF REQUEST (Executive Summary from the Proposal)**

Description:

Many of the schools are connected to their Distance Learning Consortium of schools with very large DS3 (45 megabit, high bandwidth) circuits that are dedicated solely to two-way audio and video use within the Consortium. Practically all schools have a dedicated T1 or 1.5 megabit circuit along side for Internet access. The proposed IP-based upgrade would not only update the obsolete equipment (switch/routers and co-decs) but would allow flexible use of the DS3 (high bandwidth) circuits for two-way audio and video use, increased bandwidth for internet use, and expansion for future technology applications. This upgrade would eliminate the need for the separate dedicated T1 circuit for Internet use and enable statewide connectivity between and among schools as a result of connecting to Network Nebraska.

Justification:

The Distance Learning equipment in many of the high schools is obsolete and no longer made or supported by the manufacturers. In addition, contracts between Nebraska schools and Telecommunications Service Providers are progressively nearing expiration of 10-year contract terms. The earliest Distance Learning contracts are due to expire in 2006 with other schools' contracts progressively expiring through 2012. There is a need to upgrade equipment and renew contracts with Telecommunications Providers.

On the educational side, the upgrade would enable schools connecting with Network Nebraska to have statewide connectivity allowing increased opportunities for distance learning course sharing as opposed to the current limitation of course sharing between schools in a regional area consortium. On the Internet side, the upgrade would enable schools connecting with Network Nebraska to have much needed additional bandwidth for access to enhanced learning resources (i.e. streaming digital media, etc.) as well as additional advanced connectivity services such as Internet 2.

**FUNDING SUMMARY**

<b>Estimated Costs for Implementation of Distance Learning Enhancement (First Phase of 3 yr Plan)</b>			
<i>Italics indicates possible LB 689 funding or less than the highest priority for funding. Underlined is highest priority.</i>			
<b>Schools in ESUs 13,15,16 area</b>		<b>67 sites</b>	
<b>Item</b>	<b>FY06 (ends 6-30-06)</b>	<b>FY07 (7-1-06/6-30-07)</b>	<b>Comment</b>
<b>1. High Capacity, scalable infrastructure</b>			
Network Nebraska Backbone Transport	\$0	<u>\$540,000</u>	*Backbone transport from Scottsbluff to Lincoln
<u>Regional Aggregation Circuit Costs</u>	\$0	<u>\$125,000</u>	*OC-3s or OC-12s within Scottsbluff, North Platte
<u>Buydown of Local Circuits (\$25K/site)</u>		<u>\$1,675,000</u>	Contracts for regions
<b>2. IP-based network for interconnection</b>			
<u>Regional Aggregation Routers</u>		<u>\$639,600</u>	**Regional Aggregation Routers for Scottsbluff, North Platte
<u>Regional Network Operations Centers</u>		<u>\$80,000</u>	*RNOC facilities at Scottsbluff, North Platte
<u>Building switch/routers</u>		<u>\$489,100</u>	<u>Switch/routers at 67 sites</u>
<u>Scheduling Software</u>		<u>\$702,000</u>	**K-12 portion of statewide scheduling software

<b>3. Upgrades of telecom equipment</b>			
<i>Building Codec Replacement</i>		\$1,206,000	<i>CoDec upgrades for 67 sites</i>
<i>LAN Upgrades and video classroom eqpt</i>		\$1,067,000	<i>LAN upgrades and video classroom eqpt as needed</i>
<b>High Priority State Investments sub total</b>	<b>\$0</b>	<b>\$3,761,600</b>	
<b>Possible LB 689 funding sub total</b>	<b>\$0</b>	<b>\$2,762,100</b>	
<b>Total Maximum Project Cost</b>	<b>\$0</b>	<b>\$6,523,700</b>	
			*Ongoing costs
			**Includes some ongoing costs

**PROJECT SCORE**

Section	Reviewer 1	Reviewer 2	Reviewer 3	Mean	Maximum Possible
III: Goals, Objectives, and Projected Outcomes	14	14	14	14.0	15
IV: Project Justification / Business Case	24	24	24	24.0	25
V: Technical Impact	18	18	17	17.7	20
IV: Preliminary Plan for Implementation	8	8	9	8.3	10
VII: Risk Assessment	8	8	10	8.7	10
VIII: Financial Analysis and Budget	18	17	18	17.7	20
<b>TOTAL</b>				<b>90</b>	100

**REVIEWER COMMENTS**

Section	Strengths	Weaknesses
III: Goals, Objectives, and Projected Outcomes	<ul style="list-style-type: none"> <li>- The goals of this request are perfectly aligned with those priorities expressed by the NITC.</li> <li>- Well justified.</li> <li>- Clear description of the goals, beneficiaries and outcomes.</li> </ul>	<ul style="list-style-type: none"> <li>- Seven year assumption on hardware may be stretching it.</li> <li>How will this mesh with upgrade for next group of schools running out of contract time?</li> <li>- Measurement and assessment is a little vague</li> </ul>
IV: Project Justification / Business Case	<ul style="list-style-type: none"> <li>- Completely in line with stated goals of all agencies and commissions connected with distance education. Plenty of benefits noted, and there are likely to be some not thought of yet.</li> <li>- Well justified.</li> <li>- Clear history and benefits of the project.</li> </ul>	<ul style="list-style-type: none"> <li>-\$55M cost estimates have dropped to the \$30M range. Bidding will drop it more.</li> <li>"Lower network costs" assumed as benefit. This seems unlikely.</li> <li>- How much is the estimated savings this network will have?</li> </ul>
V: Technical Impact	<ul style="list-style-type: none"> <li>- Interoperability and conformity to established standards.</li> <li>- Desire to adhere to current standards</li> </ul>	<ul style="list-style-type: none"> <li>- If this is an outright purchase of hardware, who will be responsible for replacing failed equipment after warranty? Purchase of hardware not eligible for erate. Document doesn't specify purchase of hardware or lease with connectivity.</li> <li>- A little vague in some of the answers.</li> </ul>
VI: Preliminary Plan for Implementation	<ul style="list-style-type: none"> <li>- Beginning with schools whose contracts are running out. By not trying to do the entire state at once the actual roll out is more likely to occur in the time allotted.</li> <li>- Very clear on your plans.</li> </ul>	<ul style="list-style-type: none"> <li>- Service contracts on gear implies purchase instead of lease. Erate is in question. Nebraska Universal Service Fund listed as possible source of funds. So far the PSC has been reluctant to commit.</li> <li>- Lacks details of ongoing support requirements</li> <li>- More detail on training and support requirements.</li> </ul>

Section	Strengths	Weaknesses
VII: Risk Assessment	- Realistic list of risks.	- Oversight of implementation to be by NITC and NDE. NITC is not an operational agency. CAP/Network Nebraska members (DOC, NU and NET) are more appropriate implementation partners. NITC role would likely be in policy advisory. - Seems like we only scratched the surface on this. The barriers are way more significant than the wording portrays.
VIII: Financial Analysis and Budget	- Budget accounts for all areas for consideration as reflected in the proposal text. - Good comments explaining line items. - Costs look accurate and well thought out.	- No new FTE asked for. Once system is implemented, someone will have to oversee ongoing operation and coordination. Also, would like to have seen what the estimate would be for the local schools to pay upfront/ongoing as local match. - Maybe break out the one-time costs compared to the on-going costs.

**TECHNICAL PANEL COMMENTS**

- The Technical Panel agrees with the findings of the reviewers.
- The Technical Panel finds that:
  - The project is technically feasible.
  - The proposed technology is appropriate for the project.
  - The technical elements can be accomplished within the proposed time frame and budget.
- The agency should be provided the opportunity to respond to the review.