# IT Project Proposal Report - Detail
## Agency: 047 - EDUCATIONAL TELECOMMUNICATIONS COMM
### Budget Cycle: 2013-2015 Biennium          Version: AF - AGENCY FINAL REQUEST

## IT Project : Media Services Technology Project

### General Section

| | | | | | |
|---|---|---|---|---|---|
| **Contact Name :** | Michael Winkle | **E-mail :** | mwinkle@netad.unl.edu | **Agency Priority :** | 4 |
| **Address :** | 1800 North 33rd St | **Telephone :** | 402-472-3611 | **NITC Priority :** | |
| **City :** | Lincoln | | | **NITC Score :** | |
| **State :** | Nebraska | **Zip :** | 68503 | | |

### Expenditures

| IT Project Costs | Total | Prior Exp | FY12 Appr/Reappr | FY14 Request | FY15 Request | Future Add |
|---|---|---|---|---|---|---|
| **Contractual Services** | | | | | | |
| Design | 20,000 | 0 | 0 | 20,000 | 0 | 0 |
| Programming | 25,000 | 0 | 0 | 25,000 | 0 | 0 |
| Project Management | 10,000 | 0 | 0 | 10,000 | 0 | 0 |
| Data Conversion | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 |
| **Subtotal Contractual Services** | 55,000 | 0 | 0 | 55,000 | 0 | 0 |
| **Telecommunications** | | | | | | |
| Data | 0 | 0 | 0 | 0 | 0 | 0 |
| Video | 0 | 0 | 0 | 0 | 0 | 0 |
| Voice | 0 | 0 | 0 | 0 | 0 | 0 |
| Wireless | 0 | 0 | 0 | 0 | 0 | 0 |
| **Subtotal Telecommunications** | 0 | 0 | 0 | 0 | 0 | 0 |
| **Training** | | | | | | |
| Technical Staff | 15,000 | 0 | 0 | 15,000 | 0 | 0 |
| End-user Staff | 0 | 0 | 0 | 0 | 0 | 0 |
| **Subtotal Training** | 15,000 | 0 | 0 | 15,000 | 0 | 0 |

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## Expenditures

| IT Project Costs | Total | Prior Exp | FY12 Appr/Reappr | FY14 Request | FY15 Request | Future Add |
|---|---|---|---|---|---|---|
| **Other Operating Costs** | | | | | | |
| Personnnel Cost | 0 | 0 | 0 | 0 | 0 | 0 |
| Supplies & Materials | 0 | 0 | 0 | 0 | 0 | 0 |
| Travel | 5,000 | 0 | 0 | 5,000 | 0 | 0 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 |
| **Subtotal Other Operating Costs** | 5,000 | 0 | 0 | 5,000 | 0 | 0 |
| **Capital Expenditures** | | | | | | |
| Hardware | 145,000 | 0 | 0 | 70,000 | 50,000 | 25,000 |
| Software | 55,000 | 0 | 0 | 30,000 | 25,000 | 0 |
| Network | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 |
| **Subtotal Capital Expenditures** | 200,000 | 0 | 0 | 100,000 | 75,000 | 25,000 |
| **TOTAL PROJECT COST** | 275,000 | 0 | 0 | 175,000 | 75,000 | 25,000 |

## Funding

| Fund Type | Total | Prior Exp | FY12 Appr/Reappr | FY14 Request | FY15 Request | Future Add |
|---|---|---|---|---|---|---|
| General Fund | 275,000 | 0 | 0 | 175,000 | 75,000 | 25,000 |
| Cash Fund | 0 | 0 | 0 | 0 | 0 | 0 |
| Federal Fund | 0 | 0 | 0 | 0 | 0 | 0 |
| Revolving Fund | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Fund | 0 | 0 | 0 | 0 | 0 | 0 |
| **TOTAL FUNDING** | **275,000** | **0** | **0** | **175,000** | **75,000** | **25,000** |
| **VARIANCE** | **0** | **0** | **0** | **0** | **0** | **0** |

## IT Project: Media Services Technology Project

**EXECUTIVE SUMMARY:**

See attached NITC form.

**Attachments:**

    NITC report Media Services Request.doc

**GOALS, OBJECTIVES, AND OUTCOMES (15 PTS):**

See attached NITC form.

**PROJECT JUSTIFICATION / BUSINESS CASE (25 PTS):**

See attached NITC form.

**TECHNICAL IMPACT (20 PTS):**

See attached NITC form.

**PRELIMINARY PLAN FOR IMPLEMENTATION (10 PTS):**

See attached NITC form.

**RISK ASSESSMENT (10 PTS):**

See attached NITC form.

**FINANCIAL ANALYSIS AND BUDGET (20 PTS):**

See attached NITC form.

**Nebraska Information Technology Commission**

# Project Proposal Form

**Funding Requests
for Information Technology Projects**

**FY2013-2015 Biennial Budget**

IMPORTANT NOTE: Project proposals should only be submitted by entering the information into the Nebraska Budget Request and Reporting System (NBRRS). The information requested in this Microsoft Word version of the form should be entered in the NBRRS in the "IT Project Proposal" section. The tabs in the "IT Project Proposal" section coincide with sections contained in this Microsoft Word version of the form. Information may be cut-and-pasted from this form or directly entered into the NBRRS. ALSO NOTE that for each IT Project Proposal created in the NBRRS, the submitting agency must prepare an "IT Issue" in the NBRRS to request funding for the project.

| | |
|---|---|
| **Project Title** | Media Services Technology and Integration Project |
| **Agency/Entity** | **NET (Nebraska Educational Telecommunications)** |

**Notes about this form:**

1. **USE.** The Nebraska Information Technology Commission ("NITC") is required by statute to "make recommendations on technology investments to the Governor and the Legislature, including a prioritized list of projects, reviewed by the technical panel..." Neb. Rev. Stat. §86-516(8). "Governmental entities, state agencies, and noneducation political subdivisions shall submit all projects which use any combination of general funds, federal funds, or cash funds for information technology purposes to the process established by sections 86-512 to 86-524. The commission may adopt policies that establish the format and minimum requirements for project submissions." Neb. Rev. Stat. §86-516(5). In order to perform this review, the NITC and DAS Budget Division require agencies/entities to complete this form when requesting funding for technology projects.
2. **WHICH TECHNOLOGY BUDGET REQUESTS REQUIRE A PROJECT PROPOSAL FORM?** See the document entitled NITC 1-202 "Project Review Process" available at http://nitc.ne.gov/standards/. Attachment A to that document establishes the minimum requirements for project submission.
3. **COMPLETING THE FORM IN THE NEBRASKA BUDGET REQUEST AND REPORTING SYSTEM (NBRRS).** Project proposals should only be submitted by entering the information into the NBRRS. The information requested in this Microsoft Word version of the form should be entered in the NBRRS in the "IT Project Proposal" section. The tabs in the "IT Project Proposal" section coincide with sections contained in this Microsoft Word version of the form. Information may be cut-and-pasted from this form or directly entered into the NBRRS. ALSO NOTE that for each "IT Project Proposal" created in the NBRRS, the submitting agency must prepare an "IT Issue" in the NBRRS to request funding for the project.
4. **QUESTIONS.** Contact the Office of the CIO/NITC at (402) 471-7984 or ocio.nitc@nebraska.gov

## Section 1: General Information

| | |
|---|---|
| Project Title | Media Services Technology and Integration Project |
| Agency (or entity) | NET (Nebraska Educational Telecommunications) |

Contact Information for this Project:

| | |
|---|---|
| Name | Kate Tempelmeyer |
| Address | 1800 N 33rd |
| City, State, Zip | Lincoln, NE |
| Telephone | 402-472-9333 |
| E-mail Address | ktempelmeyer@netnebraska.org |

## Section 2: Executive Summary

*Provide a one or two paragraph summary of the proposed project. This summary will be used in other externally distributed documents and should therefore clearly and succinctly describe the project and the information technology required.*

Nebraskans are expanding their use of online video to access information important to them as citizens and individuals. The rising demand for streaming content also puts pressure on the systems, networks and personnel who manage and provision these services that the public is using. To effectively manage these resources efficiently and expand services, changes are necessary to grow and extend these services. Integration of scheduling systems to a single interface will reduce entering data in multiple databases and potential mistakes that could result from this practice. The provisioning of additional LTO (Linear Tape Open) storage will decrease the cost of maintaining important video archival collections and content. The integration of existing asset management systems to seamlessly address routine video production and distribution tasks by centralizing and repurposing the metadata for capturing, logging, editing, transcoding, archiving and provisioning content rights will optimize the state's investment to manage these resources.

NET has made strides to distribute video content on the web with the launch of a new web site, NetNebraska.org. In addition, the State of Nebraska's Video Conferencing Network will soon be providing live streaming for video conferences and media management services. In order to viably increase and provision the amount of content that will be streamed on the web, to smart phones and personal media devices , NET needs to expand the capacity of their existing platforms and reduce the complexity of managing these systems to leverage this technology more effectively. The results will enable NET to distribute information and content important to Nebraska's civically and culturally-engaged individuals and organizations.

## Section 3: Goals, Objectives, and Projected Outcomes (15 Points)

1. Describe the project, including:
   - Specific goals and objectives;

The Streaming/Media Management project will enable NET to expand their repository for video content to provide additional archive space for public entities within the state of Nebraska. In addition by streamlining the scheduling and media management processes, NET can scale and expand these platforms to process and distribute available live and video on demand (VOD) content to the public and other state institutions. The goals of the project are:

- Increase the total amount of streaming video and audio content available to the public and other State of Nebraska entities
- Increase the use of the Nebraska Video Conferencing Network (NVCN's) existing video conferencing technology by effectively managing resources to provision video streaming and media management services
- Eliminate redundant data entry across systems to better utilize available personnel resources for scheduling and media management
- Improve workflows and respond to technology changes more effectively
- Be compatible with our current CDN (Content Delivery Network) providers
- Provide affordable archive storage for content


- Expected beneficiaries of the project; and
- Expected outcomes.

The Streaming/Media Management project's intended beneficiaries are Nebraska citizens, State of Nebraska agencies and educational institutions who need access to content produced and shared over the internet. By streamlining existing systems that would enable public entities to viably stream, share and store content, this would promote increased cooperation and better understanding across institutions and for the public while giving access to content that otherwise might not be available.

After a successful implementation the expected outcomes of this project are:

- Increased availability of content in both quantity and audience distribution
- Increased use of the NVCN network to more widely distribute and access content created during video conferences
- Unprecedented access to content by the general public, educational institutions and State of Nebraska agencies


2. Describe the measurement and assessment methods that will verify that the project outcomes have been achieved.

The success of the project will be determined by a variety of metrics, including hours of content available, number of NVCN users, number of visitors accessing content made publicly available on web sites, direct feedback from State agencies and departments using the system.

In the first year NET and the State of Nebraska will generate usage reports for live and VOD streaming services. The 1st year goal being to have 75 hours of video content streamed on the NVCN network, with 150 hours being the intended target. Additionally NET would promote the

services to other entities and encourage them to use NET's and NVCN's systems for streaming and archiving content. Expected growth rate in subsequent years would be heavily dependent upon the number of users and the number of hours of content that is hosted on these systems.

User traffic to NET's website and user traffic accessing the archived and live NVCN streaming files will also be a key metric in measuring the success of the project. A standard of 5000 unique visitors per month accessing Live/VOD files on NET's website and 25 NVCN/Jabber sites a month utilizing streaming would indicate a successful adoption of the service. This information would be determined by analyzing streaming logs, Google Analytics and reports from Limelight.

In addition to the statistics NET would solicit feedback on improving the service and determining its value by identifying key individuals using the system for feedback.

3.  Describe the project's relationship to your agency comprehensive information technology plan.

A significant item in NET's strategic plan is to increase impact and reach through programs and services, and the Media Management Project is a key initiative designed to fulfill that strategy. This project is listed in NET's agency technology plan for FY 12-13 and under the Nebraska Educational Telecommunications Commission FY 2014 & 2015 Biennial Budget Narrative request item CC-4.

## Section 4: Project Justification / Business Case (25 Points)

4.  Provide the project justification in terms of tangible benefits (i.e. economic return on investment) and/or intangible benefits (e.g. additional services for customers).

The proposed Media Management system integration and storage expansion for video streaming and publishing will allow state agencies and "mission-similar" partners to share and manage their content by leveraging technology used in line with the NVCN network. The benefit being that live and VOD content could be captured from their video conferencing system and transfer services to allow for widespread distribution across multicast and broadband services. This distribution has the potential to raise the profiles of the organizations and extend the reach of their efforts and programs, making them more cost-effective to the presenters and broadening their service to the citizens of Nebraska.

The Media Management system coupled with the digital media publishing solution will allow partners throughout the state to provide content to people in a wide range of "channels" without knowledge of sophisticated code to deliver this service.

The specific goals and objectives are to:

1) Increase the amount of content which can be delivered to the people of Nebraska. Thousands of hours of content have been created by public agencies and organizations across the state. Most of this content has limited channels of distribution, such as live broadcast or internet streaming, face to face settings or underutilized tape libraries. By

integrating systems to better manage these resources and budgeting for archives NET can scale this service to deliver the content while insuring the storage costs are sustainable.

2) Increase the use of the Nebraska Video Conferencing Network (NVCN's) existing video conferencing technology by effectively managing the resources to provision video streaming and media management services. State agencies and partners who are managing video to meet their missions of training, educating or creating public archives can leverage an existing resource. By promoting the use of this system and helping state agencies understand how the technology could be adopted within their own workflows, usage of the system will increase.

3) A limitation of the existing systems is the need to enter similar data in multiple scheduling platforms used with the NVCN system. By eliminating redundant data entry across systems, personnel resources can be better utilized and able to scale services for scheduling and media management. This will help keep personnel costs down while still meeting the needs of the clients using the service.

4) Improve workflows and respond to technology changes more effectively. In order to provision services and respond to customer support needs, NET will need to be able to seamlessly transcode and move content to the appropriate storage location for the client's needs. This will be a combination of enterprise storage, cloud storage and LTO (Linear Tape Open) archives. By using a tiered approach and leveraging the technology to address workflows, the transcoding and movement of file processes will be easier and more affordable to maintain in the long term. As the video formats change, the technology facilitating the workflows can be used to transform the files.

5) Provide affordable archive storage for content by utilizing a combination of cloud and LTO storage. Maintaining video files on local high performance disk drives makes sense if the file size is extremely large, encoded at a higher bite rate and is being accessed often. Once the file is not being accessed and ready to be archived, it can be stored on lower cost medium like LTO storage. Most video consumed over the internet can also be stored on a CDN (Content Delivery Network). Both of these options help reduce the cost of sustaining an archive.

6) The overarching goal of this project is to foster the cultural and civic engagement of the citizens of Nebraska by agencies utilizing this technology

> 5. Describe other solutions that were evaluated, including their strengths and weaknesses, and why they were rejected. Explain the implications of doing nothing and why this option is not acceptable.

NET and the State of Nebraska CIO  contracted with SKC, an integrator that has an in-depth knowledge of the NVCN network and NET's streaming infrastructure.  This company will be bringing forward options for consideration and make recommendations to consolidate scheduling platforms, integrate streaming across multiple systems and address media management services.   The following options were considered to address NET's Media Management Technology Project before consulting with SKC:

1) **Identify APIs for existing scheduling platforms for production facilities, video conferencing, live streaming, media management and attempt to integrate these systems using in-house developers**

    Strengths:
    - a) Workflows could be customized that support NET's current environment
    - b) Existing code could be extended since it was built on an open standard
    - c) NET would own and manage the code
    - d) Existing APIs for the current platform could be leveraged

    Weaknesses:
    - a) High turn-over in the developer community could have a significant impact
    - b) Time to develop, maintain and document code could be considerable
    - c) Training staff in-house as programmers to code the project would significantly delay the project.
    - d) Staffing costs would be higher than purchasing a vendor provided solution
    - e) NET does not have internal talent on staff to develop the code
    - f) NET would need to devote at least two FTEs to develop the code for this tool.
    - e) Ongoing staffing costs would be higher than purchasing a vendor provided solution

2) **Continue to use existing technology across multiple platforms utilizing more personnel resources to sustain the operations**

    Strengths:
    - a) Personnel have developed multiple checkpoints across existing platforms to insure schedules and streams will be reliable
    - b) Platforms currently exist and are functioning
    - c) Streaming solutions are currently functioning

    Weaknesses:

a) As the volume of users is increasing the workload is not sustainable by the current FTEs.
b) As data is entered across multiple platforms the chance of errors occurring in the data increases
c) Files that need to be moved to cloud storage and archives require personnel resources to address
d) Provisioning live streams requires personnel to do multiple cross checks to insure the stream publish points are correct
e) Skillsets necessary to create the publish points and codecs are limited
f) Live streams could potentially fail if manual intervention is required

Implications of doing nothing:

If NET continues to manually schedule across multiple platforms, provision media management for live and VOD (Video on Demand) streams to publish this content to the web and provide archiving/media management services without adequate storage these processes will inhibit NET's ability to scale existing services to meet the increasing demands by other State agencies and entities for this service.

6.   If the project is the result of a state or federal mandate, please specify the mandate being addressed.

While not a mandate, this project supports expansion for archiving of the Legislature's content.  It also supports NVCN's ability to stream and archive content without adding additional stress to the state's network.  This gives State agencies the ability to make the content publicly accessible as well.

### Section 5: Technical Impact (20 Points)

6.   Describe how the project enhances, changes or replaces present technology systems, or implements a new technology system. Describe the technical elements of the project, including hardware, software, and communications requirements. Describe the strengths and weaknesses of the proposed solution.

The Media Services Technology project enhances NET's current distribution system by enabling additional content streaming services to be scaled to allow NET and other contributors at State agencies to share this content and foster its use by the citizens of the Nebraska.  This will be accomplished by integrating existing systems with new technologies to schedule and manage resources effectively.  NET and the State of Nebraska (NVCN) will also leverage their existing networks, video conferencing systems, streaming platforms, storage infrastructure, and Content Delivery Network (CDN) providers, which are highly scalable.

Unified Streaming Scheduling/File Management Systems

A unified streaming scheduling platform and file management system is used to initiate a live stream, capture the file, encode it to different formats for later playback as a VOD file and move it to the proper storage location to be retrieved.  It is also used to provide essential metadata for

the file allowing end users to find it. The current scheduling platforms could be better utilized if unified either thru custom integration using the APIs for each scheduling platform or by installing a 3$^{rd}$ party scheduling system that can be used to manage all the schedules and metadata thru calls back to the databases currently in place. This would potentially include the Digital Rapids Broadcast Manager, ScheduALL, Cisco Tandberg TMS, Myers Protrack and NET's Ingest form.

Most systems use a database to schedule streams, store content, metadata, and/or artifacts that might be needed by the system.

Integrating these platforms would meet the following requirements:

- Provide an easy and intuitive single scheduling contribution platform
- Eliminate the need for redundant data entry
- Provision streams and better manage resources from a single platform
- Be compatible with our Digital Media Publishing System and Content Delivery Network providers

Integrated scheduling solution platform software requirements:

- Built with open standards
- Have a backup agent installed for disaster recovery
- Use a Vmware ESX license, which will provide a high level of redundancy and scalability
- Utilize open ODBC
- Have the ability to integrate and distribute content utilizing industry leading Content Delivery Network providers such as Amazon and Limelight

Integrated scheduling solution platform hardware requirements:

- Example of server capable of running Vmware ESX (Dell Poweredge R710)
- NET will expand our current Xiotech ICE storage infrastructure to meet the needs of this project

Content Delivery Network

A content delivery network or content distribution network (*CDN*) is a system of computers networked together across the Internet that cooperate transparently to deliver content most often for the purpose of improving performance, scalability, and cost efficiency, to end users.

NET will also be using our existing Content Delivery Network providers Amazon and Limelight. These are both subscription based services.

8. Address the following issues with respect to the proposed technology:
   - Describe the reliability, security and scalability (future needs for growth or adaptation) of the technology.

Reliability:
- All hardware and software provider's offer 24/7 support. Storage is high performance distributed storage with built in redundancy.

- Content Delivery Networks vendors offer a SLA with 99.9% availability

- NET will perform a full backup of scheduling systems weekly, incremental updates nightly and retain for a year, which will allow us to recover the system if needed.

Security:
NET will secure content and systems hosted by NET using industry standard practices(Firewalls, Antivirus, Intrusion Detection, and appropriate routing configurations)  NET has met both State and PCI security requirements.

Scalability:
The Unified Streaming Scheduling/File Management System will be built utilizing VMware ESX which is a highly scalable virtual server environment where processors, memory and storagecan be dynamically allocated if needed.  The CDN services for streaming are all provisioned on as subscription services so as the needs of the streaming clients increase we can purchase additional services on demand.

Storage is an ever increasing need when distributing content especially video.  Also, as new larger drives are available for LTO or disk targets can be set up, NET can integrate these solutions into the existing archive infrastructure thus exceeding current limitations.

   - Address conformity with applicable NITC technical standards and guidelines (available at http://nitc.ne.gov/standards/) and generally accepted industry standards.

Conformity:
All systems meet with the NITC technical standards and guidelines.   Proposed solutions were designed and supported used accepted industry standards.

   - Address the compatibility with existing institutional and/or statewide infrastructure.

Compatibility:
All scheduling systems will be using open standards and have APIs that can be used to integrate platforms across NET's network and NVCN.

## Section 6: Preliminary Plan for Implementation (10 Points)

9. Describe the preliminary plans for implementing the project. Identify project sponsor(s) and examine stakeholder acceptance. Describe the project team, including their roles, responsibilities, and experience.

Media Management/Streaming Technology project incorporates four main areas that work in concert to update, upgrade and improve our capacity to deliver our critical digital services.  This includes both our internal NET streaming and content management needs along with our partner's needs.  The target date for having all necessary hardware, software, custom development and integration completed by July 2014.

Input to this plan has originated from all departments of NET involved with storage, networking and content/media management as represented by the following individuals.

Overall project manager for the Media Management/Streaming Technology project is Kate Tempelmeyer,  Director of NET's Media Services Department. Kate Tempelmeyer, served the organization as Information Services Director for eleven years and has extensive experience with hardware and storage installations, network integration, security and managing major software development projects.  Ms Tempelmeyer has strong technical and business qualifications with track record of more than 12 years of hands-on experience in strategic technology planning, budgetary development, project management, and system engineering strategies. She currently manages the scheduling of NVCN systems, streaming platforms, Content Delivery Networks, Traffic Operations and Content Management.

Dave Stewart, Chief Engineer, will be the project manager for the LTO storage expansion project. Mr. Stewart currently manages the Isilon Storage, Storagetek LTO library, transcoding/ encoding platforms and file based workflows for NET.  He has extensive technical and specialized integration experience and has managed the day-to-day operation of NET's technical broadcast services.

Randy Heinzman, Helpdesk Supervisor, will be the assistant to the project manager and be directly responsible for working with the scheduling platform integration aspect of the project. Mr.  Heinzman currently manages the NVCN scheduling systems and the personnel supporting this service.  He also manages the streaming publishing scheduling platforms for NET.   He has extensive database experience and will be integral to the implementation process.

Kevin Melang-Thoren, Media Services Engineer/Supervisor, will be the technical support engineer who will coordinate the software and hardware installations for the scheduling integration platforms.  He will also insure the systems have disaster recovery backups setup and running in coordination with the IS Manager.  Mr. Melang-Thoren has solid experience with servers, data backup and networking.

Mark Weakly, Chief Engineer, will be assisting with the scheduling integration to the NVCN video conferencing systems.  Mr. Weakly has many years of experience with technical design, video conferencing system support and integration skills.

10. List the major milestones and/or deliverables and provide a timeline for completing each.

In FY '12-'13  SKC will respond to the consulting contract with recommendations and options to integrate scheduling of streaming, asset management and video conferencing on to a single platform.  A decision about the specific platform, integration points and project plan will be done.

> Fall of 2012 – Identify platform integration points, identify specific platform, finalize costs and develop project plan

In FY '13-'14, the LTO archive capacity of system will be increased to accommodate storage of digital assets.

> Fall of 2013 – Identify specific equipment and storage needs to expand the LTO archive capacity
>
> Winter 2013 – Purchase equipment through State Purchasing Bid process
>
> Winter/Spring 2013-2014  – Integrate additional storage capacity into enterprise LTO system

In FY '13-14, The scheduling, streaming, asset management and video conferencing integration project will awarded, purchased and implemented.

> Spring of 2013 –   Identify vendors to provision integration, platform and implementation.
> Spring and Summer of 2013 - Purchase software and hardware required through State Purchasing Bid process
> Fall of 2013 – Install software and equipment, provision integration and implement training
> Winter/Spring 2013-2014– Bring all systems online

11. Describe the training and staff development requirements.

As new software and hardware elements are deployed, formal training from the respective vendors and integrators will be provided to key staff.  Two lead persons will be identified to become product experts and be available to troubleshoot/support systems.  They will provide additional wider training to other staff expected to use the scheduling systems.

12. Describe the ongoing support requirements.

Within NET's budget there are designated line items for maintenance of the hardware and technical infrastructures. These will continue to exist . By expanding on the existing systems with additional equipment and software NET can take advantage of maintenance agreements already in place. Following the expiration of the initial maintenance agreements for additional hardware and software, extended agreements would need to be negotiated and budgeted within NET's budget.

NET commits to supporting the Media Management/Streaming Technology project with the equivalent of two FTE positions. These duties will be distributed among several current NET positions. One position will act as a server administrator, hardware maintainer, and network troubleshooter providing technical support for the system components. The other position will be responsible for insuring the integrated system databases are utilized, managed and maintained properly to insure streaming, content management, transcoding, and provisioning of files is addressed. This position will also directly supervise the personnel using this system.

### Section 7: Risk Assessment (10 Points)

13. Describe possible barriers and risks related to the project and the relative importance of each.

a) Risk: Thee accepted technology standards for integration change between the project inception date and the project go-live date.

   Impact: NET would have to redesign the Scheduling Integration platform, or spend more money to buy new equipment to support the newer standards.

   Compensating Controls:  Project leaders shall research technology standard trends continually up until project inception date, and also ensure that "Flexibility" is a criterion upon which possible solutions are judged.

b) Risk:  NET and NVCN consumers are not aware of or use the streaming and content management systems

   Impact:  NET and NVCN will not have expanded its true distribution reach to its consumers, however it still will have expanded access to the content.

   Compensating Controls: NET/NVCN will make sure its consumers are aware of this service through several different  mediums and communicate this over a period of time.

c) Risk:   NET suffers a loss of Knowledge Capital by way of project member turnover.

   Impact:  The planning, implementation, or maintenance phase of the Media Management Streaming Scheduling Integration platform could be impacted adversely or delay it.

   Compensating Controls:   Project leaders will hold regular meetings with all project members to discuss  aspects of the project, and also establish an electronic repository for information.

d)  Risk:  NET fails to deliver a functional Media Streaming Scheduling/Management platform due to technical reasons.

Impact: NET will have wasted and abused Nebraska Taxpayer monies.

Compensating Controls:  Appropriate hardware/software installation and integration contracts shall be included in the proposal, which come with guarantees from the vendors and integrators.

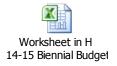14. Identify strategies which have been developed to minimize risks.

See "Compensating Controls" under item 13 to minimize and mitigate risk.

### Section 8: Financial Analysis and Budget (20 Points)

15. Financial Information

The "Financial" information tab in the Nebraska Budget Request and Reporting System (NBRRS) is used to enter the financial information for this project (NOTE: For each IT Project Proposal created in the NBRRS, the submitting agency must prepare an "IT Issue" in the NBRRS to request funding for the project.)



Worksheet in H
14-15 Biennial Budget

## Nebraska Information Technology Commission
## Project Proposal Form
### Section 8: Financial Analysis and Budget

(Revise dates as necessary for your request.)

| | Estimated Prior Expended | Request for FY2014 (Year 1) | Request for FY2015 (Year 2) | Request for FY2016 (Year 3) | Request for FY2017 (Year 4) | Future | Total |
|---|---|---|---|---|---|---|---|
| 1. Personnel Costs | | | | | | | $ - |
| 2. Contractual Services | | | | | | | |
| 2.1 Design | | $ 20,000.00 | | | | | $ 20,000.00 |
| 2.2 Programming | | $ 25,000.00 | | | | | $ 25,000.00 |
| 2.3 Project Management | | $ 10,000.00 | | | | | $ 10,000.00 |
| 2.4 Other | | | | | | | $ - |
| 3. Supplies and Materials | | | | | | | $ - |
| 4. Telecommunications | | | | | | | $ - |
| 5. Training | | $ 15,000.00 | | | | | $ 15,000.00 |
| 6. Travel | | $ 5,000.00 | | | | | $ 5,000.00 |
| 7. Other Operating Costs | | | | | | | $ - |
| 8. Capital Expenditures | | | | | | | |
| 8.1 Hardware | | $ 70,000.00 | $ 50,000.00 | $ 25,000.00 | | | $ 145,000.00 |
| 8.2 Software | | $ 30,000.00 | $ 25,000.00 | | | | $ 55,000.00 |
| 8.3 Network | | | | | | | $ - |
| 8.4 Other | | | | | | | $ - |
| TOTAL COSTS | $ - | $ 175,000.00 | $ 75,000.00 | $ 25,000.00 | $ - | $ - | $ 275,000.00 |
| General Funds | | | | | | | $ - |
| Cash Funds | | | | | | | $ - |
| Federal Funds | | | | | | | $ - |
| Revolving Funds | | | | | | | $ - |
| Other Funds | | | | | | | $ - |
| TOTAL FUNDS | $ - | $ - | $ - | $ - | $ - | $ - | $ - |