

Nebraska Information Technology Commission

Project Proposal Form

**New or Additional State Funding Requests
for Information Technology Projects**

FY2007-2009 Biennium

Project Title	Digital Audio Recorders
Agency/Entity	Nebraska Supreme Court

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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, for which new or additional funding is requested.” Neb. Rev. Stat. §86-516(8) In order to perform this review, the NITC and DAS Budget Division require agencies/entities to complete this form when requesting new or additional funding for technology projects.
2. **WHAT TECHNOLOGY BUDGET REQUESTS REQUIRE A PROJECT PROPOSAL FORM?** See the document entitled “Guidance on Information Technology Related Budget Requests” available at <http://www.nitc.state.ne.us/forms/>.
3. **DOWNLOADABLE FORM.** A Word version of this form is available at <http://www.nitc.state.ne.us/forms/>.
4. **SUBMITTING THE FORM.** Completed project proposal forms should be submitted as an e-mail attachment to rick.becker@nitc.ne.gov.
5. **DEADLINE.** Completed forms must be submitted by September 15, 2006 (the same date budget requests are required to be submitted to the DAS Budget Division).
6. **QUESTIONS.** Contact the Office of the CIO/NITC at (402) 471-7984 or rick.becker@nitc.ne.gov

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Section 1: General Information

Project Title	Digital Audio Recorders
Agency (or entity)	Supreme Court

Contact Information for this Project:

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Section 2: Executive Summary

This project is intended to replace aging analog tape recorders in Nebraska County Courtrooms with digital audio recorders. This is a multi-year project that was started in FY 2007. All courtroom proceedings are recorded on analog tape recorders. The tapes are either stored or transcribed depending upon the requirements of the case or proceeding. The Administrative Office of the Courts (AOC) was notified in June 2006 by Lanier Corporation that Lanier will no longer produce the analog recorders after 2007 and all remaining support will cease approximately five years later.

The AOC tested three digital audio recorders in April –June 2006. The tests proved very successful and the audio quality was superior to that of the analog recording devices. The AOC then worked with State Purchasing to bid the digital audio recorders. The bid was awarded in August 2006. The AOC is presently replacing 21 analog recorders in FY 2007 using a deficit appropriation of \$29,000 and shifting some \$55,315.00 in existing internal funds (the reason there are some internal funds available was due to an error in NIS which did not show receipt of funds received from Nebraska.gov for several months in FY 2006, going forward those monies will be used to provide additional personal computers to trial court staff.) to cover the cost. Going forward the AOC intends to replace all of the analog recorders over the next three years at a total cost of \$495,440.00.

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

1. Describe the project, including:

- Specific goals and objectives;
- Expected beneficiaries of the project; and
- Expected outcomes.

The Digital Audio Recorder project will replace all existing analog tape recorders in county courtrooms with digital audio recorders. There are 108 county courtrooms using analog tape recorders. The specific goals and objectives are to eliminate the aging analog tape devices in all of the county courtrooms. By eliminating the analog tape recorders and using state of the art digital audio recorders the courts will have better technology to capture audio of courtroom proceedings and trials. Additional objectives are to have the ability to store the digital audio files in common digital formats (i.e. MPEG-II, wav, AVI,) and place them on AOC provided servers to enable downloading the files to any Internet connected location and then provide playback via a freeware player. This

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allows the ability for a judge or court staff to not have to be physically at a courthouse to listen to the recording. The digital audio recorders have the capability to transfer a recording to a CD for storage and playback capabilities.

The expected beneficiaries will be the citizens of the state of Nebraska as well as judges and court staff. The recordings will be clear and intelligible and easier to transcribe. Current analog recordings are sometimes not able to be transcribed due to blanks spots, poor recording quality and recorders in need of repair.

The expected outcome will be for judges and court staff to have clear, highly transferable audio recording files of trials and court proceedings.

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

The primary measurement will be to replace every analog recording device in county courtrooms with a digital audio recorder. A total of 108 devices will need to be replaced over a period of four years.

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

The replacement of analog recorders with digital audio recorders is included in the Judicial Branch's Strategic Technology Plan and is rated as a high priority to accomplish by FY 2010.

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

Currently the AOC provides and supports analog audio tape recorders in county courtrooms. The recordings are made for any procedure that comes before a county court. The recordings are maintained and stored in the event of an appeal; at that point the recordings are transcribed to a word document. In a typical courtroom there are four microphones used, one for the judge, one for the witness, one for the prosecution and one for the defense.

The AOC is beginning to replace analog cassette tape recorders with digital audio recorders. A pilot project was launched in April 2006 for the Seward County Court. The following are comments from the court on the success of the pilot.

Mr. Miller:

To give you a bit of background about why I am so supportive of this wonderful new technology. A few years back in Nance County we had a problem with the older tape equipment there. Even though the clerk was watching the tape recording equipment it still managed to malfunction causing over \$8,000.00 expenses to one of the litigants to retry the case including expert witnesses. Also, when the court first started in 1973 the recording equipment was Sony reel to reel tapes (just ask Barb Nielsen).

The only problem so far is that I started a case without the computer being up and running. Sue had not told me that the equipment had to be turned on and warmed up. If, I had known we could have waited and now she knows to let me know if we are not ready.

I understand from the clerk magistrate that the system is much better at recording the sounds and it is much easier for Sue to type transcripts from the computer.

Therefore I would highly recommend using this computer for recording hearings as it is much more dependable than the present tape systems.

Judge Rouse

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The AOC was notified by the manufacturer of the existing analog tape recorders in 2006 that they will stop producing the analog tape recorders in 2007 and stop all support (parts and service) in 2012. The court has seen serious problems while trying to maintain the existing recorders.

The AOC worked with State Purchasing to develop a Request For Proposal (RFP) and received bids on the Digital Audio Recording software in June 2006. The bid has been awarded and the AOC plans to lease personal computers from the Office of the CIO to begin replacing analog recorders in FY 2007.

Instead of using analog tapes, the digital audio recording system records proceedings to a PC's hard drive. The hard drive may be located on either the local PC or on a central server elsewhere in the network. After a recording is complete, the file may be moved to a CD, a DVD, or any other PC-compatible storage media. Audio files can be copied and moved throughout a network just like any other type of electronic file.

The digital court recording solution is designed to allow the courts to move to a digital recording environment instead of investing in outdated analog cassette tape technology, old fashioned stenographic recording or first generation digital recording systems.

Listed below are some of the features and benefits received when using a digital court recording solution:

- The ability to record from 1 to 32 separate channels, allowing for the isolation of any individual channel during playback.
- 1 channel of video with multiple cameras.
- High quality audio recording for accurate transcription, audio review and minutes preparation.
- Instant and direct archival of the digital audio onto CD-ROM or a network storage location.
- A File Notes facility that allows general text notes to be imbedded directly into an audio file.
- Audio files are easily annotated and rapidly located using the integrated annotation Software.
- The ability to monitor a recording as it is written to the hard drive so that you can ensure the recording volume levels are sufficient.
- Transcription playback using USB foot pedal.
- Easy duplication of recordings for re-distribution and archival.
- Professional Transcription/Playback Software

The AOC plans to replace 21 recorders in FY 2007 using \$29,000.00 from a deficit appropriation and adding an additional \$55,315 from the AOC's FY 2007 budget.

If this request is approved and funded the AOC would replace an additional 25 analog recorders in FY 2008 at a cost of \$100,375.00. In FY 2009 the AOC would replace another 25 analog recorders at a cost of \$100,375.00 and 12 additional units in the Douglas County Court system at an additional cost of \$100,000.00. This would be a centralized system. In FY 2010 the AOC would replace any remaining analog recorders, estimated to be 25 at a cost of \$100,375. A year by year breakdown is provided in the appropriate sections of this document.

Digital Audio Recorders (DAR's)			
FY2007 Existing Dollars			

Costs for DAR's	Each	21 Units
Liberty Court Recorder Software	\$1,795.00	\$ 37,695.00

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6 - Port Mixer	\$ 645.00	\$ 13,545.00
Roxio CD Software	\$ 10.00	\$ 210.00
Headset	\$ 25.00	\$ 525.00
Foot Pedal	\$ 75.00	\$ 1,575.00
Annual Maintenance	\$ 265.00	\$ 5,565.00
Sub Total	\$2,815.00	\$ 59,115.00
Laptop (Lease from OCIO)	\$1,200.00	\$ 25,200.00
Total	\$4,015.00	\$ 84,315.00

Deficit Appropriation	\$29,000.00
AOC Internal Funds	<u>\$55,315.00</u>
	<u>\$84,315.00</u>

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 tangible benefits are clear, high quality recordings of trials and court proceedings. The ability to digitize and store the audio files for quick movement of the files over the State Network or via the Internet provides a superior method over the analog tape recording. The potential to not have to retry a case due to a record that was unable to be transcribed is huge. Although a retrial of a case or proceeding is rare it does in fact occur and costs a lot of money to make it happen.

In the current system, it is necessary for tapes to be mailed from court to court for transcription. We have a limited number of staff doing transcription and this new technology will allow us to electronically transmit the file and we will no longer have the worry of lost tapes and will no longer have postage costs. The major concern is losing tapes plus the time delay -- transcribers have 4-6 weeks from the date of the request and if the mail takes 3-5 days; that can impact their ability to complete the work timely.

Some of the intangible benefits include the ability to listen to a file remotely, and the ability for numerous parties to listen to a recording simultaneously. This actually occurred during a recent high profile trial in the Supreme Court. Through the use of digital recording the day's proceedings were made available via an FTP server within fifteen minutes of adjournment. Justices and court staff were able to download the file and listen at their leisure. We did not have to crank out multiple copies of CD's. Justices and court staff were able to listen to the recordings from their chambers or from home.

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.

The AOC looked at continuing with the analog recorders but were notified by one manufacturer that they intend to stop producing recorders in 2007. A look around the country to see what other courts were doing with regard to this technology strongly suggested that analog recorders were being phased out and replaced by digital audio recorders. A discussion with our current repair vendor suggested that parts were getting hard to come by and in some cases no longer available.

The strengths of moving to digital audio recorders include but are not limited to the following:

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- Places additional laptop computers out to court staff and courts for use in transcribing trials and court proceedings but can be used for other applications when not recording in the courtroom.
- High quality audio recording for accurate transcription, audio review and minutes preparation.
- Instant and direct archival of the digital audio onto CD-ROM or a network storage location.
- A File Notes facility that allows general text notes to be imbedded directly into an audio file.
- Audio files are easily annotated and rapidly located using the integrated annotation Software.
- The ability to monitor a recording as it is written to the hard drive so that you can ensure the recording volume levels are sufficient.
- Easy duplication of recordings for re-distribution and archival.
- Professional Transcription/Playback Software

The weaknesses of this project include the following:

- Training transcribers to use the new laptops and the digital audio software.
- Risk the software provider would go out of business.
- The four year time period for replacement of existing analog devices.
- Risk the project will not get funded.

The biggest risk is if we do nothing. The existing analog devices are failing almost on a weekly basis with little hope of repair and replacement parts availability getting better. County Courts do not use Court Reporters; they must use an electronic recording device to record the trial or proceeding. Analog recorders are dinosaurs in today's digital world.

As recently as July 2006 a case in Douglas County Court was being consider for an appeal due to the fact that there were 99 sections in the trial transcript that were inaudible to the court transcriber preparing the transcript. To do nothing would be a disservice to the citizens of the state of Nebraska. They deserve to have court's using the latest in technology to perform their functions in government.

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

This project is not a result of any mandate.

Section 5: Technical Impact (20 Points)

7. 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 project is intended to replace analog tape recording devices in County Courtrooms with digital audio recorders. This will be an enhancement for the courts in that they will be able to quickly provide an electronic version of the record by means of an electronic file and be able to place the file on a CD or in a server or hard drive. The electronic version of the file can be downloaded simultaneously by more than one judge or court staff. It can be emailed or sent to an FTP server. The existing system allows only for cassette tapes.

The technical elements of the digital audio recorders consist of the following:

- A laptop or desktop personal computer, running Microsoft XP Professional Operating System, Pentium 4 processor with a minimum CPU speed of 1.3 GHz, a minimum of 512 MB of RAM, a minimum 40 GB hard drive, 3 - 4 USB ports, Windows SoundBlaster compatible, and a CD-RW or network storage device.

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- Digital audio recording software, in our case the software is Liberty Court Recorder and a version of a free Liberty Court Recorder Player for playback of the recording.
- An audio mixer with 6 microphone ports and a USB connection to the PC. We are re-using the existing microphones from the analog systems.
- A Roxio CD burner software package.
- A headset and foot pedal for playback and transcribing with USB connection.
- Communications requirements are the same as existing court connections used for Internet connections or JUSTICE.

The typical set up in a courtroom would be four microphones, one for the Judge, one for the witness stand, one for the defense table and one for the plaintiff's table. The microphones are connected via cables to the sound mixer device; the audio mixer is connected to the PC via a USB connection. The Liberty Court Reporting software and Player are loaded onto the PC. The court employee operates the PC and inputs the data and monitors the recording of the trial or proceeding. At the conclusion of the proceeding, the court employee stores the audio file in the hard drive or on CD until a transcription is performed.

The strengths of the proposed solution are as follows:

- High quality clear record of the proceeding.
- Ability to turn the file into an electronic file and transmit the file via FTP or email.
- The court staff can monitor the quality of the audio real time via VU indicators on the PC monitor and via the headset.
- Existing microphones will be re-used keeping the costs in line.

The weaknesses are as follows:

- Staff training to bring staff up to speed will take some time.
- Four year time period to replace all county court recorders.

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.
- Address conformity with applicable NITC technical standards and guidelines (available at <http://www.nitc.state.ne.us/standards/>) and generally accepted industry standards.
- Address the compatibility with existing institutional and/or statewide infrastructure.

The reliability of the digital audio recorders will be vastly greater than the current analog recording devices. The software has been tested in a pilot court project and performed better than expected. The project will scale easily to all ninety three counties. Security features are also part of the software package and application.

The digital audio recording software is compatible with the NITC's MPEG II audio standard.

The compatibility with existing infrastructure will be great with the project. We are simply replacing analog recording devices with digital audio recorders using personal computers. It will assist the court with getting more personal computers out to court staff located in all ninety three counties.

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.

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The plans for project implementation are as follows:

Project Sponsor is Bill Miller, Deputy State Court Administrator for Information and Technology. He will be responsible for project development and getting the PC and software out to the courtrooms, setting up training and support of the PC's and software.

The Project Team will consist of:

- Judy Beutler, Deputy State Court Administrator - Judy's role will be to select and schedule the courtrooms for replacement equipment.
- Office of the CIO, Intergovernmental Data Services Division will be utilized to lease the PC's from and for loading of the digital audio software.
- Clerk Magistrates of the County Court who will be receiving the equipment along with their court staff who will be trained to operate the equipment.

We believe stakeholder acceptance of this new technology will be high mainly due to the problems they experience with the existing analog recorders.

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

The major milestones are as follows:

- FY2007 replacement of 21 analog recorders.
- FY2008 replacement of 25 analog recorders
- FY2009 replacement of 25 analog recorders and an additional 12 analog recorders in Douglas County with a centralized digital recording system.
- FY 2010 replacement of 25 analog recorders – Project completed.

11. Describe the training and staff development requirements.

There are not currently any requirements for additional staff. Training requirements consist of one 2-4 hour in person or via a webcast class explaining how the software works and following that with each individual spending approximately 16 hours operating and learning the digital audio recording software.

12. Describe the ongoing support requirements.

On-going support requirements for the digital audio recorder software are provided by JCG Technologies at a cost of \$265.00 per license per year. Support is via telephone and includes software patches and updates. On-going PC support is included in the lease from the Office of the CIO, Intergovernmental Data Services division.

Section 7: Risk Assessment (10 Points)

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

The major potential barrier is a lack of funding to replace the analog recorders. The risk associated with this barrier is very high as we experience problems with recorders on a weekly basis all across the state. An additional barrier is the four year replacement time period. The risks still exists for the AOC to not be able to have analog recorders repaired; the probability for this to occur is high. Another barrier could be training time although the AOC feels this is a very low risk.

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

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The AOC has tried to minimize risks by obtaining a version of digital audio software and using it in a pilot county court, in this case Seward County Court. The pilot has been in place since April 2006 and has been operating quite well with only a few minor glitches. In addition the AOC worked with State Purchasing to develop a Request For Proposal (RFP) and bid out the digital audio software in May 2006. Five proposals were received and evaluated. An Intent to Award was made in June 2006 and a formal bid was awarded in August to JCG Technologies from Phoenix. The bid was for three years with two one year renewals a possibility. The personal computers are to be leased from the Office of the CIO's Intergovernmental Data Services division. The AOC feels all of these practices will help to minimize risks and make the project a successful one.

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Section 8: Financial Analysis and Budget (20 Points)

15. Financial Information

Digital Audio Recorders	
FY2007 Existing Dollars	

Costs for DAR's	Each	21 Units
Liberty Court Recorder Software	\$1,795.00	\$ 37,695.00
6 - Port Mixer	\$ 645.00	\$ 13,545.00
Roxio CD Software	\$ 10.00	\$ 210.00
Headset	\$ 25.00	\$ 525.00
Foot Pedal	\$ 75.00	\$ 1,575.00
Annual Maintenance	\$ 265.00	\$ 5,565.00
Sub Total	\$2,815.00	\$ 59,115.00
Laptop (Lease from OCIO)	\$1,200.00	\$ 25,200.00
Total	\$4,015.00	\$ 84,315.00

Deficit Appropriation	\$29,000.00
AOC Internal Funds	<u>\$55,315.00</u>
	<u>\$84,315.00</u>

FY2008 New Funding

Costs for DAR's	Each	25 Units
Liberty Court Recorder Software	\$1,795.00	\$ 44,875.00
6 - Port Mixer	\$ 645.00	\$ 16,125.00
Roxio CD Software	\$ 10.00	\$ 250.00
Headset	\$ 25.00	\$ 625.00
Foot Pedal	\$ 75.00	\$ 1,875.00
Annual Maintenance	\$ 265.00	\$ 6,625.00
Sub Total	\$2,815.00	\$ 70,375.00
Laptop (Lease from OCIO)	\$1,200.00	\$ 30,000.00
FY 2008 Total	\$4,015.00	\$ 100,375.00

FY2009 New Funding

Costs for DAR's	Each	25 Units
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Liberty Court Recorder Software	\$1,795.00	\$ 44,875.00
6 - Port Mixer	\$ 645.00	\$ 16,125.00
Roxio CD Software	\$ 10.00	\$ 250.00
Headset	\$ 25.00	\$ 625.00
Foot Pedal	\$ 75.00	\$ 1,875.00
Annual Maintenance	\$ 265.00	\$ 6,625.00
Sub Total	\$2,815.00	\$ 70,375.00
Laptop (Lease from OCIO)	\$1,200.00	\$ 30,000.00
Total	\$4,015.00	\$ 100,375.00

Douglas County Court System (centralized)	12 Units
Budget estimate	\$ 100,000.00
Annual Maintenance	\$ 10,000.00
	\$ 110,000.00
FY2009 Total	\$ 210,375.00

FY2010 New Funding

Costs for DAR's	Each	25 Units
Liberty Court Recorder Software	\$1,795.00	\$ 44,875.00
6 - Port Mixer	\$ 645.00	\$ 16,125.00
Roxio CD Software	\$ 10.00	\$ 250.00
Headset	\$ 25.00	\$ 625.00
Foot Pedal	\$ 75.00	\$ 1,875.00
Annual Maintenance	\$ 265.00	\$ 6,625.00
Sub Total	\$2,815.00	\$ 70,375.00
Laptop (Lease from OCIO)	\$1,200.00	\$ 30,000.00
FY 2010 Total	\$4,015.00	\$ 100,375.00

Total County Courtrooms for DAR Units 108 Units

16. Provide a detailed description of the budget items listed above. Include:

- An itemized list of hardware and software.
- If new FTE positions are included in the request, please provide a breakdown by position, including separate totals for salary and fringe benefits.
- Provide any on-going operation and replacement costs not included above, including funding source if known.
- Provide a breakdown of all non-state funding sources and funds provided per source.

An itemized breakdown of the hardware and software has been included in item 15 above.
 No new FTE positions are required currently for this project.
 Ongoing operation and replacement costs have been included in item 15 above and relate only to FY2007 costs.
 No non-state funding sources are being used for this project.

17. Please indicate where the funding requested for this project can be found in the agency budget request, including program numbers.
 The AOC budget request for this project is in program number 396.