#1901

NDSU Student Technology Fee Action Plan Request

I. Action Plan Introduction and Authorizations

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Office of the Vice President for Information Technology

NDSU ORGANIZATION OR UNIT Department of Communication			
TITLE OF PROJECT Video Production Switcher System/Closed Captioning			
Project Duration (3 years maximum)	From: March 1, 2019	To: March 1, 2020	
Type of Project (Check one)	New X	Previously Submitted	Renewal
Total Technology Fee Request: $30,436.40			
Project Director Stephenson J. Beck	Campus Address: Minard Hall 338B2 Phone: 701-231-9770 Fax: 701-231 7784 E-mail: stephenson.beck@ndsu.edu		
Name (Type or Print)	**Signature**	**Date**	
Project Directors Stephenson J. Beck, Jeffrey Anders		2-12-2019	
Unit Head Stephenson J. Beck		2-12-19	
IT Division Consultant Steve Beckerman	**Signature**	**Date** 2-12-19	

Executive Summary (maximum of 175 words)

The Bison Information Network and Broadcast program in the Department of Communication would like to improve the quality and functionality of television programming on campus while benefiting the NDSU community as a whole. In conjunction with our relocation to the Memorial Union, we request funding to purchase a new Tricaster (plus associated technology) and Closed Captioning. The current Tricaster (or switcher) was purchased at the debut of our television studio and is quite outdated. A new Tricaster will improve functionality on several fronts and increase our outreach to the campus community. Closed Captioning is especially exciting as well, since it will allow us to have functional television coverage in all television locations on campus. NDSU has many locations where televisions are used, especially in the Memorial Union. However, due to noise considerations the audio is muted and students can only watch silent talking heads during broadcast. The use of Closed Captioning will not only remedy that situation, but encourage other outlets on campus to turn to our station.

The Technology Fee Advisory Committee will only accept for consideration Student Technology Fee Action Plan Request forms which are fully completed and signed, and whose Project Directors have no past due reports on previously awarded projects as of the current submission deadline date, according to the guidelines listed in the Instructions, pages 1 and 2.

Technology Action Plan Request forms will be opened and reviewed after the submission deadline.

II. Project Overview

1. How does this project meet student needs?

This project benefits to two levels of student needs. First, it allows BIN and the Department of Communication to offer top of the line video creation and broadcast production. It provides students with the real-life experience needed for the job market. Second, it benefits the entire student population. Coverage of events across campus will increase, and closed captioning will allow viewership and many locations across campus.

2. What audience does this project directly serve? What audience is indirectly served? How many students are affected?

The project directly benefits students of BIN and the Department of Communication. Importantly, BIN workers are not required to be Broadcast Journalism majors, and in fact many of them are from across campus. Last year's General Manager was an Engineering student. All associated with the television station are directly benefited.

The indirect audience would involve all viewers on our cable channel (which is broadcast across campus) and our social media sites. Anyone who has walked through the Memorial Union has seen our broadcasts. Theatre Arts and Athletics have likewise used are video production skills.

3. For projects that target a subset of NDSU's students, please describe the possibility for broader application in the future.

The Tricaster gives us a variety of possibilities. The Tricaster is central to everything we do, and thus we will have more opportunities. For example, the Tricast works with our data network to broadcast from anywhere on campus. Additionally, if we procure the Tricaster, the Department of Communication has offered to pay more a new character generator and laptop that would support it. The new Tricaster will make it easier and more efficient to offer closed captioning.

Additionally, we are always looking for new content for the channel and program streams so any students that would be interested in producing a video production could potentially use this system in conjunction with the BIN organizations help to produce a new show.

4. Describe both the immediate and long term impact of this project.

These acquisitions will be the bedrock of our television studio for the next 10 years. It is also great timing, as we are moving to a new on campus studio. We will have brand new location with a brand new Tricaster! We will now be more central to campus with equipment that will allow us to produce more campus video and broadcasts.

5. Who will pay for ongoing expenses following the technology fee funded portion of this project (e.g., who will replace hardware or software after it has reached its end of life)?

The BIN organization and the Communication Department are the main support for the television studio. Student government also provided BIN with a yearly budget which includes some maintenance fee opportunities. Jeffrey Anders is a full-time engineer devoted to BIN.

6. Describe how this project will follow NDSU's best practices in information technology. (Please make sure the NDSU IT Division staff you consulted signs in Part I of this form.)

We have reviewed this application with Steve Beckerman. BIN staff will be responsible for installation, maintenance and integration of the new systems, led by Technical Engineer Jeffrey Anders.

This technology acquisition sets us up for many years to come. We have a way to maintain it and have many opportunities to add to it as well. It is effective and efficient, and we will be good stewards of the funding allocated to us.

7. What service on campus is most similar to the one proposed here? How does this project differ?

There is not a direct comparison to other programs on campus in terms of video and broadcast production. That is why Theatre Arts and Athletics approach us for broadcast assistance. University relations does some work on media releases, and the Spectrum also produces news content. But their purposes are quite distinct from BIN and the Department of Communication offer here.

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III. Project Description (5 pages maximum)

Include information on the background of this project: how did it come to fruition?

The Bison Information Network and Broadcast program in the Department of Communication would like to improve the quality of television programming on campus while directly benefiting the NDSU community as a whole. With the relocation of the Bison Information Network studio from the Bison Block Building along 12th Avenue North to the space next to the NDSU Spectrum in the Memorial Union, now would be an ideal time to upgrade the very core piece of equipment that is used to produce every live production that the Bison Information Network creates in the BIN studio. Additionally, such an upgrade would allow for the acquisition of closed captioning, a televised wording system that would assist the NDSU community as a whole.

The current video switcher used by the student television station is 10-years old, is not very user friendly, and it has very limited capabilities. For example, to do a chroma-key requires navigating the menu system to enable the chroma-key which disables the ability to do normal character generator keying. The students have expressed their frustration about this switcher for a number of years now.

The latest generation Newtek Tricaster is designed to replace numerous pieces normally found in a video production control room/studio and it has what is called NDI capability. NDI technology allows video sources to be sent through the ethernet infrastructure that is already in place in nearly all public facilities including the NDSU campus. BIN could potentially have cameras and devices anywhere on the NDSU campus that connect back to the Memorial Union control room simply by connect them to the existing NDSU IT data network. This would make it possible to have productions originate anywhere on campus in High Definition resolution and could be live streamed on the BIN campus television channel 484, as well as recorded for future playback or streaming. Sporting events, guest presenters, Fine Arts stage productions, graduations, anything that happens on campus could be seen on the channel or streamed live anytime. The Tricaster TC1 can do World-Class Live Virtual Sets, which means BIN could have a different set for every show that they produce. This would make it easy for any type of show to be produced and branded in the BIN studio, cutting down on long term studio production costs. It truly is a very modern video switcher system with the connectivity for the social media conscious student of today.

In conjunction with this purchase, we are also applying for closed captioning. In conjunction to the Tricaster, closed captioning will allow all televisions on campus to have the language of all broadcasts displayed. Not only is this helpful for the hearing impaired, but since most televisions around campus have their audio muted, it would allow all those television systems to portrayed what it being said. For example, televisions in the Memorial Union display our programming but without sound. Watching a newscast without sounds is quite non-functional. With closed captioning, not only will all these televisions be fully functional, but it may also encourage other televisions on campus and in residence hall to display BIN programming.

The acquisition of the Tricaster and closed captioning will greatly benefit BIN, the broadcast journalism major, and all NDSU students and faculty.

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IV. Milestones

List the date for each project milestone. These milestones should represent the ***significant*** accomplishments that will be associated with the action plan. For each milestone, please indicate its expected outcome and the means for assessing that outcome. (The table may be extended as needed.)

	Date	Milestone	Expected Outcomes	Means of Assessment
1.	May 1, 2019	Purchase Tricaster and Closed Captioning		
2.	July 1, 2019	Installed equipment into new television studio in Memorial Union		
3.	August 22, 2019	Open House for BIN		
4.	August 23, 2019	Functional for first day of classes	Used in BIN broadcasts and Comm 245/445	Improved portfolios, increased student recruitment
5.				

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V. Supporting Documentation

All the specifics to the purchases are contained within the budget spreadsheet. The prices represent the current list price at stores such as www.newtek.com and www.linkelectronics.com.

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VI. Budget

(double-click on the form to begin entering data)

1.	**NDSU ORGANIZATION OR UNIT** Department of Communication
2.	**PROJECT DIRECTOR(S)** (Must be NDSU faculty or staff) Jeffrey Anders and Stephenson Beck

3.	SALARIES AND WAGES			
	Personnel description	**Number employed**	**Number of months**	**Funds Requested**
	A. Staff			
	B. Graduate students			
	C. Undergraduate students			
4.	**TOTAL SALARIES AND WAGES**			$0.00
5.	**FRINGE BENEFITS**			$0.00
6.	**TOTAL SALARY, WAGES AND BENEFITS**			$0.00

7.	EQUIPMENT			$0.00
	Newtek Tricaster TC1 video production system			$19,995.00
	rack rails			$254.88
	Educational software bundle			$995.00
	Windows 10 Laptop for LiveText 3.14			$400.00
	Connect Spark SDI/HDMI			$495.00
	Mobile Studios battery kit			$189.95
	Atomos HDMI-to-HDMI cable			$19.95
	Canare HD-SDI cable			$15.95
	SONY 40" HDMI monitor			$648.00
	Black Magic Design dual mon			$427.68
	Closed Caption Encoder			$3,999.99
	ENCO Systems ENCAPTION APPLIANCE for NDI®			$2,995.00

Describe Equipment specifics in the Budget Justification section

8.	MATERIALS AND SUPPLIES	$30,436.40
	Describe Materials and Supplies specifics in the Budget Justification section	

9.	TOTAL TECHNOLOGY FEE REQUEST	$30,436.40

10.	MATCH (Describe in Match Section)	$0.00

11.	TOTAL PROJECT EXPENDITURE	$30,436.40

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VII. Budget Justification

Describe how you arrived at the budget totals in Section VI, Budget.

You are expected to follow all applicable university policies and procedures regarding salary expenditures.

You are expected to follow the state-approved purchasing guidelines when purchasing materials and supplies.

- Equipment: List name, estimated cost and quantity of each item and explain why it is important to the project. Include installation and maintenance costs in your estimates.

- Materials and Supplies: List name, estimated cost and quantity for each non-equipment items and explain why it is important to the project.

Funding justification for the Tricaster

With the relocation of the Bison Information Network studio from the Bison Block Building along 12th Avenue North to the space next to the NDSU Spectrum in the Memorial Union it would be an ideal time to upgrade the very core piece of equipment that is used to produce every live production that the Bison Information Network creates in the BIN studio. It benefits the Bison Information Network, the Department of Communication, and the NDSU community.

It dramatically increase the capabilities and reach of our programming. With the capabilities that NDI technology allows, BIN could potentially have cameras and devices anywhere on the NDSU campus that connect back to the Memorial Union control room simply by connect them to the existing NDSU IT data network. This would allow productions to originate anywhere on campus in High Definition resolution and could be live on the BIN campus television channel 484, streamed live and recorded for future playback or streaming. Sporting events, guest presenters, Fine Arts stage productions, graduations, and anything that happens on campus could be seen on the channel or streamed live anytime. The Tricaster TC1 can do World-Class Live Virtual Sets, which means BIN could have a virtual set for every show that they produce. This would make it easy for any type of show to be produced and branded in the BIN studio, reducing cost of studio production without sacrificing production value. In addition, it works with video calling to allow for remote guest access anywhere in the world. Additionally, editing and playback would not require additional hardware, and major bonus for production purposes. It has great audio mixing capabilities and can hold two incoming Internet video feeds simultaneous.

We believe that these benefits will not only strengthen our broadcast production and extend our campus outreach, but also help in recruiting new BIN members.

Funding justification for closed-caption encoder.

Closed Captioning was first implemented in the television industry in 1980 and was originally intended to benefit hearing-impaired viewers. As BIN does not currently have a closed-captioning encoder and since all of the televisions located in university buildings that are tuned to the BIN's campus channel 484 have the sound turned off, the benefit to students, faculty & staff that are viewing the programs on channel 484 are compromised. With closed captioning, programs produced by the BIN organization could have the words from their newscasts and program scripts displayed on those televisions and viewers could enjoy those shows. And it would also help to promote the BIN organization and connect them better to the student body and university.

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VIII. Budget Match

1. Attempted Budget Matches:

Department of Communication will be funding $1200 for the Character Generator and laptop.

2. Actual Budget Matches:

Department of Communication will be funding $1200 for the Character Generator and laptop.

3. Additional Budget Match information: