

NNU Streaming Media Procedures

On-demand streaming media describes audio and visual content that is stored on a server and transferred to a Web browser in a continuous stream, as opposed to content that users download to their own computer.

Getting content from analog to streamed involves five steps. E-Learning Services and Technology and Media Resources can assist NNU faculty, adjuncts and students in completing this process.

1. Prepare
2. Digitize
3. Encode
4. Upload
5. Serve

1. Prepare

First, you must have audio, visual or animated content. This can be from a videotaped lecture, a recorded message, etc.

Consider Assistance

Technology and Media Resources rents equipment to record or videotape, which you may do on your own or hire personnel to assist you at hourly rates. You may also check with the Mass Communications department if you need more advanced production equipment and personnel.

Comply with Copyright Law

Use of the material must comply with copyright laws and/or Fair Use guidelines

< <http://learn.copyright.com/copyrightoncampus/> >. Three scenarios exist:

- If you or NNU own(s) the rights to the content, it may be uploaded.
- If you have written permission from the copyright owner, such as a publishing company, the content may be uploaded.
- If you do not have written permission but the Fair Use guidelines apply, the content may be uploaded for a limited amount of time. Access to media under this condition must be removed in a timely manner to comply with TEACH Act guidelines
< <http://www.copyright.com/Services/copyrightoncampus/basics/teach.html> >.

For help in deciding whether you can use certain media, visit www.nnu.edu/technologies, or contact the NNU Copyright Officer (Dr. Sharon Bull, Director of Library Services, SBull@nnu.edu or 208-467-8609).

For Academic Use, Meet Pedagogical Goals

Beyond compliance with the law, instructors should consider whether their intended use of media meets sound pedagogical goals. For instance, avoid placing just a “talking head” on your course site. Include opportunities for students to interact, perhaps by asking them to pause the file while they answer questions in a discussion forum. Use video to explain – and illustrate – difficult concepts or skills. The key concept to remember is to have specific learning objectives in mind when you use video and audio.

For Non-Academic Use, Receive Approval

Beyond compliance with the law, streamed media intended for nonacademic use (e.g., an Admissions video) must be approved by the Communications Council, headed by the Marketing Director.

2. Digitize

Once you have audio or video content on tape, the next step is to convert it from its analog state to digital. If your content is already in a computer file, skip ahead to the third step, **Encode**.

Consider Your Options

An eLearning TA can convert your videos and audio at no charge; academic programs have priority over nonacademic. Alternately, a TA can train you to convert media yourself. NNU faculty, staff or students desiring to create personal files (such as for a non-NNU website) may use the station on a walk-in basis.

For either a conversion or consultation, please use the online TA request form found at https://www.nnu.edu/input/request/angel_assistance at least 72 hours before you need the content.

Plan Adequate Time

Note that digitizing takes some time – up to one-and-a-half times the play length of your file – depending on the content and the settings you choose. A 10-minute video clip, for instance, could take approximately 15 minutes to digitize.

Use the Temporary “Raw” Folder

If you choose to use the station yourself, during the digitizing process you will place your file into a specially created folder on that computer called C:\Temp Streaming Media Raw. Later in the streaming process, you will be instructed to move the file into another temp folder and then eventually into your own storage.

Rip Your File if Necessary

If your file is on DVD, a substep of digitizing is “ripping.” Content must be in a computer file in order to be streamed, so content on a DVD must be “ripped.” Software for ripping a DVD, which is the process of copying files from DVD directly to a computer's hard drive, is available at the TMR station. Departments may also wish to purchase ripping software for their own use. Software is generally available for download from the Internet; consult TMR staff for guidance (help@nnu.edu or 208-467-8111).

3. Encode

Once your content is in digital form, available as a computer file, it should be encoded (compressed) so that the server can stream it more smoothly.

Consider Your Options

Encoding software is available at the TMR station. Alternately, Windows Encoder is available as a free download from Microsoft.

Separate Longer Files

Consider your audience of Internet users in preparing the file. Large file sizes take much longer for users to access, so it is best to chunk your video into a series of separate files. For instance, if your video is one hour long, consider breaking it up into two half-hour segments, or three 20-minute segments.

Follow Naming Conventions

E-Learning Services recommends a specific file name, all lowercase, using the following format:

- a) The course or department web page where it will be used (e.g., “nurs6010” or “admissions”)
- b) Some kind of identifying title for the content (e.g., “pediatrics” or “mainevent2009”)

Avoid spaces, dots, quotation marks or other non-alphanumeric characters. An underscore (_) is permissible. The extension should be .wma for audio files or .wmv for video files (NNU uses a Windows Media Server for streaming).

For example: *nurs6010_pediatrics.wmv* or *admissions_mainevent2009.wmv*

Use the Temporary “Sized” Folder

During the encoding process using the do-it-yourself station, you will place your file into a specially created folder on that computer called C:\Temp Streaming Media Sized. Once the encoding is finished and you have successfully played the file, please save it to CD, DVD or USB drive. Then, remove the files you saved to the Raw and Sized folders.

4. Upload

After you have saved your file and removed the temporary versions, you may place a copy where it can be accessed by the server. TMR Staff can create a departmental folder for you on the streaming media server. Contact TMR (help@nnu.edu or 208-467-8111) to request such a folder, or, if a department folder already exists, ask for a new folder within the department area for your use.

e.g., MBA/ Galloway

TMR Staff or an eLearning TA must provide training to upload your streamed files to the server, or do this step for you. Note that streamed files are usually large and take up network space, which is limited. Due to their nature, NNU's online programs need as much space as possible for use of streamed media and have allocated funds to increase this space if required. If a great deal of space is needed for other than online programs, please work with your department chair or director to ensure that enough space is available.

5. Serve

After uploading your file, you may check it directly on the Internet, determine the URL, or link, for your media file. The basic URL will not begin with *http*, but with *mms* (referring to "multimedia server"), and will begin like this: <mms://media.nnu.edu/StreamingMedia>. The rest of the URL will depend on where your file is located. Overall, the link will follow this format:

[mms://media.nnu.edu/StreamingMedia/\(department\)/\(filename with extension\)](mms://media.nnu.edu/StreamingMedia/(department)/(filename with extension))

Here are some examples:

mms://media.nnu.edu/StreamingMedia/MSW/sowk7000_senility.wmv

mms://media.nnu.edu/StreamingMedia/MBA/bsns5555_economy.wmv

mms://media.nnu.edu/StreamingMedia/Music/musc1010_baroque.wmv

Serve from ANGEL

To link to your file from within ANGEL, create an embedded link in any textbox. Look for a tutorial on the ANGEL Support page at www.nnu.edu/angel, or contact E-Learning Services (ellearning@nnu.edu or 208-467-8034) for help.