

An Evaluation of Narrated Presentation Software for Online Instruction and Distance Education at NC State University

Submitted by: the Narrated Presentation Software Evaluation Team

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**To: Sharon Pitt,
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(draft, February 2, 2005, send comments/edits to tmrhyne@ncsu.edu)

Executive Summary:

After an extensive product survey and evaluation of Narrated Presentation Software, Macromedia Breeze or other Flash-based Enterprise Wide Solution seems optimally suited for North Carolina State (NC State) University's varied online learning and distance education environments. We thus recommend this scalable campus-wide solution for the production of online rich media content.

The Narrated Presentation Software Evaluation Team was formed in response to the expressed need of faculty to add narration to Microsoft PowerPoint presentations for online delivery. We developed an evaluation matrix to address software that allows for the addition of voice, captioned content and other rich media elements to be added to standard slide show presentations. We also conducted product testing of a) authorGEN for PowerPoint; b) Microsoft Producer; c) Viewlet Presenter; d) Apresso for PowerPoint; e) Impatica for PowerPoint; f) Accordent Presenter; g) Camtasia Studio; h) Snapz Pro and i) Macromedia Breeze. Impatica for PowerPoint and Accordent Presenter were eliminated from the Desktop Evaluation effort since their pricing was above \$200 per unit for an individual instructor purchase.

We were hopeful of finding a desktop solution that could satisfy the robust needs for online and distance education instruction. After evaluation of these products, we determined that an enterprise solution that yields zero or minimal direct cost to the individual instructor was optimal. We also found that a Flash based enterprise solution provided minimal file size, reliable performance, universal accessibility, cross platform capabilities, ease of plug-in installation, straight forward rich media content creation and optimal user interface capabilities. This enterprise approach is also in concert with the existing suite of Macromedia tools the DELTA/Learning Technology Service (LTS) supports via Faculty Development Workshops, provides reusable multimedia modules to aid the DELTA/LTS Online Instructional Program's ongoing production of rich media content, and has the potential to integrate with current campus wide WebCT Vista Learning Management System efforts that DELTA/LTS has underway.

Introduction:

Over the last six months, we have conducted an extensive product search and survey of Narrated Presentation Software. Our efforts have included the development of an evaluation matrix and associated product testing. Narrated Presentation Software allows for the addition of voice, captioned content and other rich media elements to be added to standard slide show presentations. The starting point is frequently a set of digital slides created with Microsoft's PowerPoint software.

Background on Narrated Presentation Software Usage at NC State University:

Previously, faculty at NC State University used tools like RealPresenter to create narrated presentations from MS PowerPoint slides. Through its Faculty Development unit, the DELTA/Learning Technology Service (LTS) provided training and support to faculty in the use of RealPresenter. In 2002, RealPresenter was discontinued by RealNetworks. In addition, the Online Instructional Programs (OIP), Video Communication Services and Media Production Services units of LTS also received requests to assist with Narrated Presentation productions where Powerpoint slides served as the starting point.

In August 2004, the Director of LTS established an evaluation team with the goal of "providing recommendations on software tools that can scale to campus wide usage by faculty and students for the production of online/distance education instructional content". In addition to LTS staff representation from the respective Faculty Development, Online Instructional Programs, Video Communication Services, Media Production Services and Technology Development units, the evaluation team also included participation by the DELTA Distance Education Planning and Development group and a distance learning specialist from NC State University's Center for Transportation and the Environment. The members of this team are shown as "the Narrated Presentation Software Evaluation Team" at the start of this report. Faculty commentary on various narrated presentation software currently used for online courses was also sought.

Defining Three Levels of Narrated Presentation Software:

In September and October 2004, the Narrated Presentation Evaluation Team developed a matrix for a unified approach to evaluating narrated presentation software. During the matrix development process, three levels of narrated presentation software support were defined: a) the desktop level; b) the production level; and c) the enterprise level.

Desktop Level:

The desktop level assumed the scenario of an instructor or general user acquiring the narrated presentation software from their limited funding resources. Narrated presentations (frequently with PowerPoint slides as a starting point) would be

built on the instructor's desktop computer with an inexpensive desktop microphone attached. Products in this category would be targeted in the price range of \$200 or less since the instructor would have minimal funds for purchase. We determined that it is optimal if the desktop narrated presentation software is priced at \$99 or under.

Production Level:

The production level considered software functions that would be used by web content developers, video producers, multimedia specialists and instructional designers to polish, enhance, and produce narrated presentations originally generated by instructors either from the original PowerPoint slides or from desktop level narrated presentation software tools. Products in this category would potentially have specialized functionality and could be in the \$500 range and above. It seemed unlikely that individual instructors would purchase these production level tools unless the instructor wanted to build their own multimedia studio environment.

Enterprise Level:

The enterprise level addressed the acquisition, training and support of server based narrated presentation products for campus wide usage. On the NC State University campus, this would involve a commitment from DELTA/LTS and other organizational partners. Products in this category would involve addressing ongoing site licenses, server support and maintenance issues with pricing spanning from the \$10,000 toward the \$100,000 ranges. Individual instructors would have a zero or desktop level cost to build narrated presentation content with enterprise level tools.

Components of the Evaluation Matrix:

To address instructors' direct needs and to proceed with our evaluation process, we determined that it was optimal to focus on product evaluations at the desktop level. We decided production level functions would be assessed at a later date. Our next step was to establish a set of basic and bonus criteria for product evaluations. Basic criteria were critical components. Bonus criteria were considered as supplemental ("nice to have") features.

Nine **basic criteria** were established: a) Cost; b) Output Format; c) File Size; d) User Friendly; e) Audio; f) Cross Platform from the User Viewpoint; g) Accessibility; h) Good Documentation; i) Reliable Performance and j) Overall Features.

Cost:

As noted previously, for desktop products, it is optimal if the desktop narrated presentation software is priced at \$99 or under for the individual instructor. For

our evaluation efforts, we decided to accept products that are priced at \$200 or less. Products above that cost level are eliminated from our evaluation efforts.

Output Format:

We determined that we needed to know the final format that the software generated for online instructional purposes.

File Size:

The resulting file size of the generated narrated presentation is important to determining potential storage requirements and effective asynchronous viewing of the online content.

User Friendly:

The product's ease of use in building and generating narrated presentations is a key evaluation component. We also set our evaluation sessions to be 1.5 hours in length to assess how quickly it was to build the online content.

Audio:

The clarity of the audio track was an essential component of our evaluation.

Cross Platform from the User Viewpoint:

To support the varied computer architectures that students use and access in the NC State University community, the completed narrated presentation is optimal if it is possible to successfully view it on multiple computer architectures.

Accessibility:

To support universal access by all students, the narrated presentation software is optimal if it addressed mechanisms for supporting screen readers, addressing captioned content, and facilitating keyboard access. Products with automated functions for captioned content and keyboard access received high scores. In contrast, products requiring additional production work to build accessible content received lower scores.

Good Documentation:

The effectiveness of the product's documentation is an essential component for successful ongoing use of the product by instructors.

Reliable Performance of Output:

The capability of the final narrated presentation to consistently playback via online access is a key evaluation component.

Overall Features:

To summarize our product testing, a ranking of overall features is included as our final basic assessment component.

For the basic criteria, we applied a 1 = poor; 2 = good; 3 = excellent scale and provided specific details for quantifiable criteria. These scales were noted in our summary.

Bonus Criteria for evaluation included: a) Editing of Output; b) Import of Embedded Video; c) Capturing of Narrator's Video; d) Cross Platform from the Content Developer's Perspective; e) Choices of / Controls for Export Compression Formats; and f) Capability to obtain a Printout of the complete narrated presentation sequence.

Editing of Output:

It is helpful if the video and audio components of the final narrated presentation are able to be modified and updated as content elements change over time.

Import of Embedded Video:

This ability to import video elements that enhance and support an existing narrated presentation is a helpful bonus feature.

Capturing of Narrator's Video:

Support, by the narrated presentation software, for video of the narrator delivering the lecture content enhances the final rich media presentation.

Cross Platform from the Content Developer's Viewpoint:

It is ideal if the narrated presentation software is available for multiple computer architectures.

Choices of / Controls for Export Compression Formats:

The option to select export compression formats for delivery of the narrated presentation is another feature.

Capability to obtain a Printout of the complete narrated presentation sequence:

The capability to obtain a printed copy of the entire narrated presentation sequence, similar to printing the complete PowerPoint slide set, is a requested bonus feature from the student viewpoint.

For the bonus criteria, we applied with a 1 = poor; 2 = good; 3 = excellent or a 1= no and 2 = yes scaling. These scales were noted in our summary evaluation sheet.

Product Testing:

Once the evaluation matrix was established, testing of surveyed products began. A sample PowerPoint slide set with a text script embedded into the PowerPoint notes section was used for all product testing efforts. The text script, embedded into the PowerPoint notes section, provided the basis for the recording of audio components associated with each slide as well as mechanism for assessing automated captioned text features of narrated presentation software tools.

In early November 2004, the Evaluation Team determined an initial set of products for testing. After discussions with the Director of LTS, it was decided to also add Macromedia Breeze to the list of products. If Macromedia Breeze was purchased as an Enterprise system, the direct cost to individual instructors would likely be zero, or at least under \$200.

Thus our product list included: a) authorGEN for PowerPoint; b) Microsoft Producer; c) Viewlet Presenter; d) Apresso for PowerPoint; e) Impatica for PowerPoint; f) Accordent Presenter; g) Camtasia Studio; h) Snapz Pro and i) Macromedia Breeze. Impatica for PowerPoint and Accordent Presenter were eliminated from the Desktop Evaluation effort since their pricing was above \$200 per unit. Products were evaluated by individuals or by teams of two or three people in 1.5 hour sessions. The narrated presentation examples built from these product testing efforts are available for viewing at: <http://lts.ncsu.edu/oip/nps/>.

During December 2004 and January 2005, via a series of matrix standardization sessions, the Evaluation Team normalized the product testing results. These results are summarized in the product testing notes and matrix appendices of this report.

Observations from Product Testing:

After product evaluation and testing of authorGEN for Powerpoint, Microsoft Producer, Viewlet Presenter, Apresso for Powerpoint, Impatica for PowerPoint, Accordent Presenter, Camtasia Studio, Snapz Pro and Macromedia Breeze, we provide the following observations:

- 1) Macromedia Breeze is the narrated presentation software tool optimally suited for the evaluation criteria developed to reflect NC State University's online and distance education learning environment. The tool effectively supports viewing of final output on multiple computer architectures, small file sizes for generated

output of the complete presentations, effective indexing of presentation content, automated captioning of text, and reliable performance. Macromedia Breeze output is in Flash format, a widely playback medium.

- 2) Viewlet Presenter, Microsoft Producer and Apreso for PowerPoint, while being user friendly, yield narrated presentation outputs that are tightly coupled to Windows architectures and thus do not support cross platform functionality.
- 3) Camtasia Studio and Snapz Pro are effective screen capture tools but have limited functionality with regard to support for indexing of presentation content and automated captioning of text.
- 4) authorGEN for PowerPoint, as an emerging narrated presentation software tool, generates output that can be viewed on multiple computer architectures, including handheld devices, and supports automated captioning of text. The final output was frequently found to have unreliable performance.
- 5) As noted previously, Impatica for PowerPoint and Accordent Presenter were not tested since the cost for each of these products is beyond the \$200 price range.
- 6) None of the products tested are able to automatically generate printed output of the complete narrated presentation sequence. It is possible to obtain printouts of individual screen captures manually, one screen at a time. Instructors can also create handouts through printer utility programs such as pdf or html generators.

Next Steps and Recommendations:

We recommend the following next steps as a result of our Narrated Presentation Software Evaluation efforts:

- 1) **Consideration be given to purchase of NC State University campus wide license for Macromedia Breeze or other Flash-based Enterprise Wide solution.** In addition to providing a scalable campus wide presentation capability for online/distance education instructional content, Macromedia Breeze is compatible with the existing suite of Macromedia tools the LTS supports via Faculty Development Workshops. In addition, the content produced is searchable and track able. As a server solution, Macromedia Breeze will also provide reusable multimedia modules to aid Online Instructional Program's ongoing production of rich media content. Macromedia Breeze also has the potential to integrate with current WebCT Vista Learning Management System efforts that DELTA/LTS has underway. In addition to Macromedia Breeze, there are other comparable enterprise wide solutions that also might merit consideration and examination. This current evaluation does not address a robust evaluation of enterprise solutions at this time. We recommend that DELTA/LTS given consideration to an enterprise solution that will support a NC State University campus wide license.

- 2) **Development of training sessions for faculty/instructional support staff in Macromedia Breeze.** As noted in (1), LTS – Faculty Development Services currently provides training workshops in Macromedia’s Dreamweaver, Flash and Fireworks suite of tools. Thus, there already exists a natural progression for adding Macromedia Breeze training and support.

- 3) **Presentation of the results of this report at future NCSU MMUG/TLTR sessions.** We would like to share with the broad NC State University community the findings of our product search and testing of narrated presentation software.

Appendix #1: Summary of Product Testing Findings of Narrated Presentation Software Evaluations at NC State University

Below, we present a summary of our findings from product tests of authorGEN for Powerpoint, Microsoft Producer, Viewlet Presenter, Apresso for PowerPoint, Impaticia for PowerPoint, Accordent Presenter, Camtasia, SnapzPro and Macromedia Breeze. We note that all products have good documentation.

authorGEN for PowerPoint: (<http://www.authorgen.com/ag-powerpoint.html>)

AuthorGEN for PowerPoint is currently available for \$149. The product installs as a menu option in PowerPoint and allows for capturing audio and video at the desktop. The narrated presentation tool produces output in Real Player, Windows Media Player and Flash for Pocket PCs formats. AuthorGEN supports automated captioning of text that is stored as PowerPoint notes. Our challenges with this product included: a) some confusion with the user interface and b) frequent unreliable performance with the use of Real Player content. Newer versions of authorGEN are slated to be released to address some of these concerns.

Microsoft Producer:

(<http://www.microsoft.com/windows/windowsmedia/technologies/producer.aspx>)

Microsoft Producer is free downloadable software from Microsoft for licensed users of PowerPoint 2002 and above. Microsoft Producer is designed to run in conjunction with PowerPoint. The product was found to be easy to use. It easily facilitated the capturing of audio and video at the desktop level into Windows Media format. Our challenges with this product included: a) the narrated presentation output is heavily tied to the Windows architecture, making it not easily cross platform for users; and b) no automated captioning of text to easily support accessibility requirements.

Viewlet Presenter: (<http://www.qarbon.com/presentation-software/vs/>)

At the time of our product testing, Viewlet Presenter was a \$149 stand alone product for creating narrated presentations. As our evaluation progressed, the creator of Viewlet Presenter (Qarbon) changed its product strategy and incorporated Viewlet Presenter functions into a more expensive (\$398) Viewlet Suite product. Unfortunately, Viewlet Presenter is no longer available as a stand alone product. We note that the product was rated highly for its user interface, support of automated captioning of text, and reliable performance. Our challenge with the product focused on a lack of cross platform support for users, Viewlet Presenter functions are heavily tied to the Windows platform.

Apresso for Powerpoint: (http://www.apreso.com/product_overview.asp)

Apresso for PowerPoint is a \$199 product. The product installs as a menu option in PowerPoint and allows for capturing audio and video at the desktop. The product was

found to be easy to use. It easily facilitated the capturing of audio and video at the desktop level into Windows Media format. Apresso for PowerPoint supports automated captioning of text and has reliable performance. Our challenge with the product focused on a lack of cross platform support for users, Apresso for PowerPoint functions are heavily tied to the Windows platform.

Impatica for PowerPoint: (<http://www.impatica.com/imp4ppt/>)

As noted in our main report, Impatica for PowerPoint is currently available for \$300. This price was above our \$200 price range and thus we did not conduct further testing of this product. We would like to note that there are faculty teaching online and distance education courses at NC State University who use Impatica for PowerPoint for producing narrated presentations.

Accordent Presenter: (http://www.accordent.com/products_overview.html)

As noted in our main report, the least expensive Accordent Presenter product, (Accordent Presenter One) is priced at \$400. This price was above our \$200 price range and thus we did not conduct further testing of this product. We would like to note that Accordent Presenter is also being considered as a potential Classroom Capture product at the enterprise level.

Camtasia Studio:
(<http://www.techsmith.com/products/studio/default.asp?lid=CamtasiaStudioHome>)

Camtasia Studio is a \$149 product. As noted in our main report, Camtasia Studio is a PowerPoint add-on that is an effective screen capture tool. The tool is easy to use and records full motion video and audio from the desktop in a variety of streaming media formats. As a screen capture tool, the product is not oriented towards providing indexing of PowerPoint slides and does not support automated captioning of text from PowerPoint notes.

Snapz Pro: (<http://www.ambrosiasw.com/utilities/snapzprox/>)

Snapz Pro is a \$69 product that is a screen capture tool for the Macintosh platform. Although we were able to record full motion video, we found the tool to be challenging. As a screen capture tool, the product is not oriented towards providing indexing of PowerPoint slides and does not support automated captioning of text from PowerPoint notes. We would like to note that there are faculty teaching online and distance education courses at NC State University who use Snapz Pro for producing narrated presentations from Powerpoint slides.

Macromedia Breeze: (<http://www.macromedia.com/software/breeze/>)

As noted in our main report, Macromedia Breeze is an enterprise level solution to supporting the production of online narrated presentations. Purchase of this product

category involves addressing ongoing site licenses, server support and maintenance issues with pricing being in the \$100,000 and above range.

Individual instructors would have a zero or minimal desktop level cost to building narrated presentation content with Macromedia Breeze. The Macromedia Breeze plug-in installs as a menu option in PowerPoint and allows for capturing audio and video at the desktop. The narrated presentation tool produces output in Flash format that is automatically stored on the Macromedia Breeze server for storage and distribution. Members of the Narrated Presentation Software Evaluation Team, who are also involved with the Next Generation Learning Management System deployment on the NC State University campus, additionally noted that Macromedia Breeze provides for searchable and track able content. Macromedia Breeze supports automated captioning of text as well as keyboard access. We recommend Macromedia Breeze as the scalable campus wide solution to preparing narrated presentations for online and distance education instruction across the NC State University campus.

Appendix #2: Matrix of Product Testing Results – Narrated Presentation Software Evaluation at NC State University

CRITERIA	authorGen	Microsoft	Viewlet	Apreso Ppt	Impatica	Accordent	Camtasia	SnapzPro	Breeze
Scale:1(poor);2(good);3(excellent); yes/no		Producer	Presenter			Presenter			
	team review	team review	team review	one person review			one person review	team review	one person review
COST (\$99 desired range)	Cost = \$149	Cost = Free download but requires PPT 2002 or 2003 (\$148)	Cost = \$149 standard price	Cost = \$199	Cost ~\$300, eliminated	Cost ~\$400, eliminated	Cost = \$149	yes - \$69	requires server solution if acquired, individual cost = \$0
FORMAT	Real Player & Windows Media		IE, Mozilla, Netscape (with Flash 5 or higher installed)	Windows Media			Windows Media, Flash, HTML, RealMedia	QuickTime	Flash
FILE SIZE	453KB Real/ 480 KB Wind.	7.2 Mb(audio)/14.4 Mb (video)	0.668Mb for 02:26 audio track	6.25 Mb (video) 2:56 audio track			need data	7.8 Mb 2:52 mins	0.95 Mb 1:56 mins
USER FRIENDLY	2	3	3	3			3	1	3
AUDIO	1	3	3	3			2	unknown	3
CROSSPLATFORM	3	1	1	1			2	2	3
& USER	3 platforms, Windows, Mac	Windows PC only	Windows PC only	Windows: IE Browser only			Windows & Mac	Windows & Mac	3 platforms, Windows, Mac
	Linux								Linux

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CRITERIA	authorGen	Microsoft	Viewlet	Apreso Ppt	Impatica	Accordent	Camtasia	SnappzPro	Breeze
Scale:1(poor);2(good);3(excellent); yes/no	Producer	Presenter			Presenter				
ACCESSIBILITY	2	1	3	2			1	1	3
(1= can use outside software tool)	reads ppt notes,	no captioning built in	reads ppt notes,	reads ppt notes,			no captioning built in	no captioning built in	reads ppt notes,
(2=automated captioning from ppt notes)	to create captions	can use SAMI	to create captions	to create captions			can use SMIL/Quicktime	can use Quicktime pro	to create captions
(3=keyboard access)								Helix server	Server
GOOD	3	3	3	3			3	1	3
DOCUMENTATION									
FILE SIZE	2	2	0.668MB for	2			2	7.8 Mb	0.95 Mb
			02:26 audio track					2:52 mins	1:56 mins
RELIABLE	1	2	3	2			2	2	3
PERFORMANCE			need to test multiple accesses				has quirks with Firefox	progressive downloads	
OVERALL FEATURES	2	2	3	3			1	1	3
							screen captures only	screen captures only	

Appendix #2: Matrix of Product Testing Results – Narrated Presentation Software Evaluation at NC State University

CRITERIA	authorGen	Microsoft	Viewlet	Apriso Ppt	Impatica	Accordent	Camtasia	SnapzPro	Breeze
Scale:1(poor);2(good);3(excellent); yes/no	Producer	Presenter			Presenter				
**BONUS CRITERIA									
EDITING	1	3	2	1			3	1	3
1=No, 2=Yes, 3=Robust									
VIDEO									
Import/Embedded Video	1	2	1	1			1	1	2
1=No, 2=Yes									
Capture Narrator's Video	2	2	1	2			1	1	2
1=No, 2=Yes									
CROSSPLATFORM & DEVELOP	1	1	1	1			1	1	1
1=No, 2=Yes									
Choice of Export/Compression	1	2	1	1			2	1	1
PRINTABLE	1	1	1	1			1	1	1
1=No, 2=Yes									