

# Going Mobile, Streaming and Beyond

How can you make learning within the Blackboard Vista Enterprise system more accessible and appealing to different learning styles?

It's not just about "streaming video" - it's about how faculty can most easily record and publish the media in multiple formats, including mobile formats.

This comparative analysis documents the pros and cons of different capture, publish, and streaming solutions. Some of these tools allow users to record once... the recording goes into a watch folder... then encoding software produces the one recording in multiple formats and also publishes it to the web based on the instructor's pre-determined profile. Some are free and hosted; others are costly out-of-the-box solutions. Which one would work best for you? ...for your instructors? ...for a campus-wide solution?

For example, some solutions could prepare a Flash file and put it on a public webpage;

prepare both a video and an audio-only podcast and publish them to a podcast server for iTunes or an audio-CD; and prepare an .mpeg4 and publish it to a streaming server for your iPhone. And do it all at once. At the click of one button.

More importantly, some of these tools integrate with the Blackboard Vista Enterprise system.

According to Wikipedia, the Scope of mobile learning includes:

- Children and students using handheld computers, PDAs or handheld voting systems in a classroom or lecture room.
- Students using mobile devices in the classroom to enhance group collaboration among students and instructors using a Pocket PC.
- On the job training for someone who accesses training on a mobile device "just in time" to solve a problem or gain an update.
- Learning in museums or galleries with handheld or wearable technologies
- Learning outdoors, for example on field trips.
- The use of personal technology to support informal or lifelong learning, such as using handheld dictionaries and other devices for language learning.
- Improving levels of literacy, numeracy and participation in education amongst young adults.
- To provide audiovisual support in order to enhance training that's been provided in a corporate business or other classroom environment.

## Authoring Tools

These tools are for use in creating courses, tutorials, etc for delivery on mobile devices, e.g. PDAs, mobile phones, etc.

Key to Availability

E=cost; C=add code to web page/blog D=download; H=hosted service; OS=Open source; FT=free trial; Ease of Use (1=easy, 2=slightly difficult, 3=difficult for most newbies); P=Powerlink for Blackboard Vista

Tool	Summary	Available				
Atlantic Link Content Point: <a href="http://www.atlantic-link.co.uk/home_contentpoint.htm">http://www.atlantic-link.co.uk/home_contentpoint.htm</a>	Rapid authoring software with automatic Flash output for Windows Mobile devices. Create fully interactive mobile courses in hours.	£	D/H	FT	1	
iWriter: <a href="http://www.talkingpanda.com/iwriter/">http://www.talkingpanda.com/iwriter/</a>	Solution for creating iPod study tools	£	D	FT	2	
Learning Mobile Author: <a href="http://www.hotlavasoftware.com/">http://www.hotlavasoftware.com/</a>	Mobile content authoring and publishing tool that allows the rapid design, editing and publishing of trackable mobile learning and testing content	£	D		2	
Mobile Study: <a href="http://www.mobilestudy.org/">http://www.mobilestudy.org/</a>	Create quizzes for mobile phones	Free	H/D		1	
MyLearning Author for Pocket PC: <a href="http://www.m-learning.org/products/mylearning-author-for-pocket-pc.htm">http://www.m-learning.org/products/mylearning-author-for-pocket-pc.htm</a>	A set of easy-to-use software tools that lets you create learning activities to run on Pocket PCs.	£	D		1	
m scape authoring toolkit: <a href="http://www.mscape.com/home">http://www.mscape.com/home</a>	Download, create and share mobile, location-based media	Free	D		2	
Podquiz Maker: <a href="http://podquizmaker.com/">http://podquizmaker.com/</a>	Wizard to produce multiple-choice quizzes and instructional content	£	D	FT	1	
StudyMate: <a href="http://www.respondus.com/studymate/samples.shtml">http://www.respondus.com/studymate/samples.shtml</a>	Rapid authoring software for interactive games and assessments	£	D/H	FT	1	P
Toolbook 9.5: <a href="http://www.toolbook.com/preview/">http://www.toolbook.com/preview/</a>	Provides support for the Apple iPhone and other enhancement	£	D	FT	2	
Wondershare PPT to Blackberry, DVD, iPhone, iPod, Pocket PC, PSP, Video, YouTube, Zune: <a href="http://www.ppt-to-dvd.com/products.html">http://www.ppt-to-dvd.com/products.html</a>	Converts PPT to almost any popular video or mobile format	£	D	FT	1	

## Delivery Tools (live or on-demand; stream or download)

### Live Broadcasting

These tools enable you to set up and deliver a live talk, presentation, or music show.

Tool	Summary	Available				
Ustream: <a href="http://www.c4lpt.co.uk/Top100Tools/ustream.html">http://www.c4lpt.co.uk/Top100Tools/ustream.html</a>	Platform that provides live interactive video for everyone	Free	H		1	
blogTV: <a href="http://www.blogtv.com/">http://www.blogtv.com/</a>	Create, watch and share live broadcasts	Free	H		1	
iRadio: <a href="http://www.iradio.com/">http://www.iradio.com/</a>	Radio platform to stream MP3 and WAV files	Free	D		1	
Mogulus: <a href="http://www.mogulus.com/">http://www.mogulus.com/</a>	Everything you need to launch your own live 24/7 television station	Free	H		1	
MyCasting: <a href="http://www.orb.com/en/mycasting">http://www.orb.com/en/mycasting</a>	Transform PC into personal broadcasting system	Free	D		1	
Stickam: <a href="http://www.stickam.com/">http://www.stickam.com/</a>	Place streaming video, slide show, music, and live video chat on your blog and/or web site. Upload videos, music and photos	Free	H/C		1	
uBroadcast: <a href="http://www.ubroadcast.com/">http://www.ubroadcast.com/</a>	Broadcast your own live talk or music show	Free	D		1	
Wimba Live Classroom: <a href="http://www.wimba.com">http://www.wimba.com</a>	Live 2-way video, audio, presentations, text chat, polling, application sharing, whiteboard, quizzes, recorded archives for later viewing, back-up telephone conference option. From user's desktop or classroom.	£	H/D		1	P

### Stream / On-Demand Video

These tools enable you to deliver a recorded talk, presentation, or music show.

Tools—Hosted	Summary	Available				
TeachOutLoud: <a href="http://teach.learnoutloud.com/">http://teach.learnoutloud.com/</a>	Upload your digital content and sell it, or offer it for free	Free			H	
Vimeo: <a href="http://www.vimeo.com/">http://www.vimeo.com/</a>	Video hosting and delivery service	Free			H	
YouTube: <a href="http://www.youtube.com">http://www.youtube.com</a>	Video sharing tool	Free			H	
Flickr: <a href="http://www.flickr.com">www.flickr.com</a>	Photo storage and sharing tool - now hosts 90 sec videos	Free			H	
TeacherTube: <a href="http://www.teachertube.com">http://www.teachertube.com</a>	Instructional video hosting and sharing	Free			H	
5min: <a href="http://www.5min.com/">http://www.5min.com/</a>	Video hosting for videos under 5 mins in length	Free			H	
Abazab: <a href="http://www.abazab.com/">http://www.abazab.com/</a>	Video hosting	Free			H	
Badongo: <a href="http://www.badongo.com/">http://www.badongo.com/</a>	Site to upload unlimited files, video, music etc	Free			H	
Blip.tv: <a href="http://blip.tv/">http://blip.tv/</a>	Record, upload and watch your videos	Free			H	
Google Video: <a href="https://upload.video.google.com/">https://upload.video.google.com/</a>	Host and share videos	Free			H	
Akamai Streaming: <a href="http://www.akamai.com/html/technology/products/streaming.html">http://www.akamai.com/html/technology/products/streaming.html</a>	Hosted streaming solution—audio/video	£			H	
ScreenCast: <a href="http://www.techsmith.com/screencast.asp">http://www.techsmith.com/screencast.asp</a>	Hosted streaming solution—video	£			H	

Storage/Stream for Campus-wide Solution	Cost	Filetypes	Support
Darwin Streaming Server: <a href="http://developer.apple.com/opensource/server/streaming/index.html">http://developer.apple.com/opensource/server/streaming/index.html</a>	FREE	QuickTime; MPEG-4; 3GPP	no support
Helix by RealNetworks: <a href="http://www.realnetworks.com/products/free_trial.html">http://www.realnetworks.com/products/free_trial.html</a>	\$400 for 100 concurrent streams	.rm, .wmv, .mov, .mp4, .ra, .mp3, .wma, .smil, .mpeg1thru4, 3GPP	support included
Windows Media Server: <a href="http://www.microsoft.com/windows/windowsmedia/forpros/server/server.aspx">http://www.microsoft.com/windows/windowsmedia/forpros/server/server.aspx</a>	FREE	.wmv, .mp3, .avi, .wma, .wav, .asf	limited support
Flash Media Streaming Server: <a href="http://www.adobe.com/products/flashmediastreaming/">http://www.adobe.com/products/flashmediastreaming/</a>	Approx \$4500 perpetual; \$200 upgrade; free trial limited to 10 concurrent users	.FLA / .FLV, ASC/ .JS SWF / .SWD, H264, HE-AAC, multi-point publishing, FlashLite, Real Time Messaging Protocol	support included

Encoding	Cost	Filetypes	Support
Windows Media Encoder	FREE	.wmv, .mp3, .mp4	limited support
Helix Mobile Producer - Standard & Prof: <a href="http://www.videomediasolutions.com/real_mobileproducer.html">http://www.videomediasolutions.com/real_mobileproducer.html</a>	\$400 - \$7000	.avi, .mov, .dv, .mpeg1 thru .mpeg4, .mp3, .wav, .swf, 3GPP	support included
RealProducer: <a href="http://www.videomediasolutions.com/real_realproducerplus.html">http://www.videomediasolutions.com/real_realproducerplus.html</a>	FREE-\$200	.wmv, .mp3, .avi, .wma, .wav, .asf, .rm	Limited support
TechSmith's Relay: <a href="http://www.techsmith.com/featured/2007/relay/educause2007/default.asp">http://www.techsmith.com/featured/2007/relay/educause2007/default.asp</a>	TBD	"just about any" - plays on all platforms; can be placed on clients campus-wide, publish preferences (called profiles) can be preset by instructor, recording, rendering, encoding all takes place on a server. Allows for back-to-back recording. Publishes multiple file formats to multiple sources, all at once. Pricing TBD. Can use Camtasia for Editing.	Support included

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Stacey Rowland, Distance Education Coordinator, University of West Georgia

References: :

<http://www.c4lpt.co.uk/Directory/>

<http://www.learningtechnologyconsortium.org/documents/EduComm2005-Capture-Laudato.ppt>

Technical Challenges include:

- Connectivity and battery life
- Screen size and key size
- Ability for authors to visualize mobile phones for delivery
- Multiple standards, multiple screen sizes, multiple operating systems
- Repurposing existing e-Learning materials for mobile platforms
- Learning curve for users, developers, and support personnel
- Network connectivity

Social and educational challenges include:

- Accessibility and cost barriers for end users, as well as developers, and support personnel: Digital divide.
- How to assess learning outside the classroom
- How to support learning across many contexts
- Developing an appropriate theory of learning for the mobile age
- Design of technology to support a lifetime of learning
- Tracking of results and proper use of this information
- No restriction on learning timetable
- Personal and private information and content
- No demographical boundary

## Record/ Edit/ Encode

These tools are for creating different media and encoding media into alternate file formats - animation, audio, video etc.

Key to Availability

E=cost; C=add code to web page/blog D=download; H=hosted service; OS=Open source; FT=free trial; Ease of Use (1=easy, 2=slightly difficult, 3=difficult for most newbies); P=Powerlink for Blackboard Vista

### Top Media Creation & Editing Tools

Tool	Summary	Available				
Audacity: <a href="http://www.c4lpt.co.uk/Top100Tools/audacity.html">http://www.c4lpt.co.uk/Top100Tools/audacity.html</a>	Cross-platform sound editor and recorder	Free	D			
Camtasia by TechSmith: <a href="http://www.c4lpt.co.uk/Top100Tools/camtasia.html">http://www.c4lpt.co.uk/Top100Tools/camtasia.html</a>	Record your screen to create training, demo, and presentation videos, aka screen-casts. Can include interactivity. Encodes in multiple-formats. Includes smart-focus (auto zoom). Recording, Editing, Rendering, Encoding all done on user's computer. Licensed per computer.	£	D		FT	
Relay by TechSmith (Beta)	Same as above but Recorder can be placed on clients campus-wide, publish preferences (called profiles) can be preset by instructor, recording, rendering, encoding all takes place on a server. Allows for back-to-back recording. Publishes multiple file formats to multiple sources, all at once. Pricing TBD. Can use Camtasia for Editing.	£	H/D		Beta	
Captivate: <a href="http://www.c4lpt.co.uk/Top100Tools/captivate.html">http://www.c4lpt.co.uk/Top100Tools/captivate.html</a>	Record your screen to create training, demo, and presentation videos, aka screen-casts. Can include interactivity. Encodes to Flash. Includes autoText captioning, describing your actions.	£	D		FT	
Garageband: <a href="http://www.c4lpt.co.uk/Top100Tools/garageband.html">http://www.c4lpt.co.uk/Top100Tools/garageband.html</a>	Turns your Mac into a recording studio	Free	D			
iMovie: <a href="http://www.c4lpt.co.uk/Top100Tools/imovie.html">http://www.c4lpt.co.uk/Top100Tools/imovie.html</a>	Video editing software (for Macs)	£	D			

Tool	Summary	Available				
After Effects: <a href="http://www.c4lpt.co.uk/Top100Tools/imovie.html">http://www.c4lpt.co.uk/Top100Tools/imovie.html</a>	To create motion graphics and visual effects	£	D	FT	2	
Audio Acrobat: <a href="http://bartsmith.audioacrobat.com/">http://bartsmith.audioacrobat.com/</a>	Create audio and video	£	H	FT	2	
Audio Conversion Wizard: <a href="http://www.litexmedia.com/audio_wizard/">http://www.litexmedia.com/audio_wizard/</a>	"All to All" converter of digital audio formats	£	D	FT	1	
Audio Recorder for Free: <a href="http://www.download.com/3120-20_4.html?hhTest=1&amp;qt=Audio+Recorder+for+Free&amp;tag=404">http://www.download.com/3120-20_4.html?hhTest=1&amp;qt=Audio+Recorder+for+Free&amp;tag=404</a>	Captures audio stream as MP3 etc	Free	D		1	
Blender: <a href="http://www.blender.org/">http://www.blender.org/</a>	Software for 3D modelling, animation, rendering, post-production, interactive creation and playback	Free	D	OS	3	
Evoca: <a href="http://evoca.com/">http://evoca.com/</a>	Record your voice on the web; capture your readers' voices	Free	H		1	
Eyespot: <a href="http://eyespot.com/#">http://eyespot.com/#</a>	Upload, edit and stream your personal videos	Free	H		1	
FixMyMovie: <a href="http://www.fixmymovie.com/splash/">http://www.fixmymovie.com/splash/</a>	Enhance your videos	Free	H		1	
Flvix: <a href="http://www.litexmedia.com/audio_wizard/">http://www.litexmedia.com/audio_wizard/</a>	Convert and download videos from YouTube, Google Video	Free	H		1	
Gabcast: <a href="http://www.gabcast.com">http://www.gabcast.com</a>	Record using your phone or VoIP	Free	H		1	
Hey!Watch: <a href="http://heywatch.com/site">http://heywatch.com/site</a>	Online video encoding platform	Free	H		1	
Hipcast: <a href="http://www.hipcast.com/index.htm">http://www.hipcast.com/index.htm</a>	Create audio, video, podcasting, blogs	£	H		1	
iPod Video Converter: <a href="http://www.koyotesoft.com/indexEn.html">http://www.koyotesoft.com/indexEn.html</a>	Convert all your videos to Ipod video format directly	Free	D		3	
JayCut: <a href="http://jaycut.com/">http://jaycut.com/</a>	Create your own movies and slideshows (mixes) online	Free	H		2	
Jumpcut: <a href="http://jycut.com/">http://jycut.com/</a>	Make movies online	Free	H		1	
Kaltura: <a href="http://corp.kaltura.com/">http://corp.kaltura.com/</a>	Group video making	Free	H		2	
Mixcraft: <a href="http://corp.kaltura.com/">http://corp.kaltura.com/</a>	Multi-track audio recorder that enables you to record your band, create a podcast, etc	£	D	FT	2	
Mixercast: <a href="http://mixercast.com/">http://mixercast.com/</a>	Mix your images, video, and sound with unique templates and share across the web in one click.	Free	H		1	
Mojiti: <a href="http://mojiti.com/">http://mojiti.com/</a>	Subtitle any video	Free	H		1	
Moonk: <a href="http://www.moonk.com/">http://www.moonk.com/</a>	Flash your media	Free	H/C		2	
MP3myMP3 Recorder: <a href="http://www.mp3mym3.com/mp3_my_mp3_recorder.html">http://www.mp3mym3.com/mp3_my_mp3_recorder.html</a>	Saves any audio you hear on your computer straight to mp3 or wav	Free	D		1	
Olivelink: <a href="http://www.olivelink.com/">http://www.olivelink.com/</a>	Personal streaming tools to listen to and broadcast media	Free	D		2	
Photostory 3 for Windows: <a href="http://www.microsoft.com/windowsxp/using/digitalphotography/photostory/default.mspx">http://www.microsoft.com/windowsxp/using/digitalphotography/photostory/default.mspx</a>	Create slideshows using your digital photos	Free	D		2	
Pinnacle Studio: <a href="http://www.pinnaclesys.com/PublicSite/us/Products/Consumer+Products/Home+Video/Studio+Family/">http://www.pinnaclesys.com/PublicSite/us/Products/Consumer+Products/Home+Video/Studio+Family/</a>	Video editing software	£	D		2	
Premiere: <a href="http://www.c4lpt.co.uk/Top100Tools/adobepremiere.html">http://www.c4lpt.co.uk/Top100Tools/adobepremiere.html</a>	Video editing software	£	D	FT	2	
SalesVoice: <a href="http://www.soniclear.com/SalesVoice.html">http://www.soniclear.com/SalesVoice.html</a>	Record, and organize your dictation, meetings and presentations for professional and personal use	£	D	FT	1	
Super: <a href="http://www.erightssoft.com/SUPER.html">http://www.erightssoft.com/SUPER.html</a>	Simplified Universal Player Encoder & Renderer	Free	D			
Swishmax: <a href="http://www.swishzone.com/index.php?area=products&amp;product=max">http://www.swishzone.com/index.php?area=products&amp;product=max</a>	Create Flash animations	£	D	FT	2	
Toufee: <a href="http://www.toufee.com/">http://www.toufee.com/</a>	Create and publish flash movies and presentations online	Free	H		2	
Turbine Video Encoder 3: <a href="http://www.blue-pac.com/products/turbinevideo/default.htm">http://www.blue-pac.com/products/turbinevideo/default.htm</a>	Publish your video to the Web in Flash	£	D	FT	1	
Videora: <a href="http://www.videora.com/">http://www.videora.com/</a>	Personal video downloading program	Free	D			
VisualHub: <a href="http://www.techspansion.com/visualhub/">http://www.techspansion.com/visualhub/</a>	Universal video converter for Macs	£				
VozMe: <a href="http://voze.com">http://voze.com</a>	Convert text to MP3	Free	H		1	
Windows Movie Maker: <a href="http://www.microsoft.com/windowsxp/using/moviemaker/default.mspx">http://www.microsoft.com/windowsxp/using/moviemaker/default.mspx</a>	Video editing software	Free	D		1	
Wimba Voice Tools (VoiceBoard, Recorder, Pod-caster)	Create & deliver all online - threaded audio-boards, simple .mp3 or .wav recordings.	£	H/D	FT	1	P

## "Out of the Box" Classroom Capture/ Stream Solutions

These tools say that they do it all (almost)... all hardware is often included in their pricing and is installed per classroom or rolling cart.

Tool	Cost	Summary
Tegrity: <a href="http://www.tegrity.com">http://www.tegrity.com</a>	Depends on FTE or per encoder license; avg quoted \$70,000 1st year—then % annually	Combined encoder & is full editable.
Blackboard Vista Powerlink Available		
Echo 360: <a href="http://www.echo360.com/">http://www.echo360.com/</a>	Depends on FTE or per encoder; avg quoted \$40,000 1st year—then % annually	Includes scheduler, capture, encode, publish, monitor, report options. Captures from many media inputs simultaneously and synchs. Captures in .mpeg4, and ACC audio. Lots of hardware—for a "smart classroom". No editing; encoder not included.
SonicFoundry's MediaSite: <a href="http://www.sonifoundry.com/products/mediasite/default.aspx">http://www.sonifoundry.com/products/mediasite/default.aspx</a>	Depends on FTE or per encoder; avg quoted \$30,000 1st year— then % annually	Little editing capabilities; encoder not included.
Accordant's Capture Station: <a href="http://www.acordent.com/products/mcd_creation_prod/cap/cap_landing.html">http://www.acordent.com/products/mcd_creation_prod/cap/cap_landing.html</a>	Depends on FTE or per encoder; no avg quote	Little editing capabilities; encoder not included.
Envivio's Mindshare: <a href="http://www.envivio.com/products/webcasting_mindshare_composer.php">http://www.envivio.com/products/webcasting_mindshare_composer.php</a>	Depends on FTE or per encoder; no avg quote	Little editing capabilities; encoder not included.
Anytime's Apreso Classroom: <a href="http://www.anystream.com/">http://www.anystream.com/</a>	Depends on FTE or per encoder; no avg quote	Combined encoder & is full editable.
Blackboard Vista Powerlink Available		