

**Infrastructure Council Minutes**  
**April 19, 2012**  
**1:00 PM**  
**Library East, Conference Room 2B**

*Present:* Naomi Young, Nina Caputo (APC), Sue Alvers, Bill Millard, Andy McCollough, Fedo Zazueta, Shannon Holliday, Elias Eldayrie, and Ken Paul (Classroom 24-7).

The meeting was called to order at 1:06 p.m. by co-chair Naomi Young.

Introductions were made and minutes were approved.

### **Recording of Lectures**

Ken Paul, representing Classroom 24-7, gave a short presentation about his company and its service recording College of Pharmacy lectures. Discussion afterwards revolved around necessary policies for recording in the classroom. It was particularly unclear how to handle FERPA students with privacy protection. This has been a concern since way back during filming classroom work for television. It was noted that Barbara Wingo from General Counsel's Office drafted a policy for television that didn't progress and is still in the general counsel's office. Nina Caputo stated that the Academic Policy Council was concerned about the intellectual property aspects and how tapes are used. Andy McCollough mentioned that there was a recent meeting discussing that issue. At this meeting, Barbara Wingo agreed to write a memo and draft to distribute to faculty. She should have this completed by the middle of May. As a side note, this subject is part of the negotiations with the collective bargaining unit.

Bill Millard explained that video-capturing College of Pharmacy lectures was started in 2001. Students seemed to like it because they could go back to the lecture afterwards for review. Students sign a privacy release document when they participate. A long discussion ensued about the pros and cons of distance education. What are the goals? Is quality of learning experience still there? It was noted that research shows that a well-designed distance education course achieves the same as face to face. An important reminder is that accessibility to distance education for disabled students is critical. There was also concern about the undergraduate experience on campus where students learn social skills. Is that available through an online experience? The council decided that it will keep track of this issue in the future.

### **Replacing Blackboard Collaborate/Elluminate**

University is phasing out Elluminate and Blackboard this week. Andy stated that the synchronic learning tool was acquired by Blackboard. The contract with Blackboard and Elluminate is ending. EOIT decided that it should evaluate alternatives and decided on "Big Blue Button" and "Adobe Connect".

### **Steering Committee**

Naomi Young gave a short report on the Steering Committee meeting. Scott Nygren returned from Tallahassee that morning. He traveled there with the President and Provost to meet with the Governor about the Pre-eminence Bill. She noted that budgets were sent to deans.

### **Land Use and Facilities Planning Committee Report – Bill Millard**

Bill did not have much to report. He said that the committee did approve parking for Baby Gator.

### **Miscellaneous**

It was noted that the next scheduled meeting is only two weeks away, so the council decided to cancel the May 3 meeting. The two council members that were in attendance are rotating off this year, so there was no one to vote for this position. Naomi will contact Mark Tillman to see if he's willing to continue as vice-chair and will ask Jay Watkins if he'd take the chair position.

Meeting adjourned at 2:45 p.m.

## Education and Outreach IT Advisory Committee 03/17/2012 R. Gleason report

**Per Dr. McCullough: make sure your College Dean is informed of events at these meetings; Deans have asked him about things that EOIT members should have reported to them.**

1. **Review of the February 2, 2011 meeting notes (distributed 2-22-12 and posted on website <http://www.it.ufl.edu/governance/advisorycommittees/educationoutreach.html> )**
2. **Sakai: User Voice (Tawnya Means)**
  - Based on user feedback, Sakai will add a “Feedback” function button. It will allow users to ask questions and make complaints. When the user starts to type, Sakai will bring up any related questions/answers already posted. It will ask for user’s opinion of the importance of the issue (which user can change at a later time if it’s not more or less important than first thought).
3. **Synchronous Learning Advisory Group- Report and recommendation (Al Wysocki)**
  - See attachment regarding Blackboard Collaborate (Elluminate) replacement.
  - It will be a two-tiered system.
    - Most users: **Big Blue Button** – all faculty can use, available now, Dan will send link by next week. Generic demos: <http://demo.bigbluebutton.org/>
    - Users needing more advanced options (e.g., breakout rooms) will use **Adobe Connect**. Limited licenses (300 for all of UF, will add more if needed).
  - A central UF support site will handle both sites, and user training will be supplied by that group (either online or in-person).
  - Governance of synchronous tools and Sakai will fall under a Learning Support Committee (part of EOIT) .
4. **<http://teach.ufl.edu> Update and future plans (Ken Nanni)**
  - Teaching Excellence Workshop 4/6 (at Library West or online). Please remind faculty. Link: [conferences.dce.ufl.edu/SSP](http://conferences.dce.ufl.edu/SSP)
  - Good take-up of [teach.ufl.edu](http://teach.ufl.edu)
5. **Quality Assurance and Faculty Training ( Tawnya Means)**
  - Ongoing preparation of faculty training tools – SACS requires for faculty teaching online courses
    - will probably be mandatory first time and then elective or occasional, not annual
    - faculty with online experience grandfathered in
    - rubrics for online courses being developed
6. **Report requirements for non-credit programs , certificates , and courses**

Board of Governors requiring info on professional ed/professional developments courses, including those with no tuition or fees. By end of June, Colleges will be notified of required data elements (probably: head counts, # courses, gross revenue). Will not be retrospective prior to present semester.

# ***Report and Recommendation from the Synchronous Learning Advisory Committee to the Education and Outreach IT Advisory Committee at the University of Florida***

March 16, 2012

This report by the Synchronous Learning and Advisory Committee (SLAC) includes the following components: summary of the recommendations, statement of the problem, description of current UF practices, peer institution synchronous tool usage, investigations of synchronous learning tools, detailed recommendations, and appendices and supporting documentation.

## ***Recommendations***

- Tier 1**            The University should adopt **Big Blue Button** as a centrally supported and integrated synchronous collaboration tool.
- Tier 2**            The University should provide options for academic units requiring a more advanced synchronous collaboration tool. This would replace the current group licensing arrangement between AT and Elluminate with a new license purchase arrangement for utilization of **Adobe Connect**.
- Support**        In order to meet the needs of faculty and students, as well as to comply with accreditation standards that require training and support for equipment and other resources essential to the viability and effectiveness of the distance education, the University should establish a central point of support for implementation and operation of recommendations Tier 1 & Tier 2 listed above.

## ***Statement of need***

As the University of Florida seeks to improve student education while reducing costs, the use of virtual classroom and collaboration tools is becoming a critical element in fostering student engagement. In 2007 after a 12 month review, the Collaborative Software Committee (an offshoot of the DCE Advisory Board) recommended a multi-department deployment of Elluminate. A pricing model was created that allowed access to Elluminate based upon the FTE count of each participating department.

Due to vendor changes, the Elluminate product will no longer be available, nor will the current licensing model used by UF. These and the following additional factors led to a review of the currently available tools:

- The University seeks to increase quality online course offerings
- A campus-wide service with centralized training and support may now be feasible
- Synchronous communication tools are increasingly being used for research collaboration and outreach
- Instructors and students need the ability to easily initiate collaborative sessions (not currently available in the Elluminate system)
- The synchronous tool within Sakai is limited to text chat and the add-on synchronous tool available for Microsoft Outlook (Lync) is only available to on campus users and has severe limitations for Mac users

The following student comments collected through this process provide further evidence of the need for collaborative, synchronous learning in online and blended courses:

*“I know that just viewing a class lecture from home can sometimes make you feel a little ‘distant’ from the real class environment.”*

*“Live Meetings made things more real. I got to see my professors face and I was even able to talk to them one on one.”*

*“Being away from campus can make one feel like an island with no sense of community. [This] allows students to connect with the instructors more effectively... makes online teaching a lot easier and less confusing.”*

*“Students do understand that there will be a learning curve: Not everybody is ready to move into web conferencing technology. I really cannot imagine most UF professors managing a live online classroom. Most hardly know how to use Sakai; some don't even bother.”*

In summer 2011, Dr. Andrew McCollough brought together the Synchronous Learning Advisory Committee (SLAC). The committee was charged with reviewing the needs of the university and making a recommendation that would support the growing interest in the use of synchronous tools for teaching.

### ***Description of current UF practice***

The University of Florida is currently serving faculty and students with minimal support for online synchronous learning sessions through user licenses purchased by units. This product provides faculty and students with the ability to conduct web-based meetings, with capabilities for:

- Screen and application sharing
- Text chat
- Audio and video
- File sharing
- Break out rooms
- Polling
- White boards
- PowerPoint and other file sharing
- Persistent virtual space
- Recorded sessions for asynchronous viewing

Units offering distance education rely heavily on these tools and functions for course delivery. Exhibit 1 is a summary of the 2011 Elluminate usage at the University of Florida.

**Exhibit 1: Summary of 2011 Elluminate Usage at the University of Florida**

Month	Rooms Started	Max Concurrent Rooms	Total Attendees	Recordings	Recording Downloads	Multimedia Downloads	Presentation Downloads
January	1613	17	8109	460	2408	166	205
February	1288	16	6448	365	2705	135	106
March	1282	22	7194	376	2333	60	160
April	1121	16	5269	340	2895	120	105
May	1113	16	5517	293	1126	150	120
June	879	15	4555	223	1093	165	163
July	1079	17	5601	300	2000	180	170
August	1427	19	5916	273	1580	120	182
September	1378	18	6888	432	3265	135	263
October	1205	16	6508	348	2451	75	217
November	1333	19	5906	407	3354	60	273
December	573	8	1970	213	1326	0	80
<b>Totals</b>	<b>14291</b>	<b>22 (max)</b>	<b>69881</b>	<b>4030</b>	<b>26536</b>	<b>1366</b>	<b>2044</b>

***Peer Institution Synchronous Tool Usage***

A review of synchronous tools used by UF’s peer institutions (Exhibit 2) indicates that Blackboard Collaborate and Adobe Connect are widely adopted tools. UNC-Chapel Hill and GIT are looking into changing synchronous tools in the near future.

**Exhibit 2: Peer Institution Usage of Synchronous Learning Tools**

Institution	Tool
University of North Carolina – Chapel Hill	Blackboard Collaborate
University of Michigan – Ann Arbor	Adobe Connect
University of California – Berkeley	Internally developed: Webcast Berkeley
Ohio State University	Internally developed: Gatekeeper
University of Virginia	Blackboard Collaborate
Penn State University	Adobe Connect
University of Texas – Austin	Adobe Connect
University of Wisconsin – Madison	Blackboard Collaborate
University of Illinois – Urbana Champaign	Meeting Place (Cisco Systems)
Georgia Institute of Technology	Wimba

## ***Investigation of Synchronous Learning Tools***

Based on the statement of need, current practices at the University of Florida, and the peer institution of synchronous tool usage, the committee followed the procedures below to investigate synchronous learning tool solutions.

*Develop a list of requirements* – The subcommittee, with significant input from the Synchronous Learning Collaboration Administrators Group (SLCAG), developed an extensive list of criteria that were used to evaluate the software. The criteria were divided into “Need to have” and “Like to have” features (see complete criteria listing found in Appendix A).

*Evaluate vendor products* – The subcommittee started with an extensive list of possible products to consider. These included: Adobe Connect, Agora in Sakai, Big Blue Button, Blackboard Collaborate (replacement for Elluminate), Cisco WebEx, Solar Digital (Unity), Dim Dim, Electra Live, GoToMeeting, Horizon Wimba (recently purchased by Blackboard), iLinc, Microsoft Life Meeting, Microsoft Lync, Open Meetings, OnSync, PolyCom, SABA (Centra), Vyew, and WiZiQ Premium.

The committee reviewed vendor websites and some products were removed from consideration when necessary functions and features were not available. The committee invited representatives of the remaining products to give demonstrations: Big Blue Button, Collaborate, Connect, Unity, and WebEx.

*Conduct a pilot study* – The committee actively sought participation from faculty and current Elluminate users to test the following products: Big Blue Button, Connect, Unity, and WebEx. Since Collaborate is currently in use on campus, this tool served as a baseline for comparison of products, services, and features.

The committee invited instructors and technical support staff from the following units to participate in the pilot: Agricultural and Life Sciences, Business, Education, Engineering, IFAS Extension, Liberal Arts and Sciences, Pharmacy, and Public Health and Health Professions.

The committee provided a variety of resources to support instructors during the pilot. These included instructions for faculty and students, a pre-pilot survey, recorded sessions from the










vendor demonstrations, links to other training resources, an evaluation matrix for faculty to complete after each use of the piloted tool, and an invitation to one of the post-pilot focus groups (see Appendix B for a summary of the faculty focus group discussions). Student feedback was captured through response to a brief survey and/or written feedback.

## Findings

Findings include student evaluation of the synchronous learning tools, highlights from a Gartner study on web conferencing tools, and potential costs for synchronous learning tools.

*Student evaluation of synchronous learning tools* - Student experiences with the synchronous learning tools (Exhibit 3) during the pilot are summarized below. A complete listing of student comments is found in Appendix C.

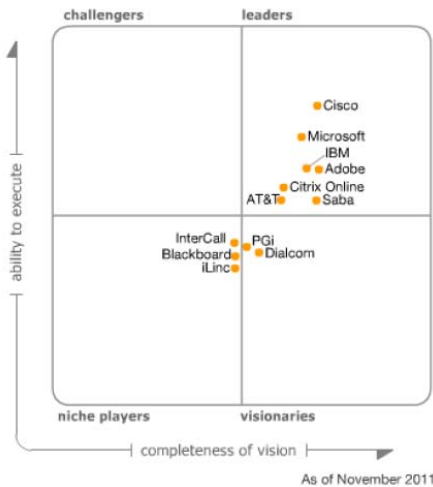
### Exhibit 3: Student Evaluation of Synchronous Learning Tools

Big Blue Button		
Feature		Positive/Negative
<b>Layout control</b>	Students were able to drag and rearrange windows.	
<b>Navigation</b>	Students reported that BBB was the easiest tool to navigate, with only the feature set needed.	
<b>Room entry alert</b>	Students' top complaint on Big Blue Button was the beeping sound that happened each time that someone entered the virtual room.	
Connect		
Feature		Positive/Negative
<b>Layout control</b>	Students were not able to drag and rearrange windows.	
<b>Navigation</b>	Students reported that some of the features were overwhelming.	
<b>Break out rooms</b>	Students liked the ability to break out into separate groups.	
<b>Break out rooms</b>	Randomization of the room assignments worked fine the first time, but then caused chaos when groups were re-randomized.	
WebEx		
Feature		Positive/Negative
<b>Layout control</b>	Students report that the interface is awkward to use.	
<b>Mobile</b>	Students like the mobile app.	



*Gartner study on web conferencing tools* – In December 2011, Gartner published a report titled: “Magic Quadrant for Web Conferencing.” Exhibit 4 illustrates four magic quadrants for web conferencing tools: niche players, visionaries, challengers, and leaders.

**Exhibit 4: Magic Quadrant for Web Conferencing**



A summary of vender strengths and cautions from the Gartner report can be found in Exhibit 5.

**Exhibit 5: Synchronous Learning Tool Strengths and Cautions**

**Collaborate**

**General Comments**

Blackboard's Collaborate offering combines technologies acquired with the purchase of Elluminate and Wimba. Blackboard has combined the best features of Elluminate and Wimba to develop and launch a fully overhauled platform including Web, video, voice and IM capabilities. There was initial concern among customers about how Blackboard would integrate the technologies and what would happen to their investments in Elluminate and Wimba. Blackboard then clarified its strategy of unifying these brands under Blackboard Collaborate, only for it later to announce its acquisition by Providence Equity Partners. This in turn has caused concern among customers about the nature of Blackboard's commitment to the Collaborate offering. Blackboard Collaborate supports training, learning and virtual classroom use cases. Beyond the education market, Blackboard has presence in corporate, government and military scenarios. Mobile support is limited at present and behind that of competitors. Deployment models: on-premises and SaaS

**Strengths**

Blackboard Collaborate has cross-platform support for Windows, Macintosh, Linux and Unix operating systems

The predominant use case is for learning and virtual classroom scenarios, with integration to a wide range of commercial and open-source learning management systems. Blackboard has specific expertise in the education sector.

**Cautions**

Some customers concerned about the recently announced acquisition of Blackboard and the company's future have begun looking at competitors' offerings

Mobile support for devices such as Android, iPhone and iPad is limited to playback-on-demand conferencing sessions. Users cannot join a live session from mobile devices. However, Blackboard promises to remedy this shortcoming by the end of 2012.

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## Connect

### **General Comments**

Adobe has one of the better user interface designs in the Web conferencing space. The Adobe Connect offering supports on-premises, cloud-based and managed-service provisioning models. Adobe has strong traction in the education, government and defense sectors, where we see heavy on-premises deployments. Adobe Connect supports iPhone, iPad, Android and BlackBerry mobile devices, among others. Adobe Connect continues to support various use cases, from ad hoc meetings to scheduled webinars, training and virtual classrooms. Deployment models: on-premises, SaaS, and hybrid, as well as managed services.

### **Strengths**

Adobe has focused on the user experience and usability of the Adobe Connect platform, to make it more user-friendly. The user interface is configurable by the host of each meeting.

Adobe has targeted expertise for education, enterprise, government and specific defense environments.

Adobe Connect supports an unlimited number of video participants

### **Cautions**

Clients indicate that Adobe Connect tends to be one of the more expensive offerings and that the licensing model can be complex to understand.

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## WebEx

### **General Comments**

Cisco's WebEx offering is the most recognized brand in Web conferencing and, according to Gartner's statistics, has the leading share of new license revenue. WebEx is a feature-rich offering that includes modules for collaborative meetings, training, large events, remote support and integrated audio. Because of the wide range of features, users sometimes report it can be complex to understand. WebEx supports multiple mobile devices, including iPhone, iPad and BlackBerry. With the recently launched support for HD (720p) video, which builds on WebEx's introduction of high-quality (360p) video last year, and interoperability with telepresence, Cisco's video offerings range from telepresence to desktop and mobile videoconferencing. We expect Cisco will bring a version of the cloud-based WebEx Web conferencing services into an on-premises offering. Enterprises will then have the option of on-premises or SaaS, or a hybrid deployment.

### **Strengths**

Cisco WebEx has the largest share of the Web conferencing market in terms of new license revenue.

Cisco has a well-rounded and integrated conferencing portfolio, ranging from telepresence to desktop-based Web conferencing and videoconferencing.

Cisco WebEx has mobile support for Apple iOS, Android and RIM BlackBerry devices.

### **Cautions**

Cisco is a large company, and we have heard from several customers with smaller licensing deals that their sales representative was sometimes unresponsive

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*Potential costs for selected synchronous tools* – Exhibit 6 provides a breakdown of the costs for each of the synchronous learning tools that were considered in the pilot study. It should be noted that these are rough cost estimates that will change depending on how they are deployed at the University of Florida.

**Exhibit 6: Potential Costs for Selected Synchronous Tools**

**Big Blue Button**

Category	Item	Comments	QTY	Cost	Total	Recurring****
<b>Hardware</b>	Server	A small amount of SAN storage will also be needed	3	\$5,500	\$16,500	\$4,125
<b>Personnel</b>	Programmer*	BBB is an Open Source product	1	\$93,100	\$93,100	\$95,893
	Tech Support**	User support and training	1	\$63,840	\$63,840	\$65,755
	Server Support***	Needed during initial setup & testing	0.1	\$67,800	\$6,780	\$6,983
	Help Desk Student	Front line user support	2	\$9,630	\$19,260	\$19,838
<b>3rd Party Support</b>	Blindside Networks	3rd Part support is available but we do not believe necessary at this time	20 Days	\$1,600 Per day		
	Ongoing support	4 month trial	4 Days	\$1,600 Per day		
<b>These figures need to scale with growth in use</b>				<b>Totals:</b>	<b>\$199,480</b>	<b>\$192,594</b>

\* Salary = \$70,000; Benefits = 33%:

\*\* Salary = \$48,000; Benefits = 33%:

\*\*\* Salary = \$60,000; Benefits = 33%

\*\*\*\* 4-year refresh cycle; 3% annual salary adjustment

**Collaborate**

Description	Qty	List Price	Quote	Subtotal	Grand Total
Includes ASP setup and hosting	25,001 –				\$79,000
Implementation Services w/ Dedicated consultant (T & E billed separately if done onsite)	50,000 FTE				(2012)
					\$98,400
Onsite or Online Staff Product Training (T & E billed separately if done onsite)					(2013)
					\$131,200
24/7 End User Technical support (250 cases per year)					(2014)
Archive Storage (5 GB storage)					

## Connect

Description	Qty	List Price	Quote	Subtotal	Grand Total
Connect Meeting: Concurrent User License. User has ability to attend or host a meeting on the Adobe Connect Managed Service.	300	\$1,350 Per user	\$243 Per user	\$72,900	
Connect Meeting Seminar Room. The room size based on number of seminar room seats purchased per room.	600 seats	\$75 Per seat	\$13.50 Per seat	\$8,100	<b>\$81,000</b>
Connect Meeting Hosted Platform (100 seats per meeting) (if purchased separately)	30	\$150 Per host	\$97.50 Per host	\$2,925	
Seminar Room (if purchased separately)	200 seats	\$15 Per seat	\$15 Per seat	\$3,000	
Seminar Room (if purchased separately)	300 seats	\$15 Per seat	\$15 Per seat	\$4,500	
Seminar Room (if purchased separately)	400 seats	\$15 Per seat	\$12.75 Per seat	\$5,100	

## WebEx

WebEx EE with IM - Enterprise subscription (active host) , Specify subscription qty in range 100-999	500	\$630	\$252	\$126,000	
WebEx MC Ports - 1 yr, Subscription	50	\$2,266	\$906.40	\$45,320	<b>\$171,320</b>

## ***Recommendations***

After careful analysis and consideration of both quantitative and qualitative data gathered during the pilot project the synchronous committee reached a consensus around the following recommendations:

1. **Tier 1:** In order to more fully achieve and demonstrate parity between the resources provided for faculty teaching in onsite traditional classrooms and those utilizing the electronic platform (both for students in residence on the main campus and away from the main campus) the University should adopt **Big Blue Button** as a centrally supported service.
2. **Tier 2:** In order to provide options for academic units which require a more advanced synchronous collaboration tool the University should replace the current group licensing arrangement (between AT and Elluminate) with a new license purchase arrangement for utilization of **Adobe Connect**.
3. **Central Point of Support:** We recommend that the centrally supported synchronous collaboration services -- both the campus-wide service and the second-tier product -- being supported through the UF Computing Help Desk and through other appropriate units in the Office of Academic Technology. Consultation with current synchronous collaboration user groups indicates that the current charge back model does not include support for users and units.
4. **Implementation:** We recommend leveraging UF's experience with the Sakai open source course management system to implement and deploy Big Blue Button for campus-wide use. This will require some additional resources in the form of hardware, but even more importantly in a small number of FTE for programming and user support.
  - We recognize that the feature set of Big Blue Button may not fully meet the needs of some programs whose activities may require a more feature rich product.
  - Therefore, we also recommend that UF consider Adobe Connect in a manner similar to the current Elluminate model, whereby Software Licensing Services

manages negotiation of price, purchasing, and distribution of licenses at cost to UF units.

5. **Growth:** UF has no experience supporting a campus-wide synchronous collaboration tool and consultation with peer institutions provided little guidance on what campus-wide use at UF might look like. Therefore we have no definitive metrics to suggest:
  - How quickly this service may grow
  - How many users may ultimately depend on this service
  - The exact number of servers and other hardware that will be necessary to support campus-wide use
  - How quickly this service may need to scale.

As a result, UF administration needs to be aware that deploying campus-wide synchronous collaboration service will undoubtedly need additional resources in the future; a demand that can be controlled by deployment in phases moving toward campus-wide use as quickly as feasible based on available services and funding.

6. **Licensing:** Software Licensing Support in the Office of Academic Technology has done an excellent job managing the current Elluminate licensing. We recommend continuing this arrangement, with the caveat regarding support mentioned above, and with the emphasis that enabling units to buy licenses for the second tier product needs to be equitable and not wasteful.
7. **Governance:** Because deploying synchronous collaboration tools on a campus-wide basis will undoubtedly affect a large user base, we recommend that this synchronous collaboration product be clearly and explicitly placed under appropriate UF and IT governance.
  - We understand that discussions are currently taking place to re-purpose the existing Sakai Advisory Committee as an e-Learning Services Advisory Committee reporting to the Education and Outreach IT Governance Committee; therefore we suggest this as an appropriate place to locate governance for this campus-wide service.

8. **Short-term Third Party Support:** The subcommittee further recommends that the governance committee with appropriate oversight for implementation of these recommendations may want to consider a short term arrangement for support (which could include an established 3<sup>rd</sup> party vendor) with a record for supporting the Big Blue Button tool. The governance committee assigned to implement recommendations from this report may also want to consider a long term strategy that would enhance the open source features of Big Blue Button in order to meet both the basic needs and the advanced needs which would be temporarily achieved though the implementation of recommendations in this report.
9. **Faculty Education and Training:** Faculty (user) education and training are critical to the successful deployment of any synchronous learning tool. It is recommended the university allocate the needed resources to carry out effective education and training. Wake Forest credits a successful roll out of their campus-wide synchronous tool to the team of trained helpdesk students who were available onsite to assist faculty during practice sessions and for initial synchronous classroom sessions. These students were able to handle both technical and student-related questions that inevitably arise during a synchronous tool session.

### ***Subcommittee Members***

Allen Wysocki	Professor, College of Agricultural and Life Sciences (chair)
Pamela Dickrell	Director, UF EDGE, College of Engineering
Doug Johnson	Assistant Director for Learning Services, Office of Information Technology
Dan McCoy	Senior Director of Operations, College of Education
Tawnya Means	Director, Teaching Excellence & Assessment, Warrington College of Business Administration
Iain Moffat	Systems Program Manager, Office of the Provost
Ken Nanni	Director, Distance Learning
Sven Normann	Associate Dean, College of Pharmacy
Praveen Pathak	Associate Professor and AEI Faculty Fellow, Warrington College of Business
Jennifer Smith	Manager, Instructional Design Services, Center for Instructional Technology and Training
Susan White	Coordinator, Education and Training, College of Public Health and Health Professions

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## Appendix A: Synchronous Tool Criteria

### Technical Features (Need to have)

Sakai Integration/Authentication (Must have authentication, sakai integration is less important)

Multiple Video Feeds

Multiple Audio Feeds

Attendance Tracking

Pre-Event Testing for Participants

Extensible API

Persistently available rooms via LMS integration

Mac Compatible

Exportable Format (NOT proprietary)

IOS Supported (e.g., iPads) required for tier 2 product

### Usability Features (Need to have)

Archive (session recording) tier 2

ADA/UDL compliant user interface must be available for tier 2

Participant Listings

Multiple Moderators

Written Chat Capability

### Collaboration Features (Need to have)

Breakout Rooms tier 2

Polling

Whiteboard

Application/Screen Sharing

Easy to generate/distribute links

Web Tour/Integrated browser sharing

Hand Raise feature to draw attention

### Technical Features (Like to have)

Echo cancellation built in

Ability to open w/ traditional browser

Flexibility in assigning roles

Symbols for whiteboard (math, econ...)

### Usability Features (Like to have)

Persistence across multiple applications

Create different layouts for events

### Collaboration Features (Like to have)

Multimedia file sharing

Emoticons for approval/disapproval

Ability to pre-load whiteboard/media

Ability to distribute media files during a session

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## Appendix B: Faculty Focus Session Feedback

### General Comments

1. Students are not intuitively savvy about technology. The more streamlined the application, the better.
2. I recommend tutorials for instructor and for students.
3. Students want to feel that they are interacting. There should be “best practices” training or support materials available to faculty.
4. TAs may not necessarily have expertise to go into breakout rooms and provide help.
5. There needs to be a team dedicated to supporting the e-learning tool. We need to have dedicated FTE to support the product.
6. The availability of collaboration spaces for students is very important.
7. In part we are marketing the online paradigm. Resources to support the product are necessary.
8. We need Breakout rooms.

### Tool Specific Faculty Comments

Item	Big Blue Button	BlackBoard Collaborate	Connect	WebEx
Audio	Regular logitech webcam audio worked fine (you need to click the "Connect" to set up for best results)	Multiple mics were OK	Multiple mics were not OK	Only one student had problems with the microphone
Audio	It had terrible Connection problems with VoIP, the audio (likely, the user's system)		During live session, no complaints about audio, but in recorded session, audio went in and out	WebEx had scratching
Breakout rooms	Does not have		Supports 20 breakout rooms	
Breakout rooms			Problems when randomly assigned, then new people arrive	
Browser	Does not work well with I.E.			
Browser			Sometimes could not get into Sakai--especially with Chrome (Firefox fewer problems)	
Chat				Very helpful
Customization	We can customize or outsource			
Document upload		Clunky in Collaborate--although not as bad as Elluminate was	Easier to upload documents	

## Tool Specific Faculty Comments (Continued)

Item	Big Blue Button	BlackBoard Collaborate	Connect	WebEx
Easy to use	Find it to be similar to Connect but with fewer features and therefore easier to use	The new Collaboate interface is wonderful and people would be happy to use it if they knew about it	Hosted Adobe Connect makes it easier to support	Easy to load presentation
Easy to use		Easy to save recording and share with students in Elluminate	Connect was easiest to use	Easy to set up polls, whiteboard and hand raising
Easy to use			Adobe Connect is the easiest and most efficient to use	WebEx was easier to handle in the class (smaller, different class)
Easy to use				with WebEx no need to think so much about technology
Easy to use				Able to join WebEx meeting flawlessly
Easy to use			Had no trouble with Connect recordings	Would like a feature like WebEx to be integral to next online course
Exported format			File size too large, students could not open link	
Faculty preference		I'm not a fan of Collaborate	Liked Connect	Liked WebEx
Faculty preference			Adobe Connect was the best	Liked WebEx
Faculty preference			Adobe Connect was the best	Liked WebEx better than Elluminate
File sharing	Supports office docs and .pdf occasionally glitches in the rendering of the document		occasionally glitches in the rendering of the document	extraordinarily easy, no lag time, no download, it appeared and it was clear.
File sharing			Problem with support formats in Connect	
Hard to use		IFAS has tried to make Elluminate available and people did not use it because it was too hard to learn	Not easy to save recording and share with students in Connect	Chat and hand raising disappears in WebEx during sharing
Hard to use		Faculty were being dinged in evaluations because of technical problems with Elluminate	Had to give students faculty password to get into course-- Connect	
Hard to use			Had to spend much more time focusing on technology with Connect	
Hard to use				WebEx did not have persistant room
Hard to use				WebEx has too many tools, can't get people back in or chats back
Layout	Can be moved around, but return to your default when you come back	Multiple layers allow things to get lost	Liked being able to change	
Layout			Everything is in one layer so things don't get lost	

## Tool Specific Faculty Comments (Continued)

Item	Big Blue Button	BlackBoard Collaborate	Connect	WebEx
Lost Connection			Student knocked out and couldn't get back in	
Roles	Assigning roles is easy			
Scheduling		Collaborate must be scheduled through the administrator		Persistent rooms are currently not available
Scheduling		If students want to meet, the instructor has to set up a work group meeting to run the semester		we need a tool that students can meet and work w/o faculty--WebEx is good for this because they can have their own
Sharing			Sharing feature in Connect created large problems--get into a loop--different meeting room after meeting room	
Student preference		Students preferred Collaborate	Students did not like Connect	Students liked WebEx
Student preference			Students liked Connect	Students liked WebEx
Student preference			Students liked emoticons	
Student preference			Students liked Connect	
Support	Fred Dixon has been very helpful--even joined Eric's class		Adobe Customer service does not have a good reputation	
Talk icon			Icon lights up when someone wants to talk	
Video			Problems with 6 feeds	had no control over camera--video camera did not necessarily go to the student speaking
Video			10+ feeds worked OK	Video froze up and did not start until 10 minutes into the session
Video			Had no control over camera	
Webtour			Problems with sending the students--may have been user error	
Whiteboard			Could not share whiteboard in first meeting with Connect	Works very well

## Appendix C: Student Blog Feedback

### ***On the need for synchronous learning tools***

1. In a big online class such as ISM 3004, there isn't much teacher-student interaction but the Live Meetings made things more real. I got to see my professors face and I was even able to talk to them one on one.
2. As a distance learning student myself, I know that just viewing a class lecture from home can sometimes make you feel a little "distant" from the real class environment.
3. Being away from campus can make one feel like an island with no sense of community. So having a better way to communicate with professors other than email is a plus.
4. I liked having a "real time" connection with the professor, rather than just watching a recorded lecture. It was user friendly and the ability to "raise your hand" and participate by "taking the floor" and asking questions added to the classroom feel. The live meetings throughout this course were brand new experiences for me. I feel like this feature to the on-line course allows students to connect with the instructors more effectively. Instead of e-mailing and waiting for a response when a student has a question, they can ask the question directly in the live meeting and get feedback instantly! Also, instructors can address issues to the class and answer questions on the spot which makes online teaching a lot easier and less confusing.
5. Not everybody is ready to move into web conferencing technology. I really cannot imagine most UF professors managing a live online classroom. Most hardly know how to use Sakai; some don't even bother. I doubt they would be able to keep up with live chat while giving a lecture. They would need moderators (perhaps TAs) to manage the discussions.

### ***Big Blue Button***

1. Of the five meetings my favorite system was Big Blue Button. I thought it was very user friendly and I really enjoyed being able to change the layout to fit my preferences. My only complaint was the beeping when new members entered or left the room. The beeps were extremely distracting and often overpowered the speaker, so the audio became chopped up at times. If the beeping could be turned off I would have absolutely no complaints with the system.
2. I liked this tool very much. It is somewhere between WebEx and Adobe Connect. I had complete control over the screen layout, even being able to drag and rearrange windows. Additionally, this was the most interactive tool, as we were less limited in what we non-presenters could do. There was, however, one major flaw with Big Blue Button—the system would beep each time someone entered the room. There was one student who kept having trouble with his connection and was kicked off every other second, so this noise became very annoying. It would overpower the voice of the speaker, so that you couldn't hear what he was saying. If that alert could be disabled, Big Blue Button would be an excellent choice.

3. Of the tools we experimented with, I preferred Big Blue Button (BBB) most. Design and layout of BBB is very appealing and makes it simple to navigate. Audio and webcam quality was also better than previously tested programs.
4. The last live meeting software session I attended was the one for Big Blue Button. I probably enjoyed the use of this one the most. It does not have all the functionality that you find in the others two packages but it has the items you would likely use. It certainly felt more flexible in its usage.
5. Big Blue Button seemed to work just fine with all interactive capabilities it offered. I don't think I can think of any areas that need improvement on this one.
6. If I had to recommend one of the live sessions for consideration, I would recommend Big Blue. Everything seemed to work great in this meeting. Big Blue had most of the features offered in the other synchronous interaction meetings.
7. My favorite one was Big Blue Button. First because it was a much smoother experience with minimal problems. Also because the interface was well laid out and presented in an orderly fashion. The way that we were able to see the presenters screen view and the way that the presenter could enable another person to share their screen view was very impressive. I also liked the layout of the web cams. They didn't seem clumped together or overbearing. My one quarrel with the software was the buzz sound that it made every time someone would log in or out. The programmers should use a more pleasant sound.
8. I prefer BigBlueButton over Adobe Connect because of its simplicity, flexibility, and visual appearance. I like that you are able to move windows around in BigBlueButton and personalize the tool to what appeals to each individual user. Not only can you move around the windows, but you can also adjust the size of each window. For example, I could enlarge the size of the chat window in BigBlueBetton which made it easier to see the text and I could easily see messages from multiple people.
9. My least favorite was Big Blue Button mostly because of the annoying beeping noise when people would enter or exit the room... I would probably say that the overall rating for (me at least) Big Blue Button would increase if the beeping was not attached to users entering and exiting the room.
10. Big Blue Button would be the one I'd least likely choose, only one person could annotate at a time and this annoying and very distracting "beep" sounded every time someone entered the meeting.

### **Adobe Connect**

1. My favorite synchronous learning tool was Adobe Connect! I like Adobe Connect the most because we were able to share files and web pages instantaneously, as well as, have public or private chats.
2. My favorite Live Meeting was one of the last ones where we had the break out groups. In our break up groups we got to actually see each other as well as hear each other, type on a whiteboard and type personal messages to one another.
3. Adobe Connect would be the one I'd most likely choose, because it seems to offer more tools that really facilitate easier team collaborations and feel more like the interaction in a face-to-face class.
4. After experimenting with several live meeting tools through the class, I thought that Adobe Connect was the better product. One of the key features that I enjoyed using was the ability to break into teams.
5. Of all the platforms we viewed I personally liked adobe connect. The Connect screen was simple and efficient and having the ability to maneuver each screen segment to please my eye movement was great. In addition, Connect didn't have the annoying beeping sound when someone entered the room.
6. I think Adobe Connect has some extra features that will enhance the live meeting experience. The Adobe Connect has better controls, accessibility functions, and one-click sharing that makes it more powerful and easier to use.
7. If I were to choose between the two that I was a part of, it would overwhelmingly be Connect. It was a smooth bit of software from what I witnessed. I hope the University implements this software as it is the best one that I encountered.
8. Adobe Connect had the most useful features and most effective design layout. The ease of using this software will most likely be its best feature. At times the video would lag, but i never found there to be a problem with the audio. I think the video lag was due to the internet connection, not the software.
9. In Adobe Connect, the chat window was very small and you have to keep looking at the chat window so that you do not miss anything.

### **WebEx**

1. Overall, I thought Cisco WebEx was okay, it did seem a little awkward to use and it would be nice if more than one (1) person at one time could be a presenter as this would be very helpful during group projects.
2. Cisco WebEx was the first tool I tried out. It was my favorite of the three, although I cannot recall precisely why. I do recall giving this 4 stars. I remember that there weren't any audio or video problems with WebEx. I also like that Webex is mobile-friendly. What I didn't like about WebEx was the limitations in interaction. By this I mean that we participants had to receive permission to do just about anything. In a class environment I could see this being very useful, but in a group environment it would be difficult, unless we could all be 'presenters' simultaneously.
3. WebEx remains my favorite web based collaboration tool. From its screen layout, app capabilities and overall ease of use, WebEx is a great choice for any collaboration meeting.