

April 17, 2009

SENATE DIVISION CHAIRS
SENATE COMMITTEE CHAIRS

Dear Division and Committee Chairs:

At the March 25 meeting of Academic Council, the University Committee on Research Policy requested Council's endorsement of its concept paper describing a proposed initiative to establish a UC Seminar Network. Council members agreed that the Divisions and Committees of the Academic Senate should have the opportunity to review this substantive proposal before Council takes a position. Accordingly, I am distributing the concept paper for your review. It is likely that some systemwide committee chairs will find that the subject matter of the proposal is outside their committees' scope and decline to comment. Please let me know if that is the case.

For those who wish to comment, I ask that you do so by June 5, so that UCORP can review your comments at its June 8 meeting. For those who cannot reasonably meet this deadline, comments may be submitted by June 18 for consideration by Council on June 24. As always, thank you for your assistance.

Finally: please note that we have established a new mailbox for Senate reviews.

Sincerely,
Martha

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UNIVERSITY COMMITTEE ON RESEARCH POLICY (UCORP)
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March 12, 2009

**MARY CROUGHAN, CHAIR
ACADEMIC COUNCIL**

RE: Senate Endorsement of UCORP Concept Paper "UC Seminar Network"

Dear Mary,

This year, the University Committee on Research Policy (UCORP) has been exploring possibilities to increase synergy across and within the campuses. One idea that the committee, the administration, and various outside sources have received enthusiastically is a UC Seminar Network, which would broadcast live via web the many seminars that occur on UC campuses each week as well as store and archive them for future viewing. As the attached concept paper describes in detail, the options for realizing this vision are nearly at hand, and the tests to date have been increasingly successful. Before moving to the next stage of devising implementation procedures and guidelines, though, UCORP feels that systemwide endorsement of the concept will strengthen the proposal and ensure that the process does not get stymied by wrestling with too many details too early on; indeed, we are aware that many specific issues must be addressed and have included an appendix to the concept paper to that effect.

We ask that the Academic Council send for systemwide review the attached concept paper for endorsement. Additional next steps may include the submission of the paper for external publishing, thereby placing UC and the Academic Senate as proactive leaders in this area.

Please do not hesitate to contact me if you have questions or concerns.

Sincerely,

James Carey, Chair
UCORP

cc: UCORP
Steve Beckwith, Vice President, Office of Research and Graduate Studies, UCOP
Dan Greenstein, Vice Provost, Strategic Academic Planning, Programs, and Coordination, UCOP
Catherine Candee, Executive Director, Strategic Publishing and Broadcast Initiatives, UCOP
Martha Winnacker, Executive Director, Systemwide Academic Senate
Bernd Hamann, Associate Vice Chancellor for Research, UCD

Peter M. Siegel, Vice Provost, Information and Educational Technology (IET), UCD
Dave Shelby, Assistant Vice Provost, IET, UCD
Paul VerWey, Manager, IET - Academic Technology Services, UCD
Elizabeth Gibson, Director of IET - Academic Technology Services, UCD

Encl.

CONCEPT PAPER

Linking Research Seminars Systemwide

University Committee on Research Policy (UCORP)^{1, 2}

SUMMARY

We propose the creation of a network to webcast the hundreds of seminars presented each week in the 10-campus UC system. Referred to as the *UC Seminar Network*, this grassroots enterprise involving relatively inexpensive and simple-to-use technology and straightforward operational protocols, would increase intra-, inter- and off-campus seminar access, reduce travel, augment outreach, and generate digitized records. The UC Seminar Network would establish a precedent for the creation of an international research seminar network, and create new opportunities for enhancing the exchange of scientific information such as linking published papers to archived videos of author's presentations.

INTRODUCTION

Because the intense, infectious enthusiasm of scholars speaking about their research is so perfectly complemented by the deep, unquenchable thirst of academic audiences for new knowledge, seminars are one of the most forceful and efficient mechanisms for transmitting scholarly information. Indeed seminar attendance is an integral part of the experience of virtually all UC researchers including the 46,000 graduate students, 6,500 postdocs, 8,000 professional researchers, and 8,600 academic faculty. With nearly 900 departments or programs across the UC system, there are an estimated 300 to 500 seminars (excluding brown bags) during a typical week of the academic year. This translates to well over 10,000 seminars annually that are presented in a wide variety of different formats and at different frequencies—weekly department, graduate group and center seminars, monthly or quarterly talks in distinguished lecture series, and annual university lectures by eminent faculty.

The importance of both sponsoring and attending research seminars is acknowledged universally by UC scientists and administrators. However, both time and travel constraints limit the potential of seminars for maximizing transmission and exchange of the massive amount of information that is presented collectively in talks across the UC system. The schedules of scientists (particularly faculty) are often packed so tightly that they cannot accommodate the additional time commitment needed to walk to many seminars on their own campus. It follows that the time and resources required to attend a seminar presented at a neighboring UC campus, much less a distant one, are also too great for the vast majority of scientists. Consequently the number of UC scientists who attend seminars on UC campuses other than their own is negligible.

A concept that would not only provide a partial solution to these time constraints, but would also open up a wide range of new possibilities for information exchange would be to bring scientific presentations to a researcher's office computer using webinar technology that links seminars across the 10-campus UC system. Referred to as the *UC Seminar Network*, this system would increase intra-,

¹ A standing committee of the UC Academic Senate, 2008-09 UCORP members include James Carey, Chair (UCD), John Laursen, Vice-chair (UCR), Steven Glaser, (UCB—2008), Stephen Raphael (UCB—2009); Gregory Miller (UCD), John Crawford (UCI), Timothy Lane (UCLA), Patricia LiWang (UCM), Kimberly Hammond (UCR), Theodore Groves (UCSD), Jean-Francois Pittet (UCSF), David Stuart (UCSB), Phokion Kolaitis (UCSC), Laura Serwer (graduate student rep, UCSF), and Mengfei Chen (undergraduate student rep, UCI).

² Correspondence to: James R. Carey, jrcarey@ucdavis.edu

inter- and off-campus seminar access, encourage speaker sharing, reduce travel, augment outreach, and provide electronic feeds for on-demand streaming and archiving. It would also situate UC as a world leader in the creation, implementation, and extension of this concept.

OVERVIEW

Concept and Components

The keys to the successful development and implementation of this concept are simplicity and ease of set up at the seminar venue, and especially the lack of any need for special technical expertise. The main operational concepts are buy-in by the hosting department and prioritizing transmission of content over concerns about high definition images of the speaker, ideal lighting, and elaborate speaker introductions.

The following is a general description of how the proposed *UC Seminar Network* would work.

1. Announcements³. Key information (host department, speaker/affiliation, seminar title, time, date, location) entered to campus website by sponsoring department or unit along with a URL address for accessing seminar via video streaming. This information would be distributed to a central seminar listing website for all UC's using the Shibboleth Authentication System.
2. Speakers. Unless choosing to opt out of the webinar, seminar speakers would be asked to sign a 'consent to record' form. Some committees responsible for distinguished lecturer series offering generous honoraria to speakers might consider mandating web casting to all invitees.
3. Technology. Minimal requirements for weekly seminar series would involve camera, laptop, microphone, and appropriate video streaming hardware/software⁴. Graduate students in charge would set up equipment and log in to the web casting site (i.e. turn-key concept). More sophisticated equipment and IT personnel would likely be used for seminars involving eminent speakers.
4. Mechanics. Speakers would be required to use the microphone and asked to restrict their movements to the podium area. The camera would be either ceiling-mounted and trained on the stage or tripod-mounted and operated by a videographer. The host would be responsible at the start for introducing the speaker and at the end for directing questions from the in-person audience as well as for reading selected emailed queries. Straightforward protocols would be distributed to seminar committees.
5. Video. Beside the option of streaming the video images but not saving them, two levels of recording include: i) *temporary* for on-demand streaming but with an expiration date e.g. 30, 60, 90 days; and ii) *archiving* for permanent storage (e.g. in cooperation with the California Digital Library).

Sponsoring units would be responsible for supplying laptops and video cameras with the campus IT units responsible for software and licensing. Costs have not yet been estimated for full-scale implementation⁵. However, vetting proof-of-principle and field testing on a limited basis can be done with the existing technology and technical infrastructure, the results of which will shed important light on cost estimates and technological constraints. Proof-of-concept is currently underway in three departments at UC Davis with UC Davis Academic Technical Services (ATS) in the Division of Information and Education Technology (IET) providing the equipment on-loan for free.

³ A survey of a several different UC campus calendars revealed that a surprisingly small proportion of scheduled seminars were posted on a campus-wide calendars (i.e. majority posted only in host departments).

⁴ e.g. Adobe Acrobat Connect is designed for creating live presentations; on-line audiences need only to have the widely-used Adobe Flash Player on their computers.

⁵ Although with different ultimate aims than the current one, the proposal "*UC Davis MultiMedia Webcasting and Podcasting*" that was solicited from UC Davis IT staff by Mitchel Bensen, Interim Assistant Vice Chancellor for University Communications, contains important background information on prospective costs.

Byproducts

There are a number of likely byproducts of a UC seminar network. One would be an improvement in the quality of many seminars; i.e. speakers often take talks more seriously when they know their presentation will be recorded and transmitted widely. Another would be the ability to pre-screen invited speakers and job applicants from their video-streamed or on-demand seminars. A third offshoot would be the use of on-demand video in training modules for undergraduate, graduate and professional students. A final derivative of a UC seminar network would be heightening UC scientist's awareness of the remarkable diversity of off-campus UC research sites with talks originating from locations ranging from the Scripps Institute of Oceanography in La Jolla and the Los Alamos National Laboratory in New Mexico to the Burns Piñon Ridge Reserve in the Mohave Desert and the Gump South Pacific Research Station in French Polynesia.

Open Access⁶

Inasmuch as most research at UC is funded by taxpayers, it can be argued that the public should have direct if not immediate access to the results. This is currently the case with some of the open access scientific journals such as the Public Library of Science (PLOS) and should be considered when developing the proposed system to link seminars across the UC System⁷. For example, people might wish to listen to a seminar speaker who presents new results on a family illness or on wellness concepts. Or people who have serious hobbies such as amateur astronomers, reptile hobbyists, or bird watching enthusiasts may wish to view a scientific seminar. People who do not read scholarly articles can also benefit indirectly from open access seminars. For example, patients benefit when their doctor has access to the latest research, growers benefit when their farm advisors have access to experts speaking about the most effective pest control technologies, and the public benefits when legislators and their staff have direct access to cutting-edge scientific information. Science teachers who work at schools with high proportions of minorities could be alerted to seminars to be presented by minority scientists and thus expose his/her students to potential role models via webcast seminars. Local newspapers might be willing to either publish or post on their website announcements for seminars of general interest that are scheduled to be presented anywhere in the UC system along with a website address listing scheduled seminar details and URL sites.

Concept Evolution and Extensions

As other university systems and institutional clusters adopt a similar idea for making their seminars available via webinar technology, the *UC Seminar Network* would become part of a *University Seminar Network* which, in turn, could become part of a global *Science Seminar Network*. Because many thousands of weekly seminars across all time zones and areas of science would be listed on an international website, the postings would need to be sorted by topic or key word and/or be listed according to interest group (e.g. malaria), time zone/region and language. As researchers become more comfortable with the webinar concept, seminar series can begin being organized in new configurations involving institutions in different time zones and on different continents (e.g. *Continental/Hemispheric Seminar Series*⁸) with a mid-morning seminar presented in California being viewed as an early evening seminar on home office computers in Tel Aviv.

Although scaling to regional, national, and global levels is one way to extend the concept, there are a number of other possibilities:

1. Linking archived talks to research papers, science blogs and CV's. Just as on-line news websites embed archived video of news events, scientific journals might eventually embed video links to

⁶ Evans, J. A., and J. Reimer. 2009. Open access and global participation in science. *Science* **323**:1025.

⁷ With full recognition of issues arising from making intellectual property open on the Web (Smith, M. S. 2009. Opening education. *Science* **323**: 89).

⁸ This concept can also be extended in yet another direction by considering international seminars presented in virtual conference rooms using *Second Life*—a virtual 3-D world. This is widely seen in connection with corporate or specialized lecture-style environments (Mayadas, A. F. et al. 2009. Online education today. *Science* **323**:85.).

digital archives of the lead scientist presenting his/her research paper at a seminar. Researchers who contribute to science blog sites⁹ could include links to archived seminars concerning the topic (or scientist) on which they are writing and scientists can include in their curriculum vitae links to on-demand seminars that they presented on their published research.

2. Web brown bags. Although it is unlikely that most ‘brown bag’ seminars would be webcast due to their informality and small size, scientists could use the webinar concept to organize their own weekly brown bag lunches with colleagues (or students) that are each located on different campuses.
3. Colloquia and specialized conferences. The webinar concept could of course be extended to the talks presented at the many hundreds of conferences held each year in the UC system. Similarly the concept could be used for the exchange of information within research centers, multi-campus research units (MRU), and schools that are located on two or more campuses. For example, the concept could be built into the developing plans for the UC School of Global Health involving six different campuses and hundreds of researchers. Or it could be used for delivery of lectures (i.e. distance learning) to students enrolled in the School but based in remote locations.
4. Partnering with industry. Because of the proximity of many UC campuses to either Silicon Valley or major corporations in southern California concerned with software and web-ware, UC could partner with industry to develop this web casting concept that might include major commercial components. For example, in cooperation with YouTube, Google might consider a complement to Google Scholar with the creation of Google Seminar; textbook publishers with on-line versions could include links to archived seminars presented by some of the prominent scientists whose work is cited in their books; a modest fee might be charged to lay public for access to certain high-end seminar series much like cable TV packages; on-line courses could incorporate on-demand streaming video from webcast seminars¹⁰.
5. Arts and humanities. The same concept for video conferencing science research seminars could easily be extended to any scholarly activity ranging from dance, music, and theater performances to art shows, book critiques, and poetry readings.

DISCUSSION

Of course the concept of using webinar technology is not new to the UC system since the not-for-profit TV channel UCTV has been recording and transmitting seminars since its launch in 2000. However, the aim of UCTV is substantially different from the primary aim of a UC Seminar Network. Whereas UCTV is principally concerned with posting on-demand, TV-quality productions of (mostly) high-end seminars¹¹ or panel discussions for 24/7 access by the public, the primary aim of the UC Seminar Network would be that of real-time video streaming and capture for on-demand use of all seminar types for internal consumption by UC scientists. A UC Seminar Network would thus complement UCTV, with each representing a component of a larger UC communications enterprise.

As part of one of the world’s largest and most prestigious library systems, the California Digital Library (CDL) would clearly play a central role in developing the seminar network by providing expertise on how best to catalog, store, preserve, and retrieve recorded seminars. It is conceivable that video records of scientific seminars may become a bibliographic (and thus both searchable¹² and citeable) concept much like that for many news organizations, complete with on-

⁹ L. Bonetta. 2007. Scientists enter the blogosphere. *Cell* 129:443-445; Anonymous. 2009. It’s good to blog. *Nature* 457:1058.

¹⁰ Mayada et al. 2009. Online education today. *Science* 323: 85

¹¹ An example of an existing high-end series of lectures recorded for on-demand viewing is TED (Technology, Entertainment, Design) that was started in 2007 but based on an annual conference that began in 1984 with the theme *Ideas Worth Spreading* (New York Times Magazine, January 25, 2009)

¹² For example, using meta-tags as an identification marker so material can be easily found (*Digital archivists, now in demand*, New York Times, February 8, 2009)

demand videos showcased as *Editor's Picks*, *Most Viewed*, and *Highlights of Week*. Indeed, the recorded seminars can become part of the liquid fabric of all information contained within a universal library infrastructure fostering a new culture of interaction and participation¹³.

As the research arm of the state, the University of California needs to explore this concept of linking seminars systemwide as a mechanism to both enhance and accelerate science. Although the present budget crisis in the state as well as technological constraints¹⁴ might limit development in the short term, a modest amount of field testing can still vet the concept, quantify the level of interest, and evaluate the technology. In light of trends in science, technology, and the internet, it is likely that the system described here or a variation on it will eventually be developed. Thus the issue is less about whether UC will be involved in some form of seminar linkage system, and more about whether it is willing and able to take the lead.

TECHNICAL DETAILS AND COSTS

Best practices

Set-up. (1) place video camera on tripod and focus on podium; (2) insert the red-coded end of Cable A in the red-coded camera portal and the blue-coded end in the blue-coded portal in the laptop; (3) connect audio mixer and laptop with Cable B and audio mixer and two microphones with Cables C and D; (4) upload presenter's PowerPoint to host/webcasting laptop; (5) with seminar room on laptop screen, start camera, voice and slides. Commence with presentation.

Video. Hosted computers should avoid using a wireless connection when connecting to the internet since hard-wire connections improve video and audio quality/performance. It is best to keep speakers in lighted, pre-defined areas and asking them to limit their movement. A drape with logo can identify the department/university and provide a clean and professional looking set. Limiting the use of pan/tilt and zoom when recording the presentation can improve the quality of the streaming video. It is also good practice to use a redundant recording method for all critical presentations—usually a tape drive attached to the camera system.

Audio. Audio recording performance seems to be a particularly sensitive area in Adobe Connect. It is critical to use the built-in audio setup wizard to minimize dropouts. It is also important to use direct line level input when possible. The microphone should be positioned 6-12 inches under the chin.

Content Sharing. Adobe Connect must convert all PowerPoint Slides to a Flash Format for on-demand streaming. This can be completed in 10-15 minutes. Because embedded PowerPoint movies will not play in Adobe Connect, it is best to play the video from a share screen on the desktop or better, pan the camera over to the screen while the movie is playing and enlarge the video/camera pod screen.

Costs¹⁵

Virtual meeting room (Adobe Connect)	\$150 (annual cost)
Equipment (camcorder; tripod; mixer; microphone)	\$578 (one-time cost)

Example webinar (link)

<https://breeze.ucdavis.edu/p57013430/>

¹³ Kelly, K. 2006. Scan this book!. New York Times Magazine, p42; May 14, 2006.

¹⁴ History encourages the notion that webcasting technology will continue to advance rapidly. For example, innovations for viewing movies online via Internet video were recently introduced through the use of Broadband HDTV from LG Electronics and NetFlix instant watching (Brad Stone, New York Times, January 5, 2009).

¹⁵ Estimates for up-front (e.g. websites) and back-end (e.g. archiving) costs for UC currently being researched

Mockup of UC-wide website

Title/Speaker/Affiliation ¹⁶	Campus/Sponsor	Date	Time	Location	url address ¹⁷
ANTHROPOLOGY					
<i>Shaping a new society. Recent results from archaeological investigations in Viking age Iceland</i> (Orri Vesteinsson, Univ. Iceland)	UCD Anthropology	2/16/09	2:10p	704 Human Science Bldg	click
<i>Identity, Power and the Rights of Indigenous Peoples</i> (Maureen Molloy, Univ. Auckland)	UCI Anthropology	2/16/09	4:10p	4221 Social Science	click
<i>Toward a Global Human History: Agency and the Explanation of Long-Term Change</i> (John Robb, Cambridge Univ.)	UCLA Anthropology	2/17/09	3:10p	341 Haines Hall	click
<i>Genetic consequences of habitat fragmentation in wild populations of howler monkeys</i> (Luciana I. Oklander; Univ. Buenos Aires)	UCSB Anthropology	2/18/09	4:10p	Webster Auditorium	click
<i>The Cultural Construction of Psychiatric Categories</i> (Charles Nuckolls; Univ. of Chicago)	UCSD Anthropology	2/18/09	noon	154 Social Science	click
<i>Primate Sexuality and Human Evolution</i> (Alan Dixson; Univ. Birmingham)	UCR Anthropology	2/18/09	noon	3256 Easton	click
<i>Formations of violence in African conflicts</i> (David O'Kane; Univ. Dublin)	UCB Anthropology	2/18/09	1p	3214 Evans Hall	click
BIOLOGY					
<i>Maintaining Genomic Integrity through Chromosome Double-Strand Break Repair: Importance for Development, Meiosis, and Cancer Suppression</i> (Maria Jasin, Memorial Sloan-Kettering Cancer Center)	UCB Life Sciences	2/16/09	4:10p	LBNL Bldg 66 Auditorium	click
<i>Moving the Protein Folding Problem from the Test Tube to the Cell</i> (Lila Gierasch, Chemistry, U Mass, Amherst)	UCR Biology	2/16/09	noon	50 Stanley Hall	click
[and so forth]					

¹⁶ Seminars would be cross-listed in multiple disciplinary categories and sortable.

¹⁷ Include information on audio only, PowerPoint + audio, or full video webcast.

APPENDIX

UCORP has sought and received preliminary feedback from various University sources on this project. Each respondent is supportive of the concept, but notes important logistical and policy considerations. We include two letters indicative of the feedback received and illustrative of our awareness that these issues must be addressed following approval of concept.



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March 3, 2009

**JAMES CAREY, CHAIR
UNIVERSITY COMMITTEE ON RESEARCH POLICY**

RE: UC SEMINAR NETWORK

Dear Jim,

UCCC appreciated the opportunity to review the UCORP concept paper, "Towards Greater UC Synergy" during its February 27, 2009 meeting. The committee supports the proposed seminar network and has the following suggestions.

UCCC suggests that the proposal take into consideration disciplines other than science, such as in the arts and humanities, which could also utilize the seminar network. The committee also suggests that mechanisms for responding to the seminar and interacting with the lecturer be described. Members of the committee also noted that the use of UC campuses' YouTube channels could provide low-cost archival access to the videos.

In addition to the above suggestions, UCCC identified three concerns with regard to the concept. First, the proposal does not adequately address the budgetary requirements for the project. Second, the proposal underestimates the work involved to ensure that the videos are useful. A good model for UCORP to examine is the Kavli Institute for Theoretical Physics (<http://online.itp.ucsb.edu/online/>) which has a system for managing the streaming audio and video, podcasts, and presentation slides. UC Berkeley's Educational Technology Services is another valuable resource for information including budgetary requirements. Finally, the concept paper does not make clear whether or not the California Digital Library has agreed to be responsible for archiving the videos and if there is a budget for CDL's work.

In light of the above-mentioned suggestions, UCCC looks forward to the development of the network and any future collaborations.

Sincerely,

A handwritten signature in cursive script that reads "Lisa Naugle".

Lisa Naugle, Chair
UCCC



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February 25, 2009

JAMES CAREY, CHAIR
UCORP

Re: UC SEMINAR NETWORK

Dear Jim,

UCOLASC discussed the University Committee on Research Policy concept paper, "Towards Greater UC Synergy" at its February 23, 2009 meeting. The committee agrees with the objective of creating new mechanisms for the exchange of information and with the goal of providing the public with open access to UC faculty research. We were particularly enthusiastic about the potential of giving seminar classes on specialized topics to more than one campus. However UCOLASC identified several concerns:

- The availability of videoconferencing facilities at each campus is a potential limitation.
- Logistical issues when interacting with large audiences will require the support of moderators.
- Allowing one faculty member to teach more students a certain subject at more than a single campus may lead campus administration to decide that other faculty in that subject are superfluous. This can have both positive and negative long term consequences. Some subject areas are already only taught at one campus.
- Broader availability of seminars may increase the opportunities for statements made during lectures to be taken out of context and/or used by groups outside UC for political purposes.
- Procedures are needed to ensure that faculty have given informed consent to recording of the seminar.
- The use of recorded seminars in evaluation by peers and students must be carefully considered.
- Faculty may feel compelled to restrict the content of the recorded lecture, by limiting comments on new research endeavors for example.
- Several legal issues should be vetted including copyright, liability, ownership, and intellectual freedom.

UCOLASC appreciated the opportunity to provide feedback on the proposal for a UC Seminar Network and the committee recognizes the many benefits resulting from the greater utilization of technology. However, UCOLASC recommends the comprehensive review and consideration of the issues outlined above and any other potential negative consequences.

Sincerely,

A handwritten signature in cursive script, appearing to read "Larry Armi".

Larry Armi, Chair
UCOLASC