



# University of Central Florida

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## Automated Remote Collaborative Learning Software

UCF researchers have developed a method and system of automated remote collaborative learning broadcasting that leverages learner comprehension to engage remote viewers. Multiple video feeds of an educational presentation—lecture, demonstration, or discussion—are presented to viewers classified as either local or remote, based on their available bandwidth for viewing and interacting with the selection of video feeds. While conventional systems don't provide a dynamic view of an educational presentation, this new system engages remote viewers, those with limited bandwidth, by incorporating an algorithm of video feeds most commonly “in focus” for local viewers, who have greater bandwidth and can actively switch feeds with ease.

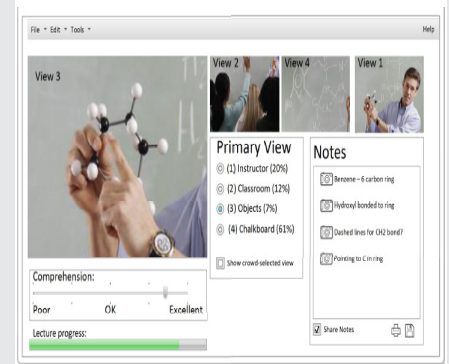
For example, local viewers will have a choice of feeds for a classroom presentation by an educator (view 1) who lectures in front of a chalkboard of written notes (view 2) while holding a model of a molecule (view 3). This system leverages the feed chosen by the most local viewers when determining the best feed to show remote viewers who don't have the bandwidth to choose among options themselves. Another feature incorporated is a comprehension rating among local viewers to give more weight to the most engaged and understanding of the group.

### Technical Details

A server receives a plurality of video feeds for a remote interaction. The server also receives a unique user identifier and bandwidth for each user viewing a remote interaction, and determines each user as either active (higher bandwidth) or passive (lower bandwidth). Active viewers receive the plurality of video feeds and select one to view largest while the other feeds remain in a thumbnail-like format. The server tracks active viewers' video feed selection and uses this data to choose the ideal video feed, at a given time, to passive viewers with limited bandwidth.

### UCF Inventors

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*A graphical user interface screen capture in accordance with a preferred embodiment of the present invention showing what an local audience viewer would see*

### Benefits

- More engaged remote learners
- Content comprehension tracking and rating
- Fully-automated feed selection for remote viewers
- Can be used to identify and address video sections with lower comprehension levels

### Applications

- Remote learning

### Tech Fields

Software

### Keywords

distance learning, remote learning, education, job training, university, classroom, broadcast, collaboration

**If you or your company are interested in this opportunity, Contact:**

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