

# MULTICAMERA LECTURE CAPTURE SYSTEM

*The MultiCamera Lecture Capture System is an educational technology that allows distance education students to view the whiteboard with an unobstructed view as if they were in the room with the instructor. The technology uses a camera configuration to create overlapping areas of the whiteboard and then stitches together video frames from each camera to create a single large format video frame.*

## PROBLEM

It is difficult to use traditional teaching methods, such as lecturing and working out example problems on the whiteboard, in online classes. Online students are often given brief notes or outlines that may not capture the complexity of problem-solving and it is difficult to watch the nuances of a professor's lecture as many of the cameras used to record lectures for online classes are placed in the back of the classroom. Especially in STEM courses, the lack of technology that can clearly communicate mathematical computations and formulas makes it difficult for students to learn how to solve problems. It is also difficult for professors to change their teaching style to fit online classes, especially if they are more accustomed to writing their solutions and examples on a whiteboard or sheet of paper.

## SOLUTION

The MultiCamera Lecture Capture System uses video cameras to capture notes on the whiteboard and then stitches together these shots to create an up-close shot of the whiteboard. This allows students to view the professor's notes while listening to lectures and it helps instructors use the same methods to teach students who are physically in the classroom or at a separate campus. The system also removes the instructor from the visual, allowing distance-learning students to clearly see the notes on the board.

## BENEFITS

Students can learn from the lecture notes by watching how their professor solves problems in real time, helping them learn problem-solving so they can solve more complex problems on their own. By listening to commentary and watching how to solve the problem, students can develop a deeper understanding of the concepts. This technology also reduces an administrative burden for professors as they do not have to provide a set of detailed notes to online students to compensate for their poor view during the actual lecture.

## APPLICATIONS

This technology is ideal for courses that rely on the whiteboard to work out problems, including a math or chemistry class. Professors who like to write physical notes during their lectures, regardless of the subject, and want to capture those notes in real time and provide them to students would also find this technology useful.

## CONTACT

Questions about this technology including licensing availability can be directed to:

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## INVENTORS

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## DEVELOPMENT STAGE

### TRL 3-4

There is a working prototype of this technology, but it is still in development.

## PATENT STATUS

## WEBSITE

[rgs.usu.edu/techtransfer/multicamera-lecture-capture-system](http://rgs.usu.edu/techtransfer/multicamera-lecture-capture-system)