

## Where teachers learn to teach.

Axis cameras in the classroom support teachers in their basic and advanced training at Regensburg University.



**Organization:**  
Regensburg University

**Location:**  
Regensburg, Germany

**Industry segment:**  
Education

**Application:**  
Remote teaching and recording

**Axis partner:**  
SUH EDV Systeme

### Mission

The University of Regensburg was looking for ways to improve the basic and advanced training for teachers and to make lesson observation more authentic. Until now, five or six people sat in the back of the classroom to observe the lesson as it took place. This had a clear effect on the teaching situation.

### Solution

SuH EDV Systeme developed a modular concept with instructions for the University of Regensburg. It is made up of multiple rotating and tilting cameras and conference microphones that transmit image and sound to a computer in an adjacent room. AXIS V5914/15 network cameras were chosen for the system. The schools can either livestream the images or record them for later viewing of the videos. Another channel displays the image being shown on the interactive whiteboard or the student tablets.

There are a number of special features that can be selected: REC room switch, graphical room display with camera selection, archive auto delete, dummy connection, intercom, stress and audio feed, external device ON/OFF, camera group control and face masking, check of usability as evidence in court. These special features depend on the intended task of the training.

### Result

In an adjacent room, lesson observers can follow what is happening in real time or with a time delay, without significantly influencing it. Teaching students, university lecturers, seminar teachers, trainee teachers and others in the teaching profession can sample and observe the lesson. They can then analyze the lesson scientifically. This enables authentic and differentiated feedback because the students quickly forget that the cameras are there.



The University of Regensburg was looking for a way to make lesson observations more authentic. Until now, five or six people sat in the back of the classroom to observe the lesson as it took place. This had a clear effect on the teaching situation. The aim was to improve the basic and advanced training for teachers.

To achieve this, the university partnered with SuH EDV Systeme, which proposed a didactic recording system used in medical and operating room training. SuH EDV Systeme was already familiar with this type of task since they had installed and maintained complete multimedia systems, including individual programming or adaptation of their own Multi Capture V4 software, for numerous other universities and public institutions. Using the solution developed by SuH EDV Systeme, metadata can be inserted into video images for training and analysis.

Four public schools in the Regensburg area made their rooms available for this purpose. For these schools, SuH EDV Systeme developed a modular concept with instructions comprising multiple cameras and conference microphones that transmit image and sound to a computer in an adjacent room. The installation work was then performed by an IT company or the school's own building services. SuH then installed the cameras and computer systems with acoustic control and online device control.

AXIS V5914/15 PTZ dome cameras are being used in the system. They offer pan/tilt/zoom, high audio quality, and powerful zoom. The open interface makes it easy to integrate with other systems and share information with a wider audience, such as in classrooms. The Multi Capture V4 software supports simultaneous recording of desktop sources via HDMI or AirPlay.

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The trainer can use a joystick to change the camera perspective, such as following the teacher as they move through the classroom or zooming in on individual student groups.

The trainer can control and adjust all cameras from the adjacent room, and set markers in the metadatabase while recording is in progress in situations that will be evaluated at a later point in time.

In the adjacent room, lesson observers can follow what happens during the lesson in real time or with a time lag without significantly influencing the lesson. Teaching students, university lecturers, seminar teachers, trainee teachers and others in the teaching profession can sample and observe the lesson. They can then analyze the lesson scientifically. This enables authentic and differentiated feedback because even though the students know they are being filmed, they quickly forget that the cameras are there.

The solution is aimed at students, who can view the recordings as part of their teacher training. In addition to the teaching staff, who use the solution for supervision, the solution is also very popular with trainee teachers, who analyze the image material as part of self-reflection over the lesson.

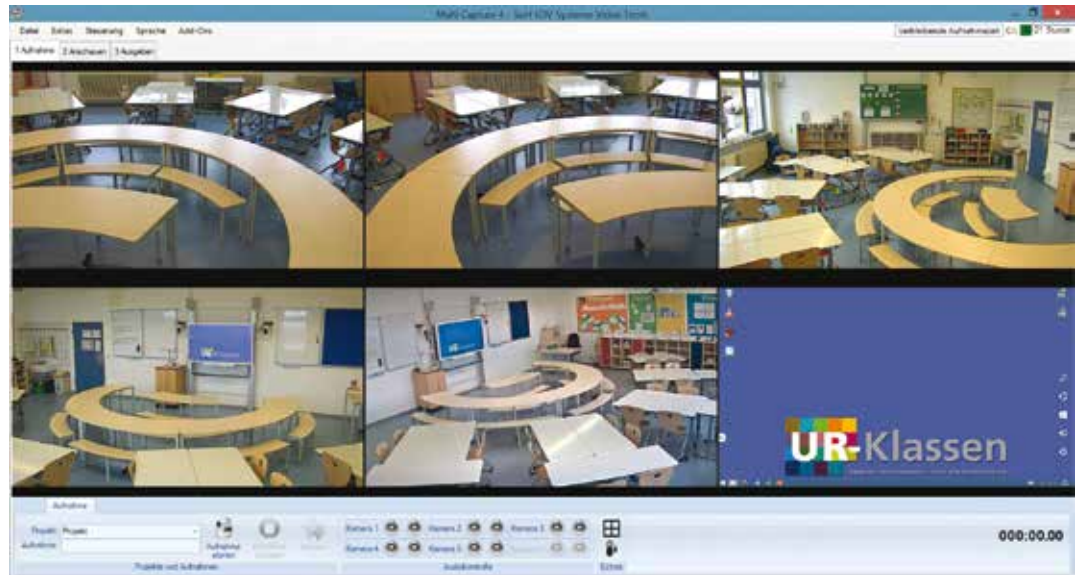
The project has been running since 2016, and implementation in more classrooms is already being planned. The installation is currently fixed, but mobile installations are to follow so that even rooms with special requirements (e.g. chemistry labs) can use the solution.





“Our main reason for choosing Axis cameras was that they work smoothly with our software, enabling in-sync recording. In addition, the cameras can be controlled via Multi Capture V4 and have XLR inputs with phantom power as well as HDMI and HDSDI outputs. We could attach them standing or hanging to walls or tripods – whatever best suited the circumstances.”

Johannes Reentjes, Head of Technology and Development at SuH EDV Systeme.



<https://my.hidrive.com/share/l4ekyg6.9z>

Multi Capture Version 4

# About Axis Communications

Axis offers intelligent security solutions that enable a smarter, safer world. As the market leader in network video, Axis is driving the industry by continually launching innovative network products based on an open platform – delivering high value to customers through a global partner network. Axis has long-term relationships with partners and provides them with knowledge and ground-breaking network products in existing and new markets.

Axis has more than 2,700 dedicated employees in more than 50 countries around the world, supported by a global network of over 90,000 partners. Founded in 1984, Axis is a Sweden-based company listed on NASDAQ Stockholm under the ticker AXIS.

For more information about Axis, please visit our website [www.axis.com](http://www.axis.com).