

Reacts was used by experts in Norway to provide remote teaching to medical students in Poland during a point-of-care ultrasound course, 17th – 18th January 2015.

Report submitted by Professor Nils Petter Oveland (MD, PhD, Associated Professor, Department of Health Studies, Network for Medical Sciences, University of Stavanger, Norway) and Victoria Vatsvaag, (Sonographer, Curato Røntgen, Stavanger):

Reacts was used as a teaching tool during a point-of-care ultrasound course for medical students in Poland on January 17-18, 2015. Skilled instructors taught on site in Poland, with two specialists instructing remotely from Norway via Reacts. Reacts enabled the instructors in Norway to give lectures in the form of a video conference and guide the students during hands-on sessions.

It proved very helpful for us to go through the online video instructions beforehand to fully understand how to use React. We found that it was quick and easy to learn.

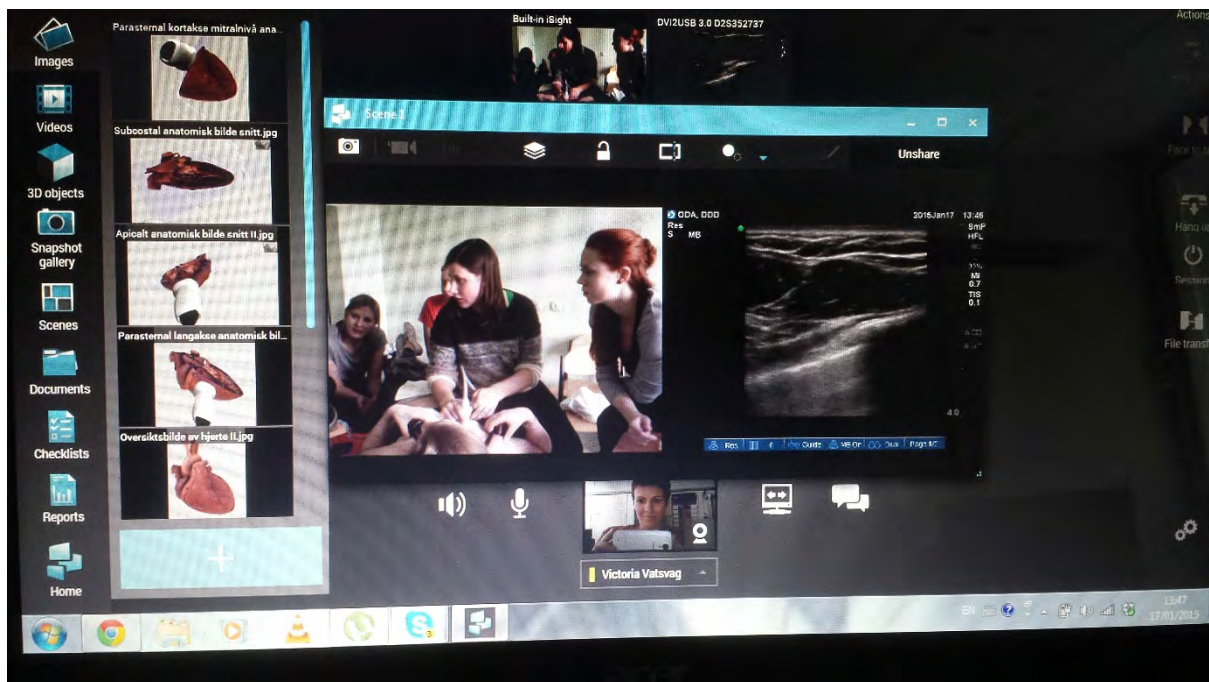
The course day started with a lecture given by a remote instructor via video conference. This worked very well, and it was absolutely brilliant being able to share the desktop with other Reacts users. The lecture was given using a PowerPoint presentation. We experienced no image or sound delays.

Most of the day was spent conducting hands-on training. We had a very good setup with a web cam located at the head end of the “patient,” which provided the instructor in Norway with a good overview of how the student approached the task at hand and also how he/she used the equipment. This also enabled the remote instructors to give helpful instructions on how to improve the scan. The remote instructors also benefited from a live image of the ultrasound screen. We all felt that this approach, combined with a live image of the actual patient and examiner, was almost as good as standing in the room with the students.

The following are just some of the many features we liked about Reacts:

- Very good image quality with little delay/disturbance (none at all when only using one window for video conferencing).
- The ability to share the desktop with other users.
- Being able to decide what we and the other users see on the screen (we used three screens/windows at the most: one of ourselves, one with the students/patient, and one with the live ultrasound image).

- Extremely helpful to be able to use a pointer during the hands-on sessions. The instructor in Norway used it to point at the live ultrasound image; it is such a helpful tool when you are not physically there to point at the screen.
- The image gallery was prepared in advance by the remote instructors. It was used mainly to demonstrate what the pathology would look like on the ultrasound image, as there was obviously (and thankfully) no pathology found in the students being scanned.



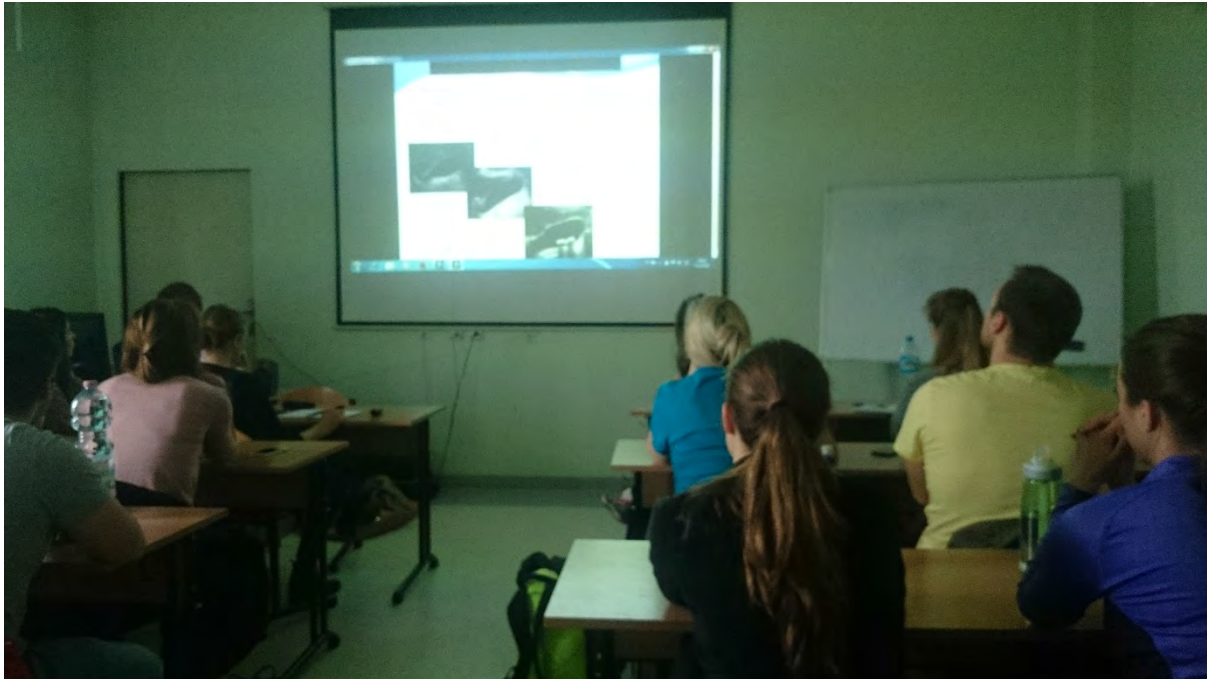
Screenshot of the Reacts window as seen by Victoria in Norway. The camera view of the students performing the exam is seen on the left, and the live ultrasound view is seen on the right. Also, Victoria has schematic images opened on the left, ready to show them to the students to help them better understand the anatomy visualized.



Dr. Oveland is seen in his Emergency Room office in Norway supervising the students in Poland performing the ultrasound exam. The camera view shows the student on one screen and the live ultrasound view on the other.



As the students in Poland perform the ultrasound exam, they can interact live with the experts in Norway. The remote instructors are able to provide helpful instructions on how to improve the scan.



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All in all, we found Reacts to be a great tool for remote education. I also want to add that the students were very impressed with Reacts, which received good feedback across the board in the course evaluation.

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