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## Cambridge weblab goes live

8 December 2006

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The UK's first "weblab", which allows people anywhere to control a live experiment remotely through a computer, is being launched at the University of Cambridge today.

[Department  
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Internet users will be able to log on and control a simple experiment in a reactor in the Department of Chemical Engineering, altering the variables so that the machine produces different results. The entire process can be watched live on a webcam.

While computers themselves are now sometimes shared in this way by academic institutions so that researchers can simulate and model different experiments, this is the first time a live, physical experiment has been controlled remotely.

The reactor itself is set up to carry out a relatively simple colour-changing experiment using two chemicals. Users can vary the flow of the chemicals, the temperature of the reactor, or the speed at which the substances are mixed.

The principle has huge implications for the sharing of resources in the future. Many universities have excellent teaching facilities which, because of their nature, are only used for a few hours per term and then lie idle for the rest of the year. The weblab means such equipment could become accessible from anywhere in the world, 24 hours a day. This allows for much more intensive use of teaching and research facilities, saves resources and allows other universities to access teaching materials that they would not otherwise possess.

The development of weblabs was undertaken by the Cambridge-MIT Institute, a collaboration between the University of Cambridge and the Massachusetts Institute of Technology (MIT). Dr Markus Kraft at the Department of Chemical Engineering and his team from the computational modelling group developed the principle of web-based teaching in this manner by setting up internet-accessible equipment.

Professor Lynn Gladden, Head of the Department of Chemical Engineering, said: "We are delighted to have the

Cambridge weblab in our department. This gives our students an excellent opportunity to get valuable experience on real industrial equipment.”

The weblab consists of a reactor, auxiliary equipment and state-of-the-art industrial process control devices and software. Due to the significant contribution of Siemens, it was possible to set up the Cambridge weblab as a fully-functioning “plant” with monitoring, controlling and data output performed by a Siemens SIMATIC PCS7 process control system.

The facility will be formally launched today by Martin Kremer, Science Director at the German embassy, at a ceremony also attended by Professor Ian Leslie, Pro-Vice-Chancellor of the University of Cambridge, and the Executive Director of the Cambridge-MIT Institute, Professor Mike Gregory.

Professor Gregory said: “This project is a shining example of how we have collaborated to devise new ways of business to yield significant educational benefits”.

For further information, please contact the University of Cambridge Office of Communications on 01223 332300

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