African students get web link to MIT labs

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Students in Uganda, Tanzania and Nigeria can now perform sophisticated engineering and science experiments at MIT--without ever getting on a plane.

"If you can't come to the lab, the lab will come to you," said Jesus del Alamo, co-principal investigator on the Africa project and a professor in MIT's Department of Electrical Engineering and Computer Science. Students at three African universities will be able to access five MIT labs via the Internet, thanks to an iLab Project partnership between MIT's Center for Educational Computing Initiatives (CECI), Makerere University (Uganda), the University of Dar Es Salaam (Tanzania) and Obafemi Awolowo University (Nigeria).

MIT faculty will work closely with their African colleagues to introduce new laboratory experiences and develop new content in several graduate and undergraduate courses in fields ranging from electrical engineering to physics.

"These additions to the curriculum will directly impact the education of hundreds of students," said del Alamo. "The project is likely to have multiplicative effects that will add to its impact. This may come in the form of revamped curricula, students acquiring unique software engineering skills, and the broader use of computers by students and teaching staff in engineering education."

Professor L.O. Kehinde, coordinator of the iLab project at Obafemi Awolowo University said, "With the dearth of funds for the purchase of equipment for experimentation, the iLab project is an important

intervention for African universities. Not only will it afford better access by more students to relevant experiments, it certainly will also result in human and infrastructural development in partner African universities."

The iLab project is an outgrowth of the Microelectronics WebLab, which was developed by del Alamo in 1998 as a way for students to test and probe fragile microelectronic devices over the Internet from dorm rooms and other convenient locations 24 hours a day. The success of that venture spawned the iLab initiative at MIT to advance the concept to other engineering disciplines. ILab was embraced and funded by MIT iCampus, a program sponsored by Microsoft.

The iLabs have been used by students at MIT and from universities in other countries, including the United Kingdom, Singapore, Sweden, Greece and Taiwan. New iLabs will be selected and developed by the African partners in collaboration with MIT.

The Africa project, funded by an $800,000 grant from Carnegie Corp. of New York, also includes a cultural-exchange component. MIT will send six undergraduate or graduate students to the three African universities to join their respective iLab development teams and support their efforts. The African universities will each send two graduate students or staff members to MIT to join MIT's own iLab effort and learn iLab technology along the way. The visits are scheduled to last about two months.

"In addition to enhancing their skills in iLab-related software and hardware development, the cross-cultural values of the collaboration between African universities and MIT are immense," said Kehinde. "The dedication and the cooperation of the iLab coordinators at MIT have been remarkable."

Professor Steven Lerman, director of MIT's CECI program and co-

principal investigator of the Africa project, said, "Carnegie Corporation recognized the potential for bringing leading African institutions together with MIT. We are delighted that this is a real partnership--institutions in developed and developing countries will work together and learn from each other."

He added, "We are grateful to Carnegie Corporation for its support and for the opportunity their funding provides for sharing knowledge between MIT and our African colleagues. We hope this project will spread among African institutions so that more students can perform real experiments and enhance their science and engineering education."

iLabs is an initiative of the MIT iCampus program, which is funded by Microsoft Corp. iCampus sponsors faculty innovations in educational technology, helps incubate them through classroom use, and promotes their adoption, evaluation and continued evolution through worldwide multi-institutional cooperation.

To try one of the labs, go to openilabs.mit.edu/

Source: MIT