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A Day in the University of the Future

Ever wondered if you can have a day at the University of the Future? Imagine, would you then not have to walk from one end of the campus to the other end just for an hour lecture? Sadly, if this is the future, it most probably isn't the future that we can see in our lifetime. Instead, let's take a glimpse into the foreseeable future, a future 20 to 30 years from now. By this time, it is safe to assume that prototypes that were at present pet material in the university labs will be marketable as they become cheaper to mass produce. For one, robots mass produced could have processing capabilities that can challenge the human brain.

To look into our imagined crystal ball, let's first assume that the past is usually the best predictor for the future. In both technological forecasts by Business Week [1] and Technology Review [2], it is evident that most technologies drive the notion that humans should perform less monotonous work. One technology that enables this is the use of robots and sensors, the applications of which are only limited by our imagination. Therefore, allow me to further stretch our imagination to paint for you the picture of a day in the University of the Future.

One of the things that would be feasible in the future would be the use of tags, analogous to Active Badges [3], which could collect information about the user and communicate the information to control stations. However, advances in technology would probably mean that the same functionality could be achieved in student cards and in additional, provide students with feedback through sound and text via a small LCD display on card. As a scenario, the future university student could expect the card to beep to remind the student that s/he is supposed to attend a lecture at some time. The display on card, on the other hand, can inform the student of a cancelled lecture or meeting with supervisors.

At this point, you may wonder where all this information originates from. Indeed, the future university should free students or lecturers of carrying out mundane tasks such as entering data through an interface. This can all be made possible through sensors that lurk in corners of lecture theatres which sense light, temperature, sound and motion while miniature cameras record images of living objects, both of which send

the data to control stations, which will process and analyse the data fast enough to be used in the system.

As another example, in a lecture, the lecturer could pose questions to students and all students can answer the question via an electronic screen mounted in front of their seats. The screen will display the question in text and offer multiple choices where students have to answer within a time frame. This can provide the lecturer with immediate feedback from students and at the same time, students' answers can be recorded and counted towards their final score, all of which makes lectures more effective and interactive.

But just as technology would make life more stressful for the university student, technology could also reduce stress for any university individual in a lot of other ways. Think of your daily dose of coffee at the university cafeteria. The cafeteria attendant should now have a computer stored record of what your regular order is from your previous order and receive hints about what you going to order even before you utter a word. Also, the cafeteria would, at that time, have a robot attendant which does the same job as the attendant but can run 24/7, meaning the cafeteria will be open at all times for your convenience. Ever had a cafeteria attendant that you didn't like? Just go to his/her metal colleague which would still make you that latte with skinny milk with a solid smile!

In another example, robots could even replace information desks in university. First year students that require navigation information could be led directly to the locations by mobile robots instead of just been given casual information.

The applications of future technologies are endless…

As the late Mark Weiser [4] once said: "The most profound technologies are those that disappear. They weave themselves into fabric of everyday life until they are indistinguishable from it." And it is by these words that I believe and in accordance with the above passage, that this is the technology that will shape the university in the future and affect the days of future generations studying in it. It is a future I am looking forward to living in.

References

[1] 21 Ideas for the 21st Century, *Business Week*, pp. 78-167, 1999.

[2] 10 Emerging Technologies that will Change the World, *Technology Review*, **106**, pp. 33-49, 2003.

[3] R. Want, A. Hopper, V. Falc ao, and J. Gibbons, The Active Badge Location System, *Tech. Rep. 92.1*, Olivetti Research Ltd., Cambridge, 1992.

[4] M. Weiser, The Computer for the Twenty-First Century, *Scientific American*, 1991.