

2008-2009

ALEXploratorium Projects Support (APS)



1. Remotely Controlled Humanoid Robot:

- **Project Field:** Communication and Electronics
- **Type of Project:** Hardware & Software
- **University:** Mansoura University
- **Project Description:** From the technical side from this project is to build a reliable robot that can be simply controlled from remote locations using existing cellular network without any unexpected problems. The objective of this project that human hand movements will be detected and sensed accurately.
Life video transmission is being established from the robot location to the controlling human. (3G networks is a good candidate to perform this task). A wireless link is used to transmit the sensed human hand motion directions to the robot arm.
A humanoid robot which its upper side motion can be controlled by simulating the user arm motion from remote locations via the wireless connection (GPRS is a good candidate).
Simply, the remote robot arm simulates the hand arm motions and the robot motion will be controlled in all directions.
- **Grade:** Excellent
- **Contact Person:** Ahmed Ali Ibraheem Farahat (ahmedali@manhag.org)

2. The Virtual Mall:

- **Project Field:** Computer and Systems Engineering
- **Type of Project:** Software
- **University:** Alexandria University
- **Project Description:** People shop to enjoy the shopping experience itself. The Virtual Mall simulates the same experience on the Internet by introducing to online shopping a brand new version and dimension. The main idea behind the “Virtual Mall” is that it is a website for shopping modeled in 3D, offering the customer to navigate through the mall and see the virtual shops around with the same shop appearance as in real life.

Inside the “Virtual Mall” every object is modeled in 3D. The customer would be able to walk to the shop he/she wants and get inside it. The products inside the stores are modeled in 3D where the user can rotate the product 360 degrees enhanced view of the product in contrast to the 2D images we see when we shop online.

The “Virtual Mall” offers a host inside each shop. The host is a virtual character that looks like humans and is dressed in a uniform that looks like the staff uniform in the real shop. The host accompanies the customer as he/she walks inside the store and can talk to the Customer in a human similar voice and tell him/her all the information about a certain product for example the price. The customer has the choice of disabling or enabling the host feature. Stores inside the mall can announce new offers, sale and clearance. The appearance of the shop will be changed by displaying signs announcing the offer. The store can also notify customers to visit the mall to take advantage of the offer.

The customer is able to specify the budget that he/she can spend and the type of product he/she wants to buy. Inside the store, the products that are under that budget are highlighted.

- **Grade:** Excellent
- **Contact Person:** Rofaida Mohamed Awad (r_firedance@yahoo.com)