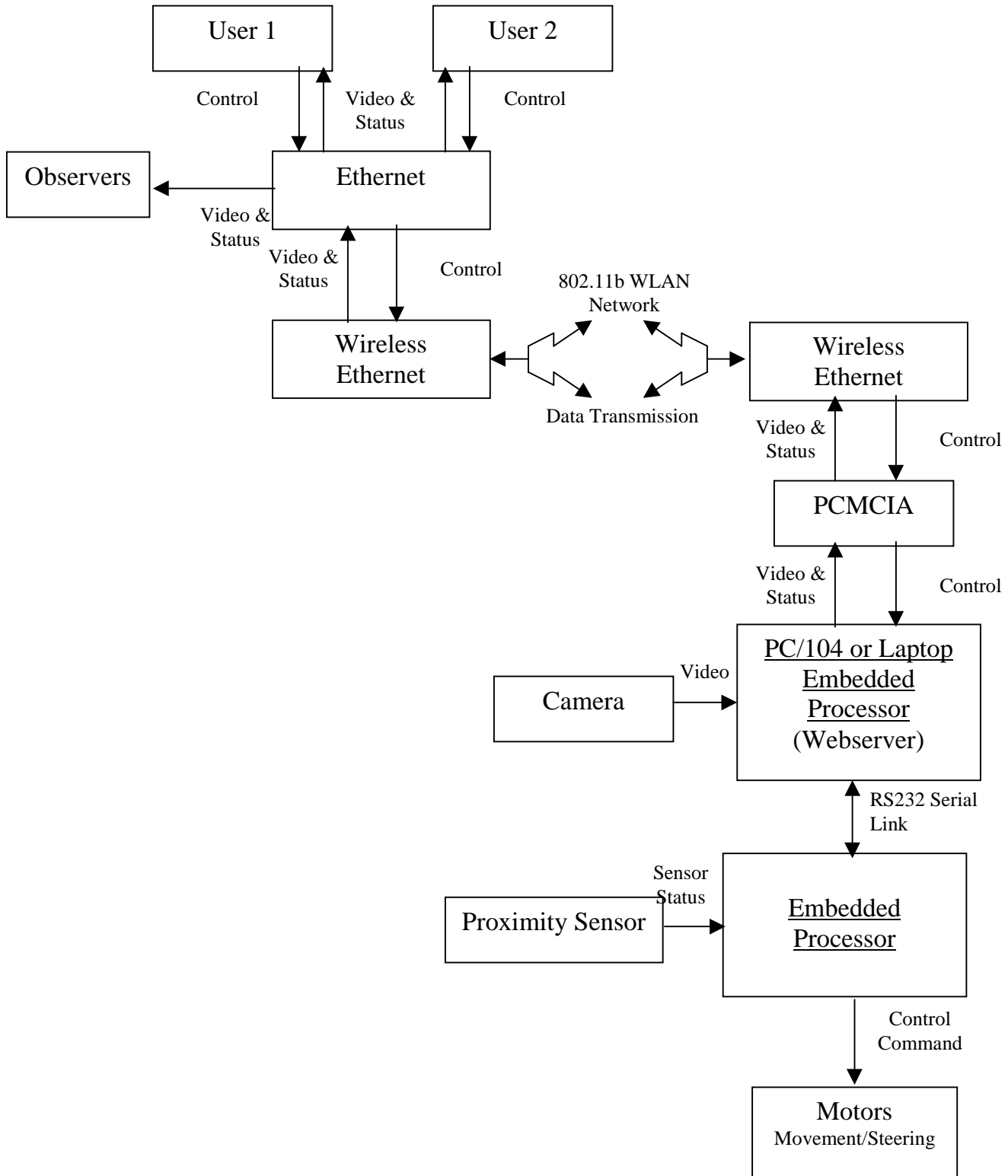


System Block Diagram  
 Telerobotics 2001  
 Project Team: Sean Grady, Tim Booth & Geoff Mikosz  
 Project Advisors: Dr. Huggins & Dr. Malinowski



<b>Component</b>	<b>Description</b>
Users	The users are the ones that control the robots remotely to play the game. They control the robots via the JAVA based controls on the webpage. Current video and robot status are sent to them.
Observers	Observers are allowed to watch the progression of the game.
Ethernet	The ethernet is used to route signals to the users and observers. It is mode independent, the server will always be listening for a new user connection.
WLAN	A wireless LAN using the IEEE 802.11b standard will be used to send and receive information between the users and the remote servers. (Mode independent) 802.11b is a high rate amendment to the original 802.11 standard that adds the speeds of 5.5Mbps and 11Mbps.
PCMCIA	PCMCIA will be used to help interface the WLAN to the PC104. (Mode independent) PCMCIA (Personal Computer Memory Card International Association) is a format that allows compatibility between the WLAN card and the PC104 platform.
Video & Status	Video feed from the webcam lets the users and observers see where the robots are. A robot status indicator lets them know if the status of the game, IR sensor, proximity sensor, and battery. The video signal will always be transmitted regardless of current mode.
Control Signal	The control signal coming from the users tell the robots what to do. The users do this by using the JAVA based control panel on the webpage. Control signals are mode independent, a new user could logon at any time.
PC/104 or Laptop Embedded Processor	Runs the web server and handles all internet control functions. When there are no users connected, this computer handles the "sleep" mode in which the robot monitors its internal power and recharges if necessary.
Robot Embedded Processor	Handles all robot specific functions such as sensing and movement. Mode independent, waits for commands from the user I/O or other control functions on
Camera	Sends current picture of the robots surroundings to the user. (Mode independent)
Proximity Sensor	Detects if another robot or object is nearby. (Mode independent)
Motors	Steer and move the robot around the environment. (Mode independent)

