

**The Ohio State University  
Dept. Electrical and Computer Engineering**

**ECE 481 Ethics in Electrical and Computer Engineering**

**Final Project: Humanitarian Technology Challenge Problem Definitions**

**Background Information:**

There is an international effort led by IEEE to develop electrical technologies for the developing world. First, study:

IEEE/UN Humanitarian Technology Challenge: <http://www.ieeehtc.org/index.php/htc/>

IEEE Humanitarian Technology Network: <http://www.ieeehtn.org/htn/home.php>

There is an education component to HTC/HTN that is currently being developed (led by Prof. Passino, web site to be posted), and there is a capstone design course that is offered in Spring 2010 at OSU called ECE 682 Humanitarian Technology Challenge.

**HTC Problem Definition:**

Define a HTC problem (no need to define a complete solution, though you may list some initial ideas). Include in your definition:

1. Definition of the need (including how you can/should get community input), as defined via poverty facts/statistics, and development goals (e.g., to address energy/technology poverty).
2. Define “appropriate technology” and explain which solutions are technologically appropriate for solving the challenge you identified in 1.
3. Define “sustainability” and discuss which solutions to the challenge are sustainable.
4. Discuss the role of technology/prototype deployment (in the developing world/community) in refining your problem definition (of course, this will be hypothetical as you are not required to pick and deploy a solution, but you should be able identify how deployment can help the design process/refinement of the solution *and* problem definition).

**Assignment: Team Approach to HTC Problem Definitions**

Pick a team (team size should be 2-4 persons). Provide **two** HTC problem definitions, each one two typed pages long (limit). Put a cover sheet on your report listing the team members, percentage contribution of each, and your email addresses.

Submission of your solution implies that you are willing to have it posted on the web (if you are concerned about this email me).

**Due Date:** Last day of class, at the beginning of class.