Today: PPI and project team formation
FPGA’s and Verilog programming

Announcements: Lab 3 on DE2-70 starts next week
Hw2 due today. Hw3 assigned.
PPI comments and rankings due Wed before 11:55PM
Project teaming meaning on thurs, 7-9PM 3150 Dow

Last one out should close the lab door!!!!

Please keep the lab clean and organized.

Nothing is more difficult, and therefore more precious, than to be able to decide.
  — Napoleon I.
Pre-project ideas (PPI)

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<tr>
<th>A Device to Regulate Body Temperature</th>
<th>Music Transcription Device</th>
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<tr>
<td>Acoustic Correction and Audio Analyzer</td>
<td>Musical Performance Augmenter</td>
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<td>Audio System Phase Adjustment</td>
<td>Noise Based Direction Detector</td>
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<td>Bird Call and Location Identifier</td>
<td>Noise Cancelling Headphone</td>
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<td>Bluetooth Guitar Jack</td>
<td>Optimal Musical Playback System</td>
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<td>Cardio Wristband</td>
<td>Pen to Computer Tool</td>
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<td>Cell Phone Detector</td>
<td>Peripheral Conversation Detector</td>
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<td>Cellphone-based Hearing Assessment Tool for Humans</td>
<td>Personal Jarvis System for Voice Control</td>
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<td>Cycling Power Meter</td>
<td>Portable Tactile Audio Device</td>
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<td>Digital Effects Processor and Pitch Correction</td>
<td>Posture Control Vest</td>
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<td>Eye Controlled Drawing Application</td>
<td>Pothole Sensing Network</td>
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<td>Facial Recognition</td>
<td>Power Control System for a Bicycle</td>
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<td>Facial Recognition System</td>
<td>Responsive Binaural Audio Simulator</td>
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<td>Golf Swing Analyzer</td>
<td>Simple Sign Language Recognition Device</td>
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<td>Hearing Aid with Sound Reduction Capability</td>
<td>Sleep Tracking Device</td>
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<td>Human Motion Tracking</td>
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<td>Image Enhancement in Frequency Domain</td>
<td>Smarter Shopping Cart using RFID</td>
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<td>In-Ear Speech Translation Device</td>
<td>Speech Recognition</td>
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<td>Instrumental Filter and Recorder</td>
<td>Speech Recognition and Modification Device</td>
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<td>Laser-Triggered MIDI Controller</td>
<td>Tempo Matching LED Display</td>
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<td>Low Cost Physical Motion Tracking Device</td>
<td>Touch-less keyboard</td>
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<td>Low-cost Baby Monitor</td>
<td>Training Basketball</td>
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<td>Low-Cost Simon Says Digital Lock System</td>
<td>Truth Detector using EEG</td>
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<td>Modular, Distributed Object Tracking Network</td>
<td>User Identification by Voice Recognition</td>
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<tr>
<td>Music To Your Heartbeat</td>
<td>Weight Lifter’s Autonomous Feedback Device</td>
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Pre-project idea (PPI) assignment (100 pts)

- Due before 11:55PM on Thursday on Ctools (60 pts)
  - Assignment counts as one homework
  - Two PPI contributions: PPI 1 (30 pts) and PPI 2 (30 pts)
  - Each PPI must be one page and follow the specified format
- Between Sat and Wed eve do the following (40 pts)
  - Comment on PPI’s on Ctools Forums
    - Each PPI will have a comment thread
    - Comment on at least 2 PPI’s other than your own
    - Respond to comments on your own PPI
    - Comments are open and should be constructive
  - Rank the top 4 PPIs that interest (Ctools Testing Center tab)
- Popular PPIs may be good prospects for teaming
  - You are encouraged to network during open comment period
  - Early efforts will give us head start in team formation on Sept 18
How you might approach the PPI exercise

- Take a look at the 3 examples listed in document linked to PPI assignment on Ctools
  - Background and overview
  - Proposed project effort
  - Who might use the device?
- Take a look at TI’s repository of projects on Homework/Projects wiki
- Take a look at Harris’s projects on Homework/Projects wiki
- Be imaginative but realistic in your PPI
  - An application that you and others may be interested in
  - A project idea that involves DSP in some way
  - A project idea that is feasible in context of a semester-long MDE
- In the comments part of exercise
  - Comment on at least two PPI’s (not yours) of interest to you
  - Critique and propose extensions or improvements
  - Respond constructively to other’s comments on your PPIs
Teaming meeting mechanics

Meet in Dow 3150

6:45PM Pizza arrives

7:00PM Overview of lab resources for projects (K. Metzger)

7:15PM Project pitches: Students pitch their favorites (5 min each)

8:00PM Project assignments: Students sign up for projects

9:00PM Adjourn

Notes:

- Review project ideas in PPI booklet before meeting
- If you have a strong interest in a project idea prepare a 5min pitch
- Group size: target team size is 3.
- Only 8 or 9 projects can be accommodated so be flexible!
- We will only assign people to teams if necessary.
How to pick a project

▶ Choose something that
  ▶ Relates to the class and lab.
  ▶ That you will enjoy doing.
  ▶ Has a reasonable degree of challenge.

▶ Be brave
  ▶ Take chances and be prepared to make mistakes.
  ▶ You will need to get something working.
  ▶ Aim high: combined forces of 3 people can do a lot!

▶ This will be a lot of work, but...
  ▶ It’s your MDE.
  ▶ You will be working on your final product that you chose.
  ▶ So you should get some enjoyment out of it!