Jonathan Kaiser
SELP 695 Integrative Project
Advisor: Dr. Fred Brown

APPLYING SYSTEMS ENGINEERING TO LIFE
Project Objective

- Life is one of the best examples of a System of Systems
- Apply the knowledge gained from SE coursework to simplify and organize day to day activities of my life
- Architecture and Work Breakdown Structures will provide organization.
- Quality and Lean Thinking will provide the methods to improve my life.

- Bottom Line – I want to free up time to spend on hobbies and nurturing family.
Stakeholders

- Me – I am the primary stakeholder
- Spouse – Of course she gets a say
- Daughter – She doesn’t say but still has requirements
- Air Force – Wants me to do work for them
- LMU – Wants my money

Many others but these have the most impact on my requirements
Stakeholder Requirements

- **Mine**
  - The system shall provide adequate levels of necessities for life to include food, water, and shelter.
  - Secondary Requirement - The system should maximize time spent on entertaining and nurturing family.

- **Spouse and Daughter**
  - Similar to mine
  - Additional requirements in the form of a Honey Do list
  - Their requirements affect my derivative requirements

- **Air Force**
  - Perform the work that is given
  - Continuously improve through education

- **LMU**
  - Pay tuition
  - Maintain a passing GPA
  - Fulfill stated requirements for degree

- Detailed requirements document in backup
Architecture

Air Force
- Works For
  - Pays
<br>
LMU
- Pays
<br>
Jon
- Insures
- Maintains
- Shelters
- Maintains
- Assures
- Provides
- Purchases

Family
- Nurtures

Home
- Shelters

Budget/Finances
- Assures
- Balances
- Provides
- Sanities
- Purchases

Entertainment
Prioritizing Tasks

- Franklin Covey introduced this concept for prioritizing tasks
- Very useful in our busy daily lives

http://www.lifetrainingonline.com/blog/first-things-first-chapters-1-5.html
Work Breakdown Structure

Jon's Life

Job  Education  Home  Family  Budget/Finances  Entertainment
Work Breakdown Structure

Jon's Life

Job
- Coordinate meetings for Chief Engineer
- Track taskings from other organizations
- General executive support for Chief Engineer
  - Writing letters and speeches
  - Reviewing documents
- Additional duties
- Training
- Fitness

Education

Home

Family

Budget/Finances

Entertainment
Work Breakdown Structure

Jon’s Life

Job
Education
Home
Family
Budget/Finances
Entertainment

MS in Systems Engineering
Integrative Project Research
Integrative Project Report
Integrative Project Presentation
Graduation

Professional Military Education

Squadron Officer School by correspondence
Squadron Officer School in residence
Work Breakdown Structure

Jon's Life

Job  Education  Home  Family  Budget/Finances  Entertainment

Nurture

Entertain
Work Breakdown Structure

Jon's Life

- Job
- Education
- Home
- Family
- Budget/Finances
  - Bills
  - Taxes
  - Investments
  - Planning
- Entertainment
Work Breakdown Structure

Jon's Life

Job  Education  Home  Family  Budget/Finances  Entertainment

Hobbies  Brain Dead Time
What is taking up all my time?

Family
Daily life
New Baby
Vacation

School
Class
Homework

Work
Daily Grind
Additional Duties
PME

Cleaning
Budget/Bills/Investing
Projects

Projects I Actually Like
Watching TV/Movies
Playing Video Games
Various Other Hobbies
Downtime

Cleaning
Chores
Lean Initiative

- Measure and Reduce time spent on chores
  - My wife and I spent about 20 hours each a week on chores and errands
  - Started automating the home
    - Automatic cat feeder
    - Roomba automatic vacuum
  - Decided to outsource processes and get a housekeeper to clean 2x a month
# Old Chore Schedule

<table>
<thead>
<tr>
<th></th>
<th>Jon</th>
<th>Time (min)</th>
<th>Jen</th>
<th>Time (min)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Monday</strong></td>
<td>Empty Litterboxes</td>
<td>15</td>
<td>Water plants</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>Class</td>
<td>180</td>
<td>Dinner</td>
<td>60</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Vacuum floors</td>
<td>60</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Vacuum couches &amp; stairs (2x/month)</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Classwork &amp; Homework</td>
<td>180</td>
</tr>
<tr>
<td><strong>Tuesday</strong></td>
<td>Do laundry</td>
<td>60</td>
<td>Food shopping</td>
<td>60</td>
</tr>
<tr>
<td></td>
<td>Fold/put away laundry</td>
<td>30</td>
<td>Meal planning</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>Wash/Put away dishes</td>
<td>30</td>
<td>Errands</td>
<td>60</td>
</tr>
<tr>
<td></td>
<td>Water lawn</td>
<td>20</td>
<td>Fold/put away laundry</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>Take out garbage &amp; recycling</td>
<td>10</td>
<td>Dinner</td>
<td>60</td>
</tr>
<tr>
<td></td>
<td>Wash cars (1x/month)</td>
<td>30</td>
<td>Project</td>
<td>60</td>
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<tr>
<td></td>
<td>Wash cats (1x/month)</td>
<td>8</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Pay &amp; file bills (1x/month)</td>
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<td></td>
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<tr>
<td></td>
<td>Clean fish tank (1x/month)</td>
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<td><strong>Wednesday</strong></td>
<td>Empty Litterboxes</td>
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<td>Acupuncture</td>
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<tr>
<td></td>
<td>Class</td>
<td>180</td>
<td>Clean toilets</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Clean bathrooms &amp; showers (2x/month)</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Sweep floors</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Steam clean floors &amp; counters (2x/month)</td>
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<td><strong>Thursday</strong></td>
<td>Empty Litterboxes</td>
<td>15</td>
<td></td>
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<tr>
<td></td>
<td>Class</td>
<td>180</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Refill Cat food (2x/month)</td>
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<td>Dinner</td>
<td>60</td>
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<tr>
<td></td>
<td>Clean Cat water dish (2x/month)</td>
<td>10</td>
<td>Bunco (1x/month)</td>
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<tr>
<td></td>
<td>Water lawn</td>
<td>20</td>
<td>Sweep porch (1x/month)</td>
<td>5</td>
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<td></td>
<td>Dishes</td>
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<td>Dust, clean tables (2x/month)</td>
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<td><strong>Friday</strong></td>
<td>Empty Litterboxes</td>
<td>15</td>
<td>Water plants</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>Clean litterboxes (2x/month)</td>
<td>30</td>
<td>Errands</td>
<td>60</td>
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<tr>
<td></td>
<td>Downtime</td>
<td>-</td>
<td>Downtime</td>
<td>-</td>
</tr>
<tr>
<td><strong>Saturday</strong></td>
<td>Church</td>
<td>-</td>
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</tr>
<tr>
<td></td>
<td>Project</td>
<td>300</td>
<td>Project</td>
<td>120</td>
</tr>
<tr>
<td></td>
<td>Classwork &amp; Homework</td>
<td>180</td>
<td>Classwork &amp; Homework</td>
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<tr>
<td><strong>Total Time Per Week</strong></td>
<td></td>
<td>1221</td>
<td></td>
<td>1230</td>
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</tbody>
</table>

**Caveats:**
- No baby
- Jon taking 2 classes
- Jen taking 1 class
- Jon project example: build something
- Jen project example: patch holes in clothing

**Notes:**
- Classes are included in the schedule.
- Total time per week is 1221 minutes for Jon and 1230 minutes for Jen.
- Some tasks are done twice a month, while others are done once a month.
## New Chore Schedule

<table>
<thead>
<tr>
<th></th>
<th>Time (min)</th>
<th>Jen</th>
<th>Time (min)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Monday</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Empty Litterboxes</td>
<td>15</td>
<td>Prep Baby Stuff</td>
<td>30</td>
</tr>
<tr>
<td>Dishes</td>
<td>30</td>
<td>Dinner</td>
<td>60</td>
</tr>
<tr>
<td>Budget/Investing/Bills</td>
<td>90</td>
<td>Make Lunch</td>
<td>15</td>
</tr>
<tr>
<td>Filing/Shredding</td>
<td>15</td>
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<td></td>
</tr>
<tr>
<td><strong>Tuesday</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Empty Roomba</td>
<td>10</td>
<td>Food shopping</td>
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<tr>
<td>Project</td>
<td>60</td>
<td>Water plants</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Make Lunch</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Prep Baby Stuff</td>
<td>30</td>
</tr>
<tr>
<td><strong>Wednesday</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dishes</td>
<td>30</td>
<td>Dinner</td>
<td>60</td>
</tr>
<tr>
<td>Take out garbage &amp; recycling</td>
<td>10</td>
<td>Make Lunch</td>
<td>15</td>
</tr>
<tr>
<td>Empty Litterboxes</td>
<td>15</td>
<td>Prep Baby Stuff</td>
<td>30</td>
</tr>
<tr>
<td><strong>Thursday</strong></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Empty Roomba</td>
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<td>Water plants</td>
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<td>Prep for Cleaning Lady</td>
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<td>Make Lunch</td>
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<td></td>
<td></td>
<td>Prep Baby Stuff</td>
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<tr>
<td><strong>Friday</strong></td>
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<td></td>
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</tr>
<tr>
<td>Dishes</td>
<td>30</td>
<td>Dinner</td>
<td>60</td>
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<tr>
<td>Refill cat food (2x/month)</td>
<td>5</td>
<td>Bunco (1x/month)</td>
<td>0</td>
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<tr>
<td>Clean kitty water dish</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Empty Litterboxes</td>
<td>15</td>
<td></td>
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</tr>
<tr>
<td><strong>Saturday</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Downtime</td>
<td>-</td>
<td>Downtime</td>
<td>-</td>
</tr>
<tr>
<td>Church</td>
<td>-</td>
<td>Church</td>
<td>-</td>
</tr>
<tr>
<td>Project</td>
<td>300</td>
<td>Project</td>
<td>120</td>
</tr>
<tr>
<td>Wash Cars (1x/month)</td>
<td>30</td>
<td>Classwork &amp; Homework</td>
<td>360</td>
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<td>Wash Cats (1x/month)</td>
<td>8</td>
<td>Water plants</td>
<td>15</td>
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<tr>
<td>Clean Litterboxes (1x/month)</td>
<td>15</td>
<td>Make Lunch</td>
<td>15</td>
</tr>
<tr>
<td>Clean Fishtanks (2x/month)</td>
<td>30</td>
<td>Prep Baby Stuff</td>
<td>30</td>
</tr>
<tr>
<td>Errands</td>
<td>120</td>
<td>Meal Plans</td>
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<tr>
<td><strong>Total Time Per Week</strong></td>
<td>908</td>
<td></td>
<td>1005</td>
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</tbody>
</table>

**Caveats:**
- New Baby
- Baby nurturing not included
- Jon no longer in class
- Jen taking 1 class
- Jon project example: build something
- Jen project example: patch holes in clothing

**15 hrs**  **17 hrs**
Project Management

- Jen is always after me because I’m not working on our Honey Do list
- Come up with project schedule to get it done during the summer
- Then I work on my personal To Do list
Current Honey Do List

- Sell Stuff on Ebay - Jon
- Clean/Org Garage - Jon
- Install Kitchen Blinds - Jon
- Clean House Windows – Jon/Jen
- Build Hydroponic Garden – Jon
- Fix Fabric Toys – Jen
- Reupholster Pillow – Jen
- Repair Sewing Machine – Jen
- Take Swordtails to Fish Store – Jon/Jen
- Plan Vacations – Jon/Jen
- Fix Remote Control Car – Jen
- Move Files from Laptop to Desktop PC – Jen
- Discard Old Files in Filing Cabinet – Jon/Jen
- Investing – Jon
- Go Through School Notes – Jen
- Fix Marble Mugs - Jon

- Longer Lead Items: Can’t be completed in less than a day
Overall Schedule for Honey Do

<table>
<thead>
<tr>
<th>Task Name</th>
<th>Duration</th>
<th>Start</th>
<th>Finish</th>
<th>Predecessors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Honey Do List</td>
<td>55 days</td>
<td>Sun 5/15/11</td>
<td>Fri 7/8/11</td>
<td></td>
</tr>
<tr>
<td>Sell Stuff on Ebay</td>
<td>13 days</td>
<td>Sun 5/15/11</td>
<td>Fri 5/27/11</td>
<td></td>
</tr>
<tr>
<td>Plan Vacations</td>
<td>19 days</td>
<td>Sat 5/28/11</td>
<td>Wed 6/15/11</td>
<td></td>
</tr>
<tr>
<td>Clean/Org Garage</td>
<td>6 days</td>
<td>Thu 6/16/11</td>
<td>Tue 6/21/11</td>
<td></td>
</tr>
<tr>
<td>Build Hydroponic Garden</td>
<td>4 days</td>
<td>Wed 6/22/11</td>
<td>Sat 6/25/11</td>
<td></td>
</tr>
<tr>
<td>Investing</td>
<td>13 days</td>
<td>Sun 6/26/11</td>
<td>Fri 7/8/11</td>
<td></td>
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</table>
Expanded Schedule for Honey Do

<table>
<thead>
<tr>
<th>Task Name</th>
<th>Duration</th>
<th>Start</th>
<th>Finish</th>
<th>Predecessors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Honey Do List</td>
<td>55 days</td>
<td>Sun 5/15/11</td>
<td>Fri 7/8/11</td>
<td></td>
</tr>
<tr>
<td>Sell Stuff on Ebay</td>
<td>13 days</td>
<td>Sun 5/15/11</td>
<td>Fri 5/27/11</td>
<td></td>
</tr>
<tr>
<td>Package / Weigh / Catalog Items</td>
<td>1 day</td>
<td>Sun 5/15/11</td>
<td>Sun 5/15/11</td>
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</tr>
<tr>
<td>List Items</td>
<td>1 day</td>
<td>Mon 5/16/11</td>
<td>Mon 5/16/11</td>
<td>3</td>
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<tr>
<td>Wait for Bids</td>
<td>10 days</td>
<td>Tue 5/17/11</td>
<td>Thu 5/26/11</td>
<td>4</td>
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<td>Ship Items</td>
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<td>Fri 5/27/11</td>
<td>Fri 5/27/11</td>
<td>5</td>
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<td>Plan Vacations</td>
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<td>Sat 5/28/11</td>
<td>Wed 6/15/11</td>
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<tr>
<td>Gather Requirements</td>
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<td>Coordinate Childcare as Needed</td>
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<td>Thu 6/9/11</td>
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<td>Book Details for Cruise</td>
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<td>Sat 6/11/11</td>
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<td>Clean/Org Garage</td>
<td>6 days</td>
<td>Thu 6/16/11</td>
<td>Tue 6/21/11</td>
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<tr>
<td>Throw Out Garbage</td>
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<td>Thu 6/16/11</td>
<td>Thu 6/16/11</td>
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<td>Finish Tire Rack</td>
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<td>Fri 6/17/11</td>
<td>Sat 6/18/11</td>
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<td>Organize Workbench</td>
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<td>Organize Loft</td>
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<td>Mon 6/20/11</td>
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<tr>
<td>Hang Remaining Large Equip</td>
<td>1 day</td>
<td>Tue 6/21/11</td>
<td>Tue 6/21/11</td>
<td>16</td>
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<tr>
<td>Build Hydroponic Garden</td>
<td>4 days</td>
<td>Wed 6/22/11</td>
<td>Sat 6/25/11</td>
<td></td>
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<td>Investing</td>
<td>13 days</td>
<td>Sun 6/26/11</td>
<td>Fri 7/8/11</td>
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</table>
Expanded Schedule for Honey Do

<table>
<thead>
<tr>
<th>Task Name</th>
<th>Duration</th>
<th>Start</th>
<th>Finish</th>
<th>Predecessors</th>
</tr>
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<tbody>
<tr>
<td>Honey Do List</td>
<td>55 days</td>
<td>Sun 5/15/11</td>
<td>Fri 7/8/11</td>
<td></td>
</tr>
<tr>
<td>Sell Stuff on Ebay</td>
<td>13 days</td>
<td>Sun 5/15/11</td>
<td>Fri 5/27/11</td>
<td></td>
</tr>
<tr>
<td>Plan Vacations</td>
<td>19 days</td>
<td>Sat 5/28/11</td>
<td>Wed 6/15/11</td>
<td></td>
</tr>
<tr>
<td>Clean/Org Garage</td>
<td>6 days</td>
<td>Thu 6/16/11</td>
<td>Tue 6/21/11</td>
<td></td>
</tr>
<tr>
<td>Build Hydroponic Garden</td>
<td>4 days</td>
<td>Wed 6/22/11</td>
<td>Sat 6/25/11</td>
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</tr>
<tr>
<td>Find Original Plans</td>
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<td>Wed 6/22/11</td>
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<td>Complete Housing</td>
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<td>Thu 6/23/11</td>
<td>Thu 6/23/11</td>
<td>19</td>
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<tr>
<td>Complete Plumbing</td>
<td>1 day</td>
<td>Fri 6/24/11</td>
<td>Fri 6/24/11</td>
<td>20</td>
</tr>
<tr>
<td>Integrate, Test, Deliver</td>
<td>1 day</td>
<td>Sat 6/25/11</td>
<td>Sat 6/25/11</td>
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</tr>
<tr>
<td>Investing</td>
<td>13 days</td>
<td>Sun 6/26/11</td>
<td>Fri 7/8/11</td>
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</tr>
<tr>
<td>Review Notes for Financial Advisor</td>
<td>1 day</td>
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<td>Sun 6/26/11</td>
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<tr>
<td>Move Funds Around in Existing Accounts</td>
<td>2 days</td>
<td>Mon 6/27/11</td>
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<td>24</td>
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<tr>
<td>Create Any Unexisting Accounts</td>
<td>3 days</td>
<td>Wed 6/29/11</td>
<td>Fri 7/1/11</td>
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<td>Research Mutuals, etc</td>
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<td>Wed 7/6/11</td>
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<td>Make Purchases</td>
<td>2 days</td>
<td>Thu 7/7/11</td>
<td>Fri 7/8/11</td>
<td>27</td>
</tr>
</tbody>
</table>
### And Then It’s My Turn

<table>
<thead>
<tr>
<th>Task Name</th>
<th>Duration</th>
<th>Start</th>
<th>Finish</th>
<th>Predecessors</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>My To Do List</strong></td>
<td>59 days</td>
<td>Sun 7/17/11</td>
<td>Tue 9/13/11</td>
<td></td>
</tr>
<tr>
<td>Race Prep Car</td>
<td>22 days</td>
<td>Sun 7/17/11</td>
<td>Sun 8/7/11</td>
<td></td>
</tr>
<tr>
<td>Research SCCA Rule</td>
<td>1 day</td>
<td>Sun 7/17/11</td>
<td>Sun 7/17/11</td>
<td></td>
</tr>
<tr>
<td>Use Intel to Target Improvement Areas</td>
<td>2 days</td>
<td>Mon 7/18/11</td>
<td>Tue 7/19/11</td>
<td>3</td>
</tr>
<tr>
<td>Research Parts</td>
<td>3 days</td>
<td>Wed 7/20/11</td>
<td>Fri 7/22/11</td>
<td>4</td>
</tr>
<tr>
<td>Weigh Cost/Benefit</td>
<td>1 day</td>
<td>Sat 7/23/11</td>
<td>Sat 7/23/11</td>
<td>5</td>
</tr>
<tr>
<td>Compare Notes with Fellow Racer</td>
<td>1 day</td>
<td>Sun 7/24/11</td>
<td>Sun 7/24/11</td>
<td>6</td>
</tr>
<tr>
<td>Make Purchases</td>
<td>2 days</td>
<td>Mon 7/25/11</td>
<td>Tue 7/26/11</td>
<td>7</td>
</tr>
<tr>
<td>Shipping</td>
<td>7 days</td>
<td>Wed 7/27/11</td>
<td>Tue 8/2/11</td>
<td>8</td>
</tr>
<tr>
<td>Install Perm Hardware</td>
<td>3 days</td>
<td>Wed 8/3/11</td>
<td>Fri 8/5/11</td>
<td>9</td>
</tr>
<tr>
<td>Test Fit Temp Hardware</td>
<td>1 day</td>
<td>Sat 8/6/11</td>
<td>Sat 8/6/11</td>
<td>10</td>
</tr>
<tr>
<td>Test Run</td>
<td>1 day</td>
<td>Sun 8/7/11</td>
<td>Sun 8/7/11</td>
<td>11</td>
</tr>
<tr>
<td><strong>Bodywork on Car</strong></td>
<td>37 days</td>
<td>Mon 8/8/11</td>
<td>Tue 9/13/11</td>
<td></td>
</tr>
<tr>
<td>Try to Remove Dents</td>
<td>2 days</td>
<td>Mon 8/8/11</td>
<td>Tue 8/9/11</td>
<td>12</td>
</tr>
<tr>
<td>Purchase New Panels as Necessary</td>
<td>5 days</td>
<td>Wed 8/10/11</td>
<td>Sun 8/14/11</td>
<td>14</td>
</tr>
<tr>
<td>Sand and Bondo Blemishes</td>
<td>20 days</td>
<td>Mon 8/15/11</td>
<td>Sat 9/3/11</td>
<td>15</td>
</tr>
<tr>
<td>Prepare for Paint</td>
<td>2 days</td>
<td>Sun 9/4/11</td>
<td>Mon 9/5/11</td>
<td>16</td>
</tr>
<tr>
<td>Paint</td>
<td>1 day</td>
<td>Tue 9/6/11</td>
<td>Tue 9/6/11</td>
<td>17</td>
</tr>
<tr>
<td>Wet Sand</td>
<td>3 days</td>
<td>Wed 9/7/11</td>
<td>Fri 9/9/11</td>
<td>18</td>
</tr>
<tr>
<td>Polish</td>
<td>3 days</td>
<td>Sat 9/10/11</td>
<td>Mon 9/12/11</td>
<td>19</td>
</tr>
<tr>
<td>Wax</td>
<td>1 day</td>
<td>Tue 9/13/11</td>
<td>Tue 9/13/11</td>
<td>20</td>
</tr>
</tbody>
</table>
Risk Management

- **Loss of Life**
  - Likelihood – Low
    - Even though in Military, not likely to deploy
    - Relatively young age
  - Impact – High
    - Clearly would end the need for this System of Systems
  - Mitigation
    - Life Insurance – Cover family
    - Weigh benefit of higher risk activities
Risk Management

- **Loss of Job**
  - Likelihood – Low
    - Not too many people get laid off from government work
  - Impact – Medium
    - Immediate loss of income would hinder functions of the system
    - Marketability would likely result in quick recovery
  - Mitigation – None Necessary
Risk Management

- Loss of Shelter
  - Likelihood – Medium
    - Natural disasters in CA
  - Impact – Medium
    - Shelter is one of the basic necessities
    - Could always live in car or like the guy on “The Road”
- Mitigation
  - Insurance
  - Emergency Plan
Risk Management

- **Loss of Water**
  - Likelihood – Medium
    - Natural disasters in CA
  - Impact – High
    - Water is one of the basic necessities
    - Can’t live without it for more than a day
  - Mitigation
    - Keep water in an emergency kit
    - Could always resort to recycling
Risk Management

- **Loss of Food**
  - Likelihood – Medium
    - Natural disasters in CA
  - Impact – Medium
    - Food is one of the basic necessities
    - Can survive without for a few weeks
  - Mitigation
    - Keep food in an emergency kit
Verification of Stakeholder Requirements

- **Mine**
  - The system shall provide adequate levels of necessities for life to include food, water, and shelter.
    - I currently maintain a job that is stable and provides ample income to cover the basic necessities
    - I have sought out higher education to stay marketable and increase my income as my family grows
  - Secondary Requirement - The system should maximize time spent on entertaining and nurturing family.
    - Through the identification of time sinks, I have been able to apply lean concepts to allocate more time to entertainment and nurturing.

- **Spouse and Daughter**
  - Similar to mine
    - Same as above
  - Additional requirements in the form of a Honey Do list
    - I have addressed the current Honey Do list with the project schedule
    - I will adjust fire as I receive requirements creep. Of course there will be significant impact to cost and schedule.
  - Her requirements affect my derivative requirements
Verification of Stakeholder Requirements

- **Air Force**
  - Perform the work that is given
    - Loose requirements from supervisor difficult to verify
    - Only verification I can offer – good performance reports
  - Continuously improve through education
    - Attaining Masters
    - Signed up for PME

- **LMU**
  - Pay tuition
    - Verified through bank statements and my student accounts status
  - Maintain a passing GPA
    - Verified through registrar and reports at the end of the semester
  - Fulfill stated requirements for degree
    - Verified through student course book, faculty advisor, and registrar
Summary

- Applied many principles learned in SE to an intricate System of Systems – Life
- My life is left better organized
- Tasks don’t seem unachievable anymore
- I have more free time
Mission Requirements

1.0  The system shall provide adequate levels of necessities for life to include food, water, and shelter.

2.0  Secondary Requirement - The system should maximize time spent on entertaining and nurturing family.
Originating Requirements

1.1 The system shall provide an adequate level of income to provide food, water, and shelter for a family of three living in Los Angeles, CA for the next two years.

1.2 The system shall provide an adequate level of income to provide food, water, and shelter for a family of four living in an unknown location within the contiguous United States after the year 2013.

2.1 The system should allot at least 1/8 of time to entertaining and nurturing a family.
System Requirements

- **1.1.1** The system shall provide a job that has a source of income that will cover all expenses for the family of three living in Los Angeles for the next two years.
  - **1.1.1.1** The system shall provide education that yields a job that will cover the expenses of a family of three living in Los Angeles for the next two years.
  - **1.1.1.2** The job shall be within five miles vicinity to the family home.
  - **1.1.1.3** The job shall provide full health coverage of medical, dental, and optometry expenses or provide income to cover expenses incurred from private health insurance.
  - **1.1.1.4** The job shall provide childcare for the child or provide income to cover expenses incurred from private childcare.
  - **1.1.1.5** The job shall provide adequate time and income to cover expenses incurred from continuing education in the form of attaining a Master’s Degree.
  - **1.1.1.6** The system shall provide a means of travel between the job and the family home.
System Requirements

1.1.2 The system shall provide a home of adequate size to support a family of three in Los Angeles for the next two years.
1.1.2.1 The system shall provide a home that is at least 1300 square feet with at least two bedrooms, two baths, and a kitchen.
1.1.2.2 The home shall be temporary and allow movement to another location in the contiguous United States after the year 2013.
1.1.2.3 The home shall have adequate access to utilities such as gas, water, electricity, and internet access.
1.1.2.4 The home shall be within two miles of a grocery store for sustaining the dietary needs of a family of three.
1.1.2.5 The home shall be within five miles of a shopping district that can provide any necessary supplies for the home.
1.1.2.6 The system shall provide a means of travel between the home, grocery store, and shopping district.
1.1.2.7 The home should have a garage that is capable of housing at least one car.
1.1.2.8 The home should have a dining room that is capable of housing a table with six chairs.
1.1.2.9 The home should have a living room or family room for entertaining the family.
1.1.2.10 The home should be furnished with at least two beds, a table with six chairs, a couch, a love seat, a coffee table, a computer, a computer desk, and a computer chair.
1.1.2.11 The home should be cleaned and maintained according to a schedule.
1.1.2.11.1 The laundry, dishes and floors should be cleaned at least once per week.
1.1.2.11.2 The garbage and recycling should be disposed of at least once per week.
1.1.2.11.3 The pantries and refrigerator should be restocked at least once every two weeks.
1.1.2.11.4 The bathrooms and furniture should be cleaned at least once every two weeks.
1.1.2.11.5 The bills should be paid and finances assessed at least once per month.
1.1.2.11.6 The home should be resupplied with consumable items such as cleaning supplies at least once per month.
System Requirements

- 1.2.1. The system shall provide a job that has a source of income that will cover all expenses for the family of four living in an unknown location within the contiguous United States after the year 2013.
  - 1.2.1.1 The system shall provide education that yields a job that will cover the expenses of a family of four living in an unknown location within the contiguous United States after the year 2013.
  - 1.2.1.2 The job shall be within five miles vicinity to the family home.
  - 1.2.1.3 The job shall provide full health coverage of medical, dental, and optometry expenses or provide income to cover expenses incurred from private health insurance.
  - 1.2.1.4 The job shall provide childcare for the two children or provide income to cover expenses incurred from private childcare.
  - 1.2.1.5 The job shall provide adequate time and income to cover expenses incurred from continuing education.
  - 1.2.1.6 The system shall provide a means of travel between the job and the family home.
System Requirements

- 1.2.2 The system shall provide a home of adequate size to support a family of four living in an unknown location within the contiguous United States after the year 2013.
- 1.2.2.1 The system shall provide a home that is at least 1500 square feet with at least three bedrooms, two baths, and a kitchen.
- 1.2.2.2 The home shall be temporary and allow movement to another location in the contiguous United States after the year 2017.
- 1.2.2.3 The home shall have adequate access to utilities such as gas, water, electricity, and internet access.
- 1.2.2.4 The home shall be within two miles of a grocery store for sustaining the dietary needs of a family of three.
- 1.2.2.5 The home shall be within five miles of a shopping district that can provide any necessary supplies for the home.
- 1.2.2.6 The system shall provide a means of travel between the home, grocery store, and shopping district.
- 1.2.2.7 The home should have a garage that is capable of housing at least one car.
- 1.2.2.8 The home should have a dining room that is capable of housing a table with six chairs.
- 1.2.2.9 The home should have a living room or family room for entertaining the family.
- 1.2.2.10 The home should be furnished with at least two beds, a table with six chairs, a couch, a love seat, a coffee table, a computer, a computer desk, and a computer chair.
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  - 1.2.2.11.3 The pantries and refrigerator should be restocked at least once every two weeks.
  - 1.2.2.11.4 The bathrooms and furniture should be cleaned at least once every two weeks.
  - 1.2.2.11.5 The bills should be paid and finances assessed at least once per month.
  - 1.2.2.11.6 The home should be resupplied with consumable items such as cleaning supplies at least once per month.
System Requirements

2.1.1 The system should allot at least 21 hours per week to entertaining and nurturing the family.
2.1.1.1 The system should limit time spent on the job, education, sleeping, and cleaning/maintaining the home.
2.1.1.1.1 The system should limit time spent on a job to a maximum of 50 hours per week.
2.1.1.1.2 The system should limit time spent on an education to a maximum of 10 hours per week.
2.1.1.1.3 The system should limit time spent on sleep to a maximum of 56 hours per week.
2.1.1.1.4 The system should limit time spent on cleaning and maintaining the home to a maximum of 15 hours per week.
2.1.1.2 The system should allot at least 14 hours per week to nurturing the family (feeding, clothing, educating, and entertaining as a group).
2.1.1.3 The system should allot at least 7 hours per week for individual entertainment.