**Rough Meeting Notes**

**18-October-2013**

***Chad’s Notes on Midterm Report***

* Seemed like group peoples broke off to do individual parts. More integration required for the final report.
* Problem definition needs more tightening.
* More discussion also required.
* Some sections can be condensed down further; also there are other sections that can be expanded.
* For a better visualization a CAD model of the blind can be created. This would better aid the description of how the blind works.

***Bi-Materials / Jeremy***

* Have narrowed down to 3 choices of bi-material. Need to do number crunching on them to compare so they can be narrowed down to best choice of bi-material

***Heat Calculations / Jiggy***.

* Need to confirm (with Chad or otherwise), that the heat equations being used are the correct.
* Comment from Chad: don’t spend time making the thermal model more complex. For the purposes of our project there are more beneficial things that can be worked on.
* Going to work with Jeremy and Chad for heat calculations for SMA/bi-materials

 ***Shape Memory Alloys / Ted and Kush***

* Need to calculate the bending force for actuation.
* Chad comment: The gravity concept needs to be defined for our application. If the gravity concept doesn’t work we can look at spring concept if there is time.
* Chad comment: Gravity concept and spring concept is not that much different. The main difference between them is that one is gravity constant and one is spring constant.
* Refer to SMA paper on material selection for SMA’s. Should help narrow down an SMA for use in our application.
* While fatigue is an important thing to look at for our application – it is not necessary to explore it right now, it is a next stage item.

***Life Cycle Analysis / Lauren and Vicky***

* Heat transfer analysis needs to be done.
* *Parallel to Jiggy???*
* For heat calculations use data from the hottest months
* Eco-audit needs to be performed.
* Helping out others with their parts if needed, as eco-audit doesn’t need to be performed till later.
* Economic part of blinds needs to be performed as well.
* Determining frame material.
* Chad Comment: Put in all constraints in CES to eliminate materials that are not feasible.
* Chad Comment: Talking to Blair about which material is more architecturally apt, might be useful.
* After choosing a material, further calculations can be done.
* Need to consider design of frame as well.
* Need to consider the different hinge types as well.
* Need to consider the covering for the blinds.

