

# Administration Notes

David Barker, '03 Team Leader

## Registration

Registration is very important and must be done early. The deadline is sometime in February but should be done well before because as the competition grows the judges might deny late entries. The easiest, and preferred way to register is online at the website: <http://moonbuggy.msfc.nasa.gov/>. You have to enter the names of 6 team members for each buggy that is entered.. More are allowed but may not receive prizes. This is a little harder than it sounds because if the team is bigger than 6 people than 6 must be chosen to be the “official” team and receive any prizes that are one. It should be left up to the discretion of the team leaders as to how these 6 are chosen. Names may be changed at the competition if you are unsure of the traveling team. Frank Brannon is in charge of registration: [frank.brannon@msfc.nasa.gov](mailto:frank.brannon@msfc.nasa.gov) .

## Funding

This year, the Cornell Moonbuggy Team received monetary donations from two sources: Ford Motor Company and the prize money the 2002 team won from NASA. In addition we received discounted prices from Kaman, Risse Racing and Swans Bike Shop.

### Ford

Our largest contributor by far was Ford Motor Company. This is their third year supporting the team. Brett Lee, the founder of the Moonbuggy team set up this contact a few years ago. This contact has been great and basically without Ford we would not be able to build our buggy. This is a contact that should be kept and the team must be in contact with Ford very early in the year to make sure we continue to receive funding from them.. Jackie Shuk was our contact:

Jacqueline S. Shuk

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It may be initially hard to get in contact with Jackie because she is very busy and giving us money is not her main job. Once in contact though she has been very helpful to us and is very willing to help us in any way possible. This year I was a little late in getting in contact with her and we did not know for sure that we had their support until October or November. I would suggest emailing Jackie in September to start conversation and to get an idea whether or not she thinks Ford will be able to contribute as they have done in the past. I initially sent a budget of \$12,000 to Ford and asked for their full funding. Jackie asked her bosses and replied that due to the tough times and budget constraints that they could not provide the full amount of \$12,000 but would be able to give us \$8,500. This was a very generous donation and a few days after confirming the donation we received a check in the mail. Make sure to get in contact with Ford early in the year because if Ford cannot help, due to the constraints on their budget, then an enormous amount of money will need to be found from another source

## **NASA**

For winning the 2002 race we won a gift of \$3500 from NASA. This money was very hard to track down due to the fact that NASA writes individual checks of \$500 to the individual team members and advisor. NASA also requires that each member submit their address and social security number. I took a while to track down the right people and the addresses and SS# of last years team members. We did not receive this money until February. Most of this money went to funding the trip.

## **Other Ideas**

### **LIFE**

The 2002 team received \$3000 in funding from the LIFE fund. Unfortunately, due to missed deadlines we were not able to receive this money again this year. However, I highly recommend applying for this funding next year, just make sure you do it very early in September. It is very easy to apply for this funding, instructions and forms are online at:

<http://www.engineering.cornell.edu/Research/ugResearch/howtoapply2.cfm>

There is an online form to fill out and one form the advisor. This funding is generally used by individual undergraduate research, but they fund teams as well, usually twice the individual amount. In 2002 the team asked for \$3000 and got it. I have heard that \$1750 is the usual amount for individuals per semester, or \$3500 for the year. That would mean that the team could reasonably ask for \$7000 for the year. I would suggest asking for a generous amount from this fund, as they are eager to fund research as well as teams. MAKE SURE TO CHECK DEADLINES EARLY!!!!!!

## **SAFC**

The 2001/2002 team also received funding from SAFC. There is a lengthy procedure for receiving money from the SAFC. An organization must submit a constitution and bylaws as well as many forms in order to apply for funding. Unfortunately, I filled out all of the paperwork and obtained all of the necessary signatures only to find out that teams receiving class credit for their work are not eligible for SAFC funding. I am not sure how the previous team received funding, but it appears as though this is not a viable option for the future unless they change the rules. It may be worth looking into briefly but I would not suggest it. More information can be found at the following websites:

<http://www.assembly.cornell.edu/sa/main/SAFC/forms.html>

<http://www.assembly.cornell.edu/sa/main/SAFC/>

<http://www.assembly.cornell.edu/SA/main/finance.html>

## **Cornell Outreach**

Bill, last year's team leader, suggested looking into the Cornell Outreach department that connects companies looking to give money with groups looking to receive money. I am not exactly sure what this is or who to get in contact with, but I'm sure that Nanette in the MAE office or another administrator could help. Also the [cuinfo.cornell.edu](http://cuinfo.cornell.edu) is another good source of information. I would suggest looking into this option as well because extra money can't hurt.

## **Outside Companies**

I would also suggest looking into other outside companies to support our team. This is something I had intended to do this year, but with the money from Ford and NASA I never really felt as though we needed to spend more time looking for money. I would say the best way to do this is to draft a generic letter to companies explaining what Moonbuggy is and that we are looking for monetary sponsorship and support in order to build a new buggy. Given the current economic situation, it may be tough to get money from a lot of companies, but many companies will be willing to help if their budgets allow them to. It is a win/win situation for companies because they can use the donation as a tax write off as well as get exposure for their company. It would be beneficial to start doing this in September because companies may need some time to review whether or not they want to donate money.

## **How to use funding**

### **Cornell**

The Cornell MAE account is fairly easy to use however you have to be very careful how you use it. For most transactions you may use a Procurement Card. The card works like a

normal VISA and may be used to buy any materials related to the project. Each transaction must be less than \$500 and the monthly spending limit is \$5000. You have to be very careful not to split the payment for expensive items over \$500. Any single item over \$500 must be paid with a purchase order. If you are buying lots of one item (like shocks) you can split it up, however each item must be on separate invoice or receipt. For example if you get \$1400 from Swans you can't just have him charge you in 3 transactions \$500, \$500, and \$400. Each transaction must have a separate invoice. If you do not do this the people in charge of the P-Card have the right to take it away.

The procurement card may not be used for travel. That means no rental cars, airfare, hotels, or food for a trip even if it is less than \$500. This is Cornell policy. To pay for these things you need to use purchase orders. This year we used a purchase order to buy the rental cars and we used money that we won from NASA to pay for the rest of the trip. We were lucky because I deposited the NASA money in my bank account and used my card for gas and other expenses on the trip. Unfortunately, the team will not have this money next year to play with. Next year all travel expenses will have to be dealt with using purchase orders.

With the procurement you must hold onto all the receipts and give them to the accounting office once a week. I did a pretty good job with this year, however if you are late the P-Card office sends you numerous emails telling you to bring the receipts. This gets very annoying and tough to deal with, especially close to the competition. I would suggest putting one person in charge of all monetary matters, that is not the overall team leader. This person would deal with emails to other companies, all receipts, all P-Card purchases, all ordering and all travel arrangements. It does not sound like much but it takes a lot of time to get all of this done and it is the last thing someone wants to do after working in the shop all day. What I did this year was to make copies of every receipt before turning them into the office. This worked well because sometimes they misplace items and it is nice to have a reference if you want to go back and look at what part numbers you ordered. A statement comes to the Moonbuggy mailbox each month with the expenses

The first step in using Cornell money is to get a procurement card. The person doing the purchasing should get the card. Talk to Linda Mattison ([lmg2@cornell.edu](mailto:lmg2@cornell.edu)) in 110 Upson and she will give you an online tutorial. After completing the tutorial a card will be sent in the mail to the Moonbuggy mailbox after a couple weeks. More than one person on the team can have a card. This is not necessary but may be worth it. As with all other contacts, do this early in the semester as the card takes 3 or 4 weeks to come in the mail.

### **Suggestions for Using Money**

Although the Cornell system works well and is convenient it may be beneficial for the team to look into other options. The biggest drawback to the Cornell system is all of the paperwork and the fact that they take 10% of all of our money as fees to run our account. The biggest plus is that it is a tax free account and therefore we never get charged New

York State taxes (about 7%). I'm not sure if it is possible but I would look into opening a checking account with a debit card with one of the banks in town under the Moonbuggy name. This would save a lot of paperwork and time and there would be no limitations as to how the team can use the money. The drawbacks are that it would not be a tax free card and I'm not exactly sure what would happen if checks are made out to Cornell Moonbuggy if they would be allowed to be deposited under someone else's name (the person who's name is on the card). You would have to check with the local bank before doing this. As far as the card not being tax free, this is not a big deal because most of our orders are done using the internet where there is no tax anyway.

## **Other Obligations**

### **Ford**

This year my correspondence with Jackie, although better than last year, was still somewhat poor. I have heard that some teams give weekly or biweekly updates to all of their sponsors. I think this would be a good idea, but you need to find someone willing to do it, i.e. a designated business manager, separate from the team leader. I would suggest setting up a website like we had planned this year and actually updating it every week. It would be nice, if the team funds allow, to purchase a team digital camera and easily upload pictures to the web. I think it would make Ford happy to see updated weekly pictures of the progress of the buggy.

Unfortunately, over the past few years representatives from Ford have not been able to come and see our work. At least once during the year it would be nice to set up a time for the Ford people to come and meet the team. This is very difficult to set up do to the fact the Ford people are very busy and their policies state they need at least a month of warning before they can set up any off site visits. The only way this could happen is if could be planned early in the year for a date later in the semester. It would be nice to actually show the people at Ford where all of their money goes.

### **Life**

(Notes from last year) Although this was possibly the easiest funding to receive, it was the most work afterwards. They require a semester and year-end report that they send to the grant donors (United Technologies). They also require displays of the "research" in the form of poster or oral presentations. We did one poster presentation at the end of the year.

### **Travel**

This year the travel procedures went very well, however it may be a little more difficult in the future. We mainly used the NASA money for travel this year and avoided having out fill out all of the Cornell paperwork. You need to talk to Linda in the accounting office to figure out exactly what needs to be done. It basically involves filling out a lot of

purchase order forms and reimbursements. Once again do not wait until the last minute to reserve hotel rooms and rental cars. This year we rented a minivan and a 15 passenger van from Rent-A-Wreck in Ithaca. Here are some suggestions for other ways to travel.

### **Method One: Fly**

I looked into the possibility of flying but found it to be too expensive for the whole team. If the team is smaller next than this may be a realistic option. However, in order to make this happen there is going to need to be lots of organization. Getting the tickets to fly is easy, getting all of our stuff to Alabama and getting to and from airports is hard. It would probably be possible to ship the buggy down along with a lot of tools and other stuff we brought but this would all need to be packed a week or so before competition. Also the team would need to rent a van or car once in Huntsville in order to get back and forth from the space center and to run errands while down there. The cost of rental cars adds up quickly and may not be the best option. Although it may be expensive it may be worth looking into because the road trip is rather long and a giant liability.

### **Method Two: Cornell Vehicles**

This also requires good organization. The best option is to look into using COE vans. This would save the team a lot of money and may save some time. However, it is very hard (according to Marc) to reserve these vans. A good amount of paperwork needs to be filled out and you may need to travel with a member of the faculty. I'm not sure how the procedures work but I'm sure anyone at the COE help desk could point you in the right direction. If done right this would be by far the cheapest way to get to Alabama.

### **Method Three: Rent a Wreck**

This is what we did this year. It is very expensive and a high liability, but a great time and a good way to bring the team together. Rent a Wreck is not the best company to deal with however they do offer the vans we need and they are cheaper than other rental car companies. They are also the only company I could find that rent 15 passenger vans. This is the most reliable way to travel (except for the quality of their vans) and could be used next year if other options are not available. My first suggestion would be looking into COE vans in order to save money and time but if this does not work then Rent a Wreck is a viable option.

### **Method Four: Personal Vehicles**

This is a last resort. If there is no cash, and you have to get there take your cars but take as few as possible to maximize drivers per car.

### **Funding the trip**

This year we used money from NASA to fund the trip. Marc used his \$500 to pay for the hotel room and put it on his credit card. We used a purchase order from our account to pay for the rental cars. I deposited \$1500 in my personal account (checks from Bill, Chris and Adrienne) to pay for T-Shirts, gas, food and other random expenses on the trip. This all worked very well because we did not have to deal with all of the Cornell paperwork. Next year all travel plans will have to be done through the Procurement card office but do not use the Procurement Card! You will get in trouble! I suggest setting up a meeting with Linda early in the second semester to see exactly what needs to be done and what forms need to be filled out.

## **Recruiting**

We were very lucky this year in that we held one information session in September and we got enough people to show interest in doing moonbuggy. Next year I suggest picking a date to hold an info session hang flyers and try to recruit people that way. Aggressive recruiting is beneficial for the team and looks good keeping the team open to the community. Info sessions are good but must be publicized well. Publicity stunts include displaying the buggy on campus, riding around answering questions, putting up posters and flyers, email notices through Nannette, and chalkboard announcements at the beginning of appropriate classes.

All of these methods are good, but it has been my experience that the only way to get people to the info sessions or interviews etc. is to talk to them individually. Writing on the wall seems to have little effect without personal interaction. Even if you expect the team to be small I suggest putting significant effort into recruiting. For inspiration I would look to the FSAE team. Possibly the most well known team on campus, they are also the most publicized and do the most recruiting work. It can only help.

Some thoughts on companies

## **Notes on Companies**

All of the companies we dealt with this year worked out very well for us. Wicks is a great source of steel tubing because they have a vast selection and offer many shipping options. It may be hard to find a better steel provider on the web. I suggest using McMaster for all bolt and tool purchases. They offer an incredible selection, a great website and very fast service. If you can't find what you need at McMaster you can check MSC Direct but their inventory is very similar. For most hardware Kaman was a great source. They did not ship as quickly as the online companies but they were extremely helpful in finding the correct parts. I would suggest keeping the number of companies you buy from as small as possible to keep things manageable. For bike parts I think Swan is the way to go all the way. He gives unbelievable prices and is very easy to access. I would suggest better planning next year and fewer trips to Bishops. Their selection is not great and it is rather expensive to buy each bolt individually. Once you know what you need I would place a big nut and bolt order with McMaster. It never hurts to extra bolts and nuts of popular sizes lying around. Risse Racing was very nice to deal with and gave us a great

discount. I would suggest any new company that the team uses that someone should talk to a manager and see if they offer any type of special discounts to university teams. Most companies are very excited about the project once you explain it to them and are willing to help in any way possible.