

# **August 30, 2010**

## **2010 FALL AESSION STUDENT BRANCH ACTIVITIES REPORT**

JIM LEONARD

### **UNIVERSITY OF MISSOURI AT COLUMBIA (MIZZOU)**

We have the list of 83 people currently on the UAV email list. Of course the majority of people on this list aren't active team members. Listed below are the names of team members that hold some sort of leadership position on the MIZZOU UAV Team

Joe Ondrus - President - [jfo5w9@mail.mizzou.edu](mailto:jfo5w9@mail.mizzou.edu)

Daniel Nabelek - Vice President - [dpn6f4@mail.mizzou.edu](mailto:dpn6f4@mail.mizzou.edu)

Joseph Morris - Chief Production Engineer - [jrmcmc@mail.mizzou.edu](mailto:jrmcmc@mail.mizzou.edu)

Matt Evans - Chief Design Engineer - [mre976@mail.mizzou.edu](mailto:mre976@mail.mizzou.edu)

Jake Jenkins - Ass. Chief Design Engineer - [jmj34c@mail.mizzou.edu](mailto:jmj34c@mail.mizzou.edu)

Justin Rychlewski - Treasurer & Power Distribution - [jmr梓2@mail.mizzou.edu](mailto:jmr梓2@mail.mizzou.edu)

Michael Rose - Autopilot and Sensors - [mar6w4@mail.mizzou.edu](mailto:mar6w4@mail.mizzou.edu)

Ryan Dickherber - Architecture & Ground Control - [ryan.dickherber@mail.mizzou.edu](mailto:ryan.dickherber@mail.mizzou.edu)

Eric Lefevre - RPV - [ejlqhd@mail.mizzou.edu](mailto:ejlqhd@mail.mizzou.edu)

Austin Bernskoetter - Fundraising - [ap.bern@gmail.com](mailto:ap.bern@gmail.com)

I plan to come by Columbia and meet the team. There will most likely be a large recruitment type meeting early on with smaller working groups meeting at various times. I plan to be able to help get more support with the AESSION chapter formation when I visit. I have made contact with Prof Emeritis Robert W. Leavene, Jr, who may be able to assist the MIZZOU students with their UAV project.

### **MISSOURI UNIVERSITY OF SCEINCE AND TECHNOLOGY**

I have contacted Dr. Steve Watkins at MS&T. The students will arrive during the week of 23 August and we hope to get a UAV team together. Jim Leonard visited MS&T on August 27, 2010. Students have been on campus for one week and we don't have a team lined up yet. I met and had lunch with Dr. Watkins. He believes that the UAV project could be partitioned and units of it used for a students Capstone Project. I advised him of the students at UMC (MIZZOU) and said maybe we could have a contest between the two with the winner going to the Outback Rescue Challenge in 2011.

I gave heard from Dave Erdos, who is currently at Technion (Israel). He and his brother Abe have acquired another UAV and are prepared to represent MS&T at this years Outback Challenge if we (AESSION) can provide \$2500 funding.

I have received the following from Dave Erdos:

I just wanted to give a brief update on our progress. Our airplane is almost ready to fly and will hopefully be flying within a week under manual control, we will then add the autopilot and the associated systems. Attached are two pictures of the airframe, as you can see it is quite large. It turns out that we were not able to get any funding from the Technion for various reasons, so we would be willing to go as the Missouri S&T Team if there is some funding available. Otherwise we are on track for having a pretty solid entry in the competition this year, although there is still much left to do.



**Photo of Dave and Abe Erdos UAV - "Penguin I"**

Unfortunately, Dave sent in a second report in which he stated their UAV crashed and he and Abe would not be able to go to Australia this year. The beautiful UAV shown above is now in many small pieces that all the king's horses and all the king's men could not put together again!

#### **UNIVERSITY OF COLORADO AT COLORADO SPRINGS**

Received the following report from Jose Alvarez (UCCS IEEE Student Branch Chair):  
As a matter of fact, today (18 August) I held a meeting with the branch officers and I brought this up. It seems like there is interest in forming the AEES chapter. We will begin

moving forward to create the chapter and will be bringing up the UAV project at our first member meeting (scheduled for September 10th).

## FUTURE OF FLIGHT FOUNDATION STUDENT EXCHANGE PROGRAM

For the students going to the UK, they will be introduced into the way British design airplanes in various facilities in the UK. They will be briefed on the history of the British Aerospace Industry. And they will then be asked to help "design" parts of an aircraft, using British technology.

After returning to the US, Our sponsored student will prepare an article for the AESS Systems magazine detailing his visit and "design experience. Teresa Pace has agreed to provide guidelines to the FoF Museum, Ann Averill, for the article.

The interim report is shown below: (MBCC is Michael Benthem Conservation Center.)

### 2010 US-to-UK intern exchange Debriefing 7-7-10

Interns Luke Thomson, William Murphy, Mosaab Zaki	FoF Barry Smith, Ann Averill
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Started with big tour of MBCC. Saw all parts that apprentices had done. This personal touch was so important.

- MBCC gets approx. 300k visitors/year. There were lots of school trips there, lots of little kids. Special events in a hangar.
- They started by working on the Hampden bomber: Mosaab did skin repair and Will and Luke learned wire splicing.
- Working on the fabric was so cool because it's woven the way it was back then. Nothing modern is used. Very historically correct.
- They got to make some pieces to bring back.
- Kyle and Martin were their teachers and they were exceptional. Learned better than from an adult. perfectionists about their craft (need to build something that is safe to fly in).

#### Culture shock

The shops all close at 5. Unless you drink and go to the pub after work, there's nothing much to do. They're used to staying up much later than 9:30 or 10.

Accommodations:

- Constable house has 3 stories. They were on the top floor and each had his own room.
- Ann Constable was an excellent hostess: took them places with lots of stops to discuss points of interest; lots of discussion about the English way of doing things.
- Major highlights included: staying with Tim and Rebecca, Tim & Rebecca's house, Tim's T6, Tim's shop where everything was "top drawer," and going to the air show. Also, their time there was relaxing and they enjoyed the unstructured, self-directed time.

These interns have not met John Sessions, but the UK interns talked about him a lot. They flew with him in his B25 (Grumpy) when he was there. They were looking forward to working with him when they get here.

#### Their observations

- Felt so close to history there.
- We were not in a school mindset but an absorbing mindset, so noticed how close they feel to the war in Iraq vs our limited attachment.
- Weird how we take flight for granted.
- Tim took them flying in his T6. they each were up about 10 minutes. Flying low, enjoying scenery. Being close to aerospace not same thing as being close to flight. Flying with Tim made them feel close to flight. Tim Manna was excellent at explaining the "why" of what you're doing when you're flying.
- We are surrounded by aerospace here, but I had not given any thought to the precision and high quality of how things are built. For example, I noticed the evolution of landing gears there; the early one was rough and looked like it was built by a plumber but then they evolved.

#### London

In London, stayed at Thistle Hotel and Queensburrough. By chance they obtained tickets to the musical "We Will Rock You." They raved about this.

#### UK Interns coming here

We became good friends with the interns who will be coming here (Martin and Nathan) and look forward to hosting them when they come here.

What the interns would like to do while they're here:

Outdoor activities

Hiking

Mountains (they really want to see what we call mountains)

Hang gliding

We added: jet skis (Luke suggested Lake Campbell)  
Wind surfing at Jetty Island

### Money

Felt they had plenty of money. Luke and Will are frugal, Mosaab was more spendy. Luke found 100 £ in his backpack which he will return to Darren when they're here. He also had money left from the \$150 stipend we gave them; we told him to use it when they're hosting the interns here. They felt the money enabled them to have a fuller experience: rented audio for their tour of Tower of London and also for the museum. That made the experiences so much deeper. Also, they went on the London Eye. "I have never traveled at this level before."

### Possible improvements

- Would like more time. At MBCC they could only do small jobs; they didn't want to start them on big jobs that would go beyond their time.
- Cells phones. They had them part of the time, but really missed having one.

Some of the best things from the whole experience:

- Mosaab: the hands on work. Going to London.
- Luke: time with Tim & Rebecca. Mike Shepherd was awesome. The play "We Will Rock You."
- Murphy: Flying in the T6.

Agreed what we liked the most: the people. They were so nice.

## **KANSAS UNIVERSITY**

Sent the following email:

Several years ago, I visited KU and, with Dr Blunt's help and Jim Rowland's help, we formed a KU AESS Student Branch Chapter.

Are the students still involved with a UAV that overflies the earth's north polar region?

Please advise of current or planned activities. Also, if funding is required for a specific Planned project, please put together a funding request and send it to me. Could be in the range Of several thousand dollars.

Awaiting a reply (Still no reply as of August 30, 2010: my report submittal date)

## **OUTBACK RESCUE CHALLENGE UPDATE:**



## Challenge News

Time is slipping by fast, with only two months to go until the 2010 UAV Challenge. The number and origin of the Search and Rescue teams that have entered has shown that word of the Challenge has reached far and wide. Many high-school teams have already been working on their entries, but with registration closing this week the task will begin in earnest. Stay tuned to the website for any rule changes. Good luck and see you in Kingaroy!

## There's still time to enter the Airborne Delivery Challenge!

Registration for the Airborne Deliver Challenge closes today! [Register your team](#) online now to be a part of this year's challenge.

## Search and Rescue Challenge

This year has seen more entries in the category than ever before. There are currently 45 teams from across Australia, Estonia, Iran, the Netherlands, the US, Switzerland, Israel, New Zealand, the UK, Hong Kong, Canada and Brazil. There's still a long road to go until September and a number of criteria that need to be met between now and then, but Joe will be happy to hear that so many teams are coming to find him!

## Sponsor update

This year we're pleased to announce that Insitu will once again be involved with the Challenge – this time as the event's major sponsor. To join Insitu, and be a sponsor of the 2010 UAV Challenge, please contact Christopher Hess ([christopher.hess@deedi.qld.gov.au](mailto:christopher.hess@deedi.qld.gov.au)) for a sponsorship proposal and more information.

## **Challenge Scheduling Changes**

Due to the larger than anticipated number of entrants for the Search & Rescue Challenge, competition days for this event will now take place on both Tue 28 Sep and Thu 30 Sep, with the scrutineering and registration day unchanged on Mon 26 Sep.

The Airborne Delivery Challenge and Robot Airborne Delivery Challenges are also unchanged, with registration in the afternoon on Mon 26 Sep, scrutineering on Tue 27 Sep and competition on Wed 28 Sep.

Due to the Search & Rescue Challenge being extended for an extra day, there will no longer be an extra day for inclement weather. An upcoming version of the rules will reflect these schedule changes.

Although these changes are confirmed, it would be best to keep travel arrangements flexible where possible so that you will be better placed to deal with any more changes that may take place.

## **Take time for tourism in Kingaroy**

Whilst there'll be plenty of excitement at the airport, if you've got the chance you should spend some extra time exploring the region. Kingaroy and the wider Wide Bay Burnett region has much to offer tourists, including the nearby Bunya Mountains. If cuisine is more your thing, there are locally made cheeses, beautiful vineyards and be sure to pay a visit to the famous Peanut Van! For more information, visit [South Burnett Tourism](#).

## **Kingaroy accomodation**

Although the 'go/no go' announcement of teams is not released until much closer to the event, it's recommended that teams begin to investigate accommodation options early. The Challenge brings in lots of tourists to Kingaroy, and accommodation tends to fill up early. Accommodation options can be found through [South Burnett Tourism](#) or via accommodation sites such as [Wotif.com](#).

## **Follow the challenge on Twitter and Facebook!**

If you haven't become a friend of the UAV Challenge Facebook page, you're missing out! [Visit us on Facebook](#).

Joe doesn't much to do while he's lost in the bush so has been busy tweeting on Twitter. Follow him closely in case he gives any hints as to his whereabouts!



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