

Team Fusion: 2009-2010

Set up at program/project structure for the team for this season

Program manager: overall manager for the team for the entire season and oversee all projects

Project managers: oversees each project that collectively makes up the program

Likely projects:

Scheduling

Requirements document

Budget

Robot build

Chassis

Drive train

Controls

software

Attachments

3D studio max

Chairman's Award

Unveiling party

Kick off party

Golf tournament

End of Season Party

Pit control/assembly /operations

Parts Procurement

Each of these project managers would manage would oversee these functions and be the focal point to report on the projects. They would plan the schedule, budget, requirements and actual work for their projects.

Program Schedule: This would be the overall program schedule that has the role up of each of the project schedules. It would not show all of the details of shown in each project schedule, but would show the milestones for each project ie Mailing date for chairman's award submission, shipping date for robot, date of golf tournament.

Program Budget: This would be our estimate of what each project will cost. This could be in dollars only or dollars and resources (people, equipment, parents, etc.) This would be the roll up of each of the project budgets. For the first year the program budget may estimate the cost for each project and give it to the project manager to track and report.

Project Schedule: This would be the schedule the project manager uses to plan their project; it could be pages long or a couple of lines depending on the complexity of their project.

Project Budget: This would be the planned budget for each project, likely it would be in dollars. Each project manager would track their budget and report on it. They would also be responsible to request additional funds if needed and justify why they needed it.

Requirements documents: This is a written document that states all of the known and assumed requirements for the program, broken down into each project. ie How much the robot can weigh , what has to be in the chairman's award document, how long the 3D studio max video can be.

Board of Directors: Chairman of the Board-Andy Gunkel

Booster Club member: head of the booster club or their selection

Mentor members: At least two mentors (adult)( volunteered)

Alumni mentors: at last one alumni member (volunteered)

Advisor to the board: Dave Fava

Parent Member: at least one parent member

Sponsor Member: At least one representative from a sponsor organization

Student Member: One student member of team fusion, in good standing, should not be

Student program manager

The purpose of the Board of Directors would be to set overall objectives, oversee the program, to assure that the program is providing the experience for the students, school and community. Also to assure the long term viability of the program, by establishing a structure to support the team with multiple

members to share and spread the work involved. Each of the board members would bring balance to board by representing their peer group. The board would have regularly scheduled board meetings and keep written minutes. The board would be responsible to establish rules of governance.

The board would determine the start and finish of the program year. Each year at the start of the year the board would be selected, and the student program manager. A tentative schedule and budget would be developed. Before the build season begins the budget should be approved to assure that adequate funds are available for the build season. The tentative schedule should plan for which and how many regional competitions are planned for the year and a contingent plan for the championship.

At the conclusion of the year, the old board will select any new board members that are needed and make any other membership changes that are required. They will collect all important documents and documentation and compile them, at least one copy will be kept for history and at least one copy made for the next years board as a working document.

The board will also assure that business plan is maintained and that the schedules and budgets are integrated into the business plan.

Finally the board will document the successes and failures of that year and recognize those who have shown exemplary efforts.

The sole purposes of the board of directors is support the team and assist in the management of the team activities, it is no way usurping the authority of the school, its teachers or any of its rules and regulations. It is an advisor board only, making recommendations' to the schools assigned representatives and it's only area of interest is in Team Fusion 364.

Budget: example of Work Break Down Structure (WBS) budget

- Income: 3.0 Overall budget
  - 3.1 Booster club
    - 3.1.1 carry over from previous year
    - 3.1.2 Grants (NASA)
    - 3.1.3 Sponsorships
      - 3.1.3.1 Dupont
      - 3.1.3.2 Gulfport school district
    - 3.1.3 Fundraisers

Expenses:

- WBS. 3.3 Registrations
  - 3.3.0 First robotics \$6,000.00 due date
  - 3.3.1 Bayou Regional
    - 3.3.1.1. Registration \$5,000.00 due date
    - 3.3.1.2 Travel
      - 3.3.1.2.1 Bus or busses \$1,5000.00 reserve by ????????
    - 3.3.1.3 Food \$300.00
    - 3.3.1.4 Team sprit supplies \$500.00
  - 3.3.2 any other regional \$??????? Due date
  - 3.3.3 Championship \$??????? Due date

## **Proposed Structure Changes to Team Fusion 364 for 2009-2010 Season**

I am proposing a structural change to the existing structure of Team Fusion. The structure that I am proposing has a Board of Directors (advisory board to Andy Gunkel), The existing Team Fusion Booster club, A student Program Manager and several student Project Managers for various projects. The primary reason for this proposal is to establish a structure with multiple members to help prepare the team for long term success in the case of a loss of any one current supporter leaving the program. As we have seen in the past some of the old dominant teams have lost a sponsor or key member of the team and the team has suffered and in some cases failed. While the structure of the team will not and cannot assure the long term success of the team it can provide a structure and many interested members and documentation that will make it easier to replace lost sponsors and key personnel.

The second purpose is to provide the students 'exposure to a structure that they will likely see in industry once they leave high school. I for one know that I did not know or understand these types of structures when I left high school or college for that matter. One of the great strengths of the First program is the interrelationships it provides the students with the mentors. I hope the exposure to some form of program management structure would help Team Fusion students in their future endeavors.

The structure I am proposing is not the only one that could be used; there are almost as many structures as there are companies and programs. The proposed structure takes elements from different sources and puts them together to form an overall plan.

I would hope that this proposal would spark a lively debate with broad input to tailor a plan that includes input from mentors, school personnel, booster club members, sponsors, parents and students. The only critical element of the plan to me is to provide additional tools to help support the team, its members and our future successes.

The key elements that I am proposing are:

**Board of Directors**

**Program Budget**

**Program Schedule**

**Student Program Manager**

**Numerous Student Project Managers**

**A program Work Break Down Structure**

**Requirements Document**

## **Board of Directors:**

The purpose of the Board of Directors would be to set overall objectives, oversee the program, to assure that the program is providing the experience for the students, school and community. Also to assure the long term viability of the program, by establishing a structure to support the team with multiple members to share and spread the work involved. Each of the board members would bring balance to board by representing their peer group. The board would have regularly scheduled board meetings and keep written minutes. The board would be responsible to establish rules of governance.

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A secondary purpose of the Board of Directors is to have the students' present information in a formal setting to adults. It is recommended that the Program Manager and project managers make formal presentations to the Board of Directors on a regularly scheduled basis. This should provide valuable experience to the students as progress in the program.

**Board of Directors:**     **Chairman of the Board-**Andy Gunkel

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**Mentor members:** At least two mentors (adult)( volunteered)

**Alumni mentors:** at last one alumni member (volunteered)

**Advisor to the board:** Dave Fava

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**Student Program Manager:**

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**Program Budget:**

This also shows a Work Break Down Structure (WBS)

Budget: example of Work Break Down Structure (WBS) budget

**Income:** 3.0 Overall budget

3.1 Booster club

3.1.1 Carry over from previous year

3.1.2 Grants (NASA)

3.1.3 Sponsorships

3.1.3.1 Dupont

3.1.3.2 Gulfport school district

3.1.3 Fundraisers

**Expenses:**

**WBS.** 3.3 Registrations

3.3.0 First robotics \$6,000.00 due date

3.3.1 Bayou Regional

3.3.1.1. Registration \$5,000.00 due date

3.3.1.2 Travel

3.3.1.2.1 Bus or busses \$1,5000.00 reserve by ???????

3.3.1.3 Food \$300.00

3.3.1.4 Team sprit supplies \$500.00

3.3.2 any other regional \$??????? Due date

3.3.3 Championship \$??????? Due date

### **Program Schedule:**

This would be a complete year schedule; it would contain the milestones from each of the individual project schedules. Each project would have its own schedule with the detail needed to manage that project; it would also have milestones which are measurable defined events. These milestones would roll up into the overall program schedule. An example of a milestone event would be the shipping date for the robot, while much work goes into that date; the shipping date is a measurable event. The schedule should be linked to the WBS so that the budget can be traced to the schedule and visa versa.

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**Student Program Manager:**

This is the same position that we currently have, just with a new name and a structure to help provide help for this position. This would be the student in charge of getting it done. The single point of contact to get whatever needs to be done accomplished. What I have added is a structure of Project Managers to assist the Program Manager and a Board of Directors to advise when needed. This is a very important position and will have a measured impact on the success of the year's events. It is a position that should be filled by a person of capable of performing the function, not a popularity contest. It should provide the selected student a great opportunity for growth, but demand complete dedication to the position.

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## **Student Project Managers:**

These will be important positions; they will give the students the opportunity to manage other students and resources while not requiring the extremely high level of commitment of the Program Manager. Ideally the Project Managers should be a training ground for future Program Managers. These will be the students that get the individual projects scheduled, budgeted, reported and completed.

Projects likely to have a project manager:

**Scheduling**

**Requirements document**

**Budget**

**Robot build**

**Chassis**

**Drive train**

**Controls**

**Software**

**Attachments**

**3D studio max**

**Chairman's Award**

**Unveiling party**

**Kick off party**

**Golf tournament**

**End of Season Party**

**Pit control/assembly /operations**

**Parts Procurement**

## Requirements Document:

While this sounds completely simple, it is often overlooked. This is where the team will document what needs to be done, how it has to be done, what parts can or cannot be used and when it has to be completed by. For the Robot the First rules book will be a major part of the requirements document, but we have to add what our robot will do, how it will do it and what we need to do it. For the Golf tournament we can start with the training guide that was created years ago, but we will have to add all the requirements for this year's event.

This is a very good training and planning tool to get the students to really think about what all has to be done and what rules they must follow. It is also a great tool to use in future years to help build our program; it provides a building block to let the next year's team start from rather than starting from scratch.

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