

The Mechanics of the Design Event

Design Event

October 22, 2011

FSAE Workshop 2011

Michigan Design Event Staff

- Event Captain- Tony Lyscio
- Event Co-Captain- Bill Riley

- Chief Design Judge- Steve Fox
- Co-Chief Design Judge- Tony Lyscio

Mechanics of the Design Event

- Spirit of the Design Event
- Design Report
- Design Spec Sheet
- Design Preliminaries
 - What to Bring
 - What to Do
- Design Semi-Finals / Finals
- Getting Feedback

Spirit of the Design Event

Per the 2012 Rules:

“The concept of the design event is to evaluate the engineering effort that went into the design of the car and how the engineering meets the intent of the market.

The car that illustrates the best use of engineering to meet the design goals **and** the best understanding of the design by the team members will win the design event. “

Key Items

- Engineering Effort
- Design Goals
- Understanding of the Design by team members

Design Report Submissions

- ◉ 4 Pages text, 3 pages drawings, 1 optional use page
- ◉ Content very similar to info for design preliminaries (plan, goals)
- ◉ Highlight types of analysis, testing (planned and complete)
- ◉ Discuss feature components and approaches
- ◉ Uses:
 - ◉ Staging of teams for Design Event queues
 - ◉ Judges get an early look at cars, "pre-judging"
 - ◉ Formation of team specific questions by judges
 - ◉ Your team's 'resume', an opportunity to make an impression
- ◉ Needs to be **ON TIME !**

Design Spec Sheet Submissions

- Complements Design Report, a **REQUIRED** submission
- Complete **ALL** areas (OK to provide a range of values)
- Note units- try to be consistent with existing units
- Be as accurate as possible
- Be consistent with Design Report and your vehicle
- Uses:
 - Judges can catch a glimpse of vehicle synthesis (big picture)
 - Supports Design Report by adding details, quick reference
 - A "cheat sheet" for you to prepare for the Design Event

Design Event – What to Bring

What to bring to your design time slot:

- ⦿ The Team (prepped, awake, positive attitude)
- ⦿ The Car (**weighed**, shined up and 'race ready')
- ⦿ Demo parts (loose, test samples, interesting bits)
- ⦿ Data, Data, Data (simple easy to read binders)
- ⦿ Story Boards (simple, must be fast to set up)
- ⦿ The Passion you put into your car

Design Event – What to Do

Prelim's—start with 3-5 minute presentation giving vehicle overview

- Overall design philosophy
- Starting Point (rules, points, tires, event points, history...)
- General performance goals (weight, CG, power, etc...)
- Did you reach your goals?
- Quick broad and direct (all judges listening together)

Team members pair off with judges (only 4-5 team members)

Give Details, Data, Plots....

Point out features, do not require judges to only observe and ask

Judges only have 45 minutes with you, use all of it!

Design Event – Semi-Finals / Finals

Semi-Finals removed from FSAE 2012+ ?

Finals- Time to dazzle the judges

- Two team members with car at a time, tag team
- Be prepared, know who is covering what
- Additional time with specific judges (more depth)
- Highlight system and component features
- More time to dig into data, development results
- You must know ALL of the why's
- Discuss the decisions, learnings, and results

Design Event – Getting Feedback

- Direct Feedback from your judges
 - Set-up appointments with judges (phone)
 - Copy of score sheet, explanation of comments
 - 2-way communication, ask them questions
- Bill Mitchell – Design Report Feedback
- Walk-up time in Design building
 - First come, first served feedback
 - Whatever judges are available to comment

Questions ?

Anthony Lyscio
anthony.lyscio@gm.com