So, what does it mean to have BEST Online?

For most of the competition activities, very little is changed. For BEST Online Competition, all activities will be "online", some of those activities will be "virtual". But what does this really mean?

- Online = controlled by or connected to another computer or to a network.
- Virtual = almost or nearly as described, but not completely or according to strict definition.

Teams will participate in the traditional BEST Award activities (Notebook, Exhibit & Interviews, Marketing Presentation) and in developing a robot design based on the game specific rules. A virtual robot and field will be used to determine Robot Performance points for the BEST Award. Students will be required to program the virtual robot to play the game. This virtual robot is provided and has specific functionality; they do not design it or change it.

The teams are still expected to design a robot just as though they were building it, to solve the game "problem". This documents their solution to the game problem and what they will review in the Critical Design Review. They just will not be following through with construction of the robot. They should still consider all the rules and limitations, such as available kit parts, size, weight, and other constraints when designing the robot. It is the team's job to show judges how they would solve the problem, how the robot would function and show proof that it would operate as expected.

Teams will not Design a Virtual Robot

In the BEST Online Competition, there will be a Team designed robot which we will call "Team Robot". There is also a virtual robot that is provided by BEST and is used by the teams in the Robot Performance time trials on a virtual field. That virtual field is nearly identical to the field described in the BEST Competition Rules. But only the necessary physical aspects are modeled.

Team Robot:

- *The team's robot is the robot design they develop based on the BEST Game Specific Rules.*
- *This is the same robot they would normally design for the game described in the rules, but without the construction/manufacturing.*
- *This is the robot design that is presented in the Robot Critical Design Review.*

- *This is the robot design that the team will attempt to model in the Robot Modeling Challenge if they choose to do so.*
- *This is the robot design that the team will document in the Engineering Drawings Challenge if they choose to do so.*
- *This is the robot design that is judged for Creative Design.*
- *This is the robot referenced in the Engineering Notebook, Marketing Presentation and Team Exhibit.*
- *This robot design may include software development, modeling, prototyping, and/or simulation.*

Virtual Robot:

- *The virtual robot is provided with the virtual game field.*
- *The virtual robot is used ONLY with the virtual field, for Robot Performance time trials and the Autonomous Programming Challenge in the Online Competition.*
- *The virtual robot includes the necessary robot functionality required to play the BEST game on the virtual field.*
- *The virtual robot is not extensively modifiable by the team. There are some configurable parameters but there is no new hardware design involved, only software development/programming.*
- *The virtual robot is used as a platform for programming.*
- *Programming the virtual robot will require an understanding of the Autonomous Programming Challenge rules, which is used for the Online Competition virtual time trials.*

Do the activities require Teamwork?

Absolutely. All activities rely on teamwork to compete and score well just as in the past. Some activities allow students to work independently and/or remotely depending on your team's specific situation. Working remotely does not change the interaction that must take place among team members. This is very relevant to 21st century engineering today and will be a great new lesson for students to experience.