

A/V priorities for the Rumble in the Roads

N. Laverdure 7/10/2015

The Rumble in the Roads, an offseason FIRST Robotics Competition, is seeking additional audiovisual support to produce the best-possible event for the teams, spectators, and local STEM community. The competition is Saturday, November 7 at Menchville High School. More than 30 teams from MD, NC, and VA are now signed up for the event, some of them coming from more than 5 hours away to compete in the one-day tournament.

In the prioritized list below, the Rumble in the Roads is seeking support on the underlined items. This is a summary only; more details can be provided if they are required. If your organization is able to assist the event with any of these items, we would consider this an in-kind sponsorship, and we'd be able to recognize your organization appropriately. Thank you for your consideration.

1. Amplify field audio and announcers

The Menchville High School main gym has a built-in audio system, but our experience in 2014 indicates that performance and quality of the system is extremely poor. The announcer's speech is intelligible from less than 50% of the stands, and even less when the ambient noise grows during gameplay. For the 2015 Rumble in the Roads, we are looking to augment the system with additional speakers that are arranged in a way that provides the best experience for the audience. Depending on how much of the built-in system is used, it's possible that additional required equipment may involve wireless mics, lavalier mics, mixers, etc. Even if we had this equipment, I don't think any of our group would know how best to set it up.

2. Record high quality match video for later publishing to the web

Triple Helix students and mentors have taken responsibility for this task.

3. Display match video with overlay

The referees and scorekeepers are able to constantly update the game score throughout each 2.5-minute match, but there's no way to show the score without a lot of video equipment that we don't have or know how to operate. I understand that the Field Management System (FMS) has a VGA output intended to be used with a chromakey video mixer. The mixer composites together the score overlay from the FMS with the live video from Triple Helix cameras. This video can then be sent to LCD projectors and projected onto screens or walls around the gym.

4. Play music

Triple Helix took DJ responsibilities for the 2014 event, but the bad sound quality in the gym kept us from getting much value from this effort. In fact, the music was kept very quiet for much of the day so that the announcers could be heard more clearly. If the sound quality were improved, and the audio sources were mixed well, then the event could benefit from more professional DJ services.

5. Display live rankings and match data

Network failures between the FMS computer and the laptop used to drive the ranking display kept this from working in 2014. Triple Helix has a plan and materials in place to make this system more reliable.

6. Publish live rankings and match data to the web

Assuming a good internet connection, Triple Helix students and mentors will be able to take responsibility for this task.

7. Provide a live web stream

The Menchville network imposes certain controls that make it impossible to stream high-quality video. For this to work, we likely need a more robust internet connection. Besides this internet connection, Triple Helix owns all the equipment necessary to capture, encode, and transmit the video and audio.

8. Make pit announcements

A seriously underpowered PA kept us from making intelligible announcements within the "pit" area (the auxiliary gym) in 2014. Our volunteers had to spread important messages by word-of-mouth. In 2015, the pits will be separated into two rooms, making it more important to find a good PA solution. We anticipate using Triple Helix resources to solve this problem.

9. Do fieldside video interviews, color commentary, etc. between matches

This is a major stretch goal. Groups like the [RoboShow](#), [FIRST in Michigan](#), [RoboZone](#), [FRC GameSense](#), [IRI Live!](#), etc. have demonstrated that it's possible to make a FRC competition into an incredibly dynamic experience for a live audience. With this event, it would be possible to set up a program with commentators, a sports desk, fieldside interviews, guest experts, and the like. This feature would define the Rumble in the Roads as the premier offseason competition of the east coast, on par with most of the well-produced regular-season events.