

GJ engineers driven to develop best driverless vehicle

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The homestretch never looked so close.

Jim Crittenden and his band of engineers, computer programmers, machinists and all-around smart guys head west this week to chase a dream they've relentlessly pursued since last summer.

Team Mojavatton (mo-HAH-va-tawn), a baker's dozen of mostly Grand Junction residents, pit their customized white Nissan Xterra this week against a field of about 40 other souped-up vehicles at the California Speedway in Fontana, Calif.

The Xterra — its revamped appearance earned it the nickname "Xboxx" — must finish in the top 20 to ensure its advance to the starting line in Primm, Utah, on Oct. 8. A \$2 million purse awaits the team whose entry completes the approximately 150-mile course in the fastest time, which must be less than 10 hours.

There's one catch.

No one sits behind the wheel of these vehicles. Backseat drivers aren't allowed, either.

Congress requires that one-third of military ground vehicles drive themselves by 2015. The technology that would meet that federal mandate does not yet exist.

That's where Crittenden and company come in. The federal government looked to enterprising teams around the country to develop a driverless vehicle that would meet the congressional mandate within the timeline. Defense officials upped the ante with a \$2 million offer that Team Mojavatton couldn't refuse. Couple the cash with the chance to save soldiers' lives and the fact that no team succeeded in crossing the finish line last year, and it seemed a challenge too good to pass up.

The semifinals at the California Speedway start Wednesday and conclude the following Wednesday. The Xboxx must successfully clear the obstacle-ridden course in good time to reach the starting line of the 2005 DARPA Grand Challenge on Oct. 8.

The 20 qualifying teams start five minutes apart. What specifically awaits the driverless vehicles is anybody's guess.

Each vehicle must rely solely on its internal navigation and sensory systems. External remote controls are prohibited. Teams drive their vehicle to the starting line, switch it into autonomous mode, get out, close the door and watch it drive away, Crittenden said.

"Once it leaves, we won't see it again unless it gets stuck," he said.

The yet-to-be specified course somewhere in the California/Nevada Mojave Desert promises plenty of sticking points that would force teams to call it a day.

Team Mojavaton's robotic wonder on four wheels must clear a course laden with potholes, wash-board roads, sheer drop-offs, rocks, boulders and such man-made obstacles as "tank traps," steel X-shaped structures designed to stop military tanks.

The team aims to see its entry cross the finish line about eight to 10 hours after the start — and ahead of the competition.

Team Mojavaton, the only entry from Colorado, is Crittenden, John Trotter, Karl Castleton, Dave Crawford, Craig Frazier, Paul Hallmann, Phil Miller, Alan Peck and Warren MacEvoy of Grand Junction; Dan Councilman of Wheat Ridge; Mike Claeys of Denver; Mark Moore of Little Rock, Ark.; and David Lafitte of Wellesley, Mass.

Follow Team Mojavaton's progress at www.mojavaton.com or e-mail mojavaton@aol.com.

Visit www.darpa.mil/grandchallenge for updates on the race.

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