PARTICIPANT INFORMATION SHEET

TEAM NAME: MITRE Robot Platoon
ORGANIZATION: The MITRE Corporation

CONTACT NAME: David B Smith
COUNTRY: USA

TOTAL NUMBER OF TEAM PERSONNEL: 4
EMAIL: daves@mitre.org

ROBOT NAMES: Moe, Larry, Curly
TELEPHONE: (703) 883 7254

WIRELESS FREQUENCIES (PER ROBOT): 802.11b ad hoc channel 10 (all robots)
FAX NUMBER: (703) 883 6501

☐ PRE-REGISTERED ☐ REGISTERED ☐ ARRIVED ON SITE ☐ COMPETITION READY

PLEASE DISCUSS YOUR APPROACH TOWARD KEY DESIGN CHARACTERISTICS (WITH EMBEDDED PICTURES):

Locomotion:
Four-wheel drive (ActivMedia Pioneer 2-AT)
**Sensors for navigation:**
Data from bumpers, wheel encoders, sonar, and laser rangefinder are fused in a central map.

**Sensors for victim identification:**
Pyrosensors and color video are used to identify victims.

**Sensors for localization:**
Data from bumpers, wheel encoders, sonars, and laser rangefinders on all robots are fused by a central mapping program. Kalman filtering is performed on the fused data for localization.

**Control scheme:**
Robots are semi-autonomous; operator can take manual control of a robot or command robots to execute several autonomous behaviors with various time spans of discretion.

**Communications:**
All robots, auxiliary processing computers, and the operator control computer, are on a single class C subnet, with IP addresses in the range 192.168.100.x. The wireless protocol is 802.11b in the 2.4GHz frequency spectrum, and the network is ad-hoc, with no access point. The network name is “stoogenet”, currently with no encryption and currently on channel 10, though these parameters could be changed if necessary.

**Map generation/printing:**
Arena features and victims are depicted on an on-screen display integrated with our commander console.