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(57) Abstract :
A victim detection and evacuation robot comprises of a plurality of motorized legs 102 to enhance mobility across uneven or obstacle-filled terrain, a LiDAR camera 104 mounted on a 360° rotatable holder 105 to generate a 3D grid map of a premises, a human presence detection sensor suite includes a thermal camera 108 for detecting human body heat, a directional microphone 109 to detect the loudness and direction of distress sounds of a potential victim, a RGB camera 110 for identifying body shape and motion of the victim, a protective cylindrical shell 106 formed of two symmetrical half-cylinders 106a by employing a pair of hydraulically powered extendible arms 106b form an enclosed shell around the victim to lift the victim out of the surrounding, a video camera 107 to capture live footage of rescue and evacuation of victim.

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