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US 20070021880 A1 US 20020026249 A1
JPNATHAN SPRINKLE ET AL MODEL-BASED DESIGN
A REPORT FROM THE TRENCHES OF THE DARPA
URBAN CHALLENGE
ANDERSON T L ET AL AUTONOMOUS ROBOTS
AND EMERGENT BEHAVIOR: A SET OF PRIMITIVE
BEHAVIORS FOR MOBILE ROBOT CONTROL
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(54) Title of the Invention: **Evaluating capability of a system to perform a task by comparing models of the system and the task**
Abstract Title: **Evaluating capability of a system to perform a task by comparing models of the system and the task**

(57) A method and apparatus for evaluating capabilities of a system (e.g. an autonomous vehicle) with respect to the performance of a task, the method comprising: providing a first model (8) corresponding to the task; providing a further model (10) corresponding to the system; providing a plurality of mappings from one model to another model; determining whether there exists a transformation trace either (i) from the first model (8) to the further model (10), or (ii) from the further model (10) to the first model (9), wherein each transformation trace comprises one or more of the specified mappings; and evaluating the capabilities of the system with respect to the task dependent upon the existence of the transformation trace.

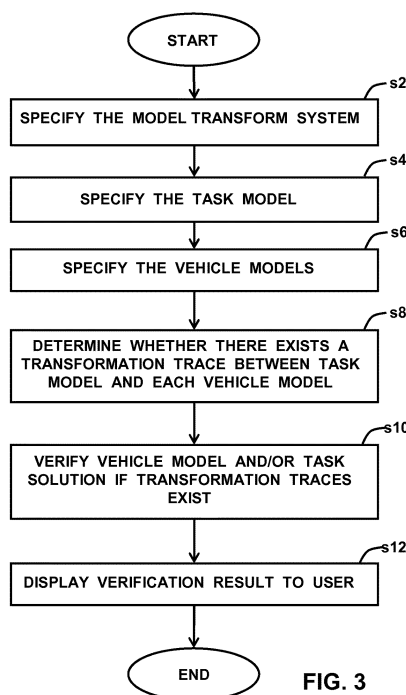


FIG. 3