Behavior Synthesis for an ATLAS Humanoid Robot from High-level User Specifications

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LIST OF TODOS, FIXES, OPEN ISSUES

***Abstract*— In this paper we ...**

Body of the TODO item

I. INTRODUCTION

Contributions (brain dump):

- Partial to full specification
  - Most intuitive from the users point-of-view
  - Limited message size over bad comms (send partial specification → compile and synthesize onboard)
- Multi-paradigm specification (objectives and initial conditions from user, topology/modes, preconditions, task)
- Generalization of activation–completion paradigm [1]
- Integration with FlexBE and ROS
- Experimental validation on ATLAS

II. PRELIMINARIES

III. LTL SPECIFICATION COMPILATION

IV. ROS IMPLEMENTATION

V. EXPERIMENTAL VALIDATION

VI. CONCLUSIONS AND FUTURE WORK

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REFERENCES

[1] V. Raman, N. Piterman, and H. Kress-Gazit, "Provably Correct Continuous Control for High-Level Robot Behaviors with Actions of Arbitrary Execution Durations," in *IEEE Int'l. Conf. on Robotics and Automation*, 2013.

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