Video Article

H3DAPI wrapper class for graphical/haptical interfaces

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Abstract

Many robots exist in the world which exhibit similar forms and functions. In the passed, performing these same functions required different software commands to be implemented for each robot. The repercussion of these developmental discrepancies is the cause of unnecessary developmental overhead time. For example, when a haptical/graphical virtual reality environment has been coded for one specific robot to provide haptic feedback, that specific robot would not be able to be traded for another robot without recoding the program. However, recent efforts are being implemented by the open source community to create universal wrapper classes which would elicit the same response on different robots from a single API. The result of this would lead researchers across the globe, who own different haptical robots to perform the same experiment, from the same source code. Therefore switching out the robot would have no effect on development time, and the velocity of research may remain less inhibited. In this paper we outline the successful creation and implementation of a wrapper class into the H3DAPI which integrates the software commands most commonly used by all robots.

Disclosures

No conflicts of interest declared.