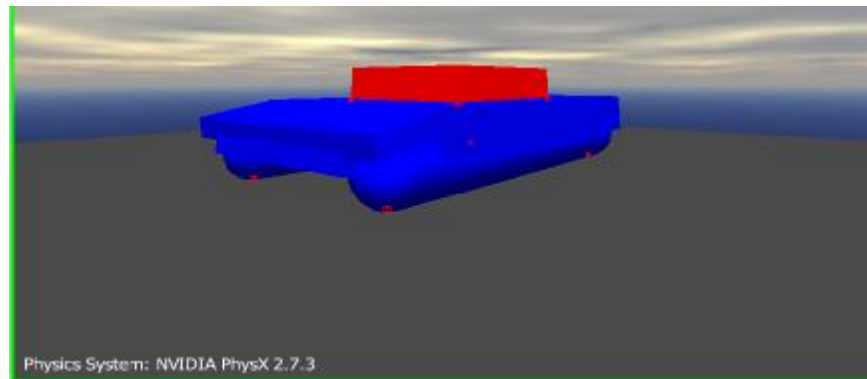


# MRL Infrastructure Contribution Plan

15 February 2010

## 1 Generating New Track Base Robots

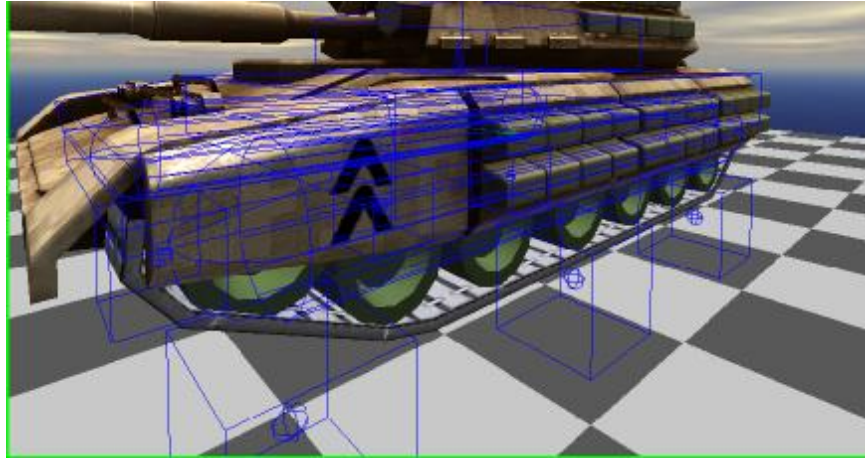
Our team wants to generate a new track base robot & air bot in UT3 because of this we read the AGEIA PhysX software package & UT3 scripts book to generate this robots. We have working on a track base robot since 2 month ago. We reduce complexity of track's joints by 2 ways. One way is to create a Hinge joint to join the body to track object and then to avoid this object from rolling, stuck this object and then reduce the friction of track because we want to skid this track on ground or using a damper to join the robot object to track object. Fig 1, illustrate the rigid bodies of track base robot. Focus on model of tracks.



**Fig. 1.** Generated track base robot in PhysX simulator

After generating these bodies, we can attach the 3d model to these rigid bodies. Fig 2. Illustrate that.

2      **Error! No text of specified style in document.**



**Fig. 2.** Attaching 3D model to rigid body

We will work on UT3 scripts to understand how sensors work and then generate the victim sensors if we can.

## 2      **Generating Some Indoor & Outdoor Maps**

We will work on UT3 Editor to generate some indoor & outdoor maps before competitions and send these packages to TCs.

We have some problems to generate the UT3 scripts and we wish to solve these problems by reading the UT3 scripts book (Mastering Unreal Technology, Volume III: Introduction to Unreal Script with Unreal Engine (Paperback) by Jason Busby (Author), Jeff Wilson (Author), David Owens (Author)).

We work 2 months for understanding UT3 scripts. We work 1 month to generate the maps and then 2 months to generate our robots. All of these packages will be published on our site <http://www.mrl.ir/index.php/Virtual-Robot/>