

AFRL RESEARCH TOPIC CALL FOR FY13

1. **Research Title:** Flexible Software Tool to Create Realistic Aircraft Flying Models for Distributed Simulation and Training
2. **Individual Sponsor:** *List the AFRL research topic sponsor's contact information:*
Dr. Winston Bennett, 711 HPW/RHAS
711 HPW/RHAS Building 852
2620 Q St.
Wright Patterson AFB, OH 45434
winston.bennett@wpafb.af.mil
3. **Academic Area/Field and Education Level:** Behavioral Science; Computer Science; Mathematics, Aeronautical Engineering (BA/BS; MS; PhD).
4. **Objectives:** The goal of this effort is to develop a user friendly software tool to rapidly develop aircraft flying models for us in game-based and full fidelity simulation environments. What we'd love to see is a "dial an airplane" kind of capability that will enable us to turn any game-based flying simulation or any more full fidelity simulation of a specific aircraft into a flyable alternative aircraft with the turn of the dial or the flip of a switch for a different model. As an example, one might have a model of a trainer like at T38 jet trainer but want to change the flying model of it on a simulation network to fly as an aggressor F5 or other aircraft. So we would like to be able to develop a software tool that allows us to quickly adjust flight and performance parameters and then put the new model into the simulator so that it now flies like and responds like the new model.
5. **Description:** Although some tools exist commercially, they are difficult to use and they do not always produce models that are compatible with game environments nor do they conform to existing standards for distributed simulation systems.
6. **Research Classification/Restrictions:** This research is unclassified.
7. **Eligible Research Institutions:** (Check all that apply.)

Universities (DAGSI)

AFIT (only)

USAFA

8. **Interest in Summer USAFA Cadet:**

If you are submitting a topic for the USAFA, please indicate if you are also interested in sponsoring a USAFA Cadet in summer of 2013. (**Avg Cost for USAFA Cadet for 33 days is \$5000**):

I would like to sponsor an USAFA Cadet in the summer of 2013: Yes No