

SPACE EDUCATION AND OUTREACH SYMPOSIUM (E1)
NEW WORLDS - INNOVATIVE SPACE EDUCATION AND OUTREACH (4)

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SYSTEM EDUCATIONS THROUGH SMALL AEROSPACE SYSTEMS

Abstract

The author have been working on small aerospace vehicles, such as small experiment rockets, quasi-satellites, high-tech water rockets, small unmanned aerial vehicle (UAV), rovers and so on, for the purposes of stimulating young engineers in private companies and students in engineering universities. These small vehicles are useful to teach how to create a system concept and to manage its development. The author summarizes and discusses the evolution of these education tools; 1) Several examples of small aerospace vehicles. - Small experiment rockets, high-tech water rockets, unmanned aerial vehicles (Fixed wing Vertical Take-Off Landing), rovers. 2) How to adopt these examples for the education tools. - Private engineering school, robots, factory automation, system definition, requirements, and building small robots. 3) How to stimulate young engineer's creative minds. - Interview, background survey, individual course setting, own curriculum, hardware software all in one. 4) What would be the future of this education system. - Nearly 100 students graduated, new education tools, clear image at the end of the course, closely connected to the possibility getting into robotics space systems. These efforts will be maintained in the atmosphere where system education are closely connected to social needs on small aerospace systems. The coauthors are Ms. T. Naemura, Mr. D. Fukuyama Ms. K. Yokoyama.