

SYMPOSIUM ON INTEGRATED APPLICATIONS (B5)
Integrated Applications End-to-End Solutions (1)

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EDUCATION: AN IMPORTANT PART OF ANY INTEGRATED APPLICATIONS STRATEGY

Abstract

The use of space technologies such as satellite communication, GPS and remote sensing are having a significant impact in the areas of disaster management and response, health care, agriculture and more. When space technologies are integrated with non-space technologies the effectiveness of the overall system is enhanced. However, the success of this approach not only requires good technical knowledge, it also requires effective communication between decision makers, service providers and the end users to ensure that the service is fully utilized and addresses the needs of the customer.

This paper will explore how the Victorian Space Science Education Centre (VSSEC) collaborates with government, education providers and industry to support a sustainable future and ensure that the needs of both education and industry are met. Through the use of scenario-based learning VSSEC stimulates student's interest in science, mathematics and technology whilst developing the skills needed to support emerging technologies.

VSSEC uses scenario-based learning to teach basic science concepts, raise awareness of new technologies and develop teamwork and problem solving skills. During VSSEC's Mission to the Orbiting Space Laboratory (MOSL) program students undertake a range of activities in the Space Station under the direction of Mission Control including tracking a hurricane. This activity includes a study of satellite orbits and footprints, the use of satellites for remote sensing and weather monitoring, the interpretation of satellite data, and the coordination of emergency services for disaster warning and response.

The use of real data, and examples that have relevance beyond the classroom, demonstrates the application of new technologies and raise science literacy in these areas. The use of a scenario-based learning environment demonstrates the relevance and application of various science disciplines, and develops the skills scientist need to perform in an environment based around collaboration and multidiscipline teams such as team work, and problem solving. The use of real life scenarios provides the link between the classroom and industry, representing contemporary science that is meaningful to students no matter what study or career path they chose.