Overview of
International Workshop on Future Intelligent Earth Observing Satellites
(FIEOS)
Denver, Colorado, USA
November 10-14, 2002

The future of earth observing satellite systems lies with incorporating "intelligence" into these systems. The increasing need for acquiring timely information about Earth system processes and for early warning of natural and human disasters, combined with a need to control costs and for coping with increased system complexity, suggests that intelligent satellites are appropriate for deriving information quickly and in near real-time for dissemination to non-science user communities. Such intelligent systems could include space-based architectures capable of dynamic and comprehensive onboard integration of sensors, data processors, and communications. The first International Workshop on Future Intelligent Earth Observing Satellites (FIEOS) was held November 10-14 in Denver, Colorado. This symposium brought together private sector, government, and university experts to discuss the possibility and feasibility of such intelligent systems for 2010 and beyond. It also facilitated interactions between international planning and data user communities to arrive at the needs and requirements for future intelligent systems for global application.

The FIEOS Workshop was co-organized by ISPRS WG I/4 (Advanced Sensor Systems). Sponsoring organizations included the National Aeronautics and Space Administration Institute for Advanced Concepts (NASA-NIAC), the International Society for Photogrammetry and Remote Sensing (ISPRS), and Virginia's Center for Innovative Technology (CIT).

The workshop was held in conjunction with the International Society for Photogrammetry and Remote Sensing (ISPRS) Commission I Mid-term Symposium, the Remote Sensing for Transportation Conference, and the Pecora 15 and Land Satellite Information IV Conference at Adam's Mark Hotel in Denver. It provided a stimulating, casual environment for scientific presentations, interactive discussions, and information exchange on future intelligent Earth observing satellite systems.

The combined conference brought together over 900 participants from 17 countries: specialists, engineers, users, and those interested in intelligent Earth Observing satellites, onboard image data processing, sensor-webs, satellite networks, remote sensing applications in transportation, and other related topics. In the workshop of FIEOS, 58 abstracts were collected, and 24 oral presentations were made in six sessions (including the opening session), and 34 posters were displayed.

Two keynote speakers, Dr. Bob Cassanova and Dr. Roger King, opened the workshop. Dr. Cassanova is the Director of the NASA Institute for Advanced Concepts (NIAC) in Atlanta, Georgia. His address was titled "Visions of the Future in Earth and Space

Sciences." Dr. King serves as Chief Technologist for NASA's Earth Science Enterprise Applications Division. His address was titled "The Challenge of End-to-End Solutions in FIEOS."

Thirteen papers from the FIEOS workshop have been compiled into a book-length collection of proceedings, the purpose of which is to facilitate the interactions of international colleagues and to raise international interest in this vision.

On behalf of the FIEOS organizing committee, we would like to express our special thanks to all people and organizations that contributed to the success of the symposium and helped to make the completion of these proceeding possible. Special thanks go to Dr. Bob Cassanova for his support for this project and symposium. We also thank Amelia Budge for her hard work preparing for this meeting and for her success in attracting working groups from different professional and scientific organizations.

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