

SPACE EXPLORATION SYMPOSIUM (A3)
Space Exploration Overview (1)

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THE ISECG GLOBAL EXPLORATION ROADMAP: STRENGTHENING EXPLORATION THROUGH
INCREASED HUMAN ROBOTIC PARTNERSHIP**Abstract**

The second iteration of the Global Exploration Roadmap (GER) will be released in mid-2013 by the International Space Exploration Coordination Group (ISECG). The GER2.0 builds on the initial efforts by space agencies to prepare for future human exploration of the solar system and reflects the current status of their ongoing road-mapping effort. It reflects the work of space agencies to identify common exploration goals and objectives and look for feasible and sustainable approaches to meeting them. While this work focuses on human space exploration road-mapping, it is recognized that robotic missions are also planned to destinations where humans may someday live and work. Initially, robotic missions will gather high priority science information and contribute to the knowledge base that informs future human missions. Later, they will explore together with humans, taking on roles which increase return on exploration mission investments. This paper will focus on the importance of increasing the natural synergies between human and robotic exploration missions and describe current and potential future initiatives aimed at achieving this goal.

Human exploration of the solar system will proceed in a step-wise manner, extending proven capabilities to achieve more complex goals while enabling new discoveries with each step. Human presence beyond low Earth orbit enables new opportunities realizing space exploration goals and objectives. New opportunities will be greatly expanded by increasing the coordination with robotic missions, where appropriate. For the most part, robotic missions planned today are primarily science driven missions, however, the information they will collect will help prepare for future human missions. Some agencies are considering missions which are mainly driven by the desire to collect information or reduce risks to future human missions. While these missions have a primary purpose to inform future human missions, they can collect information which is of interest to the science community. Lastly, several privately funded robotic missions are envisioned to help inform future asteroid mining or other human activity in space. Increasing collaboration will be an important contributor to sustainable space exploration.

Since its release in September 2011, the GER has served as a useful tool in many ways. This paper will discuss the recently released GER2.0 and highlight its role in expanding human robotic mission partnership opportunities.

For more information on the ISECG please consult the ISECG website at www.globalspaceexploration.org or contact the ISECG Secretariat at: isecg@esa.int.