



SOLAR POWER SATELLITE DESIGN COMPETITION

By Don Flourney

S*pacejournal.org*, in alliance with the Society of Satellite Professionals International (SSPI), the National Space Society (NSS), and Ohio University, will launch a Solar Power Satellite (SPS) competition in the Fall 2010. The competition is intended to assist in design of next-generation satellites that will collect solar energy in space and deliver it to Earth as a clean source of electricity.

The three-year competition will link global scientific communities with university-based digital media labs for the purpose of assuring that space-based solar power technologies and their many Earth-energy applications are better understood by governments, industry, and the general public. The immediate goal is to address the as-yet-unanswered questions standing in the way of building and launching the types of satellites that will provide a continuous supply of solar energy from space.

The Ohio University Games Research in Immersive Design Laboratory (GRID) has been commissioned by the *Space Journal* to host the international competition. An advisory board, consisting largely of SSPI and NSS membership, are being asked to help the Journal to frame the specific content and criteria, to facilitate the forming of design teams, to identify scientific and professional mentors for those teams, and to find suitable jurors to assess the technical and creative products that emerge.

In 2009, the *Space Journal* sent out a call to the global scientific and business communities asking for papers on the topic "What

technological and other advancements now make it possible for us to think seriously about going to space for future energy?" The successful publication of Journal Issue No.16: Solar Power Satellites, led to the idea for the 2010-2013 SPS Design Competition (Journal Issue No.17) that will creatively and collaboratively involve a larger number and variety of individuals, associations, industries, and nations in the discovery of "a path to space for energy."

In brief, the SPS competition will seek to link globally those who have good ideas (the researchers, innovators, and entrepreneurs) and those who have digital media visualization skills (students in training and their advisors). Among the topics to be included are: the challenges of spacecraft design, delivering structures to space, managing the environment of space, transmitting power wirelessly to Earth, positioning Earth receivers, watching out for environmental health and safety, understanding the economics of alternative energy, and developing private/public partnerships for investment.

The GRID Lab's broadband telecommunication networks will enable secure online workspaces for members of the scientific community working constructively and creatively in collaboration with the university visualization laboratories around the world, without the necessity for travel.

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