

6.1 Portfolio White Paper Format:

Title

Date

Author Information (include name, email address, and institution)

Abstract

Introduction (include brief description of prior work, how you will advance the current state of the art, and relevance to the USAF)

Basic Research Objectives (include enough detail to understand the science that supports your approach, explain why you are the one to make it a success, and how you will know when you meet success)

Budget (Rough estimate of funds needed broken down by labor, travel, materials, etc.)

References (Peer reviewed articles referenced)

General Guidelines:

DoD defines basic research as follows: Basic research is the systematic study directed toward greater knowledge or understanding of the fundamental aspects of phenomena and of observable facts without specific applications towards processes or products in mind. It includes all scientific study and experimentation directed toward increasing fundamental knowledge and understanding in those fields of the physical, engineering, environmental, and life sciences related to long-term national security needs. It is farsighted high payoff research that provides the basis for technological progress. Basic research may lead to: (a) subsequent applied research and advanced technology developments in Defense-related technologies, and (b) new and improved military functional capabilities in areas such as communications, detection, tracking, surveillance, propulsion, mobility, guidance and control, navigation, energy conversion, materials and structures, and personnel support.

Please include a CV.

White papers should be 1-2 pages (not including references).

George H. Heilmeier, a former DARPA director (1975-1977), crafted a set of questions known as the "Heilmeier Catechism" to help Agency officials think through and evaluate proposed research programs. You should think about the subset below while constructing your white paper.

- What are you trying to do? Articulate your objectives using absolutely no jargon.
- How is it done today, and what are the limits of current practice?
- What is new in your approach and why do you think it will be successful?
- Who cares? If you are successful, what difference will it make?
- What are the mid-term and final "exams" to check for success?