

of Defense⁹³ with a primary responsibility to maintain U.S. technological superiority over potential adversaries, ARPA is mandated to:

- pursue imaginative and innovative research and development projects offering significant defence utility;
- manage and direct the conduct of basic and applied research and development projects that exploit scientific breakthroughs and demonstrate the feasibility of revolutionary approaches for improved cost and performance of advanced technology for future applications; and
- stimulate a greater emphasis on prototyping in defense systems by conducting prototype projects that embody technology that might be incorporated in joint programs, programs in support of deployed U.S. Forces (including the Unified and Specified Commands), or selected Military Department programs, and on request, assist the Military Department in their own prototyping programs.

Some Prominent Consortia Funded by ARPA

Semiconductor Manufacturing Technology (SEMATECH):

Membership into Semiconductor Manufacturing Technology consortium is available only to U.S.-owned or controlled semiconductor or materials and equipment manufacturers or participant U.S. universities and federal agencies. With regard to ARPA funding, the relevant statute would be the definition of eligible firm found in 10 USC Section 2491(9). The SEMATECH legislation 15 USC Section 4601e(2) states: "The term "Sematech" means a consortium of firms in the United States semiconductor industry ...".

⁹³ ARPA actually receives only a relatively small proportion of the Department of Defense's funding for R&D. ARPA has been allocated approximately US\$2.2 billion out total U.S. defence R&D spending of US\$41.9 billion. These figures are from the Presidential budget proposal for FY 1994.