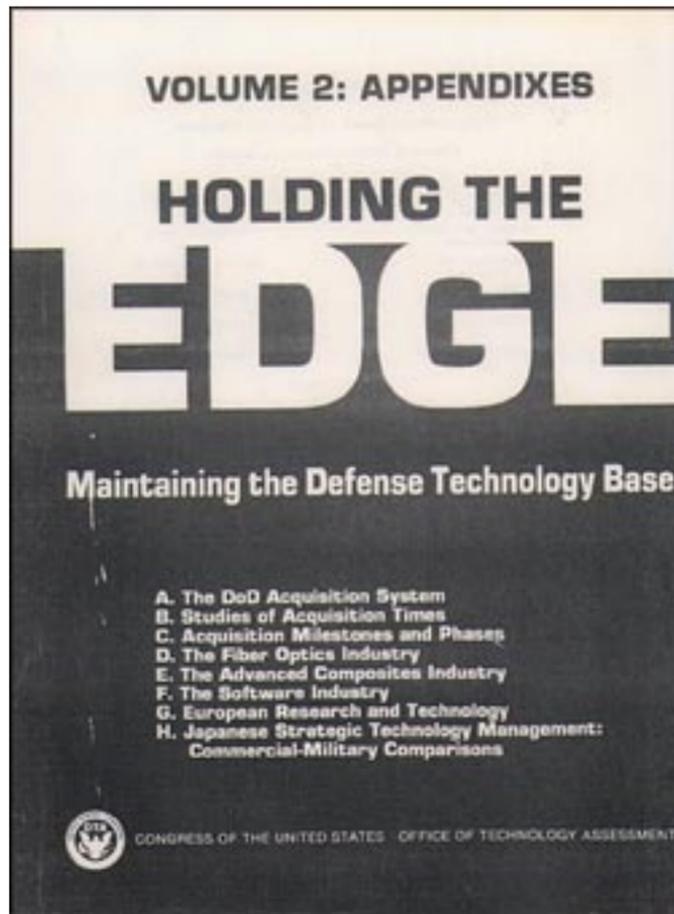


*Holding the Edge: Maintaining the Defense
Technology Base—Vol. II, Appendices*

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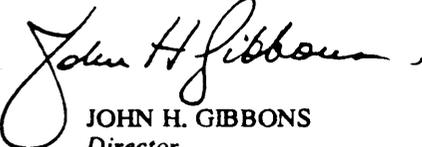
Foreword

OTA'S report "Holding the Edge: Maintaining the Defense Technology Base," noted that America's defense technology base has weathered significantly, with challenges to U.S. high-Technology firms from abroad, increasing dependence on foreign and civilian sources of technology for use in military systems, and growing technological sophistication of our adversaries.

These challenges formed the basis on which the Senate Committee on Armed Services requested an assessment of the defense technology base. The first report of that assessment, "The Defense Technology Base: Introduction and Overview" (OTA-ISC-374, March 1988), gave an introduction to the defense technology base, while the second, "Holding the Edge: Maintaining the Defense Technology Base" (OTA-ISC-420, April 1989), analyzed several major problems in depth. It examined the management of Department of Defense laboratories, how technologies are introduced into defense systems, and the exploitation of civilian technologies for defense needs, keeping in mind the questions of encouraging rapid military access to civilian technologies, as well as maintaining the health of the technology base.

In the course of producing the "Holding the Edge" report, extensive analyses were performed that were too voluminous for inclusion in the report. I believe that those analyses are of sufficient interest to be presented in their own right, and they are included in this volume. Three of the appendixes deal with the DoD acquisition processes, three deal with industry case studies (fiber optics, advanced composites, and software), and the remaining two appendixes concern European and Japanese defense technology research, development and management.

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NOTE: OTA appreciates and is grateful for the valuable assistance and thoughtful critiques provided by the advisory panel members. The panel does not, however, necessarily approve, disapprove, or endorse this report. OTA assumes full responsibility for the report and the accuracy of its contents.

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