Holding the Edge: Maintaining the Defense Technology Base

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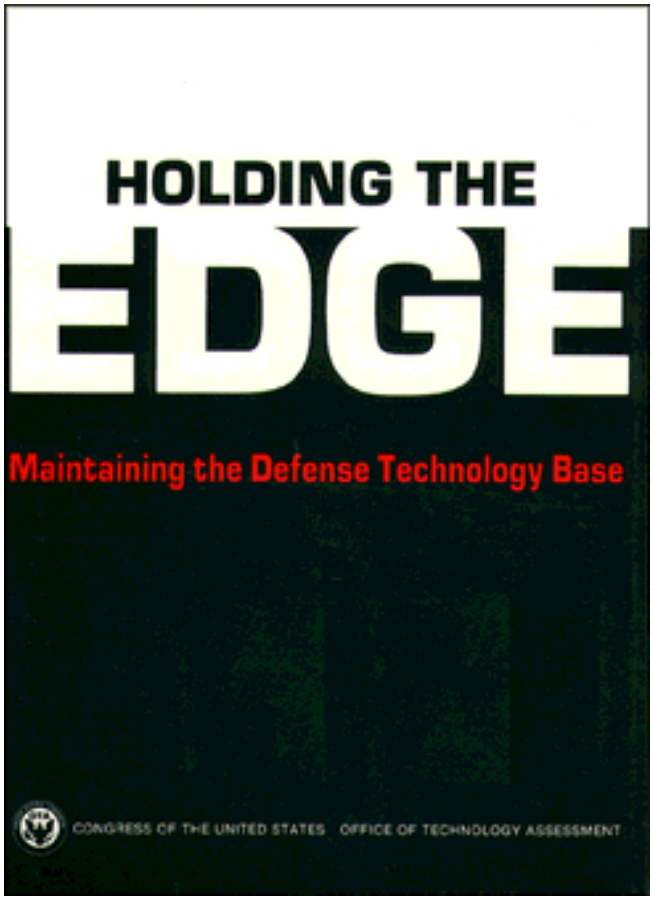

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Foreword

Technological superiority has been a cornerstone of United States security and industry since World War II. That cornerstone is not crumbling, but over the past decade it has weathered significantly. Foreign companies have made deep inroads into high-technology markets that had been more or less the exclusive domain of U.S. industry. In addition to causing economic problems, this has fostered dependence on foreign sources for defense equipment at a time when the technology in defense systems comes increasingly from the civilian sector. At the same time, the Department of Defense reports that Soviet defense technology is catching up with ours, and sophisticated Western military equipment is routinely sold to third world nations.

These trends-and others-have prompted the Senate Committee on Armed Services to ask what needs to be done to maintain the base of high technology on which U.S. national security depends. This report, the second of OTA's assessment "Maintaining the Defense Technology Base," looks into that question in some depth. An earlier report, *The Defense Technology Base: Introduction and Overview (OTA-ISC-374,* March 1988), provided a broad view of the defense technology base and the concerns regarding its health.

This report develops some of the ideas introduced in the first report. It examines the management of DoD technology base programs and laboratories. It also analyzes the process through which technology is introduced into defense systems, in order to understand why it takes so long and what might be done to speed the process up. Finally, this report examines the exploitation of civilian commercial sector technology for defense needs. It concentrates on the dual questions of expediting military access to civilian technology and keeping the necessary base of technology alive and well in the United States. Volume 2 of this report contains extensive appendices and will be published in the summer of 1989.

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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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