

*Verification Technologies: Managing
Research and Development for Cooperative
Arms Control Monitoring Measures*

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VERIFICATION TECHNOLOGIES

Managing Research and Development
for Cooperative Arms
Control Monitoring Measures



CONGRESS OF THE UNITED STATES
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Foreword

Cooperative monitoring measures, including on-site inspections, are now a regular feature of international arms control agreements. The Intermediate Nuclear Forces (INF) Treaty, the Threshold Test Ban Treaty, the Conventional Forces in Europe Treaty, the prospective Strategic Arms Reduction Talks (START) Treaty, and the proposed Chemical Weapons Convention all contain such measures. This new element of arms control verification is likely to be a part of any future arms control arrangements in which the United States becomes involved. How well prepared are we for this new era?

The Senate Foreign Relations and House Foreign Affairs Committees asked OTA to undertake an assessment centering on the technologies and techniques of monitoring the START Treaty. (The first report of this study, focusing on the START Treaty, was delivered in the summer of 1990.) In its request, the Foreign Affairs Committee also called on OTA to address the “. . . newer technologies that can be brought to bear on such cooperative verification measures as manned on-site inspections, manned perimeter and portal monitoring, and unmanned on-site monitoring.” The committee added that “it would be useful to place these technologies in the broader context of verification technologies and methods.’

This report is one of OTA’s responses to the latter request: it examines the management of the research and development process from which the new technologies are emerging. (Another response to the committee request, to be completed in May 1991, will take the form of a report analyzing at length one potential cooperative monitoring measure, aerial surveillance.) Partly as a result of the way in which the research and development process is managed, the allocation of research resources appears to be geared to meeting short-term needs and solving isolated problems, rather than to pursuing long-term goals and developing integrated verification regimes for the future. Our report identifies a range of organizational options that might help improve the balance of research emphasis.

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U JOHN H. GIBBONS
Director

Technologies for Verifying a Strategic Arms Reduction Treaty Advisory Panel

Rodney Nichols, *Chairman*

Scholar-in-Residence, The Carnegie Corporation of New York

James R. Blackwell
Director, International Security
Meridian Corp.

Ashton Carter
Director
Center for Science and International Affairs
Harvard University

Sidney Drell
Stanford Linear Accelerator Center
Stanford University

Richard Garwin
IBM Fellow
Thomas J. Watson Research Center

James Goodby
Distinguished Service Professor
Carnegie-Mellon University

Lt. Gen. Andrew Goodpaster, USA (retired)
chairman
The Atlantic Council

Sidney Graybeal
Chief Scientist
SAIC

Roger Hagengruber
Vice President for Exploratory Systems
Sandia National Laboratories

William R. Harris
The Rand Corp.

Admiral Bobby Inman
SAIC

Michael Krepon
President
Henry L. Stimson Center

Stephen Lukasik
Vice President & Chief Scientist
TRW/Space Defense Sector

Raymond McCrory
former Chief, Arms Control Intelligence Staff
Consultant

Ernest Mettenet
former CEO Hercules Aerospace
Consultant

Stephen Meyer
Professor of Political Science
MIT

Lt. Gen. William E. Odom, USA (retired)
Director of National Security Studies
Hudson Institute

George Rueckert
Senior Analyst
Meridian Corp.

Albert D. Wheelon
former Chairman and CEO, Hughes Aircraft Co.
Consultant

Charles Zraket
Trustee
The MITRE Corp.

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OTA Project Staff—START Verification

Lionel S. Johns, *Assistant Director, OTA
Energy, Materials, and International Security Division*

Alan Shaw, *International Security and Commerce Program Manager*

Thomas Karas, *Project Director*

Arthur **chat-o**

Brian McCue

Christopher Waychoff

Administrative Staff

Donna Reynolds

Jacqueline Robinson-Boykin

Louise Staley

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Los Alamos National Laboratory
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