

Incidental Paper

**Seminar on Intelligence, Command,  
and Control**

**Guest Presentations, Spring 1991:**

C. Kenneth Allard, David Y. McManis, John H. Cushman,  
Carnes Lord, Charles L. Stiles, John M. Ruddy,  
Joseph S. Toma, Duane P. Andrews,  
Eugene B. Lotochinski, Paul R. Schwartz

**Program on Information  
Resources Policy**

Harvard University  
Center for Information Policy Research  
Cambridge, Massachusetts

An incidental paper of the Program on Information  
Resources Policy

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and Control**

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Project Director:  
John F. McLaughlin

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We also wish to thank Richard Magnan for his logistical efforts on behalf of the seminar.

The responsibility for any sins of omission or commission nonetheless remains entirely ours.

John F. McLaughlin  
Anthony G. Oettinger

## **Introduction**

The papers in this volume are lightly edited transcripts of presentations and discussions ordered in the sequence in which they took place. The informality of oral exposition interrupted by questions or comments has been preserved. Only pauses and repetitions have been eliminated and tripping sentences smoothed. Substance has, as far as possible, been left unaltered. All guests made their presentations in an open forum, forewarned that neither classified nor proprietary matters are appropriate in a university classroom.

The central theme of the seminar, as in previous years, was the manner in which institutions structure intelligence, command, and control activities to serve as their organizational nervous systems. Each speaker addressed some aspect of how organizations gather and use information in order to survive and prosper in a hostile world. With one exception, all of our speakers in the 1991 series came from the national security arena.

Much of the 1991 seminar series took place against the backdrop of the Gulf War. Because we quickly forget the details of historical events, we note for our readers that Iraqi forces invaded Kuwait on 2 August 1990. The Operation Desert Storm air campaign commenced on 16 January 1991 and the land campaign started on 24 February. After 100 hours, the ground war was halted on 28 February 1991. Where appropriate, we indicate the date of the individual speaker's presentation within the context of the Desert Shield/Desert Storm chronology.

We were joined in a number of our sessions by Professor Frank Snyder of the Naval War College.



## Proceedings of the Harvard Seminar on Intelligence, Command, and Control

John F. Kennedy School of Government  
Harvard University

Anthony G. Oettinger, Professor of Information Resources Policy, and John F. McLaughlin, Executive Director of the Program on Information Resources Policy, have had a continuing interest in the ways in which institutions draw on systems of people, policies, and technologies to gather and use information for survival and growth. Since 1980 their graduate seminar on intelligence, command, and control has explored this topic with a series of guest speakers from military organizations, civil government, and businesses. While the guest speakers tend to be practitioners of the decision-making process, some are theoreticians who attempt to see patterns in the chaos of day-to-day crises. Taken as a whole, the series chronicles the recent history of this field.

The following descriptions of previous volumes identify the speakers' roles at the time of their presentations.

***Guest Presentations, Spring 1990.*** [146 pages; December 1991/Incidental Paper: I-90-3]  
This year's seminar series stressed the role of intelligence in organizations. A number of speakers addressed the challenges confronting the U.S. intelligence apparatus in the Post-Cold War political environment.

**Lt. Gen. James Cassity, Jr., USAF, Director, Command, Control & Communications (J-6), Joint Chiefs of Staff:** "Restructuring Military Policy to Reflect Worldwide Political Changes."

**Kenneth M. Duberstein, President and CEO of The Duberstein Group, formerly Chief of Staff to President Reagan:** "The White House Information Process."

**Thomas K. Latimer, Staff Director, House Permanent Committee on Intelligence, U.S. House of Representatives:** "The Congressional Intelligence Committees."

**James W. Lucas, Dean, School of Professional Studies, Defense Intelligence College:** "The Information Needs of Presidents."

**Gordon Negus, Executive Director, Defense Intelligence Agency:** "Intelligence in Support of U.S. Foreign Policy."

**Vice Admiral W. O. Studeman, Director, National Security Agency:** "The Philosophy of Intelligence."

**Major Gen. C. Norman Wood, Assistant Chief of Staff/Intelligence, U.S. Air Force:** "The Policy Aspect of Intelligence."

**Col. Joseph Zadarecky, II, Chief, Tactical Command and Control Division, Directorate of Operations, HQ U.S. Air Force:** "The Role of the Air Force in U.S. Counternarcotics Policy."

***Guest Presentations, Spring 1989.*** [132 pages; August 1990/Incidental Paper: I-90-3]  
This year's presentations included continuing assessments of the Defense Reorganization Act of 1986, a look at the impact of new technologies on C<sup>3</sup>I planning and perspectives on intelligence, command and control activities in some civilian domains.

**James M. Fox**, Assistant Director in Charge, New York City, Federal Bureau of Investigation: "Crisis Management at the FBI."

**Robert T. Herres**, General, USAF, and Vice Chairman, Joint Chiefs of Staff: "The Role of the Joint Chiefs After the 1986 Defense Reorganization Act."

**Stuart E. Johnson**, Director, Strategic Concepts Development Center, INSS, National Defense University: "Command and Control Education and Research."

**John F. Magee**, Chairman of the Board, Arthur D. Little, Incorporated: "Some Business Analogies to C<sup>3</sup>I."

**David Y. McManis**, Director, Operations Security Organization, National Security Agency: "National Security and the 'Democratization' of Information."

**John T. Myers**, Lieutenant General, USA, and Director, Defense Communications Agency: "Future Directions for Defense Communications."

**Charles A. Zraket**, President and CEO, The MITRE Corporation: "Four Vital Issues in C<sup>3</sup>I."

**Guest Presentations, Spring 1988.** [176 pages; March 1989/Incidental Paper: I-89-1]  
Speakers in this series addressed a variety of topics, but two themes predominated. The first of these was the reorganization of the U.S. Department of Defense in accordance with the Goldwater-Nichols Reorganization Act of 1986. The second major theme was the role of Special Operations Forces and Low Intensity Conflict (SOF/LIC) in defense planning and organization.

**Frank J. Breth**, Brigadier General, USMC, Director of C<sup>4</sup>I<sup>2</sup> Department/Director of Intelligence: "Getting in Front of C<sup>4</sup>I<sup>2</sup> Problems."

**Ruth M. Davis**, President, Pymatuning Group; formerly an Assistant Secretary of Energy and Deputy Under Secretary of Defense: "Putting C<sup>3</sup>I Development in a Strategic and Operational Context."

**Robert T. Herres**, General, USAF, and Vice Chairman, Joint Chiefs of Staff: "Strengthening the Chairman of the Joint Chiefs of Staff."

**Rae M. Huffstutler**, Deputy Director for Administration; formerly Director, National Photographic Interpretation Center, Central Intelligence Agency: "Intelligence Sources and Their Applications."

**Robert C. Kingston**, General, USA, (ret.); formerly Commander-in-Chief, United States Central Command: "The Special Operations Command: Structure and Responsibilities."

**James R. Locher III**, Professional Staff Member, Senate Committee on Armed Forces: "Special Operations and Low Intensity Conflict: A Congressional Perspective."

**Earl F. Lockwood**, President and Chief Executive Officer, Betac Corporation: "The Evolution of Special Operations Forces."

**John F. McLaughlin**, Executive Director, Program on Information Resources Policy, Harvard University: "The Rise in Low Intensity Conflict: A Theory."



**Richard L. Thornburgh**, Director, Institute of Politics, Kennedy School of Government, Harvard University, formerly Governor of Pennsylvania: "Three Mile Island: A Case Study in C<sup>3</sup>I for Crisis Management."

**Jerry O. Tuttle**, Vice Admiral, USN, and Director, Command, Control and Communications Organization of the Joint Chiefs of Staff (J-6): "Tailoring C<sup>3</sup>I Systems to Military Users."

*Guest Presentations, Spring 1987.* [192 pages; May 1988/Incidental Paper: I-88-1]

Speakers explored the information requirements of national, military, and business organizations at a time of technological and organizational change in the military and civilian worlds. The reorganization of the U.S. Department of Defense in accordance with the Goldwater-Nichols Defense Reorganization Act of 1986 was the occasion for analysis and re-evaluation.

**Archie D. Barrett**, Professional Staff, House Armed Services Committee; formerly Military Staff Assistant to the Executive Secretary of the Defense Organization Study: "Defense Reorganization: A View from the House."

**Robert L. DeGross**, Provost, Defense Intelligence College: "Teaching Intelligence."

**Fred R. Demech, Jr.**, Captain, U.S. Navy; formerly executive director, the President's Foreign Intelligence Advisory Board: "Making Intelligence Better."

**Greg Foster**, Senior Fellow, Institute for National Strategic Studies, National Defense University: "The National Defense University's Command and Control Program."

**James R. Locher III**, Professional Staff, Subcommittee on Projection Forces and Regional Defense, Senate Committee on Armed Services: "Defense Reorganization: A View from the Senate."

**George C. Lodge**, Professor, Harvard Graduate School of Business Administration; formerly Director of Information, U.S. Department of Labor and Assistant Secretary of Labor for International Affairs: "Ideology and National Competitiveness."

**Eugene B. Lotochinski**, Vice President, Market Development, Northern Telecom Inc.: "The Information Management Marketplace."

**Rodney B. McDaniel**, Executive Secretary, National Security Council: "C<sup>3</sup>I: A National Security Council Perspective."

**Michael J. Zak**, Vice President, Marketing, Concord Communications, Inc.: "Coming of Age in C<sup>3</sup>I."

*Guest Presentations, Spring 1986.* [168 pages; February 1987/Incidental Paper: I-87-1]

The speakers this year addressed a variety of topics, with two predominant themes. The first was the manner in which organizations — military, diplomatic, business — obtain and use intelligence. The second theme was how organizations protect information from the growing threat of electronic interception.

**Robert Conley**, formerly Deputy Assistant Secretary for Advanced Technology and Analysis and Acting Assistant Secretary for Electronic Systems and Information Technology, Department of the Treasury: "Data Security in the Information Age."

**Harold Daniels**, Deputy Director for Information Security at the National Security Agency; formerly Assistant Deputy Director for Communications Security: "The Role of the National Security Agency in Command, Control and Communications."

**John Grimes**, Director of National Security Telecommunications and Director of Defense Programs (C<sup>3</sup>) of the National Security Council: "Information Technologies and Multinational Corporations."

**Bobby R. Inman**, President and Chief Executive Officer, Microelectronics and Computer Technology Corporation; formerly Director of the Office of Naval Intelligence, Director of the National Security Agency, and Deputy Director of Central Intelligence: "Technological Innovation and the Cost of Change."

**Richard J. Levine**, Editorial Director, Data Base Publishing, Dow Jones & Company: "Data Base Publishing for Business Intelligence."

**Mark Lowenthal**, Acting Director, Office of Strategic Forces Analysis, Bureau of Intelligence and Research, Department of State: "The Quest for 'Good' Intelligence."

**Clarence E. McKnight**, Director for Command, Control, and Communications Systems, Organization of the Joint Chiefs of Staff; formerly Commanding General, U.S. Army Communications Command: "C<sup>3</sup>I Systems at the Joint Level."

**Lionel Olmer**, formerly Under Secretary for International Trade, U.S. Department of Commerce, heading the International Trade Administration; currently member of Paul, Weiss, Rifkind, Wharton & Garrison, an international law firm: "Intelligence Techniques for the American Business Community."

***Guest Presentations, Spring 1985.*** [180 pages; April 1986/Incidental Paper: I-86-1]

These presentations examined the link between defense organization and the efficacy of command, control, communications and intelligence, within the context of current debate over reorganization of the Joint Chiefs of Staff.

**Archie D. Barrett**, Professional Staff, House Armed Services Committee; formerly Military Staff Assistant to the Executive Secretary of the Defense Organization Study: "Politics and the Military — The Climate for Reform."

**Richard D. DeLauer**, President, Orion Group Limited; formerly Under Secretary of Defense for Research and Engineering: "A Consultant's View."

**Lincoln Faurer**, formerly Director of the National Security Agency and Chief, Central Security Service, Fort Meade, Maryland: "The Role of Intelligence Within C<sup>3</sup>I."

**Robert T. Herres**, Commander in Chief, unified U.S. Space Command, Aerospace Defense Command, and North American Aerospace Defense Command, and Commander of the Air Force Space Command: "A CINC's View of Defense Organization."

**Robert Hilton**, consultant specializing in national and international security affairs and political risk analysis; formerly Vice Director for Operations, Joint Chiefs of Staff: "Roles of the Joint Chiefs of Staff in Crisis Management."

**Samuel P. Huntington**, Director, Center for International Affairs, Harvard University; formerly Coordinator of Security Planning for the National Security Council: "Centralization of Authority in Defense Organizations."

**Donald Latham**, Assistant Secretary of Defense, "C<sup>3</sup>I: A View from Inside OSD."

**Richard G. Stilwell**, Chairman, Department of Defense Security Review Commission; formerly Deputy Under Secretary of Defense for Policy: "Structure and Mechanisms for Command and Control."

**Guest Presentations, Spring 1984.** [125 pages; February 1985/Incidental Paper: I-85-2]  
These presentations explored the roles of communication, information, and warning systems in peacekeeping, crisis management, and economic security.

**Richard S. Beal**, until his death in 1984, Special Assistant to the President for National Security Affairs and Senior Director for Crisis Management Systems and Planning: "Decision Making, Crisis Management, Information and Technology."

**Stuart E. Branch**, Deputy Assistant Secretary for Communications in the Department of State and member, National Communications System and U.S. Communications Security Board of the National Security Council: "C<sup>3</sup>I and Crisis Management."

**Leo Cherne**, Executive Director, Research Institute of America: "Television News and the National Interest."

**Hubert L. Kertz**, formerly President and Managing Director, American Bell International, Inc., with **Anthony G. Oettinger**: "With AT&T in Iran."

**David McManis**, National Intelligence Officer for Warning and Director, National Warning Staff: "Warning as a Peacekeeping Mechanism."

**Robert A. Rosenberg**, Vice Commander in Chief for the North American Aerospace Defense Command and Assistant Vice Commander for the U.S. Air Force Space Command: "Strategic Defense: A Challenge for C<sup>3</sup>I."

**James W. Stansberry**, formerly Commander of the Air Force Electronic Systems Division: "Cost-Effective Rearmament."

**W. Scott Thompson**, Director of Programs for the American Security Council Foundation and President, Strategic Research Associates: "U.S.-U.S.S.R. Information Competition."

**(The seminar was not held during 1983.)**

**Guest Presentations, Spring 1982.** [181 pages; December 1982/Incidental Paper: I-82-3]  
This series of C<sup>3</sup>I sessions emphasized national security issues, exploring policy and planning as well as procurement and implementation perspectives. Guests discussed not only the impact within the defense community of rapidly expanding technology but also the public consequences — national and international — of intelligence gathering and use.

**Richard D. DeLauer**, Under Secretary of Defense for Research and Engineering: “The View from the Hot Seat.”

**Hillman Dickinson**, Director for Command, Control and Communications Systems, Joint Chiefs of Staff: “Planning for Defense-Wide Command and Control.”

**Gerald P. Dinneen**, Corporate Vice President, Science and Technology, Honeywell, Inc.; formerly Assistant Secretary of Defense for Communications, Command, and Control, and Intelligence: “C<sup>3</sup> Priorities.”

**Richard H. Ellis**, formerly Commander in Chief, Strategic Air Command: “Strategic Connectivity.”

**R. Thomas Marsh**, Commander, Air Force Systems Command: “Air Force C<sup>3</sup>I Systems.”

**Thomas H. McMullen**, Deputy Commander, Tactical Air Command: “A Tactical Commander’s View of C<sup>3</sup>I.”

**William G. Miller**, Associate Dean and Professor of International Politics, Fletcher School of Law and Diplomacy, Tufts University: “Foreign Affairs, Diplomacy and Intelligence.”

**Richard G. Stilwell**, Deputy Under Secretary of Defense for Policy: “Policy and National Command.”

**Guest Presentations, Spring 1981.** [214 pages; December 1981/Incidental Paper: I-81-9]  
The perspective in this volume encompasses the Congress, combatant commands, defense contractors, and technological innovators. As part of an ongoing open forum on C<sup>3</sup>I, the sessions brought together the intersecting vantage points of industrial suppliers and innovators, government funders and decision makers, and principals in military intelligence.

**William O. Baker**, formerly Chairman, Bell Laboratories, Inc.: “The Convergence of C<sup>3</sup>I Techniques and Technology.”

**John H. Cushman**, Lieutenant General, U.S. Army, (ret.), management consultant : “C<sup>3</sup>I and the Commander: Responsibility and Accountability.”

**Richard D. DeLauer**, Executive Vice President, TRW, Inc.: “A Major Contractor’s View of C<sup>3</sup>I.”

**B.R. Inman**, Deputy Director of Central Intelligence: “Issues in Intelligence.”

**James M. Osborne**, formerly Senior Vice President, E-Systems, Inc.: “Meeting Military Needs for Intelligence Systems.”

**David C. Richardson**, Vice Admiral, U.S. Navy (ret.); consultant, Defense Intelligence Review Panel, the Defense Science Board, and other panels: "The Uses of Intelligence."

**Charles Rose**, U.S. Representative; Chairman, Policy Group on Information and Computers: "Congress and C<sup>3</sup>I."

**Charles W. Snodgrass**, Vice President, Financial Planning and Management, Electronic Data Systems Corp.; formerly Assistant Secretary of the Air Force for financial management: "Funding C<sup>3</sup>I."

**Guest Presentations, Spring 1980.** [183 pages; December 1980/Incidental Paper: I-80-6]  
These first presentations in the series described C<sup>3</sup>I principally from the perspective of national policymaking in the executive branch.

**William E. Colby**, counsel, Reid & Priest, formerly Director of Central Intelligence: "The Developing Perspective of Intelligence."

**B.R. Inman**, Director, National Security Agency and Chief, Central Security Service: "Managing Intelligence for Effective Use."

**William Odom**, Military Assistant to the President's Assistant for National Security Affairs: "C<sup>3</sup>I and Telecommunications at the Policy Level."

**Lionel Olmer**, Director of International Programs, Motorola, Inc; formerly Acting Executive Secretary, President's Foreign Intelligence Advisory Board: "Watchdogging Intelligence."

**Lee Paschall**, Consultant, formerly Director, Defense Communications Agency and Manager, National Communications System: "C<sup>3</sup>I and the National Military Command System."

**Robert A. Rosenberg**, Policy Assistant to the President for National Security Affairs, National Security Council Staff: "The Influence of Policy Making on C<sup>3</sup>I."

**Raymond Tate**, formerly Deputy Assistant Secretary of the Navy and Deputy Director of the National Security Agency: "Worldwide C<sup>3</sup>I and Telecommunications."

**A.K. Wolgast**, Manager, Planning and Analysis Dept., EXXON International: "Oil Crisis Management."

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## Glossary

ADP	automated data processing	EDS	electronic data systems
AFB	air force base	FBI	Federal Bureau of Investigation
ARVN	Army of the Republic of Vietnam	FCC	Federal Communications Commission
ATO	air tasking order	FSO	Foreign Service Officer
AWACS	Airborne Warning and Control System	GPS	global positioning system
C <sup>3</sup> I	command, control, communications, and intelligence	HUMINT	Human Intelligence
CENTCOM	Central Command	IC	intelligence community
CFE	conventional forces in Europe	ICBM	intercontinental ballistic missile
CIA	Central Intelligence Agency	IFF	identification friend or foe
CINC	Commander in Chief	IMINT	Imagery Intelligence
CINCCENT	Commander in Chief, Central Command	ISDN	Integrated Services Digital Network
CINCEUR	Commander in Chief, Europe	JCS	Joint Chiefs of Staff
CINCLANT	Commander in Chief, Atlantic	JFACC	Joint Force Air Component Commander
CINCPAC	Commander in Chief, Pacific Command	Joint STARS	Joint Surveillance Target Attack Radar
CINCSAC	Commander in Chief, Strategic Air Command	JTF	Joint Task Force
COMINT	Communications Intelligence	JTIDS	Joint Tactical Information Distribution System
CONUS	continental United States	MEF	Marine Expeditionary Force
CNN	Cable News Network	NASA	National Aeronautics and Space Administration
DAB	Defense Acquisition Board	NATO	North Atlantic Treaty Organization
DAMA	demand assigned multiple access	NEACP	National Emergency Airborne Command Post
DCA	Defense Communications Agency	NFIC	National Foreign Intelligence Council
DCS	Defense Communications System	NIE	National Intelligence Estimates
DDN	Defense Data Network	NMCC	National Military Command Center
DIA	Defense Intelligence Agency	NORAD	North American Aerospace Defense Command
DIRID	directional infrared intrusion detection	NSA	National Security Agency
DOD	Department of Defense	NSC	National Security Council
DPG	Defense Program Group	OPCON	operational control
DPRB	Defense Policy Review Board		
DSCS	Defense Satellite Communication System		
DSN	Defense Switched Network		

<b>OSD</b>	<b>Office of the Secretary of Defense</b>	<b>SIGINT</b>	<b>Signal Intelligence</b>
<b>PACOM</b>	<b>Pacific Command</b>	<b>SOUTHCOM</b>	<b>Southern Command</b>
<b>PBX</b>	<b>private branch exchange</b>	<b>STU</b>	<b>secure telephone unit</b>
<b>PGM</b>	<b>precision guided munitions</b>	<b>TAC</b>	<b>Tactical Air Command</b>
<b>PUC</b>	<b>public utility commission</b>	<b>TQM</b>	<b>total quality management</b>
<b>SAC</b>	<b>Strategic Air Command</b>	<b>WIS</b>	<b>WWMCCS Information System</b>
<b>SDI</b>	<b>Strategic Defense Initiative</b>	<b>WWMCCS</b>	<b>Worldwide Military Command and Control System</b>
<b>SECDEF</b>	<b>Secretary of Defense</b>		





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