



# FOUNDERS OF NATIONAL RECONNAISSANCE

FREEDOM'S SENTINEL IN SPACE  
1960-2000



FOUNDERS  
OF NATIONAL RECONNAISSANCE

FREEDOM'S SENTINEL IN SPACE

1 9 6 0 - 2 0 0 0

# A PERSONAL NOTE

## FROM THE DIRECTOR

*The* 10 individuals included in this booklet



occupy a unique position in the history of the National Reconnaissance Office.

These gentlemen, through their wise advice and counsel, persuaded decision-makers that a national policy of peacetime strategic reconnaissance could, and would, succeed.

They have, therefore, earned special recognition for their significant contributions to the founding of national reconnaissance. This mix of advisors, innovators, and scientists instilled in the nation's leaders a sense of confidence that establishing the National Reconnaissance Office was the right thing to do and would pay huge dividends for the country in the years to come.

By their influence, they shaped the emerging discipline of national reconnaissance and guaranteed for the United States a position of world leadership in the arena of space-based intelligence information collection.

*W. R. Healy*





FOUNDERS  
OF NATIONAL RECONNAISSANCE

## WILLIAM O. BAKER, PH.D.

A physical chemist and signals intelligence expert at AT&T Bell Laboratories, Dr. William Baker served as scientific counselor to the NSA, CIA, USN, and NRO on overhead and earth-based reconnaissance systems. He was a member of President Eisenhower's special "Ad Hoc Task Force for the Application of Communications Analysis for National and International Security," which was the signals intelligence equivalent of the Technologies Capability Panel. He also served on the President's Foreign Intelligence Advisory Board and the President's Science Advisory Committee, and advised Presidents Eisenhower, Reagan and Bush on intelligence matters. He was instrumental in shaping the course of signals intelligence, communications, and encryption/decryption technology.

*Service to National Reconnaissance: 1950-1980*

## MERTON E. DAVIES

An engineer, reconnaissance system designer, imagery interpreter, and space cartographer, Mr. Merton Davies participated in all early USAF reconnaissance studies and planning, including the Leghorn-directed Intelligence Development Planning Objects. He invented the Spin-Pan camera, and collaborated in the film recovery satellite proposal adopted by the USAF that became CORONA. Employed throughout his career at RAND, he continued to serve on NRO and other advisory panels that established reconnaissance requirements and advised on competing reconnaissance systems.

*Service to National Reconnaissance: 1948-1975*



## SIDNEY D. DRELL, PH.D.

A theoretical physicist at Stanford University, Dr. Sidney Drell served on the President's Foreign Intelligence Advisory Board and the President's Science Advisory Committee in intelligence advisory roles. He served as a key scientific consultant to Program B, and served on the Technology Review Panel of the Senate Select Committee on Intelligence where he was instrumental in securing approval and support for several NRO special projects.

*Service to National Reconnaissance: 1960–*

## RICHARD L. GARWIN, PH.D.

A physicist, Dr. Richard Garwin served on the President's Science Advisory Committee. He chaired PSAC's panels on Military Aircraft, Anti-submarine and Naval Warfare, and advised on intelligence aspects and programs in each field. He served as a key scientific advisor to Program B, and established standards and found solutions for electromechanical design of modern long-life spacecraft. As a champion of Electro-Optical Imaging, he helped Henry Kissinger understand the critical role it would have for our national defense.

*Service to National Reconnaissance: 1957–*

## AMROM H. KATZ

A physicist involved in lens and camera design for aerial systems, Mr. Amrom Katz performed the first experimental simulation of electro-optical imaging by a reconnaissance satellite. At RAND, he co-directed a project on peacetime overflight reconnaissance, and co-proposed film-recovery satellites as an immediate alternative to the near-real-time readout satellite then under development as the SAMOS Program by the USAF. This proposal was eventually established as the CORONA Project by President Eisenhower.

*Service to National Reconnaissance: 1941–1976*

## JAMES R. KILLIAN, JR., PH.D.

President of the Massachusetts Institute of Technology, Dr. James Killian chaired the Technological Capabilities Panel (TCP/Surprise Attack) for President Eisenhower that recommended building the U-2 aircraft and reconnaissance satellites. He chaired the President's Foreign Intelligence Advisory Board and the President's Science Advisory Committee, and participated in the evaluation of SAMOS that resulted in removing that project from Air Force control. He was subsequently involved in shaping the agreements between the Department of Defense and CIA that structured the NRO.

*Service to National Reconnaissance: 1950–1973*

## EDWIN H. LAND, PH.D.

Dr. Edwin Land was the Polaroid CEO and chairman of the Intelligence Subcommittee of the Technology Capabilities Panel. He was an imagery intelligence expert and scientific counselor to Presidents Eisenhower, Kennedy, Johnson, and Nixon. As Chairman of the President's Science Advisory Committee's Intelligence Panel, he advised Program B on new overhead systems and improvements to existing ones. He played a vital role in advising President Nixon on the capabilities of Electro-Optical Imaging.

*Service to National Reconnaissance: 1952–1980*

## FRANK W. LEHAN

An electrical engineer, Mr. Frank Lehan was a President's Science Advisory Committee member and served on the Land Panel that advised the NRO and Program B on overhead reconnaissance systems. He was instrumental in the decision to proceed with an important signals intelligence satellite system, and contributed to the reflector design for that system.

*Service to National Reconnaissance: 1965–1975*

## WILLIAM J. PERRY, PH.D.

A mathematician, Dr. William Perry served in the U.S. Army where, as a reserve officer, he became involved in signals intelligence collection and subsequently advised NSA and the CIA on programs to intercept and evaluate Soviet missile telemetry and communications intelligence. He chaired the "Perry Panel" that advised Program B on all overhead signals intelligence collection systems. He later served as Under Secretary of Defense for Research and Engineering and Secretary of Defense.

*Service to National Reconnaissance: 1955–1997*

## EDWARD M. PURCELL, PH.D.

Harvard Nobel Laureate and radar expert, Dr. Edward Purcell worked on all early overhead reconnaissance projects (U-2, A-12/SR-71, and others) that operated at extreme altitudes. His most significant contribution involved methods to make these vehicles, if not invisible to radar, hard to observe with radar using new materials. This feat led to later efforts that produced Have Blue, F-117, B-2, and other U.S. special projects. He also chaired the Land Panel subcommittee that selected the Program B follow-on film recovery reconnaissance system.

*Service to National Reconnaissance: 1950–1965*

