

Marshall H. Kaplan, Ph.D.
Expert Witness and Technology Consultant
Aircraft, Spacecraft and Launch Vehicles

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Marshall H. Kaplan, Ph.D., has been an expert witness and technical consultant on many litigations involving aircraft, satellites, contracts and intellectual property issues. He served as an expert witness for the plaintiff in multiple multi-hundred-million dollar patent litigations. Dr. Kaplan has served as a technical consultant in contract disputes, accidents and major technology export violation cases. He has been deposed many times and has testified in Federal District Court.

Dr. Kaplan received a B.S. in Aeronautical Engineering from Wayne State University, followed by a Master's degree in Aeronautics and Astronautics from M.I.T. After four years of industrial experience, Dr. Kaplan attained a Ph.D. degree in Aeronautical and Astronautical Sciences from Stanford University. During his 13-year tenure as Professor of Aerospace Engineering at Pennsylvania State University he was a recipient of the Award for Outstanding Achievement in Research in the College. He taught several aeronautical and astronautical engineering courses. In aeronautics, he taught aircraft power plants, flight test engineering, aircraft stability and control and aircraft and autopilot design. Dr. Kaplan has been a pilot since 1968, and holds a multi-engine, instrument rating. He has logged more than 4,000 hours of flight time and has owned, operated and maintained six different aircraft. Dr. Kaplan is intimately familiar with aircraft systems, power plants, maintenance requirements and procedures and manufacturing techniques. He also taught many astronautics courses including spacecraft and launch vehicle design, orbital mechanics, space propulsion and power and advanced astrodynamics. He is affiliated with several professional organizations, e.g., a Fellow of the American Institute of Aeronautics and Astronautics, a Fellow of the American Astronautical Society and a full Member of the International Academy of Astronautics.

SPECIFICS ON EDUCATION

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| Ph.D. | Aeronautical and Astronautical Sciences, Stanford University |
| M.S. | Aeronautics and Astronautics, Massachusetts Institute of Technology |
| B.S. | Aeronautical Engineering Wayne State University (cum laude, ranked 1st in engineering) |

UNIVERSITY FACULTY EXPERIENCE

Sep 1968 to Nov. 1981 - Professor
Department of Aerospace Engineering
Pennsylvania State University
University Park, PA

This appointment specified a half-time research and half-time teaching program. Responsibilities included the organization and management of aerospace science and engineering research programs. Teaching areas included aerospace vehicle design, propulsion, stability and control, and flight test engineering.

SELECTED INDUSTRIAL EXPERIENCE CITATIONS

2012 to present Aerospace Consultant and Expert Witness
Satellite technology, systems and operations, launch vehicle design and systems engineering.

2008 to 2012 Senior Spacecraft Systems Engineer
Johns Hopkins University/Applied Physics Lab.
Design, development and operations of spacecraft for science and national security. Senior advisor on launch vehicle selection and performance.

1992 to 1993 Chief Engineer
EER Space Company
Design, development, assembly, integration and test of the new Conestoga launch vehicle family. Responsible for all engineering aspects and operations.

1981 to 1992 Aerospace Consultant
Management and technical consulting and training worldwide. Senior proposal consultant on government contracts quests for major air and space systems.

1970 Consultant
NASA Headquarters
Evaluation of satellite retrieval technology.

PROFESSIONAL MEMBERSHIPS

American Institute of Aeronautics and Astronautics (Fellow)
American Astronautical Society (Fellow)

HONOR SOCIETY MEMBERSHIPS

Tau Beta Pi (Engineering)
Omicron Delta Kappa (Leadership)
Sigma Pi Sigma (Physics)
Sigma Xi (Research)

HONORS RECEIVED

1995 Appointed to the National Research Council Study Group on Single-Stage-to-Orbit Launch Vehicle Technologies.
1978 Award for Outstanding Achievement in Research in the College of Engineering, Pennsylvania State University.
B.S. in Aeronautical Engineering with Distinction, 1961.
DuPont Memorial Fellowship, M.I.T., 1961-1962.
NASA Traineeship, Stanford University, 1966-1967.
NSF Traineeship, Stanford University, 1967-1968.

PROFESSIONAL SHORT COURSE TOPICS FOR SPACE PROFESSIONALS

“Space Principles for Industry Professionals”
“Basic Spacecraft Bus Design and Engineering”
“Spacecraft Dynamics and Control”
"Expendable Launch Vehicle Systems Design and Engineering"
"Introduction to Reusable Launch Vehicles”
"Advanced Launch Systems - Reusables”

BOOKS

1. Modern Spacecraft Dynamics and Control, M. H. Kaplan, Wiley and Sons, NY, 1976.
2. SPACE SHUTTLE: America's Wings to the Future, M. H. Kaplan, Aero Publishers, Fallbrook, CA, 1978. Second edition, 1983.
3. Acquiring Major Systems Contracts: Bidding Methods and Winning Strategies, M. H. Kaplan, Wiley and Sons, NY, 1988.

SAMPLE CASES

- Patent Infringement Cases
- Large Breach of Contract Cases
- Aircraft Patent Infringement Litigation
- Aircraft Contract Dispute
- Liquid Rocket Anti-Trust Case
- Launch Vehicle Patent Challenge (Ex Parte)

RECENTLY ISSUED KAPLAN PATENTS

1. Apparatus and Methods for Orbital Debris Removal US 9,617,017 B1
Issue Date: April 11, 2017
2. Apparatus and Methods for Orbital Debris Removal US 9,714,101 B1
Issue Date: July 25, 2017
3. Apparatus and Methods for Creating Artificial Geosynchronous Orbits
US 10,059,470 B1 Issue Date: August 28, 2018
4. Apparatus and Methods for Creating Artificial Near-Earth Orbits
US 10,543,939 B2 Issue Date: January 28, 2020