Ken Ford, bio & publications

Kenneth Ford, BS, MS, MBA

Soon after graduating from the University of Rhode Island, **Ken** began his career with NASA as an Electronics Engineer at the Kennedy Space Center (KSC) in Florida. He went on to spend 36 rewarding years with NASA in progressively responsible System Engineering and Project Management positions.

At KSC, Ken was responsible for the design and development of communications and telemetry systems in for Space Shuttle and Spacelab. In 1987, Ken accepted a management assignment at the Space Station Program Office (SSPO) in Reston, VA. In his six years at SSPO, Ken managed Section, Branch, and Division offices for International Element Integration, Concurrent Engineering, and Risk Assessments. In 1994 Ken was appointed Earth Probes Program Manager in NASA Headquarters, managing several projects national and internbational. Ken received a Certificate of Appreciation from NASDA for ADEOS, Certificate of Appreciation from NOAA, and the NASA Exceptional Service Medal. In 1996 Ken continued moved to the Goddard Space Flight Center, MD. This would include as the Special Assistant for Program Integration for the Earth Observation System (EOS) and the Program Manager for Solar Terrestrial Probes. Ken returned to NASA Headquarters in 2005 as the Space Network Program Executive. Ken retired from NASA in January 2009 after achieving a solid record of System Engineering and Project Management with the Space Shuttle, Space Station, Tracking and Data Relay Satellite System (TDRSS), and space science programs. He is now an associated partner pf Andromeda Systems Engineering.

Professional history:

July 2009 – Present - Manager and Consultant - Andromeda Systems Engineering LLC (US) - Managing Partner advising the Andromeda System Engineering Executive Council on business strategies, product development, and marketing. Plan and manage start-up activities for the Consulting Services Division. Available for contract positions as a Program Management Consultant. Also available for education activities, on the matters of project management and project risks management. Consulting services may include tasks such as: strategic planning, proposal preparation, project development, requirements definition, technical & management studies, independent/red team analysis, field office initiation, risk management, compliance, recruiting, and training. I have strong project experience and I'm a team leader who effectively meets goals through strong leadership, interpersonal communication, and analytical abilities.

2005 –2008 - Space Network Program Executive - NASA Headquarters; Washington, DC - Management of technical, programmatic, and budgetary aspects for the ground and flight segments of NASA's Space Network. This includes the nine operational Tracking and Data Relay Satellites (TDRS) in geosynchronous orbit. Manage a $90M budget, including $80M of reimbursable revenue. Establish guidance and priorities to the Space Network Project at GSFC for needed system modifications and upgrades to maintain a high operational proficiency. Managed the start-up activities for acquisition of two new satellites to the TDRS fleet (TDRS-K & TDRS-L). Developed programmatic requirements and waivers to NASA agency requirements to enable acquisition on a fast-track schedule. Security Clearance: Top Secret

2003 –2005 - Deputy Program Manager - Solar Terrestrial Probes - NASA Goddard Space Flight Center - Deputy Program Manager for Solar Terrestrial Probes (STP) Program in the Space Science Enterprise. Manager of the technical, programmatic, and budgetary aspects of STP Projects. These projects include Solar Terrestrial Relations Observatory (STEREO), Solar-B, Magnetospheric MultiScale (MMS), Geospace Electrodynamic Connections (GEC), and Magnetospheric Constellation (MagCON). Chaired the STEREO/SECCHI Task Team to recommend technical, programmatic, and management changes to correct deficiencies. All recommendations accepted and implemented. COTR of the general aerospace contract with the JHU/Applied Physics Laboratory (APL). Formulation Manager for Concept Study for Optical Communications experiment on the Mars 2009 Telesat mission. Phase A Study was completed and presented to Office of Space Science in May 2003. Proposal Manager for Microlensing Planet Finder (MPF), in response to a Discovery AO. The proposal was submitted to the Office of Space Science in July 2004.

1999 –2003 - Special Assistant for Program Integration - NASA Goddard Space Flight Center - Special Assistant for Program Integration for the Earth Observation System (EOS) at Goddard Space Flight Center (EOS). Integration Manager for EOS projects including Landsat-7, Terra, Aqua, Aura, ICESAT, and SORCE. Developed the EOS Program Plan which included the process for EOS

Program Integration and overall risk mitigation management. I was co-chair of a Goddard Study to evaluate technical, scientific, and budget impacts for the follow-on series of EOS missions. Ten candidate future mission concepts were presented to the Office of Earth Science at NASA Headquarters. This study resulted in definition of follow-on EOS and Earth Probes missions by the Earth Science Enterprise. I was also Team Lead of the Code 400 Formulation Transition Team. This team was chartered by the Code 400 Director to recommend how the Flight Programs & Projects Directorate (FPPD) would manage Formulation Projects transitioning from the STAAC Directorate. All recommendations were accepted and implemented.

1993 –1996 Program Manager - NASA Headquarters; Washington, DC - Earth Probes Program Manager in the Office of Mission to Planet Earth (MTPE). The function of this position is to serve as manager of the technical, programmatic, and budgetary aspects of Earth Probes Programs. These programs include the Total Ozone Mapping Spectrometers (TOMS) instrument, NASA Scatterometer (NSCAT) instrument, SeaWinds Scatterometer instrument, and the Japanese Advanced Earth Observing Satellites (ADEOS). My involvement in these programs culminated in the successful launches of the TOMS-EP in July 1996 and ADEOS in August 1996. In addition to the above MTPE responsibilities, I accepted a voluntary assignment as the technical chairman of the Gravity Probe B (GP-B) Independent Annual Review (IAR). I managed a team of individuals to review the technical and programmatic progress of the GP-B Program. The results of this review were briefed to the Program Management Council (PMC) in July 1995.

1991 – 1993 - Deputy Division Manager - NASA Space Station Program Office; Reston, VA - Management of Integrated Risk Assessment Reports (IRARs) for safety and reliability, availability analyses, support equipment management, PRACA process management, and interface/payload rack requirements. Represents the office chief as required in external meetings such as the Space Station Control Board (SSCB), the Integration Management Review (IMR), and Space Shuttle Safety Reviews. Assumed chairmanship of the Ground Support Equipment (GSE) Working Group (GSEWG) for integration of GSE design requirements, GSE interfaces, intersite deliverables, and technical issues. Defined a process of using the existing SIMSYLS and GO models at MSFC for performing a cost-effective availability analysis. Established the Problem Review Board (PRB) as a subgroup to the Integration Management Review (IMR) for disposition of system-level PRACA problems. Managed IRARs for the Program Incremental Design Review (PIDR), and was Team Lead of the Product Assurance Team for the PIDR in June 1993.

1990 –1991 - Branch Manager - NASA Space Station Program Office; Reston, VA - Branch manager responsible for a new organization dealing with development of the Integrated Failure Modes and Effects Analysis (IFMEA), Integrated Hazards Analysis (IHA), and the Space Station Operations Data Book (SSODB). Branch responsibility also included requirements definition for the International Standard Payload Rack (ISPR) and Interface Configuration Documents (ICDs). IHAs and IFMEAs were developed and presented at the Integrated System Preliminary Design Review (ISPDR) in December 1990 and the MTC Preliminary Design Review (PDR) in October 1991. Chaired the Product Assurance Team for the ISPDR. The initial set of technical requirements for the ISPR was developed and baselined in conjunction with Space Station laboratory module developers at MSFC, ESA, and NASDA. The outline and plan for developing the SSODB was completed and forwarded to JSC for development.

1987 – 1990 - Manager, International Elements Section - NASA Space Station Program Office; Reston, VA - Section management responsibility for interfacing and integrating each of the Space Station international partner hardware elements into the integrated Space Station. These elements include the Canadian Mobile Servicing Center (MSC), the Japanese Experiment Module (JEM), and the ESA Attached Pressurized Module (APM). Managed development of joint technical requirements documents with each international partner in which the applicability of program requirements were baselined. Technical Interchange Meetings (TIMs) were conducted with each of the international partners to identify technical issues with interfacing international hardware elements with the Space Station. Managed the resolution of technical issues identified from the TIMs. This included integration of several technical discipline areas including: interface definition & control, electrical power, data, berthing mechanisms, and verification.

1985 – 1987 - Logisitcs Manager - NASA Kennedy Space Center; Florida - Logistics planning of Space Station facilities, systems, and Ground Support Equipment (GSE) at the Kennedy Space Center (KSC). Study manager of Space Station Program Integrated Logistics System (ILS) development in which supportability of Space Station hardware was assessed and a prototype automated system for Logistics Support Analysis (LSA) developed. Study manager for Space Station Maintenance Technology Development Mission (TDM) in which conceptual definition of on-orbit maintenance technologies and an on-orbit maintenance test bed were evaluated. In addition to the above, I accepted a 90-day detail in 1987 to NASA Headquarters in Washington, D.C. I was directly involved in the start-up activities for the new Space Station Program Office. In this capacity I was responsible for organizing concurrent engineering activities and for developing the initial Engineering Master Schedule (EMS) for the program.

1982 – 1985 - Project Engineer - NASA Kennedy Space Center; Florida - Project Engineering responsibility for integrating the planning, budgeting, and scheduling of design and construction/installation of facilities and equipment for Space Shuttle and Space Shuttle Payloads at the Kennedy Space Center (KSC). Representative projects included: Pad-A, OPF, Mobile Launchers, Landing Sites, DOD Security, electronics systems, Spacelab, and Spacelab payloads. Managed both R&D and CofF budgets for all assigned projects. Participated in defining facilities and equipment for the design & implementation of the Thermal Protection System (TPS) Facility, Orbiter Modification and Refurb Facility (OMRF), and second set of checkout equipment for Spacelab Payload Processing. Coordinated with MSFC, JSC, & GSFC personnel in study for relocating of the Spacelab POCC to KSC.

1974 – 1982 - Systems Engineer - NASA Kennedy Space Center; Florida - System Engineering for communications and telemetry systems. Responsible for the design and development of operational communications systems in preparation for Space Shuttle and Spacelab. Also responsible for design, integration, testing, and acceptance of the Microwave Scanning Beam Landing System-Ground Stations (MSBLS-GS) and the Precision Laser Tracking System (PLTS). "On-site" management responsibility for MSBLS-GS flight testing and commissioning at Kennedy Space Center, FL.; Edwards Air Force Base, CA.; and White Sands Missile Range, NM. Implementation of the MSBLS and PLTS at the various Shuttle Landing sites. Monitor and evaluate overall project performance. In

addition to the above, I developed a series of Transition Agreements for the Design Engineering organization. These Transition Agreements detailed the criteria, cost, and schedule for transitioning sustaining engineering responsibility of operational systems from the design organization to operations organizations.

Education

1985 – 1987 - Florida Institute of Technology - MS Space Science, Program Management, Space Technology

1982 – 1984 - Florida Institute of Technology - MBA Management, Economics, Finance, Behavioral Science, Computer Science

1967 – 1971 - University of Rhode Island - BSEE Electrical Engineering, Mathematics, Physics

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