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Jim Migas

SUMMARY

Extensive experience with satellite development at three major U.S. companies (SSL/Maxar, LMSC, and Hughes/Boeing) supplying large spacecraft for commercial and governmental applications.

In depth understanding of the current technologies, design challenges and realization risks associated with present and future spacecraft and RF payloads. With respect to military applications, at Lockheed Jim served as the space segment system engineering manager for the AEHF constellation. This role entailed generation of spacecraft design that satisfied the full DOORS requirements summary of all the military branches of the U.S. and partnered nations as well as coordination of the efforts of the U.S. “National Team” (LMSC, Hughes/Boeing, and Raytheon). Jim was also the principal design lead for a Loral proposal for their Wide Band Gap Filler proposal and, at Boeing, for military hosted payloads including EHF and the dual band Ka systems currently deployed on the Inmarsat 5 fleet.

This cross-company experience has proven extremely beneficial in Jim’s role as a consultant to spacecraft customers. Within the bounds of propriety and ITAR regulations, he is able to offer impartial evaluations and propose alternatives should a shortfall be identified.

EXPERIENCE

Spacecraft Systems Consultant 2022- present
CREAN/CelestNet

A member of a team designing a spacecraft relay network providing command/telemetry, positional and data links from users on the lunar and near-lunar surface to terrestrial users. The system uses a lunar constellation of relay spacecraft. Since the system was largely designed before I ‘came on board”, I served primarily as a system evaluator and analyst and as a contributor to a proposal submitted in response to a NASA RFP for these services. In addition, I am working toward getting ITU license for the system.

Spacecraft Systems Consultant 2021- 2022
LeoStella

Provided technical analyses and guidance regarding frequency and coverage compatibility for a MEO spacecraft fleet that incorporates links in IDRS, GPS, UHF, S-Band, C-Band and Ku-Bands. Specific tasks included evaluation of antenna patterns and coupling parameters. Recommendations encompassed antenna locations and additional filtering, as required. Provided general payload related guidance for less experienced engineering staff.

Spacecraft Systems Consultant 2020- 2021
Linquest/Spacelink

Served as a member of a team designing a spacecraft relay network providing command/telemetry and data links from myriad LEO spacecraft to terrestrial users. The system used a MEO constellation as the relay terminals. Specific duties included the payload design of the relay spacecraft.

Spacecraft Systems Consultant 2017- 2019
AMOS

Served as a member of the AMOS 17 customer team at Boeing Duties encompassed technical review of spacecraft configuration, subsystems and unit design as well as test programs at each level. Membership in failure and program review boards, technical oversight of key subcontracted elements often involving vendor site review, and construction and test monitoring at the spacecraft level. Supported the launch and IOT.

Spacecraft Systems Consultant 2012- 2017
Inmarsat

Served as a member of the Inmarsat 5 customer team at Boeing, with special emphasis on the payload. Duties encompassed technical review of spacecraft, subsystems, and unit design as well as test programs at each level. Membership in failure and program review boards, technical oversight of key subcontracted elements often involving vendor site review, and construction and test monitoring at the spacecraft level. The above duties were performed for all four flight units of Inmarsat 5. Launch base support for flight models 2 and 3, including quality review of the launch system.

Senior Systems Engineer 2007-2012
Boeing Space and Intelligence Systems

As a member of the Design Center provided systems requirement analyses and produced compliant designs for a range of potential satellite and ground systems, specializing in payload applications, design and analysis. Generated proposals, including cost models and vendor selections. Generated an innovative design for flexible coverage capacity for space-based broadband payloads. As a member of the Senior Review Board participated in the design evaluation and problem solution for several on-going commercial, civil and proprietary space systems, as well as Boeing internal development programs including the Boeing 702MP and 702SP product lines. Provided technical training for less senior payload engineers.

Spacecraft Systems Consultant 2002-2007
Multiple companies, to include NewSkies

Provided wide range technical guidance to spacecraft service providers. Most notably served as lead consultant to NewSkies for the NSS 8 satellite built by BSS. Duties encompassed design definition as well as oversight of detailed design, construction, test and operational planning, and failure investigation. This project entailed significant development in the propulsion and power systems and enhancements in the spacecraft testing programs. Prior engagements include proposal evaluation for Teledesic, recovery of the Artemis mission for the Italian Space Agency, and design oversight for a Satmex spacecraft built at SS/L.

Space Vehicle System Engineering Manager 2000-2002
Lockheed Martin Space Systems - Sunnyvale, CA

Lead a National Team comprising LMSCC, TRW and BSS in the definition of the space segment of the Advanced EHF military communication system.

Systems Engineering Manager 1994-2000
Space Systems Loral – Palo Alto, CA

Responsible for the definition, design, fabrication, test and deployment of a range of high-power communications satellites. Specific programs include three Intelsat VIIA satellites (serving as Principle Payload Engineer), and System Engineering Manager for Mabuhay, PanAmSats 6, 7 and 8, and a 'Replacement Satellite' program which engendered innovative approaches to both definition and realization aimed at providing custom performance with maximum commonality of components and structure to provide rapid (18 month) delivery.

Sr. Engineering Specialist/Lead Engineer 1988-1994
General Dynamics Space Systems Division – San Diego, CA

Responsible for the Telemetry, RF and Flight Termination Systems for the Atlas and Atlas Centaur launch vehicles and missions from Vandenberg and Cape Canaveral AFS. Supervised the design and operation of these systems as well as performing mission unique analyses and coordination of down-range support.
Coordinated achievement of spacecraft compatibility and integration. Served on launch team for 20+ missions on both coasts.

Technical Specialist/Project Engineer/Program Manager 1977-1988
Cubic Defense Systems – San Diego, CA

Design, development, analysis, and limited production of a range of high reliability orbital communications equipment. Specific duties have included Project Engineer / Program Manager on miniature GPS translators, advanced X-Band transponders for NASA Deep Space applications, and the Hubble Space Telescope TDRSS data transmitter. Served as design engineer on a variety of specialized electronic hardware for orbital application.

Senior Development Engineer 1974-1977
Motorola, Inc. – Franklin Park, IL

Advanced communication product development.

EDUCATION

B.S., Physics
University of Illinois - Champaign, IL. Graduate work in physics and mathematics.

SECURITY CLEARANCES

Recent SECRET and SDI.