

Hector Velasco

hevepe@yahoo.com

<http://hector.velasco.me>

Tel. (858)699-8811

Driven professional with broad experience in Satcom, Aerospace and Communications. Extensive experience, managing and supporting government and commercial projects in 5 continents. Well versed in intercultural communications, 100% fluent in Spanish. Skilled in Systems Engineering, Project Management, Satellite Communications, International Operations. **Customer oriented** familiar working on customer premises. U.S. Citizen. **Secret Security Clearance**.

- Systems Engineering
- Satcom deployment expert
- Six Sigma Black Belt Certified
- Project Management
- Extensive International exposure
- Face-to-face customer interaction

EXPERIENCE

Northrop Grumman – Aerospace

8/2014 - present

Sr. Systems Engineer

- Responsible for Test and Integration of Command and Control (C2) and Mission Operations communications on Global Hawk, High Altitude Long Endurance (HALE) UAV platform for NATO and NAVY. Verification of communications subsystems including LOS, BLOS for C2 and Mission comms on UHF and Satellite links. Integration and Deployment of Ground Segment communications infrastructure for Command and Control centers.

ViaSat, Carlsbad, Ca.

3/2013-4/2014

Project Engineer

- Lead design, test, implementation and risk analysis of services for aeronautical ISR missions using steerable beams on Ka-band satellite. Modeled satellite coverage using STK.
- Responsible for Rf analysis and performance of Rf links between aeronautical platforms and ground.
- Evaluated and recommended teleport infrastructure for SOCOM support in Middle East.
- Coordinated spacecraft maneuvers upon mission needs, and verified performance after maneuvers.
- Deployed SOCOM satellite equipment in Middle East for aeronautical C4ISR missions, responsible for relocating assets in Middle East, and validated performance after changes.

Panasonic Avionics Corporation, Lake Forest, Ca.

3/2011-3/2013

Sr. Satellite Network Engineer

- Analyzed capacity, coverage and interference in a multi-satellite network for aeronautical application that provides communications on board aircraft. The network uses panel antennas on Ku band, and iDirect Automatic Beam Switching (ABS) and hubs.
- Responsible for producing maps for iDirect system that drive the beam switching and handover of aircrafts between satellite beams. Identified root causes that affected Rf performance and provided recommendations for improvement
- Analyzed and measured engineering metrics that affected SLA, evaluated ground station performance, satellite selection and transponder usage for the largest commercial aeronautical satellite network.
- Evaluated ground stations infrastructure for operation centers.

Space Systems/Loral, Palo Alto, Ca.

1/2010 – 12/2010

Mission Engineer / Sr. Systems Engineer

- Responsible for requirements and functional analysis for the architecture of military satellite constellation
- Conceptualized end-to-end communications solutions that included ground and space segments (earth stations and payload)
- Analyzed trade-offs to meet required Rf performance on spacecraft
- Proposed commercial spacecraft constellation for military applications focusing on aeronautical C4ISR missions using UAVs, and connectivity to Ground Control Stations and into GIG, following net-centric philosophy.
- Researched UAV platforms profiles (HALE, MALE) to derive, spacecraft and communications payload requirements
- Analyzed the performance of commercial terminals for COTM and ISR using link budgets and analytical tools in order to align satellite design with current and future capacity needs.
- Proposed communications architectures that included Ka band, spot beams, multi-satellite networks and COTS equipment. Analyzed Rf interference on aeronautical applications.
- Researched and applied the Defense Acquisition System DoDI 5000 for supporting FCSA response.

- Researched R&D (IRAD) initiatives proposing GSO and NGSO architectures considering geometries that could avoid or minimize interference. Proposed new applications and technologies for future use identifying needs and technology trends

Qualcomm, San Diego, CA

10/2002 – 6/2009

Sr. Systems Engineer / Project Manager

- Designed and implemented satellite network architecture for broadcasting digital content, resulting in a robust solution reducing potential downtime in the network. Design included Rf analysis, trade-offs and link budgets
- Acted as SME on SATCOM discipline; trained and coached junior members on communications technology
- Implemented a knowledge base that reduced field reworks and reduced learning curve for new team members
- Evaluated and selected COTS equipment for satellite IP backhaul, including antennas for mobile and fixed applications, tracking antennas and IP over satellite platforms
- Directed multi-disciplined teams on the deployment of communications ground stations that included satellite links, UHF transmitters, antennas, ground communications, environmental and monitoring equipment.
- Tested, commissioned and handed-over to operations team over 1 million dollars in equipment and assets per site on a bi-weekly basis, in a 300+ sites deployment in an aggressive schedule.
- Developed strategy and metrics for the Field Engineering group based on a Business Performance Excellence (BPE) quality model that resulted in the reduction of deployment time.
- Managed schedules and bug tracking for the development of hardware for mobile satellite communications platform, including panel antennas for Communications on the Move (COTM) solution (OmniTracs)
- Acted as liaison between customer and different departments within the company

BroadTech International (BTI), San Diego, CA.

1/2002-9/2002

Consultant

- Founded BTI to offer training in Mexico on Project Management, Strategic Planning and Quality tools
- Training was based on a Business Performance Excellence (BPE) model where individuals work is aligned with the vision/mission of the organization fostering engagement and measured using quality tools.

Titan Wireless, San Diego, CA.

4/2001 –12/ 2001

Technical Project Manager

- Mixed responsibilities as Project Manager and Systems Engineer. Managed communications projects in Guatemala and Africa in a cross-functional environment
- Responsible for deployment schedules, budget control, risk analysis and approval of technical requirements.
- Managed engineering and deployment teams for a Wireless Local Loop for VoIP project in Africa, with satellite teleports in Africa and the U.S.
- Demonstrated intercultural awareness facilitating communication with customers during deployment.
- A well balance acumen of technical background and business strategy allowed me to communicate well with customers and technical personnel, undertaking systems engineering tasks as required.

Comtech EFData, Tempe, AZ.

12/1997 – 4/2001

Sr. Systems Engineer

- Lead engineer responsible for Rf analysis, end-to-end , network optimization, capacity, traffic and trade-off analysis in satellite networks for customers worldwide.
- Responsible for testing and validating communications equipment on large uplink and downlink facilities
- Performed requirements and functional analysis for the development of the first NMS in the company and one of the first commercial satellite networks carrying IP traffic.
- Led system test of network products in factory before deployment, minimizing risk during deployment
- Implemented communications solutions for a diverse range of applications such as, maritime, TV teleports and VoIP
- Spent long periods on customer premises working with their team deploying a 300+ sites network.
- Analyzed customer's requirements in order to work with R&D to synthesize and implement new solutions.
- Managed and led customer's technical team overseas where I did not have direct authority.

Satellite Communications Engineer Contractor

1/1995 – 11/1997

- Integrated teleports and control centers for satellite communications networks
- Rf testing of large earth stations and VSATs (up to 10 m antennas) for diverse applications such as TV teleports, news gathering, telemedicine, DTV-DTH broadcast, cellular backhaul, voice and data.
- Companies served during this period were: Scientific-Atlanta, IDB, SDS, Samart (Thailand), CTI (Argentina), PEMEX (Mexico), El Marin (Sweden), Deutsche Telecom (Germany), and TSA (Mexico)

EDUCATION

Masters of Engineering Management

University of Colorado, Boulder

Masters of Science in Telecommunications

University of Colorado, Boulder

Electrical Engineering (Electronics and Communications)

Tec de Monterrey, Mexico

Stanford Advanced Project Management (SAPM)

Stanford University

Master Black Belt, Six Sigma

University of Colorado, Boulder

Systems Engineering Certification (expected: 12/2016)

UCSD

MANAGEMENT METHODOLOGIES and TOOLS

Six Sigma, Project Management, Business Process Excellence, Strategic Planning, Systems Engineering

SOFTWARE, HARDWARE, TECHNOLOGIES and BRANDS

MS Office suit, Visio. FDMA, TDMA, DAMA, SCPC, OFDM, WCDMA, GSM, WAN, LAN IP protocols, DVB, MPEG, IRD, T1/E1, Routers, Amplifiers, Up converters, Down converters, BUCs, antennas, GPS, spectrum analyzers, network analyzers, VSAT, C/Ku/Ka bands, Prodelin, Patriot, Vertex, Channel Master, Scientific-Atlanta, SweDish, Cisco, Codan, Comtech, EFDdata, Comstream, Tachyon, Direcway, iDirect, MIDAS, STK