Roger W. Best
Carlsbad, CA
(619) 804-0904 rogerwbest@gmail.com
https://www.linkedin.com/in/roger-w-best-ms-mba-1780225/

Summary of Experience:

A seasoned Senior Product Designer and Project Manager with extensive experience in diverse team functions, across various industries. The industries I have worked in include: autonomous vehicles, automotive manufacturing, aerospace product and tooling, turbine engine design, military vehicle design, and machine design. The types of design include: mechanical, electro-mechanical, opto-mechanical, mechanical packaging, tooling and fixturing design, manufacturing, and systems engineering. Have also worked as a Team Leader. Previously held three Top Secret Security Clearances, pre-2011: TS-SSBI, TS-DOD, TS-Special Projects

Core Competencies:

- Most recent expertise includes: advanced sensor and camera integration for autonomous vehicles, electronic packaging for communications equipment, superplastic forming dies, test fixtures, mechanisms, machined parts, sheet metal, and weldments, as well as stampings and castings.
- Project Manager / Team Leader on several aerospace programs, both commercial and military, in aircraft development and aircraft tooling.
- Proven track record of product development success, including project management, mechanical design lead, and as an individual contributor.
- Proven ability to define robust, yet cost-effective solutions, for challenging mechanical design problems, while simultaneously addressing manufacturability and serviceability.
- Strong ability to develop expertise quickly with regards to subject matter, projects, technologies, and engineering design tools.

Work Experience:

WAYMO [Google-X], Mountain View, CA **June, 2017 – Present**

Senior Product Designer (contractor)

Designer on two different sensor suite assemblies using CATIA V6 (3DExperience), which will be integrated into autonomous vehicles. Coordinate designs with other Responsible Design Engineers (RDE) to create or update portions of new or existing design packages. Also maintain the top-level assembly structure for an entire sensor suite in Enovia. Tasked with designing test fixtures for verifying subassemblies are fully functional prior to final top-level assembly into existing vehicles. Design of electronic housings for sensors and PCB's, involving plastic injection molded part design.

NORTHROP-GRUMMAN, Rancho Carmel, CA **August, 2016 – June, 2017**

Senior Mechanical Design Engineer (contractor)

Designed electro-mechanical enclosure assemblies for military aircraft communications equipment, using CATIA V5. Worked closely with the electrical engineering design lead by transferring circuit board assemblies back and forth from/to CATIA and Mentor. Performed X, Y, and Z tolerance studies, Worked with suppliers for ordering connectors and ensure proper fits of components, and fits for my assemblies into military aircraft. Also designed small test fixtures for PCB assemblies. Worked on 19" rack test equipment CAD models, while closely interacting with Systems Engineers.

GKN AEROSPACE, El Cajon, CA **April, 2016 – August, 2016**

Senior Tool Design Engineer (contractor)

Worked in the aerospace engine components group, designing mechanisms and fixtures to position and hold small to large, mostly cylindrical, components for machining operations. Mechanical design work was done on Siemens NX 7.5 and NX 9.

THE BOEING COMPANY, Auburn, WA **August, 2011 – March, 2016**

Senior Tool Design Engineer (contractor)

Worked in the Advanced Metal Structures group, designing complex mechanisms, tooling, fixtures, and dies to fabricate titanium and aluminum components for various aircraft programs. Designed water jet tools, forming dies, joggle dies, assembly fixtures, automated drill fixtures, large transport carts, and trim tools. Regular and very close interaction with Manufacturing Engineering and Quality Engineering. Design of large superplastic forming dies (SPFD), utilizing extensive production part surfacing manipulation and creation. Extensive use of surfacing, solid modeling, part and assembly creation, and drawing creation using GD&T, CATIA V5R20.

NORTHROP-GRUMMAN, Rancho Bernardo, CA **April, 2005 – August, 2011**

Business Case Development, Financial Projections, RFI & RFP Development

Worked on developing financial estimates (ROI, ROS, NPV, and IRR) for determining training costs and pricing, along with additional business cases to justify funding for the development of a new training system pricing model. Worked on a response to an RFP for the Euro Hawk program. Used Rational Doors to develop requirements and formalize system specifications for an initial statement of work. Coordinated the effort for a response to an RFI for a weapons systems trainer program as a co-Project Manager.

Senior Engineer / Project Manager

Worked on installations, structures, and subsystems design on the KQ-X (Global Hawk-to-Global Hawk tanker program). Worked as a Responsible Engineer on the Advanced Technology Development Center-subsystems (Black Program-NGAS' most advanced aircraft at that time). Lead an installation project for a new aircraft antenna system on the Global Hawk Unmanned Aerial Vehicle program. Coordinated the integration and mechanical design on a ground station for the Fire Scout unmanned helicopter. Helped to develop a statement of work for the Fire Scout ground station. Regularly interfaced with suppliers.
Worked on installations of LRU's and secondary structural components. Developed composite parts, to be used for shielding on an antenna installation. Designed SLS and roto-mold fabricated ducting components and assemblies. Designed primary and secondary structural components for the UCAS unmanned fighter jet

ROCKWELL-COLLINS, Carlsbad, CA **July, 2004 – April, 2005**

Senior Mechanical Designer (contractor)

Developed fixturing for the fabrication of head mounted displays for military applications. Involved in product design of head mounted displays and peripheral equipment utilizing PTC Wildfire 2.0. Designed electro-mechanical enclosures of controllers for heads-up displays. Designed tooling fixtures for test and assembly. Designed and created prototypes, instructed production personnel on the assembly procedures to streamline building of electronics enclosures. Worked on designing portions of heads-up displays for military applications. Extensive electronic and opto-mechanical packaging. Considerable use of plastic injection molded part design, using PTC Wildfire 2.0.

BOEING SPACE & INTELLIGENCE SYSTEMS, Seal Beach, CA **January, 2003 – July, 2004**

Engineer / Scientist

Produced animations for the business development department using 3DS Max, Pro-Engineer, CATIA V5, SolidWorks, and various other applications. Translated CAD models to create realistic animations for senior management to present to customers. Modeled complicated part and assembly CAD models, which were then translated into 3DS Max. Created complex animations and renderings depicting overall project level scenes of Top Secret programs for the military.

NORTHROP-GRUMMAN, Rancho Bernardo, CA **January, 2002 – December, 2002**

Senior Designer (contractor)

Designed subsystems tube and hose routing assemblies, with Pro Piping, for the Global Hawk Unmanned Aerial Vehicle program while working in the Mechanical Subsystems group. All design work was done using PTC Pro-Engineer.

DRS SENSOR SYSTEMS, Torrance, CA **January, 2001 – December, 2001**

Senior Designer (contractor)

Involved in the design, layout, and detail of optomechanical infrared sights for military vehicles. Managed prototype production – from concept through fabrication. Designed a large portion of an opto-mechanical turret, interfacing to an unmanned, rugged terrain vehicle. Packaged opto-mechanical and electro-mechanical projects with Pro-Engineer 2001, also used Intralink 3.1. Collaborated with senior management on the development of new designs. Coordinated manufacturing with external suppliers to fabricate complex machined parts. Organized and coordinated designs with the optical engineer regularly.

XCELLSIS FUEL CELL ENGINES (Contractor), Poway, CA **1999-2001**

Senior Designer

Designed and managed all tooling mechanisms, test stand structures, and fixtures for the assembly of automotive fuel-cell engines. Spent considerable time designing components and subassemblies for bus and car fuel-cell engines.

EATON LEONARD (Contractor), Carlsbad, CA **1999**

Senior Designer

Designed Tube Bending Machines and managed the designs end-to-end using Pro-Engineer, ProPDM, and ASME-Y14.5M.

SOLAR TURBINES (Contractor), San Diego, CA **1996-1999**

Senior Designer

Designed, developed, and detailed large turbine engine structural/internal components and assemblies. Modeled nozzles, blades, and other intricate aluminum castings using Pro-Engineer. Also used ProPDM and ANSI-Y14.5M.

From 1988-1996: Worked in aerospace as a Senior Tool Design Engineer and as a Team Leader over eight engineers. Also worked as a Senior Product Designer on light-armored military vehicles.

From 1979 - 1988: Worked in the automotive industry developing automation equipment, conveyor systems, press welders, checking fixtures, and test stands. Designed PLC control systems for three of those years.

Formal Education:

UNIVERSITY OF SOUTHERN CALIFORNIA, Los Angeles, CA
Master of Science in Product Development Engineering (Systems Eng.), MS
http://gapp.usc.edu/graduate-programs/masters/industrial-systems-engineering/product-development-engineering

PEPPERDINE UNIVERSITY, Malibu, CA
Master of Business Administration, MBA-Finance
http://bschool.pepperdine.edu/programs/mba/

UNIVERSITY OF PHOENIX, Del Mar, CA
Bachelor of Science in Information Technology, BSIT
http://www.phoenix.edu/programs/degree-programs/technology/bachelors/bsit.html

Certifications:

LEAN SIX SIGMA GREEN BELT - Northrop Grumman – Rancho Bernardo
STANFORD UNIVERSITY – Composites Design Workshop
HUMPHREY'S & ASSOCIATES – EVMS, Cost Account Management, and Scheduling courses
PHILPOT AUTOMOTIVE BODY DESIGN – Automotive Body and Chassis design course
MENSA Member

Technical Expertise:

CATIA-29,000 hours, PTC CREO-25,000 hours, Siemens NX9-4,000 hours, ASME Y14.5M, Teamcenter, Enovia, SmarTeam, SolidWorks, MS Excel, MS Project, MS Access, 3DS Max, Photoshop

SUMMARY OF COMPLETED GRADUATE COURSEWORK

STANFORD UNIVERSITY - COMPOSITES DESIGN - 2011	
CERTIFICATE	ACCELERATED COMPOSITES DEVELOPMENT COURSE

HUMPHREYS & ASSOCIATES - 2011	
COURSESWORK	EVMS, COST ACCOUNT MANAGER, AND SCHEDULING CLASSES

USC - MS PRODUCT DEVELOPMENT ENGINEERING - 2010	
ISE-527	QUALITY MANAGEMENT FOR ENGINEERS
ISE-544	MANAGEMENT OF ENGINEERING TEAMS
ISE-545	TECHNOLOGY DEVELOPMENT AND IMPLEMENTATION
AME-503	ADVANCED MECHANICAL DESIGN
ISE-585	STRATEGIC MANAGEMENT OF TECHNOLOGY
ISE-517	MODERN ENTERPRISE SYSTEMS
ISE-515	ENGINEERING PROJECT MANAGEMENT
SAE-541	SYSTEMS ENGINEERING THEORY AND PRACTICE

PEPPERDINE UNIVERSITY - MBA - 2008	
MBFE-651	BEHAVIOR IN ORGANIZATIONS
MBFE-656	QUANT/STRAT DECISION ANALYSIS (STATISTICS)
MBFE-654	INFORMATION AND PROCESS SYSTEMS
MBFE-658	MARKETING MANAGEMENT
MBFE-652	ACCOUNTING INFO/CONTROL SYSTEMS
MBFE-653	POL/REG/EHTICAL/LEGAL ISS OF BUS (LAW)
MBFE-655	FINANCIAL MGMT OF THE FIRM
MBFE-657	PRICES/PROFIT & MARKET ECONOMY (ECONOMICS)
MBA-640	ADV PRINCIPLES OF ORG/LEADERSHIP
MBA-697	ENTREPRENEURSHIP
MBA-618	INVESTMENTS AND PORTFOLIO MGMT
MBFE-659	STRATEGIC MANAGEMENT
FINC-667	GLOBAL FINANCE (POST GRADUATE COURSE)