

# Marbert G. Moore, III

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- **Mechanical Engineer, Electro-Mechanical Engineer, Systems Engineer**
- **Project Manager, Program Manager, Engineering Manager,**
- **Creative Technical Problem Solver and Experienced Leader.**

## Education

Texas A&M University, College Station, Texas.  
B.S. Mechanical Engineering Technology, May 1990.

## Software Skills:

### **Engineering:**

Mechanical- **AutoCad , ProE, SolidWorks.**  
Analysis- **Cosmos, Icepak, CFD.**  
Electrical- **Pcad, Orcad,** various board layout (pcb routing) packages.

**Management:** MS Project, Excel, Word and PowerPoint

**Programming:** Script writing, G-code, Basic, C++, Visual Basic.

## Engineering Experience: **20 years**

Analysis: System Performance, Failure, Thermal, and Mechanical.  
Mechanical Design: Electronics Packaging (50), Mechanisms (20), Fluids Packaging,  
-experienced in rapid prototyping, fast turn parts, model shop work and machining.  
Electrical Design: PCBAs (15), AC Power Control and Distribution, System Interconnect.  
Process Development: Chemical, Thermal, and Mechanical Fabrication.  
Vacuum Chambers: Design, Leak Check Expert, Rough to Ultra-High Vacuum.  
RF Experience: Grounding, EMI/RF Sealing.  
Materials Research: glass, ceramic, metal, plastics, specialty alloys and coatings.  
Materials worked with: glass, ceramics, metal, plastics.  
Fabrication Methods used: mill/lathe/laser/welding/etching/EDM/casting/sheetmetal.  
Finish processes used: painting, plating, polishing, silk screening and sputtering.  
Products designed have resulted in sales of over \$1billion USD.  
Over 1000 parts designed and fabricated.  
Patents: 9 Submitted, 5 still pending, 1 awarded.

## Program & Project Management Experience: **17 years**

Electro/Mechanical Systems Integration- electrical, mechanical and software.  
Largest Budget Managed: \$1.35 million.  
Most Valuable Project, Intel account, \$600 million.  
Largest Group Managed was 32 Personnel.

## Managerial Experience: **15 years**

Hired 33 of the 73 total persons supervised.  
Proposal Writing and Presentations resulting in over \$700k in Awarded Jobs.  
Heavy customer interface resulting in winning bids and achieving successful completion of jobs.  
Experienced at Estimating, Planning and Development of Technology Roadmaps.  
Experienced at writing Specifications, Proposals, Reports, Presentations and Contracts.

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### **Work History**

**Owner, Sr. Engineer** Semiconductor, Energy, Automotive, Consumer Electronics

**Willow Street Design**, Katy, TX Feb 2004 - July 2006, Jan 2008 to Present

Providing full range of engineering services for several electro-mechanical projects, ranging from business plan writing to finite element analysis (FEA, Cosmos) and design work.

Main projects listed below:

- Robotic Arm and support systems for semiconductor chemical mechanical polishing (CMP) processes (specialty fluids handling (piping, pumping, valving), assessing dynamic rotational loads, overall electronic control system design), beta system in process qualifications, also designed a innovative multi-staged/multi-layered stacked gaseous/liquids fluids separator,
- Solar Energy Power System for residential and commercial applications, system based on electronically controlled sun tracking parabolic collector and Stirling cycle engine, system in design phase,
- Willow Wheel- first of kind Hubless Rear Wheel for various types of vehicles.
- iMir- first and only radio (XM Satellite) in a mirror for personal vehicles.
- Talki- first ever full-duplex BlueTooth based intercom for personal vehicles.
- Ranger- first only device to use iPod as wireless source and remote control for stereos.

2 patents pending. All design/analysis performed in **Solidworks/Cosmos**.

**Director of Engineering, Project Manager, Sr. Engineer** Oil & Gas

**Deepflex**, Houston, TX July 2006 – Jan 2008

Designed and built equipment used to fabricate flexible pipe for the Oil & Gas industry. These automated electro-mechanical systems included the following:

- Hydraulically powered under-roller for rotating 30 foot diameter welded structure.
- Electrically powered 75 foot diameter rotating platform for carrying 3.5million pounds.
- Material (web) handling equipment for creating rolls of tape (.03in thick) 7 feet in diameter at 300rpm.
- Designed upgrades for 25 foot diameter rotating structure carrying 72k pounds at 6rpm.

1 patent issued, 1 patent pending.

All design/analysis performed in **Solidworks/Cosmos**.

**Program Manager, Sr. Engineer** Semiconductor

**Concurrent Design**, Austin, TX Feb 2003 – Feb 2004

Managed team of engineers (17) performing the Design & Development of a new Etch tool (semiconductor capital equipment). Responsible for all customer interfacing, design of System Architecture (mechanical and electrical system) and specification of purchased items.

Project had a \$1.35 million dollar budget. Tool outperformed specification.

- Specification and incorporation of robotic wafer transfer system.
- Design of robotic mechanism for wafer centering and precision location (+/-50microns).
- Design of specialty gas evacuation intakes using Computational Fluid Dynamics.
- System design of specialty gas (inert/toxic) and fluid (coolant) control/delivery.

Virtually entire job conducted using **ProE**, some **Solidworks**.

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### **Engineering/Project Manager**

**Genus**, Sunnyvale, CA

Semiconductor

Mar 2001 – Feb 2003

Managed team of engineers working on thin film blanket tungsten deposition process chamber.

- Performed gas flow analysis for novel cleaning process of semiconductor chambers.

Patent pending. All work conducted in **ProE**.

### **Director of Engineering**

**Galgon Industries**, Fremont, CA

Telecom, Servers

July 1999 – Mar 2001

Directed staff of 8 engineers conducting design/analysis of new telecommunications products.

- Developed custom motor control circuit for cooling fans, No Single Point of Failure.
- Designed and launched telecom product ramped to 15k units/month production rate.
- Managed industrial, mechanical and thermal design for new telecom rack system.
- Conducted design reviews for jobs in process and sales presentations for new business.
- Prepared/submitted proposals resulting in \$440K in new engineering design contracts.

Work conducted using **ProE, Solidworks and SolidEdge**.

### **Program Manager**

**Applied Materials**, Santa Clara, CA

Semiconductor

Jan 1998 – Jul 1999

Reporting to Director of Global Product Marketing, responsible for designing a program that would improve tool performance in order to secure \$600million in business with Intel.

- Targeted weaknesses in the tool's performance through analysis of failure data.
- Determined corrective engineering action, Developed these into engineering projects.
- Customer interface with Intel to report on status of plans and projects.

Work conducted in **AutoCad and ProE**.

### **Program/Engineering Manager, R&D**

**Telegen Display Laboratories**, Redwood City, CA

Flat Panel Displays

May 1996 – Dec 1997

Reporting to Vice President for Technical Operations, responsible for directing and coordinating the efforts required to develop a flat panel display. Duties included:

- Developing technology roadmap, identify and purchase equipment (approx. \$1million).
- Hiring of staff to design prototypes, necessary testing apparatus and equipment.
- Coordinating the efforts of all 30 members of the team, including 7 direct reports.
- Research of materials (handling, processes) and integration of processes into products.

Patent Pending. All design work performed with **AutoCad**.

### **Owner/Consulting Company**

**Moore Concepts**, Los Gatos, CA

Semiconductor, Flat Panel Displays

Feb 1993 – May 1996

Started a company to provide electro-mechanical design services on a consulting basis.

- Designed a custom computer for GE control rooms, 30 days from start to finish.
- Designed a vibration resistant flat panel display package for Boeing 777.
- Generated and presented proposals for work resulting in winning \$250k in business.

All design work performed with **AutoCad**.

### **Mechanical Engineer, R&D**

**Novellus Systems**, San Jose CA

Semiconductor

July 1990 – Feb 1993

Reporting to VP of R&D, responsible for design/development of new semiconductor tools.

- Required integration of electrical, mechanical and software assemblies and systems.
- Design of electrical/mechanical system architecture and operational characteristics.
- Organization of Bill of Materials (BOM) and completing documentation package.
- Plasma Enhanced Chemical Vapor Deposition (PECVD) of dielectric and metal films on silicon wafers.
- Development of Factory Automation wafer handling robotics and vacuum chambers.
- All design work performed in **AutoCad**.