

# Résumé

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Mark Carberry  
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**1977 B.A.** Georgetown University

**1981-1983** Smith Energy Systems, Programmer in Ingres (4GL), COBOL and C for designing Fracking accounting/licensing/fuel tracking systems

**1983-1985** ESS, founder/owner of a 4GL software company developing software using Ingres and SQL. Developed a laser drive & display search system for the furniture industry and did a prototype flight booking system for United Airlines in corporation with IBM, Houston. Also developed a MRP (Manufacturing Resource Planning) system and a set of accounting software.

**1985-1987** Golden Circuits, a service bureau. Worked as a contractor where I first developed a netlist software for an early version of PCAD and then began designing PCBs.

**1987-2003** Sole Proprietor of a PCB design service.

**2003-Present** Carberry Design, a PCB Service Bureau, using PADS, Altium & OrCad Capture. All designs are designed for manufacturability.

## Professional PCB Experience

My experience is varied as my entire PCB career has been as a Service Bureau designer. I do not specialize in a narrow aspect of design but do whatever boards my clients need to prototype and design for manufacturing. These can include simple 2 layer thru-hole boards to many layer boards with components on both sides requiring controlled impedance, controlled dielectric, RF boards which may require stripline (RF line sandwiched between two planes), microstrip (RF line on surface with ground on the next layer), coplanar (RF line sandwiched between ground on the same layer) and finite ground-plane coplanar (where the next layer has a ground plane to ground the coplanar waveguide). In the mid-80s I designed MCM (Multi-Chip-Modules) on porcelain, where I wrote a program for embedded resistors. I also developed software to design transducers in spiral and circular patterns.

In recent years I've done many boards with high speed buses including DDR3 memory with controlled impedance and small pitch dense BGAs, even 0.3mm pitch in a recent HDI (High Density Interconnect), using laser blind/buried vias (4mil drills). These have been for various fields but include boards for the new 3D entertainment, Aerospace, Medical, wireless, and more specialized fields such as Interferometry (molecular sensing) and Electrophoresis

My goal is to always satisfy the needs of my customers in a timely and professional manner.