

Andrew O'Malley

Software Projects

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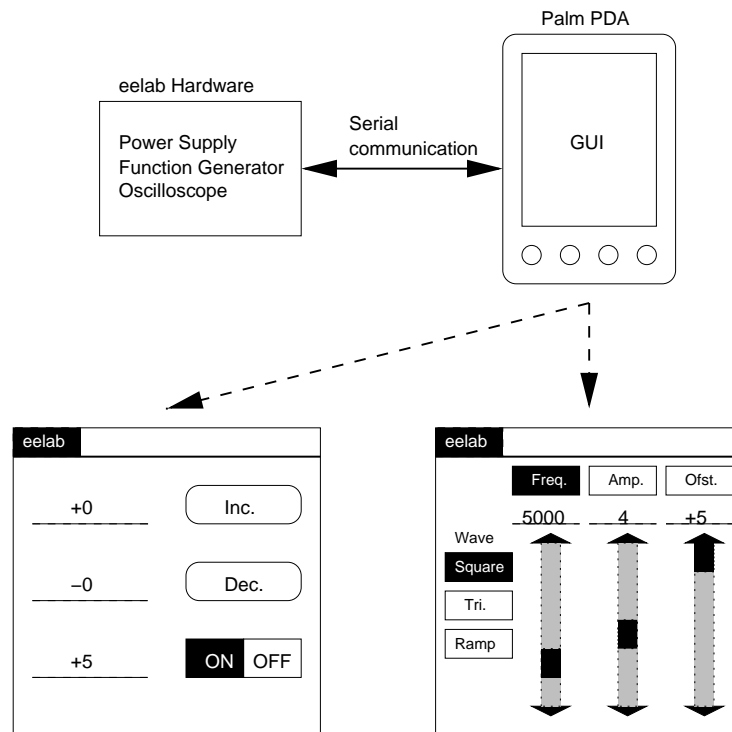
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Instrumentation GUI

Challenge:

PDA control for instrumentation hardware.



Solution:

Palm OSTM GUI written in C using GNU PRC-Tools.

Communicate with hardware via serial interface, mimic original PC GUI.

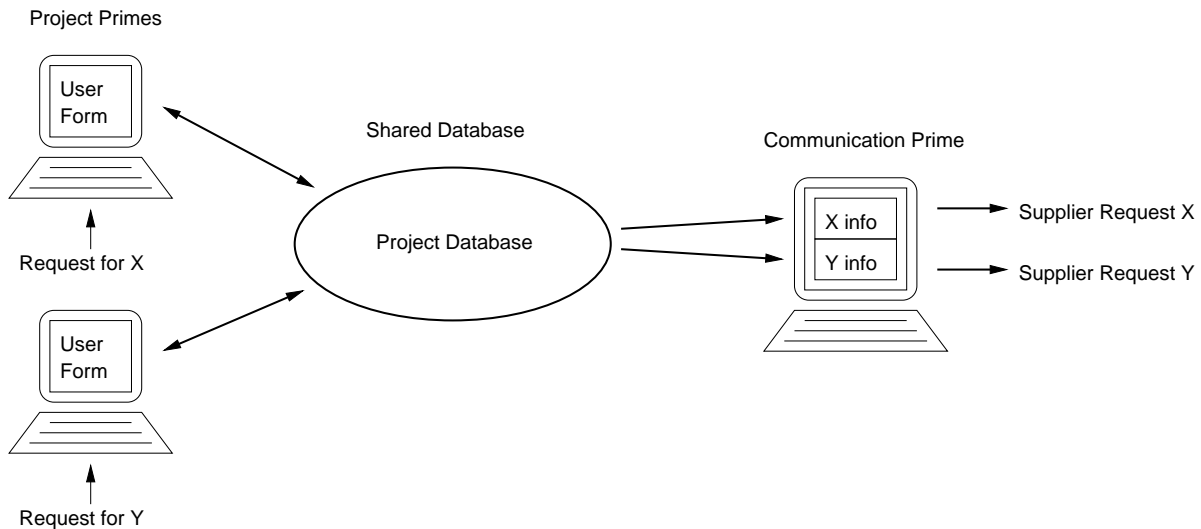
Result:

Successful control of *eelab* Power Supply and Function Generator modules; reduced footprint and cost of overall project (PDA replaces PC as controller).

Project Sharing Database

Challenge:

Formalize supplier documentation requests for a Supply Management team.



Solution:

Developed MS Access database with specific interfaces for various team members. Project Primes request documentation through user form; queue created for Communication Prime to seek documents and deliver to requestor.

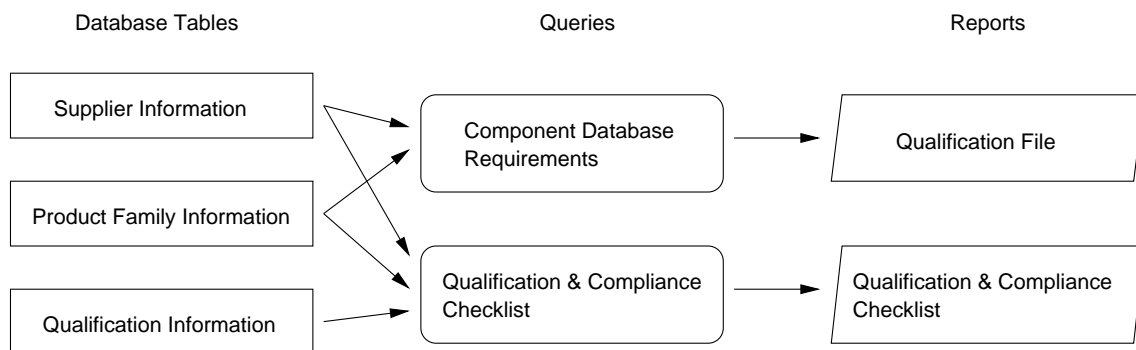
Result:

Project info and updates immediately available to all team members. Single point of contact benefits suppliers.

Product Family Qualification Database

Challenge:

Develop a formal process for qualifying a family of products for a Supply Management team.



Solution:

Developed MS Access database to automatically combine product and qualification/compliance information. Query database for required compliance and qualification references for individual parts, and generate hard copy reports for data entry and filing.

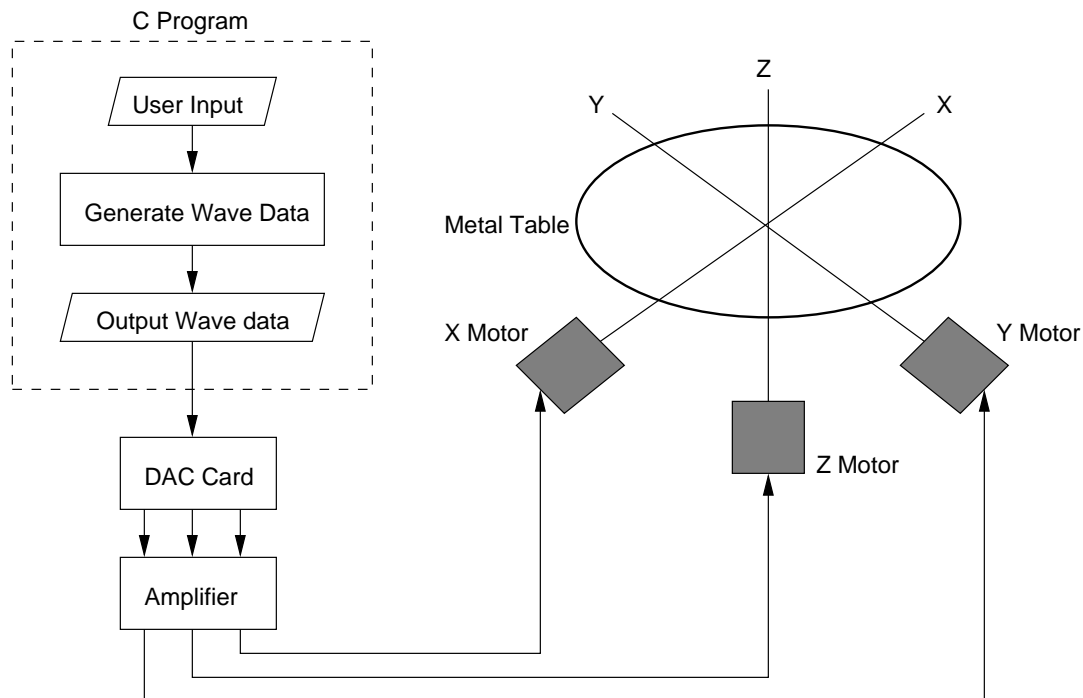
Result:

All required information cross-referenced in database for easy review; automatic report generation reduced qualification activity time by 50%.

Vibrating Table Software

Challenge:

Automate tri-axi vibration of a metal table for parts placement and sorting.



Solution:

Wrote a C program to accept trajectory information from user, generate appropriate sinusoidal wave data and send to Digital-Analog Converter card.

Result:

Initial requirements successfully met. Computer replaced manual trajectory adjustment, allowing for experimentation toward an expert system.