I. Mission Statement

TeoSys Engineering creates customer value by providing both technical services and customized systems development by integrating the most technologically advanced systems for micro-positioning, inspection, and processing. TeoSys Engineering will continue to establish a reputation for exceeding customer expectations through exemplary consultative services

II. Organization

TeoSys Engineering LLC is a company founded by Emre Teoman and Dana Lee Church in January 2001 after having worked together on a range of products since 1994. Emre left his VP of Operations position to merge with Dana's company, Systems & Software, and form TeoSys. This management team consists of colleagues who share one another's dreams and passions to drive TeoSys Engineering forward. Combined, we have over 30 years of direct experience in corporate and project management, engineering (mechanical, optical, electrical, software and systems engineering). In addition, the strength of our team gains fortifications from our working well together and commitment to bringing all projects to fruition.

Emre Teoman

- Established TeoSys Engineering LLC after merging with Systems & Software in 2001
- Partner and VP of Operations at Potomac Photonics, Inc.
- Director of Engineering at Pacific Scientific, Inc. designing and building white light and laser based particle counters.
- 20 years experience in manufacturing, product development and management.
- Extensive experience in mechanical, optical, automation and systems engineering.
- Designed numerous complete laser micromachining systems.
- Designed, tested and fielded Excimer laser for flying spot laser eye surgery customer.
- Extensive experience in manufacturing (operations, problem solving, fixture and process development).

Dana Lee Church

- Established Systems & Software, Etc. in 1996 until it became TeoSys Engineering LLC in 2001
- Managed software and systems development at Potomac Photonics, Inc. as an independent consultant with Systems & Software
- Managed software development at Pac. Sci., Inc.
- Systems and software engineer with 15 years experience.
- Extensive CASE Tools, Visual Basic, Visual C++, assembly languages, ActiveX, COM, DLLs, and G-Code experience.
- Extensive real-time embedded systems experience (C++, assembly, operating systems, hardware/software interfacing, many microprocessors, etc.)
- Extensive experience in instrumentation and systems design.

TeoSys has associates and uses numerous consultants with expertise in optical engineering, electrical engineering, civil engineering, manufacturing engineering, drafting, product packaging and physics.

III. Facilities

TeoSys Engineering is located in Gambrills Maryland. The TeoSys in-house research and development labs are equipped with all necessary test equipment some of which include the following: digital oscilloscopes, digital multimeters, laser power meters, high speed photo detectors, and video microscopes. Software CAD tools are used for schematic capture and mechanical design. Software development tools include CASE tools for requirements analysis and design, Visual Basic, Visual C++, and several microprocessor assemblers. TeoSys has a full inventory of frame grabbers, motion controllers, and proprietary hardware and software modules, which are used for rapid prototyping.

IV. Corporate Capabilities

Marketing & Business Development

- Medical Devices – automation solution, laser processing, product design, FDA requirements.
- Semiconductor – parts singulation, component processing and repair, contamination control and particle counting.
- Marking – Text, graphics, and 2-D barcodes on plastics, metals at small feature sizes.
- Aerospace – Small parts design and processing
- Others - Microfluidics, laser eye surgery (TPRK), and telecommunications market places.
- Laser Processing - Emphasis on 2 to 200 micron laser machining and applications development.
- Automated Inspection – Automated machine vision applications, integrated production solutions.
- Particle Counting - Contamination control market development.
- Finance - Experience with business development, investment management, and venture capital acquisition.

Engineering & Product Development

Systems Design and Engineering – Integration of diverse engineering disciplines including: systems, applications, mechanical, optical, electrical, software and manufacturing.

- Customer interface and full life-cycle management
- Requirements Analysis (behavioral modeling)
- System Design (functional allocation to physical)
- System Verification and Validation

Software Engineering - Over the past five years we have developed proprietary software packages and systems designs for the following:

- Machine vision
- Automated inspection
- Precision motion control
- Video display and measurement

- Real time embedded microcontrollers
- Custom integrated 2-D CAD applications
- Communications and data control

We consistently exceed customers' expectations because we continually maintain this core set of software modules that are easily customized for new systems containing similar hardware components.

Mechanical Engineering - We have considerable experience in the following mechanical design areas:

- Packaging, Thermal, Vibration
- Automation / Robotics
- Parts handling
- Tool and fixture design
- Motion systems
- Military, FDA, CE Mark specification requirements.
- EMI / EMC design and control.
- Clean room product design and compatibility.
- Clean room design and validation.

We are applications engineers, not just design engineers. All of this experience is the result of design through to manufacturing affording a wealth of knowledge of the most efficient designs for cost, schedule and producability.

Electrical Engineering

- High power amplifiers, oscillators, phase shifter, RF switch, low power oscillator amplifier, switched SAW oscillators and filters from UHF to L-band.
- Analog ASIC design, custom signal processing instruments, low noise amplifiers for sensor interfacing.
- DSP software package, non-linear noise reduction algorithm, adaptive filtering.

Optical & Laser Engineering - Working with lasers in all types of systems is what we find irresistible. Our experience with optics is a natural follow-through to laser technology. Our practical knowledge is as follows:

- UV – IR laser optics design.
- UV Excimer laser design.
- Video microscopy, illumination.
- Machine vision optics and acquisition.
- Diode laser device design, external cavity laser design
- UV laser power control circuit, auto-focus system, adaptive noise canceller.

Production & Manufacturing

All of our designs have successfully made production through to customer delivery. Design for manufacturability is our primary concern as we usually perform on a fixed budget.

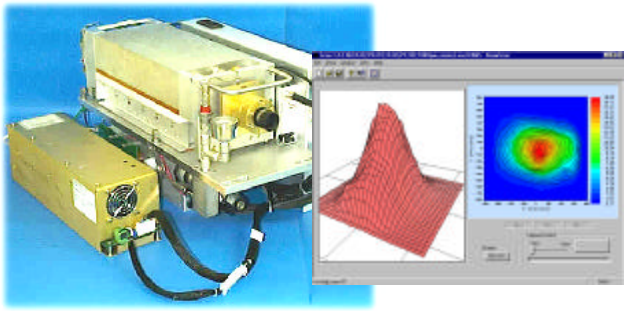
- Provide standard products for the diamond marking and material deposition industries
- Problem solving techniques
- Process development
- Fixture design
- Operations management
- Quality control, SPC, and procedure development
- Job shop (service bureau) development, short and long running projects
- ISO 9000

V. Examples of Recent Projects:

Designed, developed, manufactured and fielded an LMS-2000 Laser Diamond Marking System (3-15um marks on loose diamonds) (7 units sold, 5 installed to date).

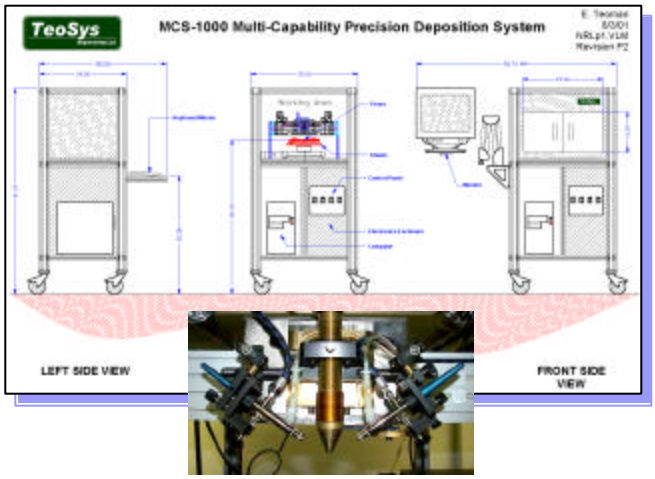
Images courtesy PhotoScribe Technologies Inc.

Designed and produced PL1500A Excimer laser for laser eye surgery application. Also developed manufacturing facility and numerous production systems, fixtures, and processes.



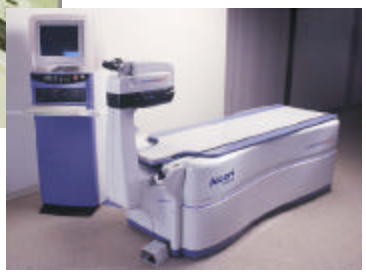
Images courtesy PhotoScribe Technologies Inc.

Designed and developed MCS-1000 Multi-Capability Precision Deposition System used to apply coatings and inks with micron level precision.



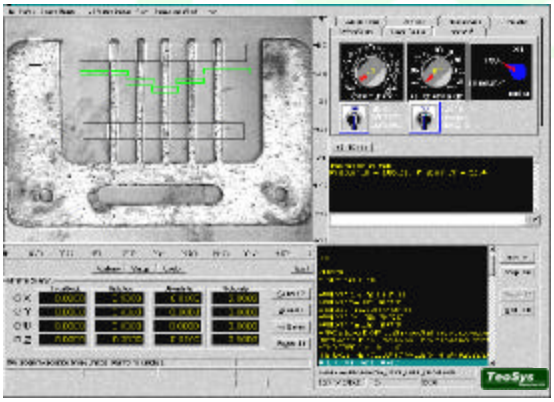
Completed GMP requirements for FDA and started ISO process for Excimer Laser Production. Delivered 50 laser systems for T-PRK Flying Spot Excimer Laser Eye Surgery System. Lead ISO-9000 team.

FDA, GMP, ISO Documentation



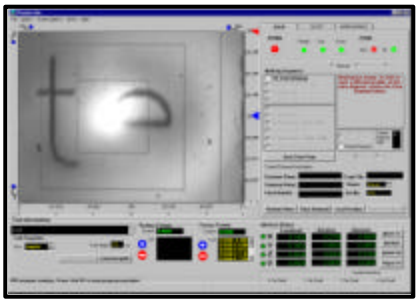
Images courtesy Alcon Surgical

Developed proprietary machine vision software package, which improved the speed and efficiency of many laser applications for micromachinists. Multiple image processing algorithms are available via proprietary vision system language (Based on RS-274). Fully integrated with motion system for pre/post/in-processing inspection, measurement and quality control. Allows micromachinists to make measurements of features within the live video image once the software has been calibrated to the optics and motion system. System aligns the part during process and compensates for rotation error. The process is halted if pre-programmed conditions are not met thereby reducing improperly processed parts.



Developed proprietary software package for the marking of diamonds via a laser micromachining sys tem by an unskilled user. Allows the user to mark text and graphics on the work surface without any knowledge of micromachining, lasers, or motion control.

Provides automatic generation of motion control source code from text or graphical (DXF) input. User programmable system parameters to control type and intensity of mark.

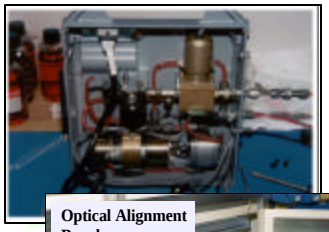


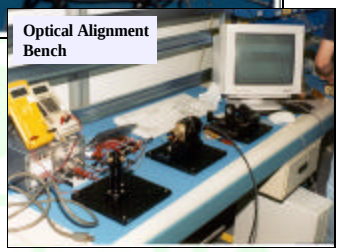
Developed proprietary software package for the automatic generation of image processing source code (proprietary vision system language).

Developed proprietary 2-D CAD and database application.

Developed proprietary software package, which aligns the part during process and compensates for rotation error. The process is halted if pre-programmed conditions are not met thereby reducing improperly processed parts. The software automatically notifies operator of processing status

Developed high pressure, heavy-duty laser based hydraulic contamination monitoring product for major filter manufacturer.





Images courtesy PALL Corp.

Packaged Military Standard, high speed, multi-CPU, RADAR processing system, which contained both high speed digital and low noise analog circuitry.

Images courtesy Scope Incorporated & Hughes Aircraft Ground Systems Group

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