

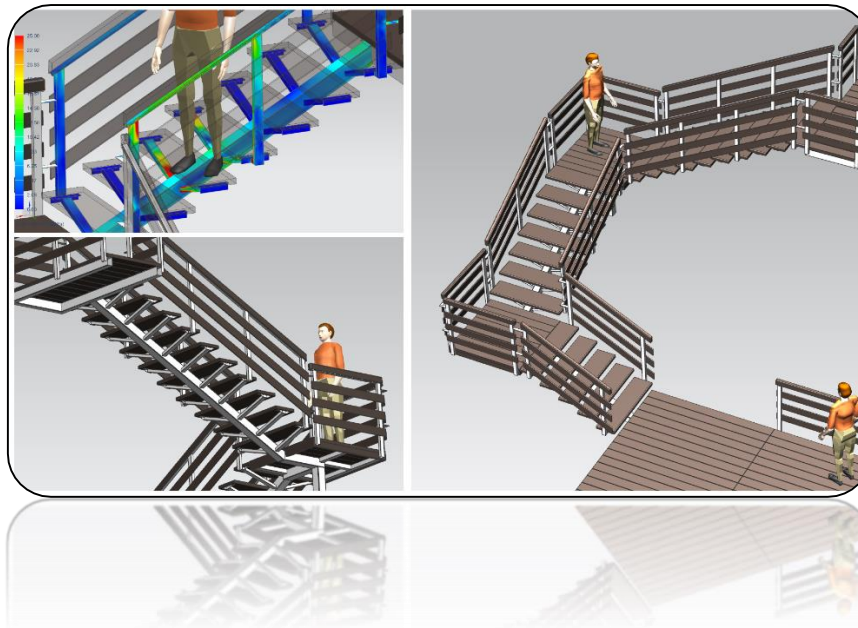


Solution
Partner

PLM

SIEMENS

SpaceCAD Ltd. provides first class software solutions and engineering services for design and manufacturing companies, relying on revenue growth out of products innovation and process efficiency.

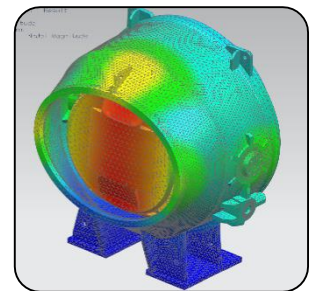


SpaceCAD Ltd., part of DAVID Holding Co., is providing the manufacturing and engineering companies with engineering automation solutions and services since 1996. Working closely with partners and customers, SpaceCAD provides effective solutions and engineering services for heavy industry and transportation, power generation, infrastructure and product design and manufacturing. In this almost 20 years SpaceCAD has proven its ability to deliver real values in projects for customers in Bulgaria, Austria, Germany, Swiss and Vietnam.

Solutions Overview

SpaceCAD has built up its reputation as responsible partner in engineering and automation. At present time, (May 2015) SpaceCAD provides the full spectrum of solution and engineering service:

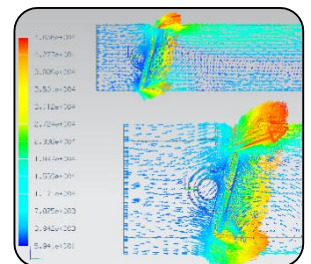
- Product design, FEM/FEA optimization
- Process simulation and optimization (CAE)
- CAM/CNC/DNC
- MES and QA



Professional Engineering Services

SpaceCAD provides first class engineering services for product design and manufacturing in product design, machine building, consumer products, power & process machinery, and transport sector. Design consulting services (product definition phase) includes:

- Product/Process design & optimizations
- Product lifecycle data management
- Manufacturing automation and quality control
- Other, engineering related



Our expertise:

- Product design & optimization
- Manufacturing process simulation and optimization
- CNC programming and CNC production process set-up
- Digital manufacturing & quality control (MES/QA)
- Product data management and product lifecycle support (PLM)

Skills

N	Skills	Engineers
1	Product/plant definition and requirements, 3D product design using Digital Mock-Up	5
2	Industrial design and styling	2
3	Production drafting & BOM generation	6
4	Consumer products, packaging/plastics and related mold tooling design	3
5	Metal processing and sheet metal products design and manufacturing	3
6	CAE for product/process simulation and optimization	3
7	Digital manufacturing , MES/QA	3
8	Product data management and product lifecycle management	2

Solutions partners

Since 1996, SpaceCAD is solution partner of SIEMENS PLM Software in delivery of solutions, based on SIEMENS NX and Velocity product lines. As for additional add-on solution, SpaceCAD collaborate with list of world proven software vendors in different engineering application areas:

- ESI Group – CAE tools for virtual product/process simulation
- Qantor Form – CAE for hot metal forming/stamping/extrusion
- Zuken – EDA for PCB design and manufacturing
- WinToll – cutting tool management
- QUINX - MES/MOM/QA solutions

Quality


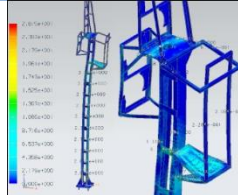
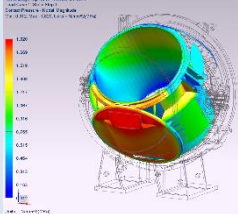
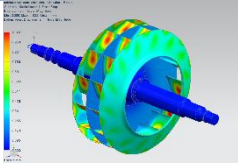

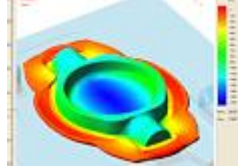
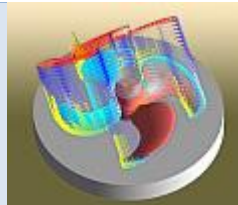
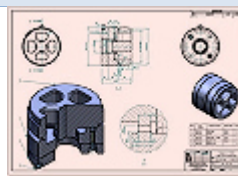

SpaceCAD Ltd. has adopted an ISO 9001:2000 certified workflows for product design that guarantee the quality of our engineering services through:



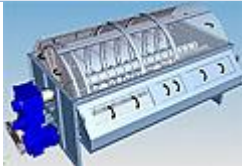
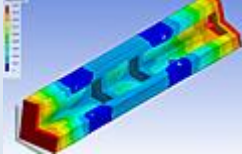


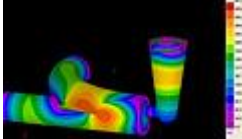
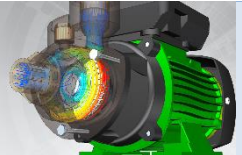
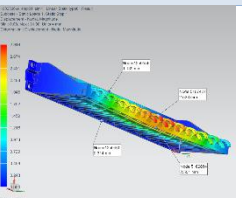
- Risk analysis and risk prevention planning
- Phase/gate project management
- Customers' requirements tracking and industry standards compliance
- Third party copyrights respect

Contacts

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Some engineering service reference samples

Service	Customer		Short description
Westinghouse AP 1000 - 3D/PLM presentation model	David Holding Co.		Design, assembly, animation and visualization of PLM ready Westinghouse AP 1000 nuclear reactor.
Design and documentation for production	Thales Rail Signaling Solutions GmbH		Based on customer's requirements and transportation standards, SpaceCAD has developed and validated new railroads signals for Plovdiv – Svilengrad signals infrastructure maintenance
Design optimization for heavy machinery	VAPTECH Ltd.		Using CFD CAE tool, SpaceCAD Engineer performed simulation and optimization of heavy duty valve for water power plant feeding channel.
Design optimization for heavy machinery	Metallic JSC		This heavy mine smoke ventilator has been successfully designed, optimized and manufactured after the production documentation, certified by SpaceCAD trough coupled CFD FEA simulation.
Solution for large scale product design automation	Saigon Ship Industry Co.		Development and implementation of a digital development platform and workflows for ship design and manufacturing, incl. full set of implementation services
Tool and process design for cold metal stamping	Peskov PLC. Stara Zagora		Using the advanced abilities of QForm 3D, an optimal toolset and stamping process has been achieved for lowering the tooling and energy cost.
5 Axis CNC milling for propeler production	Institute for ship hydro dynamics Varna		After automated desing of the parametric propeler in NX Unigraphics, 5 axis CNC template for milling was developed for fast production in digital environment.
Design and production of extrusion tools	Stlmet PLC. Sofia		Hot extrusion of aluminium profiles is a sophisticated and risky process, where CAE tools and knowledge are success critical.
Design of a plastic body of external fuel tank	Aviodelta LLC. Kazanlak		High quality surfaces with minimal air drag has been designed for external fuel tank for ultralight plane

Industrial design	Hilman Co. China		Using advanced tools of NX Unigraphics, a complete design and production documentation has been developed
Product design through reverse engineering	HES Plc.		Beginning with an old set of 2D drawings, in record time a new product line has been developed, virtually tested and prepared for production using UGS Solid Edge and NX software.
Design and production ready documentation	Andreas Kuferath GmbH		Using UGS Solid Edge, the new production ready set is generated out of 3D reconstructed assembly design in three week time.
Structural simulation for safety proofing	Steel timbering Technique Ltd.		Using virtual 3D model and UGS Femap and Nastran, the entire production line of Construction Appliances has been checked and proved to be safe.
Functional optimization of thermo-fluid systems using CFD	EldomInvest PLC		Using CFDDesign and computational fluid dynamics, the optimal placing of the heater has been determined, allowing minimal power waist and shortest wtar heating time.
Metal casting model design	Vipom LLC. Vidin		High precision 3D Solid model of a metal cast model for simulation in ESI ProCAST is prepared and checked inside NX Unigraphics
Casting process simulation and mold optimization	Bamex PLC		Having big and complex cast details, Bamex was forced to rely on ESI ProCAST for extensive virtual simulation with predicting the performance of the casting tool and process.
Product design and optimization	VIPOM JSC		Design and optimization of the pump performance has been performed using closed loop simulation of the rotation actuator and resulted flow through CFD .
Product performance simulation and validation	Reischle & De-Massari		As world recognized manufacturer of plastics component for LAN infrastructure, Reischle & De-Massari relies on SpaceCAD FEM/FEA services for product performance validation in each NPI process.

More at reference project video library: <http://www.screencast.com/t/89jicXbPzdGi>