

# Digital ENGINEERING

**CYBERNET**

Since 1985


 Computer Aided  
Engineering (CAE)

 Photonics,  
Optics & VR

 Machine Learning  
& AI


Digital Twin


 AR - VR for  
Manufacturing

 Engineering  
Services

CYBERNET has over three decades of experience in CAE business and highly-skilled engineers to provide value added support for complex engineering simulation problems across the industries.

## Our Strengths

- High-quality value-added service and support.
- Multi-industry experience inherited by many years of operation in Japan and other APAC countries.
- Engineering Services to support complex simulation.

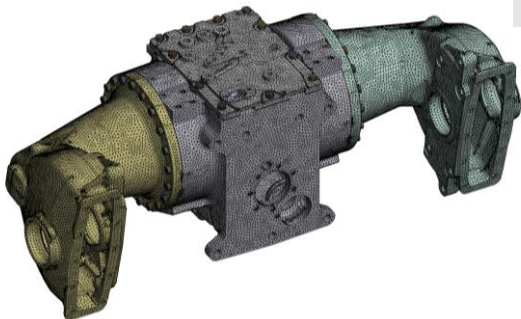

 HQ in  
Tokyo, Japan

**38**

 Years in  
CAE business

## Mechanical Solutions

CYBERNET MALAYSIA is a Channel Partner of Ansys in Malaysia, Indonesia, Myanmar, Philippines, Singapore, Thailand, and Vietnam.

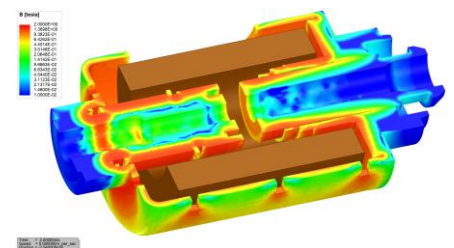


Mesh of a tractor axle by Ansys Mechanical™ software. assemblies require modeling contact between parts as well as specific interfaces, such as gaskets.

- Strength(displacement/stress/strain)
- Vibration characteristics (resonance frequency)
- Response at the time of earthquake
- Non-linear material (plastic / hyperelastic / viscoelastic)
- Drop collision ▪ Fatigue/Fracture/Buckling
- Homogenization of composite materials (mechanical properties)

## Electromagnetics Solutions

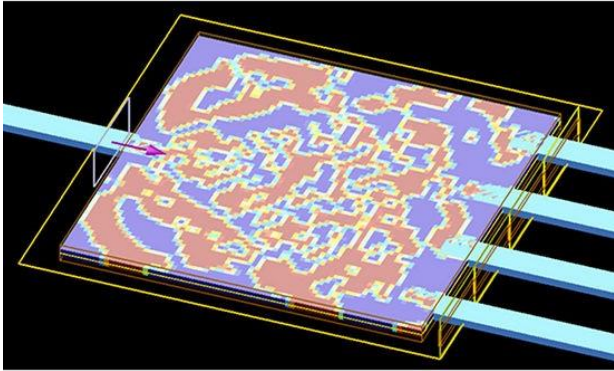
- Magnetic flux density / magnetic field strength
- Electric flux density / electric field strength
- Current density
- Electromagnetic force / torque
- Inductance / capacitance ▪ S/Y/Z parameters
- Homogenization of composite materials (electromagnetic properties)



Magnetic flux distribution on magnetic actuator by Ansys Maxwell®. This type of analysis helps in predicting the characteristics of solenoid as force vs position in magnetostatics solver or position vs time in transient solver.

## Optics Solutions

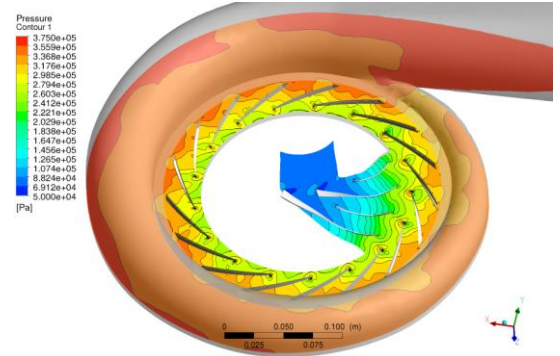
The optical technologies offered by Ansys span from Ansys Lumerical at the microscale, to Ansys Zemax at the macroscale, all the way to human and sensor perception for systems with Ansys Speos®.



Ansys Lumerical, a complete photonics simulation software solution, enables the design of photonics components, circuits, and systems.

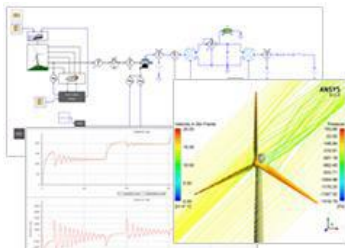
## Fluid Solutions

- Steady/Transient flow
- Laminar/turbulence flow
- Compressible/Incompressible flow
- Chemical/combustion flow
- Multi phase flow
- Turbomachinery



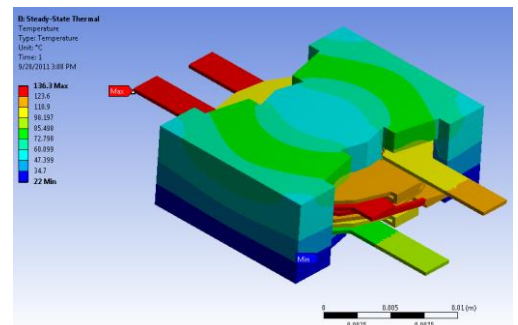
Multi-frequency harmonic analysis by Ansys CFX® provides fast solutions to challenging transient periodic flow cases such as simulating fans under inlet and outlet disturbances or modeling the asymmetric flow in radial compressors or turbines.

## Coupling Solutions



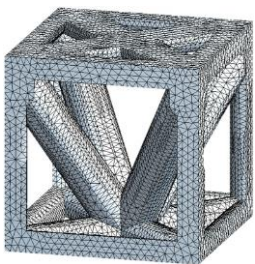
- Coupling of 3D fields
- Fluid-structure
- Electromagnetic field-structure
- Electro-structure (piezoelectric)
- Linkage between 1D and 3D
- Model-based development (MBD)
- Optimal solution extraction

Ansys takes engineering simulation to new heights with its multiphysics coupling capabilities such as fluid-structure interaction simulations, electro-thermal analyses, and other Ansys Multiphysics™ simulations performed using System Coupling™.



Temperature Profile within Electronic Transformer – Power loss of a transformer solved with Maxwell, then transferred to Ansys Mechanical to calculate thermal distribution

## Material Design & Simulation



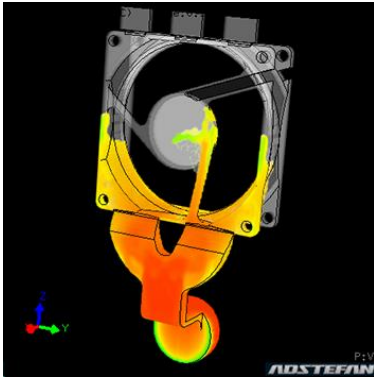
Multiscale.Sim™ is an add-in tool for the Ansys Workbench™ environment, developed by CYBERNET since 2007 and used by over 100 users worldwide including some of the top FORTUNE GLOBAL 500™ companies.

- Micro Scale Model Creation
- Homogenization Analysis
- Numerical material test
- Macro Scale Analysis
- Localization Analysis

Multiscale.Sim can evaluate macroscopic anisotropic material constants of a wide variety of composites by performing Virtual Material Tests. It can evaluate non-linear material problems as well as linear ones.



## Casting Solutions



- Fluid Flow Analysis
- Molten Metal Behavior inside sleeves
- Solidification Analysis
- Shrinkage Cavity Analysis
- Local Pressurization Analysis
- Die Temperature Analysis
- Thermal Stress Analysis (Coupling with Mechanical Solutions)



CYBERNET MALAYSIA distributes and supports ADSTEFAN products throughout the ASEAN region.

## Vehicle Simulation Solutions

VehicleSim products are used worldwide by over 110 OEMs and Tier 1 suppliers and over 200 universities and government research labs. CYBERNET MALAYSIA distributes and supports VehicleSim products throughout the ASEAN region.

- CarSim®
- BikeSim®
- TruckSim®
- SuspensionSim®



## Digital Transformation Solutions

CYBERNET MALAYSIA is an authorized reseller and a technical support provider for PTC ThingWorx®, Vuforia Chalk™, and Vuforia Studio™ products in Malaysia. Highly scalable industrial IoT and AR applications for manufacturing from PTC such as AR Remote Assistance and Vuforia Work Instructions can help solve your workforce challenges and meet business goals.

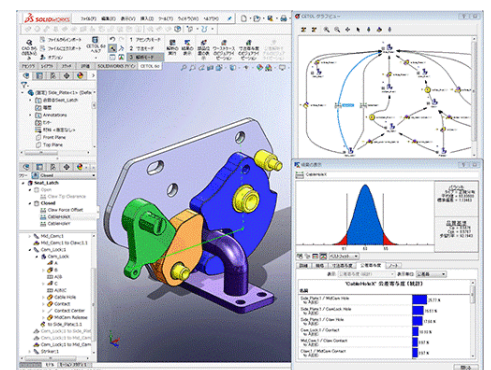


## Tolerance Analysis Software

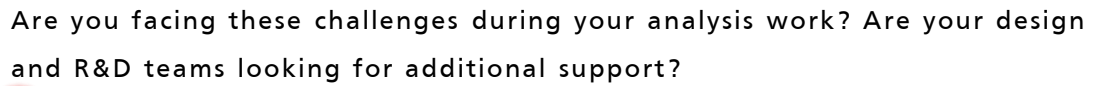
CYBERNET MALAYSIA is an authorized distributor of Sigmetrix® software in the ASEAN region.

**CETOL 6σ™** - 3D model-based tolerance analysis software that works directly with CAD model data from PTC® Creo®, CATIA®, SOLIDWORKS®, and Siemens NX™ without any additional requirement for data conversion

**EZtol** - 1-Dimensional tolerance stack-up analysis program







- Insufficient analysis due to lack of human resources and time
- We want to make analysis work more efficient
- Our team wants to improve their analysis skills
- We don't know how to start, our team doesn't have enough experience to perform complex analysis using simulation.

CYBERNET has more to offer with its own software tools developed in-house such as Multiscale.Sim material design and simulation add-in tool for Ansys Workbench environment. And many other solutions from CYBERNET development subsidiaries – Sigmetrix, Maplesoft, and Noesis Solutions also offer stand-alone and coupled workflows to surmount your engineering challenges.

## Other Services

CYBERNET has over three decades of experience in CAE business in Japan, China, Taiwan, and Malaysia. We have well-experienced and highly-skilled engineers to support engineering simulation.

- CAD creation
- CAE environment construction
- Sample model creation
- Customized technical training
- CAE launch support
- Consulting
- Optical measurement services

## About CYBERNET

CYBERNET SYSTEMS MALAYSIA SDN.BHD. supports customers in Malaysia, Singapore, Thailand, Vietnam, and other ASEAN countries. They provide a wide variety of software, technical support, engineering services and training for Computer-Aided Engineering (CAE), Vehicle Simulation, Casting Simulation, Tolerance Analysis, and Digital Engineering solutions that combine CAE with emerging technologies for Digital Transformation, such as IoT, AR-VR, Digital Twin, Big Data analysis, and AI.

CYBERNET SYSTEMS MALAYSIA is a wholly-owned subsidiary of CYBERNET SYSTEMS CO., LTD., headquartered in Tokyo, Japan. A leading CAE company established in 1985.

# CYBERNET

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