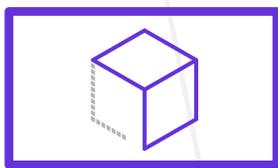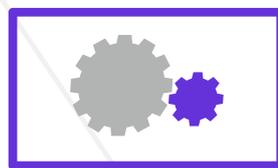**Fieldscale**

CHARGE
Electric Simulation Software

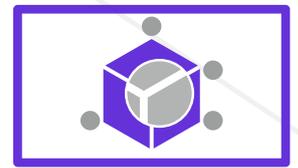## *Reduce engineering time and run impossible simulations*

Fieldscale Charge is the cutting-edge simulation software that enables the electrostatic simulation of today's complex products in maximum detail, in just some minutes. Charge is the state-of-the-art tool for electric field analysis, detecting dielectric breakdowns and partial discharges.

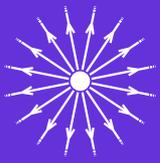*Design* > *Solve* > *Get results*

✔ Applications

Charge can ideally be used for **easy electric field analysis and dielectric breakdown detection for**

- Insulators, bushings
- Switchgear
- Surge arresters
- Cables
- Lightning Protection Components
- Shielding
- Bus Bars

Fieldscale combines the most **advanced and concrete algorithms**, conceived by the best research teams in the world to build from ground-up the **most powerful solver engine**. It utilizes a range of best-in-class **parallelization processing techniques** to succeed the **highest performance**. **As a result, engineering time is reduced up to 10X**.

Fieldscale solutions are built on top of the **concrete foundation** of Boundary Element Method (BEM) to ensure and enhance simulation reliability. Fieldscale simulation software **accurately** computes electric fields and voltage even for **the most complex designs**, eliminating the need for compromises or unrealistic design simplifications. The extremely-parallelized algorithms deliver results of an **overnight process within minutes**, without sacrificing accuracy.

We believe that a great simulation engine has to be integrated into a greatly **simple-to-use environment**. Improved user experience leads to **increased productivity** and **efficiency**. The whole design process is summarized in just **five simple, intuitive steps**, eliminating all unnecessary options. For the more demanding users, Charge's user environment **offers additional advanced functions**.
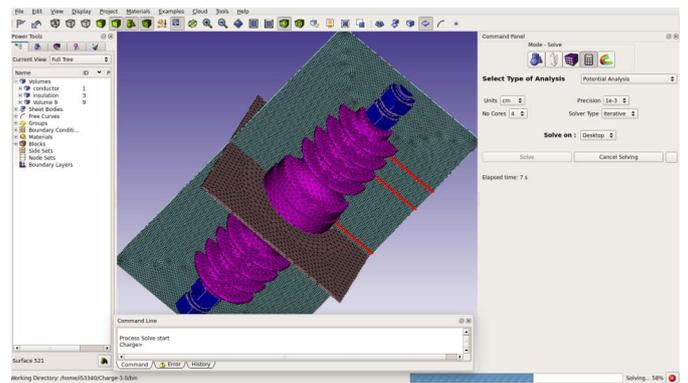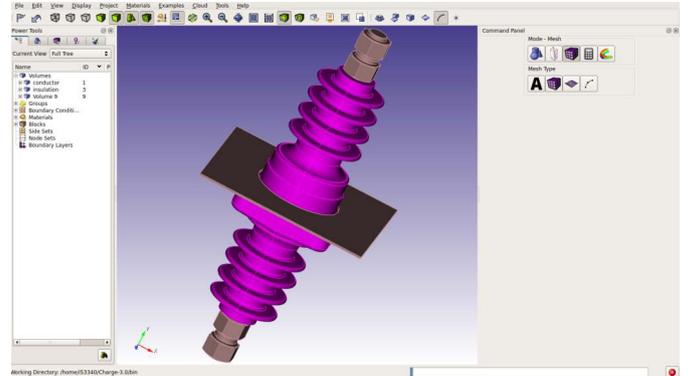
Intuitive 3D CAD environment to reduce design time

Charge offers a variety of options to satisfy all different design options:

- Import predesigned models (.STEP, .IGES, .ACIS files etc.)
- Design complex geometries by just clicking on the geometry buttons
- Write and load scripts to design multiple parametric models using our simple scripted language
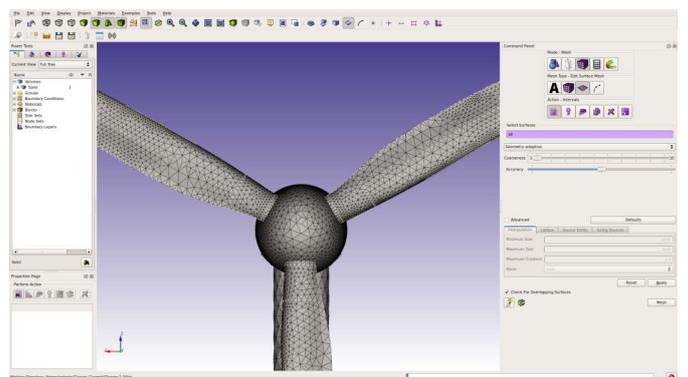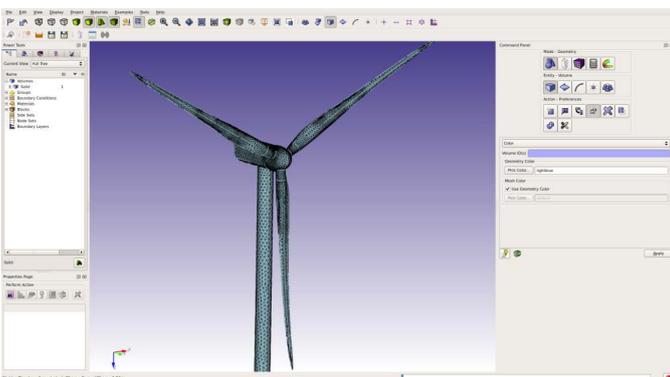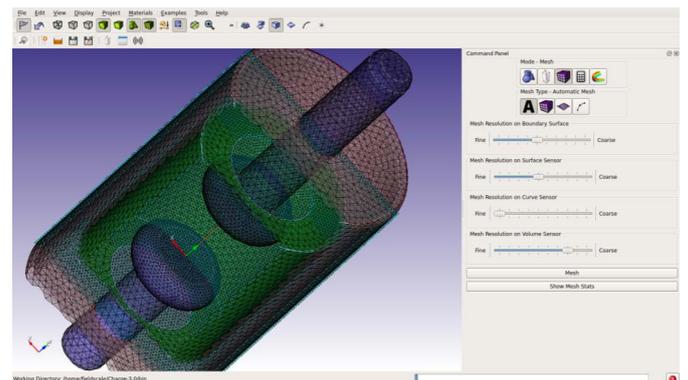

Under Charge's simplified environment underlies a powerful geometry engine to support **advanced operations** like:
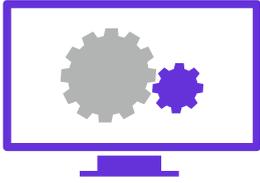
- Intersect, subtract, and unite
- Automatic Geometry Clean-up
- Geometry Healing
- Geometry Regularization
- Geometry Debugging
- Surface Overlaps Recognition
- Curve Trimming and Extending

☀ Powerful meshing engine

- Automatic meshing
- Geometry adaptive meshing
- Individual entities meshing
- User-defined mesh refinement
- User-defined mesh smoothing
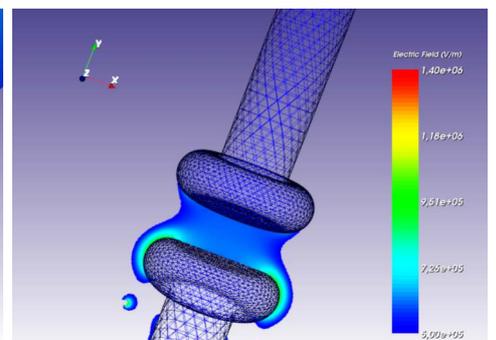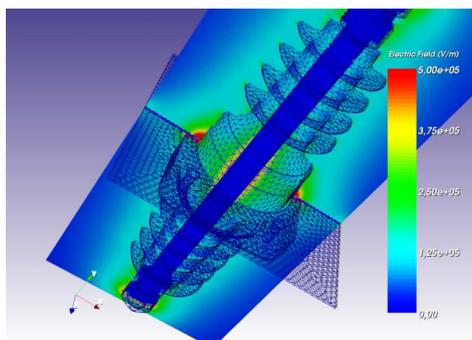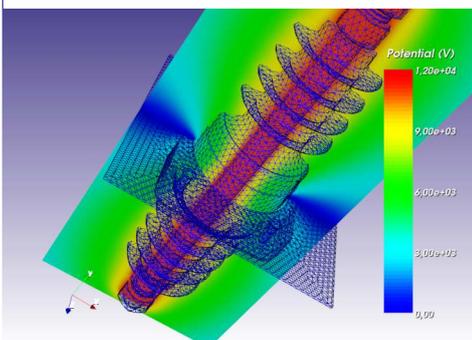- Extensive mesh statistics

Extremely parallelized solving algorithms deliver accurate results faster than ever before

The engineer can finally analyze the electric field of the whole model without compromises or unrealistic simplifications. Charge's super-optimized solving engine allows the extensive exploitation of all the available computer resources. Problems that were unsolvable up to date, become actually easy to simulate.

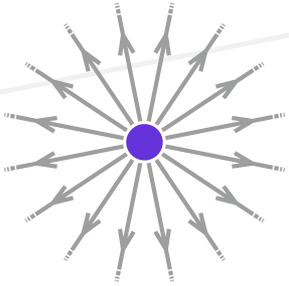# Extended visualization capabilities

- Instantly identify electric field peaks (hot-spots) and predict breakdowns with one click

- Directly overview min-max and mean values of the simulation in the results menu

- Easily filter the field and show only the parts within a user-defined value range

- Automatically get X-Y plots of E-field magnitude along user-defined lines or even curves

Fieldscale Charge is the electrostatic simulation software that enables the simulation of today's complex products in maximum detail, in just some minutes.

"In the near future simulations will be an integral part of every engineer's life. We have created a very powerful simulation engine that's able to support the fast-growing needs of the industry and it's ready to serve the innovation process in the most effective way."

Yiorgos Bontzios
CEO and co-founder

CHARGE
Electric Simulation Software

simple-to-use
environment

intuitive
design process

10x faster
solving

accurate
results

Support
- Free 2-hour training sessions
  to shrink learning curve
- On-site training options
- Standard and on-demand video tutorials

Contact us
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Reply within 24 hours

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