



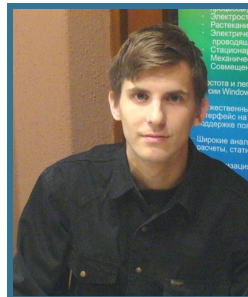
Contents and Speakers



**Vladimir Podnos,
Marketing & Support Director
WELCOME NOTES**



**Olga Ilina,
Marketing Manager
QUICKFIELD 5.7 OVERVIEW**



**Alex Lyubimtsev,
Support Engineer
NEW AND OLD ANALYSIS OPTIONS
IN QUICKFIELD 5.7**



QuickField overview



**Olga Ilina,
Marketing Manager
QUICKFIELD 5.7 OVERVIEW**



Finite-Elements Analysis Software

QuickField - Postprocessing telec2.pbm

File Edit View Problem Contour Tools Window Help

telec2.pbm

- telec2.pbm - nonlinear transi
- Geometry: Telec2.mod
- Data: Telec2.dtv
- Library Data: <none>
- Links
- No links

Postprocessing telec2.pbm:1

Values

- Local Values
- Coordinates
 - Voltage U = 57448 V
- Strength E = 308720 V/m
 - Strength $E_z = 308720$
 - Strength $E_r = -2.0882$
- Field Gradient
 - Displacement D = 1.6401e-

Table Postprocessing telec2.pbm:3

| L (mm) | z (mm) | r (mm) | N_x | N_y |
|---------|---------|---------|---------|---------|
| 0.00000 | 0.00000 | 38.0000 | 0.00000 | -1.0000 |
| 1.00000 | 1.00000 | 38.0000 | 0.00000 | -1.0000 |
| 2.00000 | 2.00000 | 38.0000 | 0.00000 | -1.0000 |
| 3.00000 | 3.00000 | 38.0000 | 0.00000 | -1.0000 |
| 4.00000 | 4.00000 | 38.0000 | 0.00000 | -1.0000 |
| 5.00000 | 5.00000 | 38.0000 | 0.00000 | -1.0000 |
| 6.00000 | 6.00000 | 38.0000 | 0.00000 | -1.0000 |

Time Plot Postprocessing telec2.pbm:2

U (*10⁵ V) Voltage

Time (*10⁻⁵ s)

telec2.pbm telec3.pbm

Postprocessing telec2.pbm:1 Time Plot Postprocessing telec2.pbm:2 Table Postprocessing telec2.pbm:3

For Help, press F1

-56.0 , 23.5



QuickField Difference

- Simple interface
- Clear and intuitive workflow
- Powerful solvers
- Practically unlimited geometry complexity



QuickField Difference





QuickField Complete Package

Magnetic Suite

AC Magnetics

Transient + DC Magnetics

DC Magnetics

Electric Suite

AC conduction + Electrostatics & DC conduction

Transient Electric + Electrostatics & DC conduction

Electrostatics & DC conduction

Thermostructural

Stress Analysis

Transient Heat transfer

Steady State Heat transfer



QuickField Electric Suite

- **Electrostatics**

| | | |
|------------|-------------------|------------|
| Capacitors | Ground connectors | Cables |
| Insulators | Contacts problems | Insulation |

- **DC conduction**

| | | |
|------------|-------------------|--------------|
| Capacitors | Ground connectors | Cables |
| Insulators | Contacts problems | Electrolytes |

- **AC conduction**

| | | |
|------------|-------------------|-------------------|
| Capacitors | Ground connectors | Cables |
| Insulators | Contacts problems | Device insulation |

- **Transient nonlinear electric analysis**

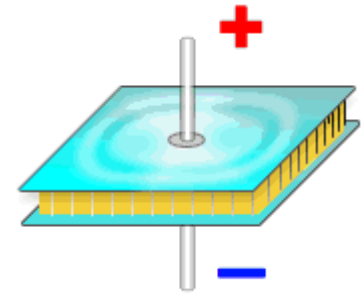
| | | |
|-----------|----------------------|-----------|
| Varistors | Stress control tubes | Arresters |
|-----------|----------------------|-----------|



New Analysis Examples

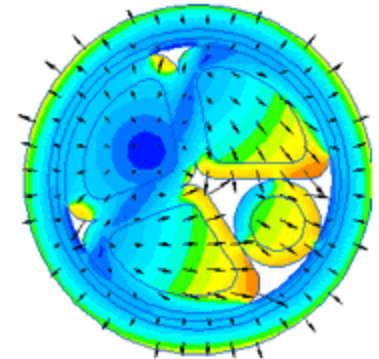
Varistors

Simulation of voltage-dependent capacitance in static and transient conditions



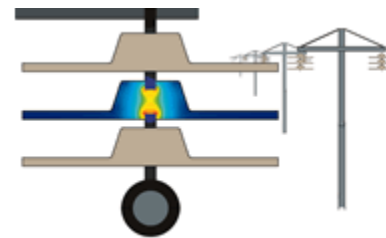
Stress control tubes

Design and optimization of cables which use non-linear stress control tubes



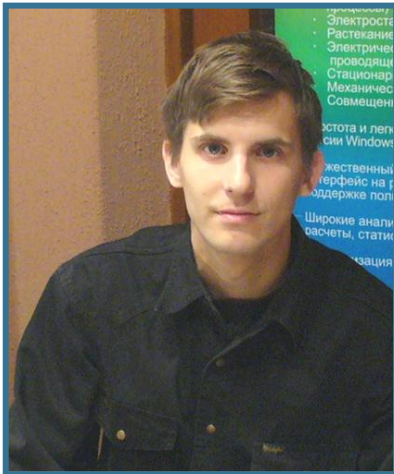
Overvoltage arresters

Transient electric analysis





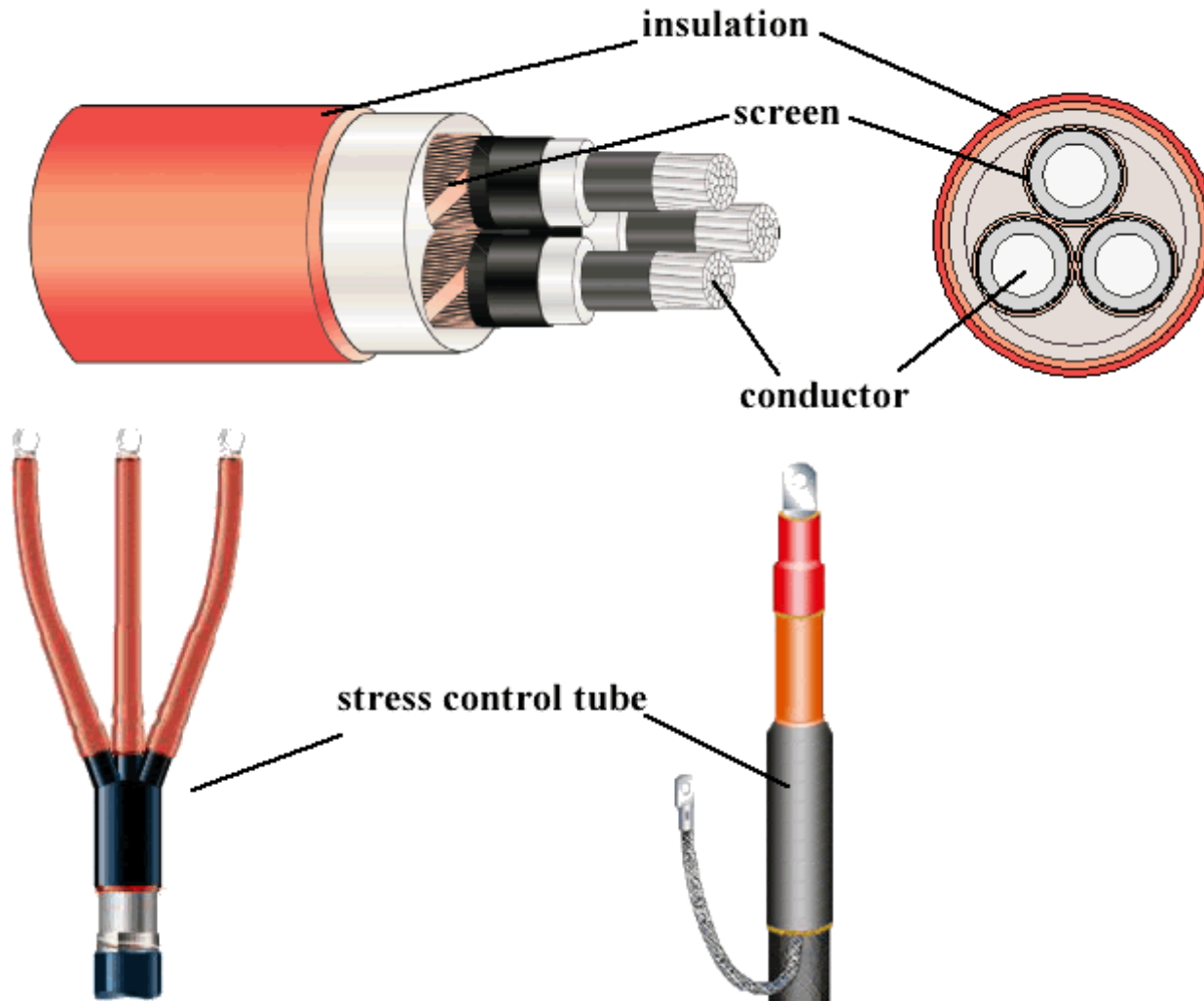
New and old analysis options in QuickField 5.7



**Alex Lyubimtsev,
Support Engineer
NEW AND OLD ANALYSIS OPTIONS
IN QUICKFIELD 5.7**



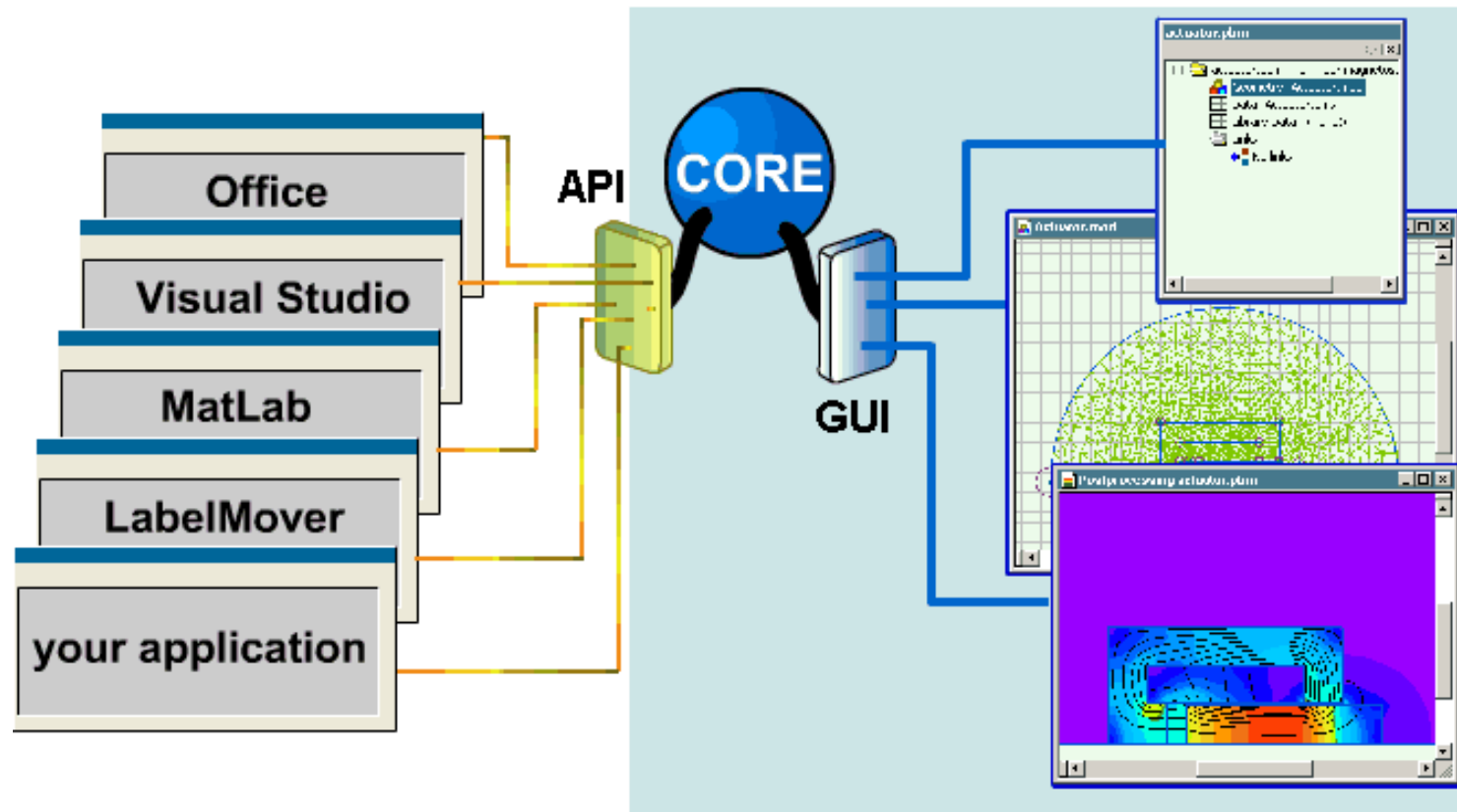
3 phase cable





ActiveField

QuickField





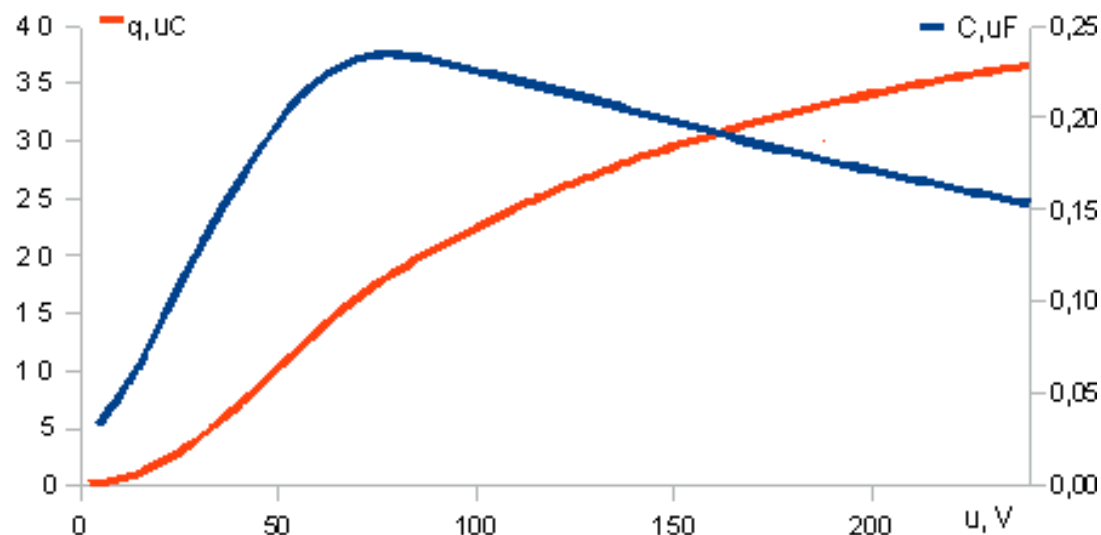
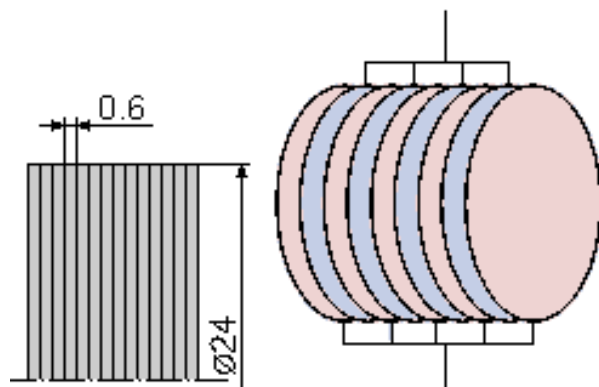
Non-linear capacitor

This is an example of the nonlinear electrical simulation, performed with QuickField software.

Problem Type:

Axysimmetrical transient nonlinear electric problem.

Geometry:



Nonlinear capacitor consist of metal plates isolated by nonlinear dielectric material.

Given:

Relative permittivity dielectric material - *nonlinear*.

Voltage $U_0 = 0.. 240$ V.