

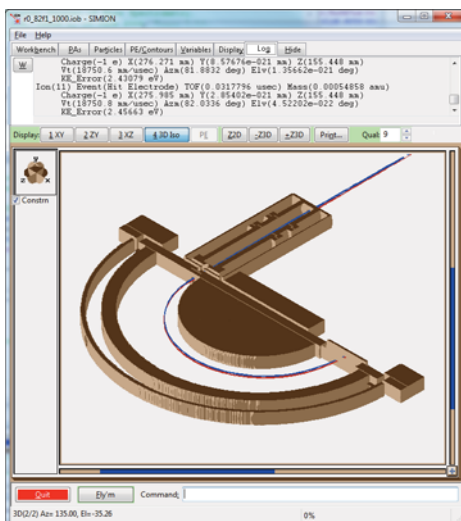
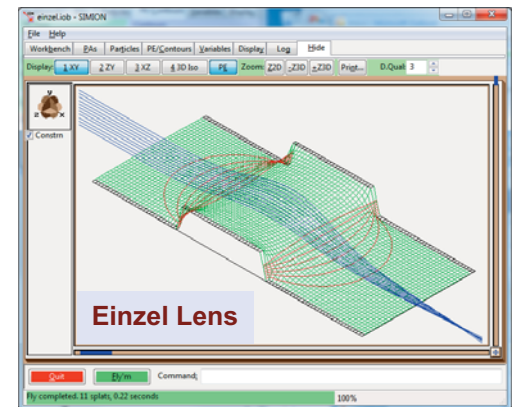
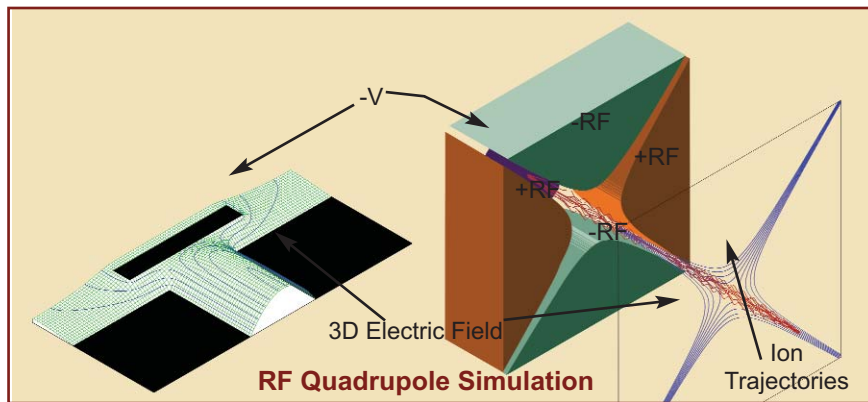
SIMION® 8.1.1

New
Release

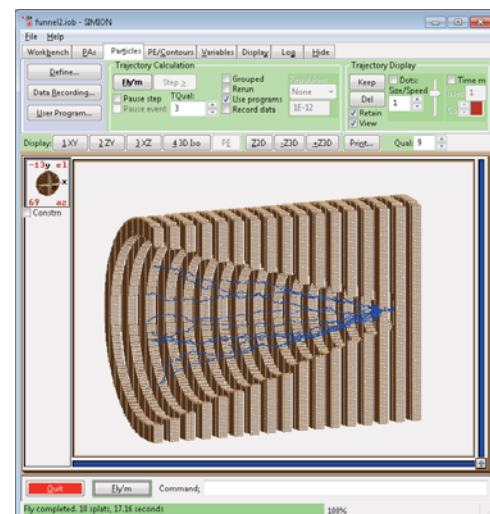
The industry standard for charge particle optics simulation.

Now faster, more accurate, and more versatile.

Overview: SIMION is a software package primarily used to calculate electric fields and the trajectories of charged particles in those fields when given a configuration of electrodes with voltages and particle initial conditions, including optional RF (quasistatic), magnetic field, and collisional effects. In this, SIMION provides extensive supporting functionality in geometry definition, user programming, data recording, and visualization. It is an affordable but versatile platform, widely used for over 30 years to simulate lens, mass spec, and other types of particle optics systems.



**Hemispherical Analyzer with
Lens Optics**



RF Ion Funnel/Collisions

Part No.	Description
SIMION81	SIMION 8.1
SIMION81LK	SIMION 8.1 Lab Kit - For Universities Use Only - Up to 30 seats
SIMION81U	SIMION 8.1 Upgrade from SIMION 8.0
SIMION81U7	SIMION 8.1 Upgrade from SIMION 7.0
SIMION81AL	SIMION 8.1 Academic Lease (1 year)



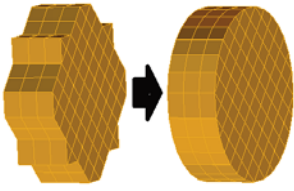
次世代技術知識集団

株式会社サイエンスラボラトリーズ

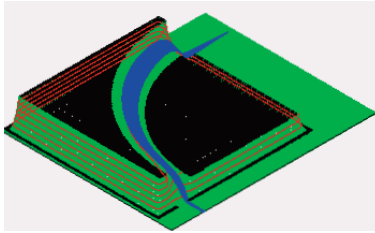
〒270-0021 千葉県松戸市小金原 7-10-25
TEL : 047-309-8311 FAX : 047-309-8310
Mail : sales@scilab.co.jp Web : www.scilab.co.jp

New Features in SIMION 8.1 (8.1.1/8.1.2) and 8.2EA/beta

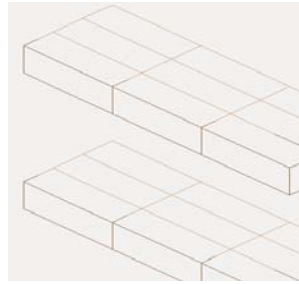
More Accurate



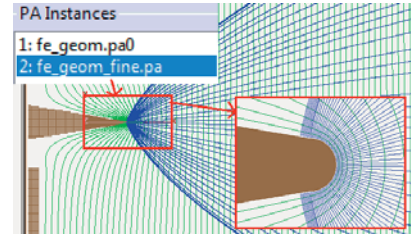
Improved curved surface handling ("surface enhancement") gives order of magnitude accuracy improvement



Large 64-bit array sizes up to 20 billion points / 190 GB
Example: 56 GB PA running in Amazon EC2

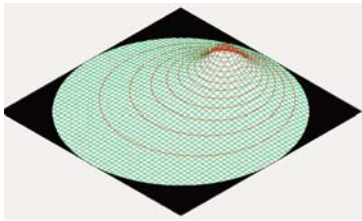


Oblong, non-square grid cells.

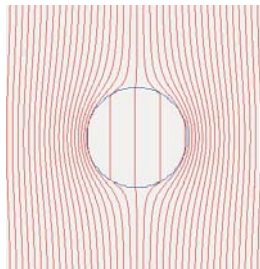


Nested refining techniques

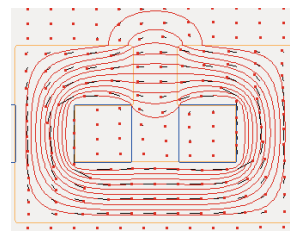
More Versatile



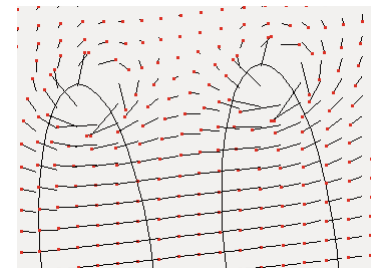
Poisson solver (Refine), fully programmable
Example: charged sphere in grounded tube



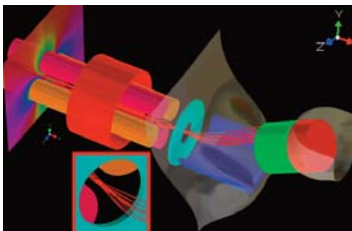
Dielectric materials (Refine)
Example: dielectric sphere in E-field



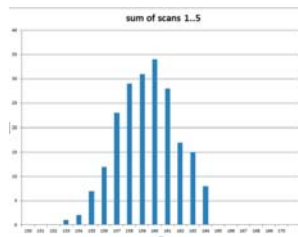
Permeability and magnetic vector potential (Refine) [8.2EA]
Example: C-magnet



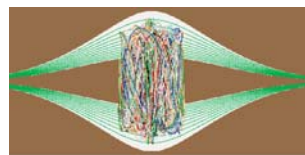
Programmable plotting capabilities for B-fields, gas flow, and wire coils.
Example: Helmholtz coil



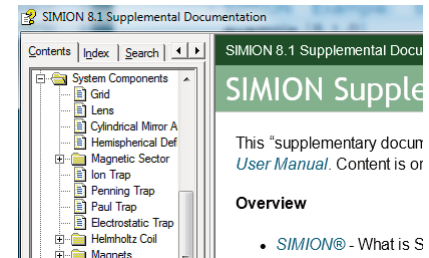
High quality 3D (OpenGL) graphics on View screen [8.2EA]



Excel/gnuplot plotting integration

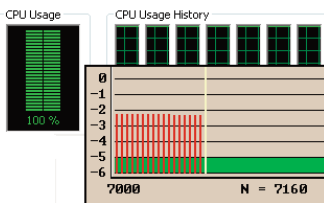


More examples



Supplemental Documentation expanded

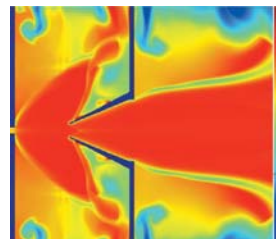
Faster



Multicore Refines [8.1]
Multicore Fly'm [8.2EA]
Additional parallization [8.2EA]
Improved Lua speed [8.2EA]

```
function segment.flym()
  -- Step combinations of voltages A an
  for VA = 10,100,10 do
    for VB = 50,70,5 do
      _VA,_VB = VA,VB
      run() -- Perform trajectory calcul
    end end
end
function segment.terminate_run()
  print('transmission ratio=', count/to
end
simion.pas[1]:potential(x,y,z, 200)
simion.pas[1]:refine{convergence=1e-5}
simion.wb.instances[1].x = 10
simion.wb.efield(x,y,z)
```

New programming segments and APIs for run automation, PA/IOB manipulation, creating particles during Fly'm [8.2EA], performing Refines and GEM regeneration from View screen, and more.
Example: voltage/geometry optimization



Third-party add-on package: Virtual Device Hydrodynamics 21.2
Gas flow solver for supersonic compressible conditions.

Native Linux batch mode SIMION binary now also available [8.2EA]

Early Access

Trial versions of features being developed for the next major version (8.2EA) can be previewed by 8.1 users via the "Check for Updates" button