



Introducing the Rappture Toolkit

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Take a trip back to 1985...



Copyright Universal Pictures
picture from imdb.com



The Boys of Summer
Don Henley
Video still from YouTube.com

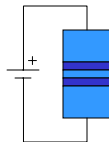


Superbowl XIX: 49ers vs Miami
Video still from Hulu.com

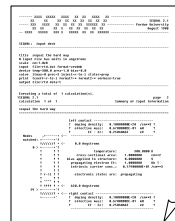


Tetris for IBM PC
Screen shot from Wikipedia.org

Semiconductor Electrostatics Quantum Analysis
SEQUAL 2.1 - 7862 lines of Fortran 77



Resonant Tunneling Diode





Now back to the present...

Magnetic Tape: \$10

```

----- XXXX XXXXX XXXX XX XX XXXX XX ----- SEQMQL 2.1
      XX XX XX XX XX XX XX XX XX ----- Purdue University
      XX XX XX X XX XX XX XX XX ----- August 1988
      XX XX XXXXX XXX X XXXXX XX XX XXXXXX -----

SEQMQL: input deck

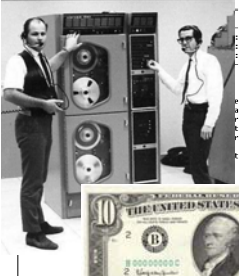

-----
title seqml the hard way
# input file has units in angstroms
scale cm=1.0E8
input file=rd.dat format=zvndk
device temp=300.0 area=1.0 bias=0.0
solve slmax# prec=0 inject=-to-1 states=prop
print tcoeff=-to-1 format1= format2= verbose=true
output file=rd.dat

-----
Executing a total of 1 calculation(s). page 2
SEQMQL 2.1 calculation 1 of 1 Summary of input information

-----
          0.1000000E+20 /cm+3 1
          0.4700000E-01 m# 1
          0.2500000E-07 eV 1

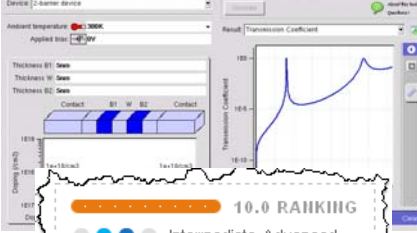
-----
          300.00000 K
          1.0000000 C/m+2
          0.0000000 U
          1.0000000 kg 1
          0.1700000E+07 /cm+3

res are: propagating
  
```

Fortran F77




Live Tool: Priceless



10.0 RANKING

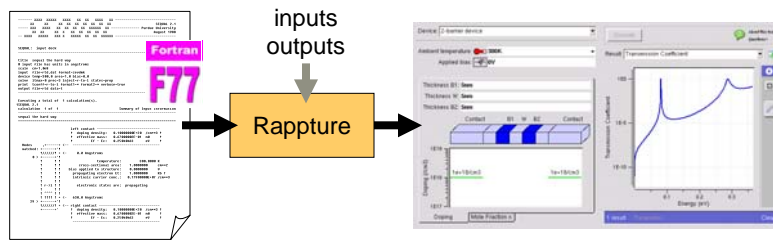
● ● ● ● ● Intermediate-Advanced

- 1185 user(s), detailed usage
- 2 questions (Ask a question)
- 2 review(s) (Review this)
- 0 wish(es) (Add a new wish)
- 4 Citation(s)
- Add to your favorites!

Share:    ...



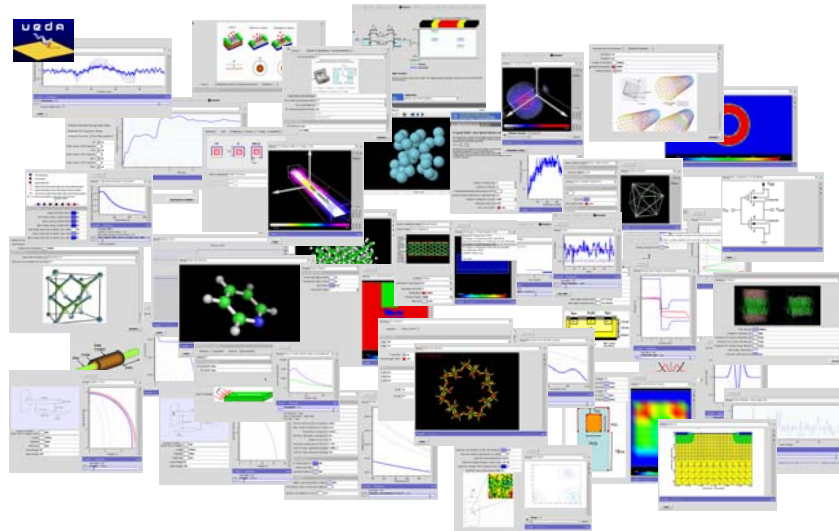
Introducing: The Rapture Toolkit



- Rapid Application Infrastructure
- Released in May 2005
- Open Source (rappture.org)
- Create standard desktop apps
- Works with your favorite programming language



Used to deploy hundreds of tools

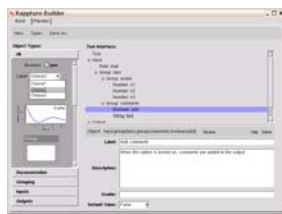


5



Three parts

Builder



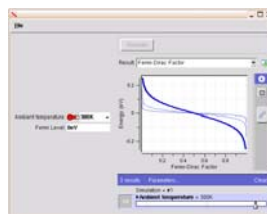
`rapture -builder`



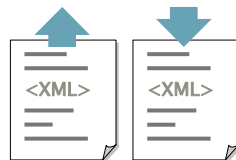
tool.xml

Generates tool description

Runner



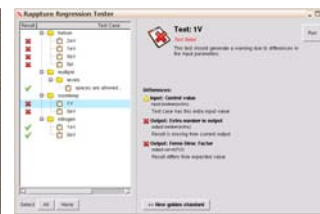
`rapture`
`rapture -run`



tool.xml **run.xml**

Reads tool description
Generates simulation results

Tester



`rapture -tester`



tool.xml **tests**

Reads tool description
Runs tests and compares results

6

1 Drag controls from the palette and drop in inputs/outputs

2 Click on a control and edit its parameters

3 Click on the "Preview" tab to preview your tool

4 Save your tool.xml file

- Takes a name and an "enthusiasm" level
- Enthusiasm adds an exclamation point
- Produces a "hello, world" string

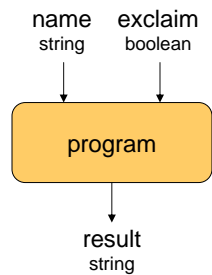
Build two ways:



string

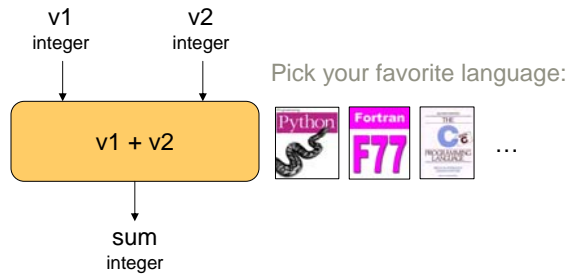
boolean

string





Exercise #1: Build a simple Addition tool



Pick your favorite language:

