

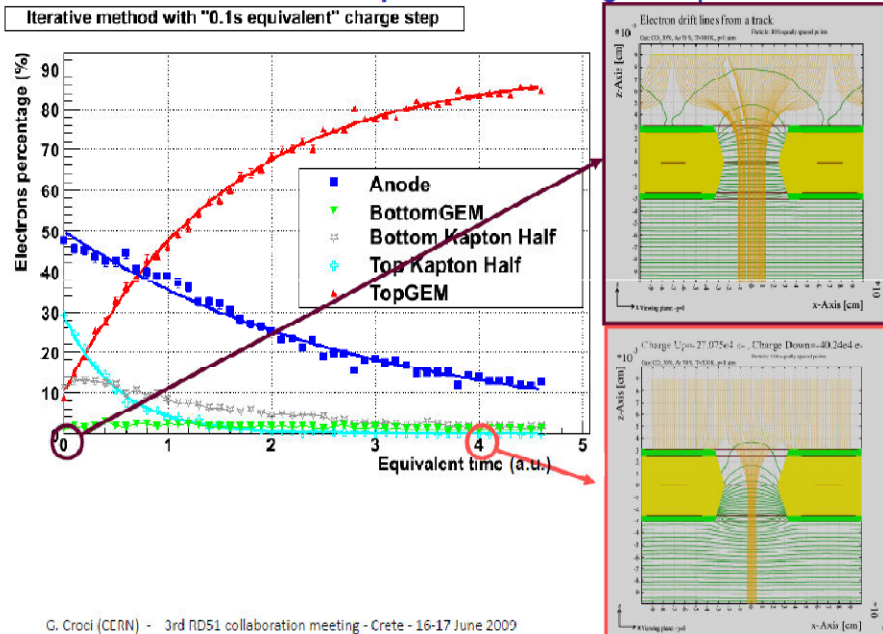
GRID Access for RD51 Users: Organizational Aspects

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RD51 Mini-week, WG2/WG4 Meeting, September 24 2009

Why GRID for RD51 ?

First “manual” iterative method simulation with “0.1s equivalent” charge step



Recent developments

The simulation took about 2 weeks!!!!!!

- We managed to write a shell script that automatizes all the required steps and is submitted to lxbatch.cern.ch:
- Creates a map with no charges (Ansys) and converts it to Garfield
 - Launches a Garfield script that starts 2000 e- 290 μm before the top GEM, executes the *microavalanche* procedure and writes an output file with x-end, y-end, z-end and t-end for each electron and ion in the simulation. To use multi-processor capability many Garfield sessions are started at the same time
 - Starts a ROOT macro that analyzes the output file and computes the electrons/ions ending place percentage, the real gain and the effective gain (if any)
 - Creates another Ansys macro applying to the kapton wall charges proportional to estimated percentages
 - Reconverts the Ansys solution to Garfield map, starts another simulation of 2000 e- and continue

G. Croci (CERN) - 3rd RD51 collaboration meeting - Crete - 16-17 June 2009

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(R. Veenhof summary, RD51 Collaboration Meeting in Crete, June 16-17, 2009)

MPGD Simulation: General Requirements

- high-computing time;
- low transmission speed (few Gb);
- hardly any disk space needed (compared to LHC experiments)

Virtual RD51 Organization

**Meeting with Patricia Mendez Lorenzo and Jakub Moscicki (IT) - September 4
Follow - up meeting – middle of October**

“Test VO” to run Garfield applications on GRID (exist since some time):

<https://twiki.cern.ch/twiki/bin/view/ArdaGrid/GarfieldGridInstructions>

Setup “RD51 Virtual Organization” will take 2-3 days

Major IT Requirements:

• Run jobs regularly @ GRID (even if not many)

• RD51/GRID expert (interface between IT & RD51) – master the system with IT help

• RD51 VO administrator (accept new users, not too technical job)

How many RD51 people/institutes are interested ? Do we need GRID?

**If answer is yes – need to ask GRID participating institutes (members of RD51-?)
to allocate certain amount of CPU for RD51 jobs – (could take some month(s))**