

RD50 DB

A first prototype

D. M. Creanza, S. My

Dipartimento Interateneo di Fisica & INFN - Bari

First Tables

```
mysql> use RD50
Reading table information for completion of table and column names
You can turn off this feature to get a quicker startup with -A
```

```
Database changed
mysql> show tables;
+-----+
| Tables_in_RD50 |
+-----+
| MeasConditions |
| MeasType       |
| Measurement    |
+-----+
3 rows in set (0.00 sec)
```

Of course this is a minimal set of tables, just to start testing the scripts. The next important table to define will be the **Device** table.

Also the definition (the structure, the content etc.) of these tables (see next slide) will be modified according to the occurring needs, as the construction of the **DB** evolves.

Description of the Tables

```
mysql> describe MeasConditions;
```

Field	Type	Null	Key	Default	Extra
ID	int(11)	NO	PRI	0	
MeasID	int(11)	NO	PRI	0	
MeasName	varchar(50)	YES		NULL	
Comment	varchar(1000)	YES		NULL	
Temp	float(5,2)	YES		NULL	
Fluence	varchar(30)	YES		NULL	
CondName	varchar(500)	YES		NULL	
CondValues	varchar(500)	YES		NULL	

```
8 rows in set (0.00 sec)
```

```
mysql> describe MeasType;
```

Field	Type	Null	Key	Default	Extra
ID	int(11)	NO	PRI	NULL	auto_increment
MeasName	varchar(50)	YES		NULL	
SourceVarName	varchar(50)	YES		NULL	
MonitorVarName	varchar(50)	YES		NULL	
Comment	varchar(700)	YES		NULL	
Legend	blob	YES		NULL	

```
6 rows in set (0.00 sec)
```

```
mysql> describe Measurement;
```

Field	Type	Null	Key	Default	Extra
ID	int(11)	NO	PRI	NULL	auto_increment
DeviceID	int(11)	YES		NULL	
MeasName	varchar(50)	YES		NULL	
MeasTime	varchar(40)	YES		NULL	
Time	timestamp	NO		CURRENT_TIMESTAMP	on update CURRENT_TIMESTAMP
VarName	varchar(400)	YES		NULL	
VarValues	text	YES		NULL	

```
7 rows in set (0.00 sec)
```

Source/Monitor Variables

```
mysql> select MeasName, SourceVarName, MonitorVarName from MeasType;
+-----+-----+-----+
| MeasName | SourceVarName | MonitorVarName |
+-----+-----+-----+
| Diode IV | Vback;Vfront;Vgr | Iback;Idiode;Igr |
| Diode CV | V1;V2 | I2;I2 |
| Strip IV | a | b |
| FFF | D | w;t |
| GGGG | D | w;t |
| LLL | a | v |
+-----+-----+-----+
6 rows in set (0.00 sec)
```



Reasonable...



Fake (not correctly defined): just for development test

Web Interface

At the moment, we have working routines for:

- reading measurement files
 - writing measurement results
 - to **already existing** meas-type DB tables
- OR
- to **new** meas-type DB tables (defining them just before)

The nice feature is that this is accomplished automatically by a user-friendly web page, with selection menus and buttons, and requires no particular effort (or knowledge) to the operator. The only prescription is that the measurement file **MUST** be a text file with these characteristics:

- it contains several columns (one per measurement parameter, that can be a **SOURCE** or **MONITOR** parameter) separated by whatever number of blanks
- each raw represents one measurement point
- the first raw is an **HEADER** containing the names of each column (i.e. of each meas. parameter)

For example:

Vback	Vfront	Vgr	Itot	Idiode	Igr
0.0	0.0	0.0	2.5E-12	-1.0E-12	-1.5E-12
5.0	0.0	0.0	4.0E-11	-3.0E-11	-1.0E-11
10.0	0.0	0.0	5.0E-10	-3.5E-10	-1.5E-10

.....

How to proceed

Such a file shouldn't be difficult to produce for simple measurement (IV, CV etc.), whatever measurement setup you may have... at least we hope so.

Anyhow, not all measurements can be reduced to such a simplified format (for example: family of curves as a function of a parameter, etc.)

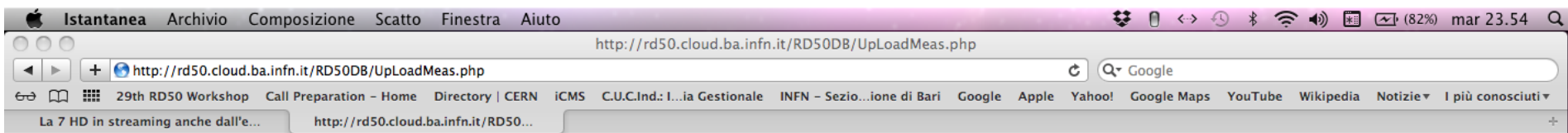
What we need to do now is to sit around a table and define the “standard” format for each individual kind of measurements, deciding also what is to be recorded in the DB as a *measurement value* and what can, instead, go into the “*comment*” field.

Once this issue is set, we can write the scripts that do the job.

Few screenshots from the web site follow in next slides, for illustration purposes (don't look at graphic aspects, they will improve!).

P:S: Please, don't use the web site now, we are working on it and some functions are disabled.

Connect to the web site



INTERFACE TO INSERT MEASUREMENT RESULTS INTO RD50 DATABASE

Choose a Measurement Type

or create a new Measurement Type:

Measurement Type Name:

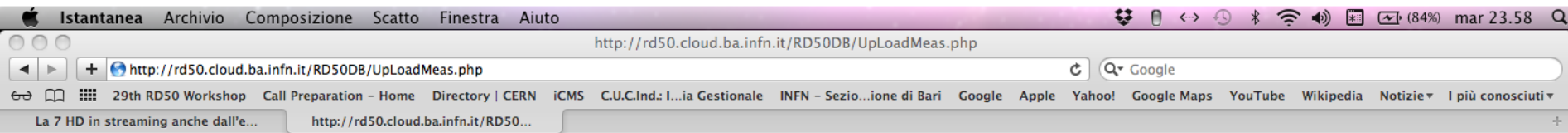
Comment:

Number of Sources: Number of Monitors:

nessuno selezionato



Choose a measurement type



INTERFACE TO INSERT MEASUREMENT RESULTS INTO RD50 DATABASE

Choose a Measurement Type

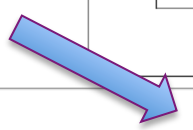
Diode CV ▾

Select Measurement File: nessuno selezionato

already in DB



or create a new one



or create a new Measurement Type:

Measurement Type Name:

Insert here your comment...

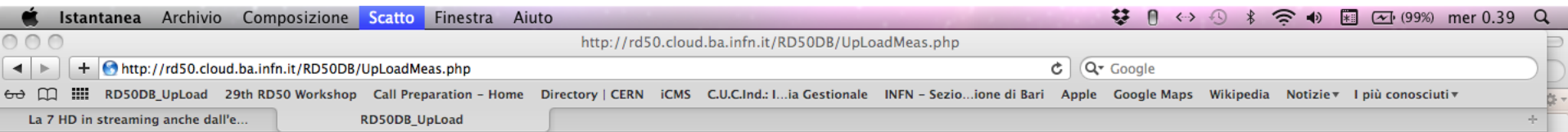
Comment:

Number of Sources: ▾ Number of Monitors: ▾

nessuno selezionato



Upload your measurement file...



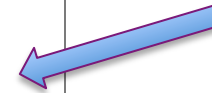
INTERFACE TO INSERT MEASUREMENT RESULTS INTO RD50 DATABASE

Choose a Measurement Type

Diode CV

Select Measurement File: CV.txt

... and submit



or create a new Measurement Type:

Measurement Type Name:

Comment:

Number of Sources: Number of Monitors:

nessuno selezionato



The variables in your header will be shown

http://rd50.cloud.ba.infn.it/RD50DB/UpLoadMeas.php

29th RD50 Workshop Call Preparation - Home Directory | CERN iCMS C.U.C.Ind.: I...ia Gestionale INFN - Sezio...ione di Bari Google Apple Yahoo! Google Maps YouTube Wikipedia Notizie I più conosciuti

La 7 HD in streaming anche dall'e... http://rd50.cloud.ba.infn.it/RD50...

IBACK VBACK

Select Measurement File: Scegli documento nessuno selezionato Submit

These headers have been found

VOLTAGE Select... Select...
CAPACITANCE Select... Select...
ERROR Select... Select...
TIME Select... Select...

SUBMIT TO DB

or create a new Measurement Type:
Measurement Type Name:
Comment:
Number of Sources: Select... Number of Monitors: Select...
Scegli documento nessuno selezionato
CREATE



Decide what to write in DB, define S & M ...

http://rd50.cloud.ba.infn.it/RD50DB/UpLoadMeas.php

http://rd50.cloud.ba.infn.it/RD50DB/UpLoadMeas.php

29th RD50 Workshop Call Preparation - Home Directory | CERN ICMS C.U.C.Ind.: I...ia Gestionale INFN - Sezio...ione di Bari Google Apple Yahoo! Google Maps YouTube Wikipedia Notizie I più conosciuti

La 7 HD in streaming anche dall'e... http://rd50.cloud.ba.infn.it/RD50...

IBACK VBACK

Select Measurement File: nessuno selezionato

These headers have been found

VOLTAGE

CAPACITANCE

ERROR

TIME

or create a new Measurement Type:

Measurement Type Name:

Comment:

Number of Sources: Number of Monitors:

nessuno selezionato

... and write
to DataBase.
Easy, isn't it?

