# “Easter” JRC CO2 Meeting 10/04/2017:

[**“Easter” JRC CO2 Meeting 10/04/2017:**](#_xgatqka73ufl) **1**

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Since we already have major things to discuss, we will have a very quick table round of presentations, 2 minutes each.  
Let’s spend more time on major problems, requests or other things that have to be discussed within the group.

Homework: Everybody complete DONE/TODO items on his part.

Lunch: Organizers share expenses - today 10 sandwiches & 5 salads from MENSA

Question: Do you have any major ~~thing~~ blocker you want to discuss during the meeting?

## Items per person:

* Dimitris:
* Iker:
* Vincenzo:
* Biagio: use of telegram and emails. Agreement on how these tools should be used.
* Michalis: no major things to discuss (presentation on driver model when possible)
* Kostas: no major things to discuss (presentation on project with AIMSUN sw when possible)
* Alessandro:
* Giorgos:
* Kostis:
* Jelica: not present
* Victor:
  + Optimization of co2mpas model (see main point below)
  + CO2MPAS DICE requests (see main point below)

## Agenda:

estimated duration 1:40’

1. 5’: Opening meeting with presenting agenda items & deciding on the next hosts (while chewing)
2. 30’: Quick tour de table: presentations 2’ (STRICTLY) from all persons, i.e ~~TODOs~~ for easter?
3. 10’: Use of telegram and mails. Agreement on how these tools should be used.
4. 20’: Tuning of CO2MPAS parameters
   1. Situation with the installation of CO2MPAS in Higgs (Planck is being shut down soon)
   2. Situation with the updated batch files to be used in the simulations.
   3. List of model parameters to be tested and which is the range of variability of each one.
   4. In which order should the simulations start (which parameters, or combination of parameters, are more critical)
   5. Get a quick briefing on how to access the cluster, prepare jobs, launch them, and check their status
   6. Have an estimate (in runtime-weeks) for all the simulations to be completed. We are already in April and we agreed on 21/02/2017 that the model has to go in code-freeze on 01/06/2017
5. 10’: CO2MPAS DICE requests
6. 5’ New eco-innovations updates implemented in USAVE.
7. 40’ AOB

## Minutes from the Meeting

### Roundtable:

* Victor:
  + DONE: testing activities on 2 vehicles: Fiat Panda and Audi A1.
  + TODO:
* Dimitris:
  + DONE: batches for CO2MPAS with the new template version.,  
    Report for comparison of old template VS new template.
  + TODO: Handle VECTO & CO2MPAS requests, provide a faster way for parsing experimental data files, synchronize them and creating input-files for CO2MPAS. Make the CO2MPAS FAQ. Analyze the impact on batches when inserting the gear-vectors in the new input-template. Keep track of the requests in VECTO and CO2MPAS and make a report.
* Iker:
  + DONE: Build HDF5 from different sources (EEA by now, more in the future).  
    Extract data from EEA CSVs and put them in HDF5 format (which allows compression and portability). Use of several GUI apps for visualizing the HDF file and metadata.
  + TODO: Cloud setup on Higgs/Planck for ipyparallel still using 1(!) node for co2mpas batch runs. Use additionally PCs to reduce run-time when Pirovano opens ports.
* Biagio: mainly administrative things related to CO2 and ART projects. WLTP task force activities.
* Vincenzo:
  + DONE: USAVE post-process route for fuel optimizations.
  + TODO:
* Giorgos:
  + DONE: Very frequent exchanges (phone, mails) with Klaus (DG Clima). Validated GreenDrive with Peugeot’s results co2mpas ~7-10% lower.
  + TODOs: Heavy Duty engine map activity (with Alessandro), report review & help Micheal & Stefanos, Nikiforos extra-muros.
* Kostis:
  + DONE: VECTO Bridge IT contract.
  + TODOs : Next big VECTO contract is coming, Provide dropbox-link with processed 500X testing → Iker, DICE updates for 15-May TS/TAA meeting, Cluster-setup & big-DB handling.
* Alessandro:
  + DONE: Air drag testing activities with Scania and Daimler (getting confident with test procedure, handling data, learning and running VECTO AirDrag). Participation to VECTO meetings in Graz. Paper on Plug-in Hybrids. Reports of the activities.
  + TODO: SCANIA and Daimler VECTO runs. Engine fuel map activity. Reports.  
     Understand the work done by Claudio Cubito and continue on it.  
     Hopefully sooner or later: literature review on hybrids and modeling.
* Kostas:
  + DONE: Traffic simulations with AIMSUN.
  + TODOs: making simulations more accurate, result that could be obtained by using driver model together with CO2MPAS simulations for better estimation of fuel consumption. Problem: CO2MPAS is not forward looking!
* Michalis:
  + DONE: participation to a conference on autonomous drive. Submission of a paper on models that take into account vehicle dynamics.
  + TODO: Development of a new driver model that takes into account vehicle dynamics based on the veh. db provided by Stefanos; embed new model in Aimsun; Create and run simulation scenarios in Aimsun in order to study CAD effect on the use case of Antwerp and assess their benefits in terms of increasing network capacity and/or emissions.

27/28 April invitation to Brussels for CO2MPAS (Biagio, Vincenzo, Giorgos, Kostis, Victor, Jelica).

15 of May workshop for TA authorities.

### Use of communication tools:

* Tools used within the group: mails, calendar (CO2MPAS), telegram, Github, Google Docs.
* The calendar is used for keeping track of the availability of everyone and accordingly setting leave periods. It can be extended outside the CO2MPAS subgroup and used by everyone.
* For discussions that involve a high number of exchanges and quick replies, telegram is to be preferred. Furthermore, it makes communication easier when outside JRC walls.
* Invitations, official documents, official communications, documents to be reviewed and so on should pass through the mail channel.
* Google documents is a powerful tool for group editing and access, but it is not easy to keep track of documents as the time passes - no linkable URLs - A use GitHub to link of each Google document in a Wiki page in Github.

### CO2MPAS parameters tuning:

Iker already managed to run simulations in parallel on our pcs, but some further steps are required in order to run simulations in parallel on the cluster.

Run as soon as possible some simulations in order to evaluate the computational time needed.

Optimization will be done on real cars (45 files), hence the computational load will not be very high.

### USAVE:

* Vincenzo implemented a new strategy that can provide further savings in fuel consumption. It is possible to decrement the traveling speed in some section and increment it in others, in a way that the time trip doesn’t change but the overall fuel consumption gets smaller.
* Small discussion on how USAVE approach could be eventually sold to other companies (TOM TOM for example).  
  Lorenzo will be responsible for the development of the smartphone App.
* OBD-connector development postponed; probably to start after summer.

## Conclusions & Action items:

(to be transferred as decision points in GitHub)

* Stuff not directly related to CO2MPAS (example: questions on WLTP) should be forwarded to Alessandro Marotta.
* DICE:
  + When we get a request for the DICE we should forward to Cosmin, he will be responsible for updating the list of official users.
  + Do not start sending config-files until next week, after new DICE release have changed config-params.
* Provide Dropbox-link with Jelica DB shrunk and downsampled with ipython/makefile code..
* Next Meeting:
  + Skip round-table next time - replace with homework: Everyone should write its DONE/TODOs and read other’s from Meeting Agenda document (a document like this, there will be a new one every time) what he/she has been working on lately, and leave the important part for the meeting (problems, requests, advices, announces, … ).
  + Lunch: Organizers share lunch expenses
  + Don’t forget the chocolates
  + Next meeting hosts: Biagio and Vincenzo, 8th of May
  + Michalis and Kostas will present the project(s) they are working on, possible integration points with co2mpas.
* Invite all group members to Calendar.
* Make cluster run python-code on all nodes (not just the master node); request to open firewall-ports for ipyparallel from Pirovano.

## Open Discussions:

* Influence of FTIR in emissions measurement
* Agreement on the use of mails, telegram, Github, Calendar, Google Docs, …
* Common problem for many people (Alessandro, Jelica, Gfon): Big-Data pre-processing and Synching (TODO: for ankostis/Iker/Vinz)