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On Demand Runs Of Mesoscale Models : Météo-France multi-mission, multi-support GUI

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Numerous experiment campaigns have shown the interest of mesoscale models to represent weather conditions of the atmosphere as a support to various applications, from electromagnetic propagation to wind power atlas. However running mesoscale models requires high level knowledge on computing and modelling to define the different parameters for a given simulation. With the increase of the demands for mesoscale simulations, we decided to develop a GUI that enables to easily define and run type-experiments
Ø at any location on the globe
Ø on different types of computers (from Meteo-France Fujitsu to a PC Cluster)
Ø with different choices of forcing models.
The GUI developed in PHP, uses a map server to visualize the location of the experiment being defined and the different forcing models available for the simulation. The other parameters such as time steps, resolutions, sizes and number of embedded domains, etc … can be modified through checkboxes or multiple choices lists in the GUI. So far, the GUI has been used to run 3 different types of experiment :
Ø for EM propagation purpose, during an experiment campaign near Toulon : the simulations were run on a PC Cluster in analyse mode.
Ø for wind profiles prediction, in Afghanistan : the simulations are run on the Fujitsu in forecast mode.
Ø for weather forecast, during a the F1 race in Japan : the simulations were run on a PC Cluster in forecast mode.

During the presentation, I will first give some screen-prints of the different fill-in forms of the Gui and the way to define an experiment. Then I will focus on the 3 examples mentioned above showing different types of graphs and maps produced.

There are tons of other applications where this tool is going to be useful especially in climatology: using weather type classification and downscaling, the Gui will help run the simulations of the different clusters representatives . The last thing to accomplish is find a name for the tool.