

## **WG#1 MOTTO**

<b>Working Group General Information</b>	
Working Group Title	Modular Design of Simulation Tools
Working Group Short Name	Motto
<b>Short Summary of the Working Group Topic</b>	
Simulation tools have many functions in common: user interface, model execution (e.g. scheduler or equation solver), evaluation of results, graphical representation and animation. The question arises if a common modular architecture is possible and useful for a sufficiently broad range of simulation tools?	
<b>Short Summary of the Working Group Goals</b>	
The WG will analyse technical and economic opportunities for a common, generally applied modular architecture of simulation software. In case sufficient benefit in such an approach is found, then the WG will propose further actions.	

## The Working Group Description

<b>Short description of the Working Group topic</b>
Modular design of simulation software : analysis of state of the art and possibilities, benefits, hindrances.
<b>Background. Reasons why this Working Group is needed.</b>
The Suppliers Group contains - and will continue to contain – a number of small suppliers which need to make their development work as efficient as possible. Wherever possible they should focus on the distinctive features of their tools and services and not spend a lot of time porting their tool from one platform to another, developing standard functions which are more or less common to all simulation tools. The Group also contains a number of academic institutes which produce prototypes of simulation tools (e.g. in the framework of a PhD thesis). Most of these tools are bound to die quickly not because of bad quality, but because they do not fit together with any commercial tools of any supplier. Also most of these tools focus on one aspect only (e.g. user interface, statistical evaluation) and are poor with regard to others. It would be extremely helpful for the academic developers if they could use existing modules which are essential for their research. And it might be easier for commercial suppliers to pick up and integrate such prototype modules into their tool boxes if there were an agreed modular structure of simulation tools. However, economic and competitive reasons may make such an approach not viable. It must be evaluated if there is sufficient benefit for a sufficient number of players.
<b>Working Group goals.</b>
<p>The goals are:</p> <ul style="list-style-type: none"> <li>- to check if joint development /common modules are technically and economically attractive for commercial developers</li> <li>- to check if modular design makes it easier for commercial suppliers to pick up and integrate prototypes (modules of simulation tools) developed in academic institutes.</li> </ul> <p>Steps:</p> <ul style="list-style-type: none"> <li>- survey state of the art and identify good practice in the area</li> <li>- assess potential benefits of modular design (for commercial partners, academia, users)</li> <li>- evaluate economic and competitive implications</li> <li>- propose actions for future work</li> </ul> <p>It is expected that 3-5 meetings will be sufficient to get a better picture and propose actions. State of the Art survey could be done by some students in their theses, ongoing work may be done as PhD work (develop and test modular structures).</p>
<b>The expected impact of the working group.</b>
The WG may help suppliers to develop better tools with less effort. It may lead to a number of joint development activities and RTD projects. It might be seen as a first step to a Sim-Serv suite of tools.