

## **#TANGOToolbox is coming back with updated tools to simplify and optimize software for heterogeneous hardware. Beta version is here!**

Brussels, 09/02/2018

**TANGO project releases the Beta version of #TANGOToolbox to facilitate the effort of coding when targeting various hardware architectures.**

The world of today is continuously imposing more flexible software abstractions and hardware architectures able to deal with more data and intense workloads, responding to new demand of customers all around the globe. We cannot depict high performance computing without drawing heterogeneity architectures or software systems without mentioning energy or performance. These topics are relevant for #TANGO, the initiative is maturing a collection of tools to put in easier connection both worlds: hardware and software. **#TANGOToolbox** comes this time with a new version of the box, but the objective is the same: to deliver a solution to simplify the way to develop heterogeneous architectures, controlling also energy limitations and value computer power.

**#TANGOtoolbox** is the main outcome of TANGO project, and it is a set of modular, open and interoperable tools to design, model, develop and execute software in heterogeneous hardware architectures. The **#TANGOtoolbox** also allows the optimization of various dimensions of software design and operations such as energy efficiency, performance and dependability on target architectures.

We are proud to announce the second release of #TANGOToolbox, the **#beta** version. This version is comprised by the whole set of tools that have been developed in the first one (Alpha version) under a new improved perspective.

TANGO plays at various workflows, trying to facilitate and enhance the performance in all them. With TANGO, every component can be used in one or more scenarios. In the future, the components will grow and get more as the workflows will be more also. Now, there are three different workflows identified where TANGO acts (efficient apps programming in HPC, programming efficiently embedded apps and design and programming heterogeneous platform with configurable hardware).

At this **#beta** version of the project, the efforts have been made with the objective of *performing on time and saving energy*. This could be seen at several levels. At IDE layer, the tools tell you whether is better or not to offload tasks to an FPGA or seeing which architectures gives you the better performance for a given task. At runtime level, the application is monitored in terms of energy and performance, if possible by the underlying infrastructure, and it is self-adapted to optimize it. This **#beta** version also supports new heterogeneous hardware like the Inte Xeon Phi. Finally, this version also focused improvements in enhancing *the productivity from developer's side*, offering a solid feedback on tools trained in this version and the first one too (Alpha version), to achieve better results and correct possible mistakes during the training period for develop

Supporting TANGO project:

TANGO is an EU project, coordinated by Atos, launched in January 2016 with the purpose to pave the ground for the new world that emerges from the new exploiting possibilities that the use of new powerful computing hardware offer by customized heterogeneous hardware. The project wants to chase the maximum success through the benefits of upgrades to fulfill the objectives of the entire consortium, to finally present a great solution to be implemented out of the project context. TANGO shows the #TANGOTOOLBOX as the way to approach developers to the next generation of applications, enabling them to work better and faster in mobile, IoT (Internet of things), Cyber Physical Systems, Wearables, Big Data and HPC (High Performance Computing).

TANGO is founder member of Heterogeneity Alliance (<http://heterogeneityalliance.eu/>) which aims at joining efforts of organizations interested in the development of future technologies and tools to advance, and take full advantage, of computing and applications using heterogeneous hardware.

To obtain more details about the project or the Alliance, you can contact the project coordinator Clara Pezuela ([clara.pezuela@atos.net](mailto:clara.pezuela@atos.net)) or by [www.tango-project.eu/contact](http://www.tango-project.eu/contact). Also, the website [www.tango-project.eu](http://www.tango-project.eu) is available to consult.