



# Going Forward with GreenSocs™

By Mark Burton, GreenSocs

GreenSocs is a small company whose principle aim is to develop open source SystemC infrastructure and an open source community based around that infrastructure. GreenSocs is run on behalf of its subscribers. The long term goals and vision of GreenSocs is that the community that GreenSocs develops benefits the subscribers in several ways:

- » **Support for research and development** Today's interesting problems, as has been the case for many years, are about scale. Research and development today is hampered in two ways. First there is little access (from the research perspective) to large scale (realistic) designs. Second there is restricted access to the tools that are required to manipulate those designs. Researchers resort to trivial examples, use proprietary examples from which it is hard to publish, or are required to enter into fruitless long projects to develop the examples they need for their end goal. One of the goals of GreenSocs is to start to make some examples of tools, IP and infrastructure (the distinction being vague) available as open source.
- » **Supply of Engineers** Because of the increased availability of SystemC infrastructure, tools and IP, the prevalence of trained engineers in the marketplace is expected to grow. Further more, as these engineers will have had direct contact with relevant and used IP, tools and infrastructure, their productivity will be increased.
- » **Supply of services** Finally, the opening of relevant infrastructure, tools and IP will also enable (and encourage) the wide spread prevalence of engineering services. Within a regional context, these services can be expected to be available within the region, rather than remotely.

While these goals are long term, and can be intangible, the subscribers have the opportunity to benefit directly from GreenSocs as a "collaboratively funded contractor". The subscribers direct GreenSocs specifically to complete pieces of engineering infrastructure that can in the short term benefit the subscribers directly, while in the longer term fulfil the goals listed above. The collaborative funding business model means that the cost to the subscriber is low, while the quantity of engineering effort that can be deployed is relatively high. This significantly reduces the cost of internal development for subscribers, where their developments coincide with that of other companies (and are therefore applicable for adoption as a GreenSocs project).

## Working within standards bodies

GreenSocs is a member of OCP-IP SPIRIT and OSCI. GreenSocs will work with OSCI to provide infrastructure around the SystemC language in the open source domain. This is in line with OSCI's aims. With OCP-IP, GreenSocs aims to provide SystemC bus fabric tailored to OCP-IP while maintaining compliance with the OSCI standards. Within SPIRIT, GreenSocs aims to provide input into the SPIRIT working groups to help SPIRIT define a description definition sufficient for generating OSCI compliant bus fabric interconnect. For all of OCP-IP, SPIRIT and OSCI, GreenSocs aims to provide engineering services into those bodies on behalf of GreenSocs members, in order to maintain the velocity of the standards process.

## GreenSocs Projects

GreenSocs is funded by subscription. The projects that GreenSocs carries out are chosen and guided by GreenSocs subscribers.

GreenSocs runs a GreenSocs project web site ([www.greensocs.org](http://www.greensocs.org)). This web site is maintained and enhanced in order to better grow, and serve the Open Source SystemC community. Some of the most important activities are providing community read/writable pages about the SystemC language, and eliciting contributions to the project from academics and others in the SystemC community. This web site is the basis of growing the SystemC community. Apart from information about SystemC, and upcoming SystemC events, the web site also provides in-depth and current information about GreenSocs projects. The web-site is used as a "scratch pad" by GreenSocs developers. This, in itself, can be a useful resource.

## Summary

GreenSocs is, as far as most users are concerned, the open source SystemC infrastructure project, providing a single place to access all the open source SystemC infrastructure, tools and IP available. It already provides interesting infrastructure, like the GreenBus, and environmental tools like the package management system.

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