SystemC and all that jazz

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1 SystemC is just GLUE

. . .

BREAKING NEWS

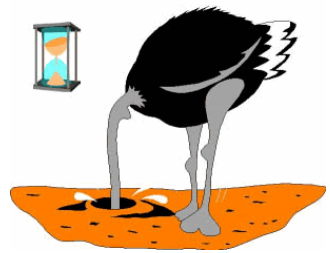
29thJuly 09, JustGotIt inc has announced full SystemC support in their flagship KindOfWorks product.

“After some customer requests, we have put a tick in the box” said ItsMy Job, founder, president and bottle washer for JustGotIt, “Now, I hope my customers will stop beating me up”.

- I hope so, for his sake, but he’s not alone.
- The world and his wife are integrating with SystemC - it’s just glue…
- But TLM-2.0 really provides substance to that glue
  - (GreenSocs will add more with protocol specific interfaces based on TLM-2.0)

2 SystemC IS the event kernel interface

"We don't do SystemC, it's too slow and rubbish, and I wish my product manager would stop talking to me about it"



- SystemC is the agreed standard for the Interface between a simulator kernel offering events of some sort and a model.
- A more accurate statement would simply be : "Our simulation kernel isn't yet SystemC compliant"
- Nothing in the SystemC standard says that it has to be slow, fast, up or down. All it gives is an API that you can implement (some of)….
  - You may not like the API, but I don't much like VHS !!!

3 throw the ISS out the window

- Remember SystemC-3.0

- It was a rumor - but people are getting on with it.
- Two (related) approaches:
  - Silicon Based Functionality….
    - It does what it says on the tin, and it's "API" is a software API.
    - It might be implemented as hardware, software or some combination….
    - It probably comes with some details on resource requirements (power, bus bandwidth, etc)
    - The 'model' of it performs the functionality, it does not need an ISS to run.
  - Virtualization
    - Run the guest O/S just as software on the host, - with some care…
    - And, use SystemC to 'glue in' the models you need…

- Want an open source example - check out how KVM works… plug KVM and QEMU together, and you effectively have no ISS, but you can still plig a SystemC PCI model in (for instance)…