

~~Algorithm for NoC Based~~  
Paper #2 : garnet - is pass 2009.pdf

GARNET : A Detailed On-chip Network model  
inside a full-system simulator

The paper mainly deals with GARNET which is  
a ~~NoC simulator~~ detailed cycle-accurate  
interconnection network model, inside the  
GEMS full-system simulation framework.  
The paper also points out on the  
changing trends in System models which  
~~that~~ is on the way of transition  
from SoC towards NoC & the importance  
of simulator which checks & provides  
us information as in what could  
go wrong / ~~well~~ right in the

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real time scenario. Further the paper sheds light on the importance / value of GARNET & its usefulness. As discussed earlier every detailing of GARNET is discussed on its design where areas such as state-of-the-art on chip interconnect, Router ~~microarchitectural~~ microarchitectural components, Interactions between memory system & GARNET, Point-to-point ordering, Network power are discussed. For the further part the <sup>details of</sup> configuration & Statistics are discussed containing parameters such as Network topology, Interconnect bandwidth, Router parameters, Routing algorithm, Configuring the router pipeline, Network-only simulation are discussed. The validation of GARNET model is done by running n/w only simulation with synthetic traffic (uniform Random & tornado) & comparing against ~~the~~ results available earlier.

Overall ~~the~~ can say a complete analysis of GARNET is given via the paper along with its validation showing its effectiveness against the ~~real world~~ other available sol<sup>n</sup>.

### 1 Critical Review

Pro.

- ① Detailed theoretical perspective of GARNET received
- ② Understanding of GARNET improved.

Cons.

- ① Practical implementation not touched.
- ② Lack of comparison with other simulators/models.