Paper Discussions

Mejia: Region- Based Routing

Region Computation   Tradeoff: adaptivity vs # of regions ⟷ routing restrictions vs
                                         switch area/complexity

- → compute minimum paths (or next best thing) ⎫
- → pack outputs   ⎬ routing options
- → pack inputs   ⎭
- → pack destination   ⎫ region
- → pack region   ⎭
  - → reduce # of OPs a switch can use per
    set of destinations

In Router   Tradeoff: computation latency vs power consumption

- → Get dest address from header
- → Check against regions w/ matching inputs
- → Check if node is in region
- → Pass OP for matching regions to arbiter
- → Arbiter picks route (criteria varies)

Application specific-ness:

- → reconfigure regions to model applications
- → could you use something similar to rainbow tables
  to take care of all the possible region mappings?

Duato: Deadlock Free Adaptive Wormhole Routing

Testing for deadlock

- → Start w/ a topology
- → Number (sequence) possible channel usage
- → Channel dependency graphs
  - → test for cycles
- → Use virtual channels to bypass deadlock.