Net cycle master selection

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Agenda

- Introduction

- Problem

- Solution

  1. Restriction of each portal
  2. Condition of each portal
  3. Cycle configuration flow

- Conclusion

Introduction

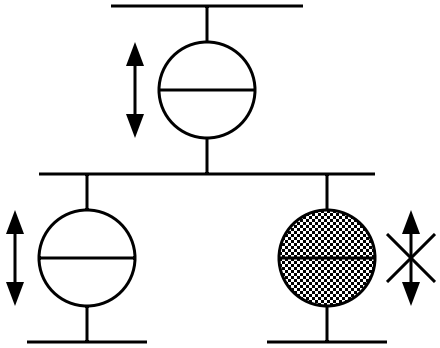
A net will be required to have a net cycle master, and net cycle master is selected and enabled by bridge manager.

Selection algorithm of net cycle master is not defined.

We propose an idea of net cycle master selection algorithm.

Problem

If there is a bridge which can not forward isochronous transaction on a net, net cycle master should not be located on the isolated bus.



bus #A

If a bridge can’t forward isochronous transaction, i.e.,
two portals of the bridge have value of zero for cmc bit field,
net cycle master should not be located on bus #A.

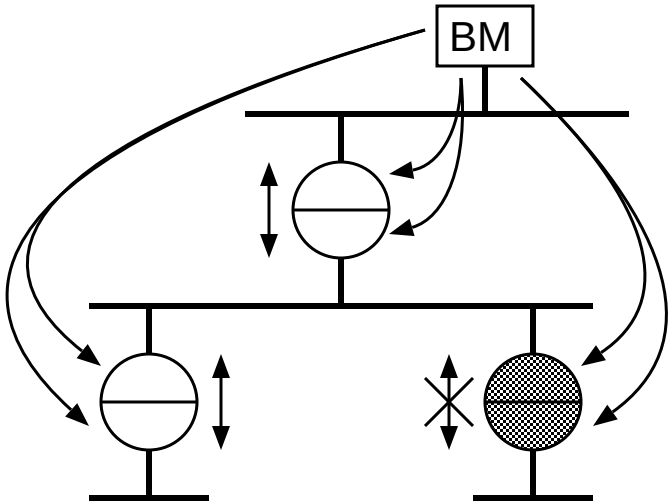
Solution

Bridge manager should collect parameters from net.

1. Restriction of each portal
2. Condition of each portal

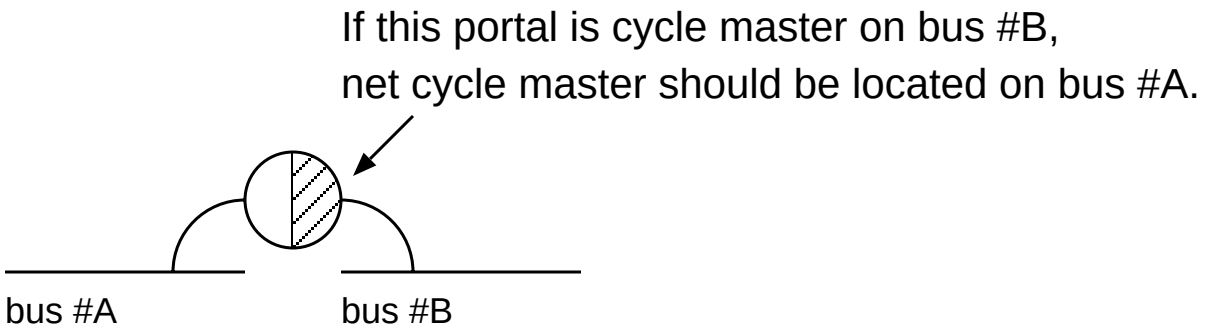
Restriction of each portal

- Bridge manager should collect restriction of each portal, for example cycle master capability (cmc field), timer offset capability, etc.



Condition of each portal

- Bridge manager should collect condition of each portal, for example whether a portal is a cycle master on its locally attached bus.



Cycle configuration flow

1. confirm the end of net configuration
2. collect parameters from net
   (1) get node ID of each portal
   (2) collect parameters from each portal
3. select net cycle master
4. move cycle master in each bus if required
   (1) set clk field and request force_root
   (2) configure timer offset / adjustment register

Conclusion

- We proposed the idea of net cycle master selection algorithm.

- This selection algorithm can provide stable route of cycle.

- Cycle synchronization of all buses will be secured.