Carrier Ethernet Service Protection over UNIs and E-NNIs – Status Update
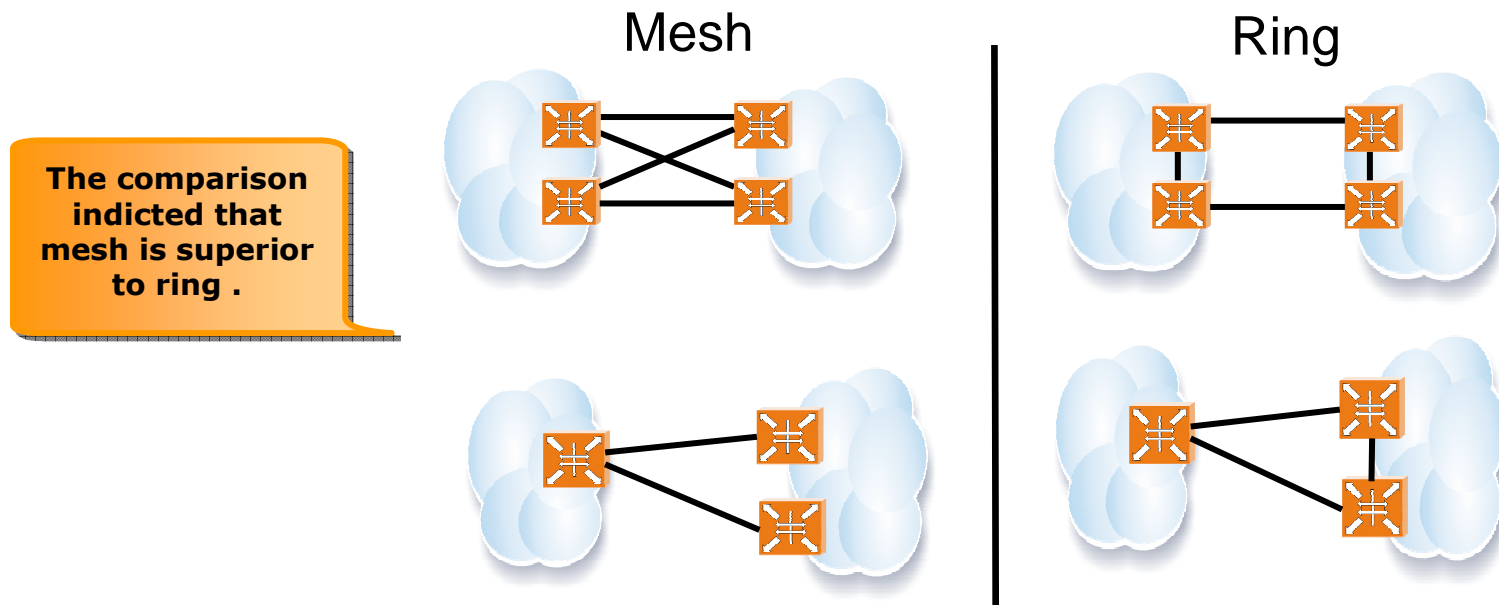
Nurit Sprecher
Zehavit Alon

November 2009

Nokia Siemens Networks

Recap

- The subject of Inter-network Ethernet Service Protection was introduced during the IEEE meeting in May in: http://www.ieee802.org/1/files/public/docs2009/new-alon-service-protection-in-interconnectned-areas-0509-v01.ppt

- Two possible topologies for connecting adjacent networks were introduced and compared

Mesh

Ring

The comparison indicted that mesh is superior to ring .

Nokia Siemens Networks

Recap (cont'd)

- The mesh topology has advantages and drawbacks:

  - Advantages

    - Direct (single-hop) connectivity between the attached networks ensuring a short path and low latency during transmission between the attached networks

    - Capability to enable efficient and simple load-sharing across all the (direct) links with optimum resource utilization

  - Drawback

    Any protection event (i.e. switchover or revert) in the interconnected zone affects the topology of at least **_one_** of the attached networks.

Nokia Siemens Networks

Drawback overcome

The full mesh construct benefits from the advantages of the partial mesh. In addition it minimizes the effects of protection events within the interconnected zone on the topology of the related attached networks, reducing them to the level of inevitable effects:
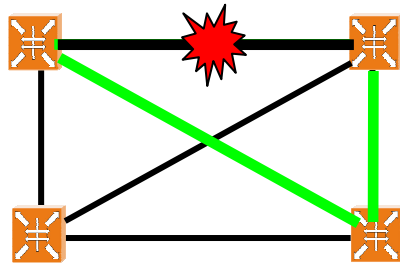
The topologies of the attached networks are not affected by the protection event

Nokia Siemens Networks

Drawback overcome

The mechanism was enhanced to support also full mesh topology, to minimize the affects of protection events in the interconnected zone on the attached networks

Full Mesh   **Partial Mesh**

Dual-attachment

2xDual-attachment
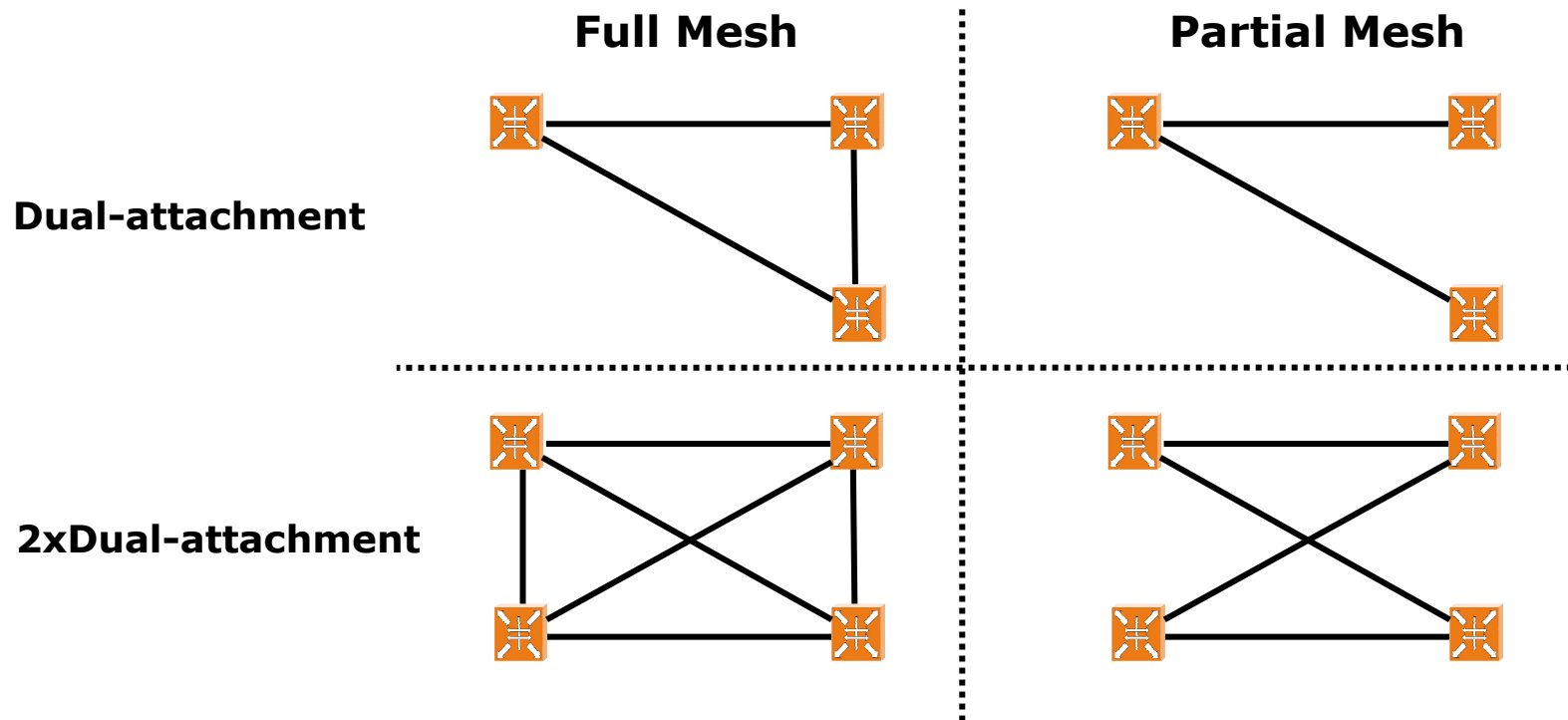
The enhanced mechanism was presented in the interim meeting on September: new-alon-service-protection-in-interconnectned-areas-0509-v01.ppt

Nokia Siemens
Networks

MEF Update

- ## Two presentations were given in the MEF.

  – Q1/2009: 28040_001_Enet Internetwork Protection_Lemon.ppt
  http://www.metroethernetforum.net/apps/org/workgroup/technical/document.php?document_id=6759

  – Q4/2009: 31042_001_Update on Inter-network Ethernet Service Protection_Cohen.ppt
  http://www.metroethernetforum.net/apps/org/workgroup/technical/document.php?document_id=8124

    ▪ This contribution addressed external Interfaces, currently UNI & E-NNI, link and node level protection, introduced the proposed topologies and a set of requirements.

    ▪ The MEF setup an ad hoc to create a project proposal for specifying MEF requirements for Service Protection across an external interface. Conf call are already scheduled and draft agenda was proposed.

Nokia Siemens
Networks

Progress in IEEE

- Useful offline discussions with parties (Juniper, Ericsson, Tejas, etc.) reviewing the mechanism and related state machines……

- Benchmark work for reference has done

- We intend to have further offline discussion after the plenary meeting.

- We are soliciting comments and welcome the IEEE802.1 experts to join the discussions and contribute.

- In the next IEEE meeting we plan to come with one more level of details.

- If the idea is adopted in January and time allows, can we use the interim meeting to start drafting a par?

Nokia Siemens
Networks

Thank you

nurit.sprecher@nsn.com
zehavit.alon@nsn.com

Nokia Siemens
Networks