"Largest Multi-Vendor OSPF Network Ever!"

OSPF Scalability Testing

- Test event held, February 28 - March 4, 1994
- 12 participants!

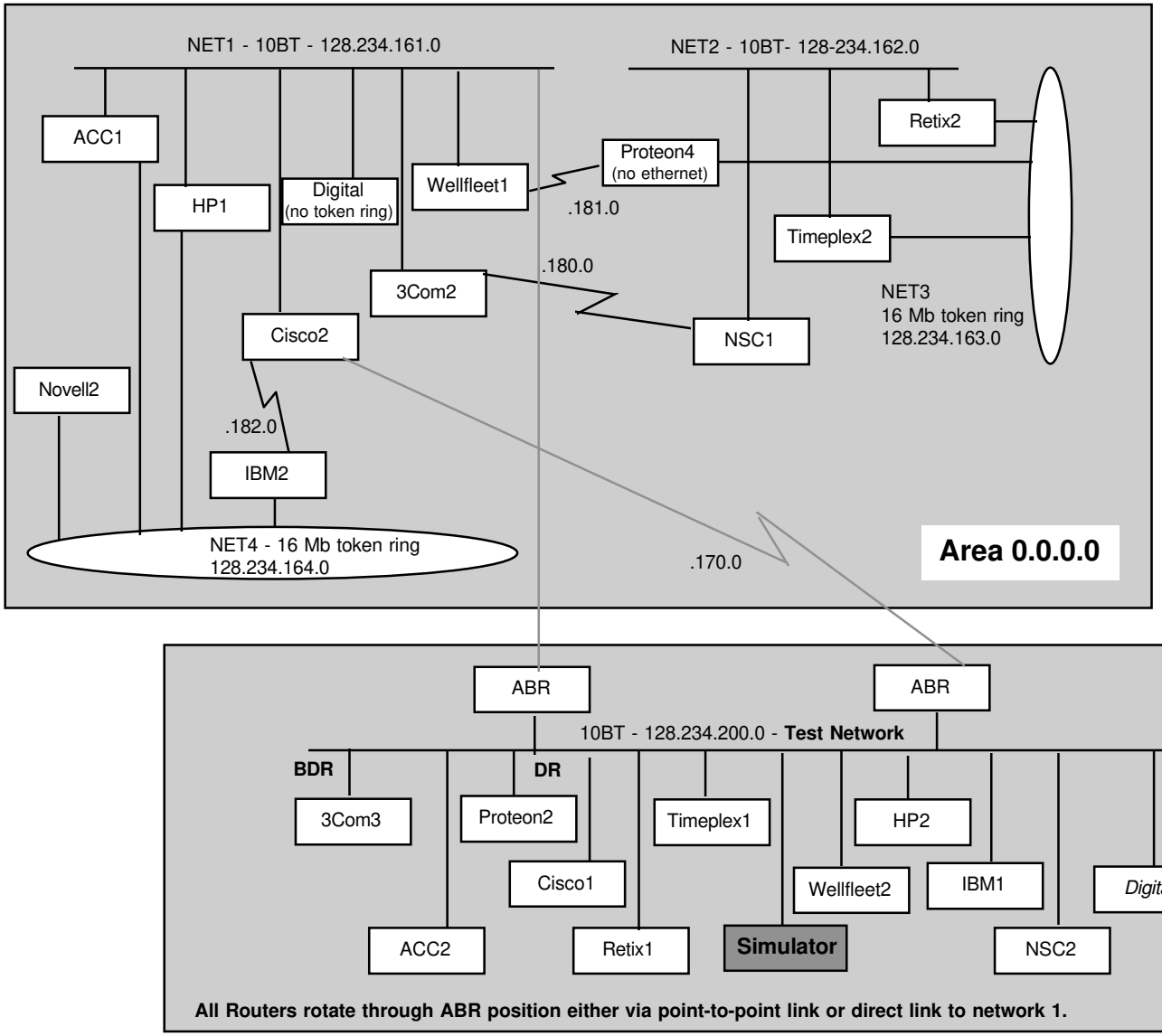
3Com	*Digital*	*Novell*
ACC	*Hewlett-Packard*	*Proteon*
Ascom Timeplex	*IBM*	*Retix*
Cisco	*Network Systems*	*Wellfleet*

- Scaling facilitated through use of Rob Coltun's simulator

OSPF Interoperability Testing
February 28 - March 4, 1994

- Scope of Testing
  - DR and all other routers ability to handle:
    - *200+ routers in a single OSPF defined area.*
    - *Flooding and flushing 300+ internal LSAs in a single OSPF area.*
    - *Flooding and flushing up to 3000 external LSAs into a single OSPF area.*
  - Ability of an Area Border Router to handle 100+ LSAs when two ABRs exist for two OSPF defined areas.
  - CIDR addresses (optionally tested).

OSPF Interoperablity Testing



Area Border Router Testing

OSPF Interoperability Testing
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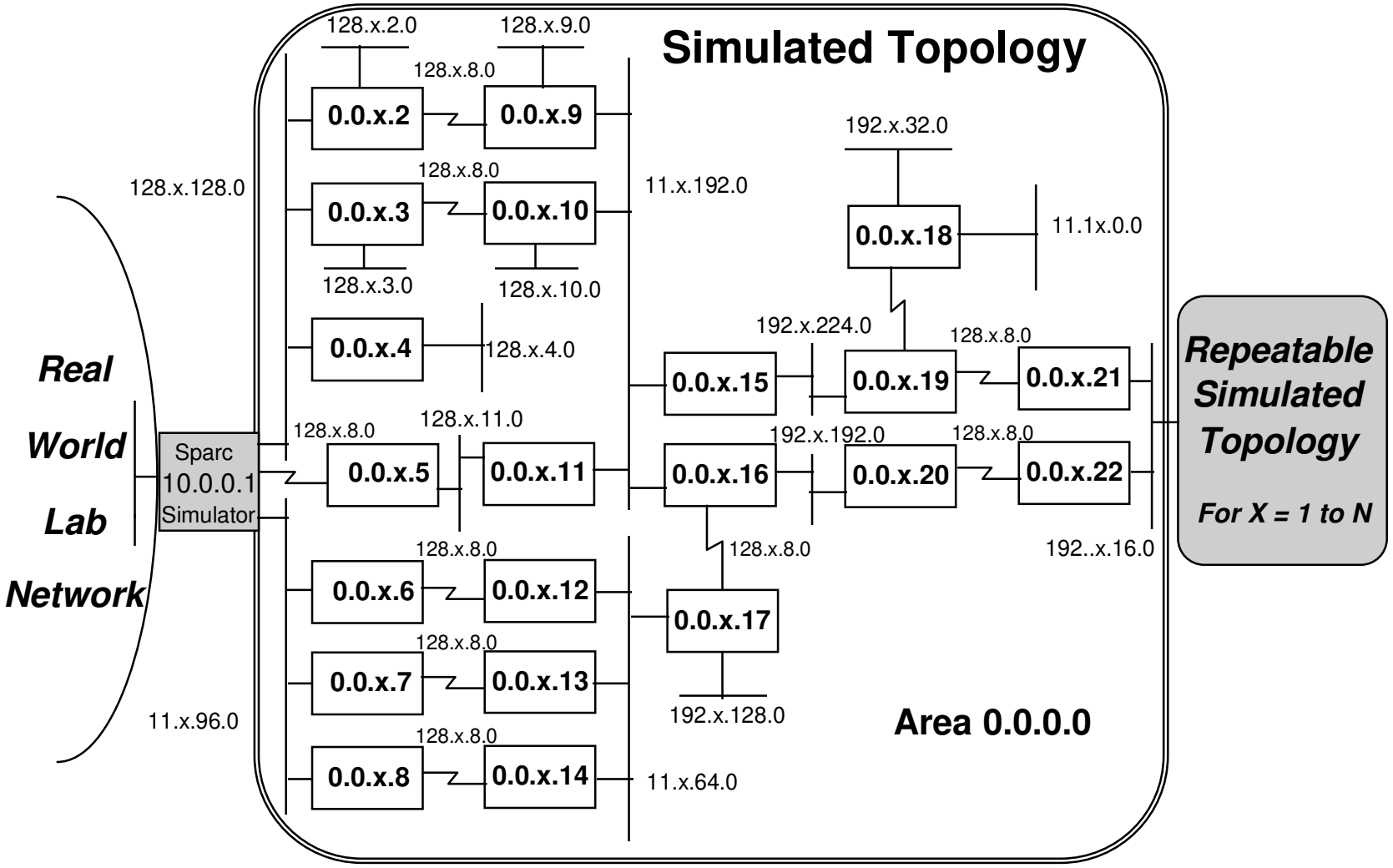

OSPF Interoperability Testing
February 28 - March 4, 1994

Conclusions

- 9 out of 12 participants uncovered at least 1 implementation problem
- Implementation issues:
  - inefficient scheduling CPU resources
  - old LSA's not flushed
  - ABRs improperly advertising summaries back into originating area
- Interoperability among multiple vendors:
  - successful for all normal operations
  - unsuccessful, only in very specific situations, when invalid data was distributed through the network

Cooperative Router Testing COS Lab - '94 Plan

- Provide ad hoc and event interoperability testing
  - Provide remote access (April '94)
  - Produce on-line test information for consumers (1st trial-PPP)
- Technical Programs
  - OSPF testing
    - ☑ *Scalability*
    - ☑ *Area Border routing*
    - *RIP-OSPF migration*
    - *Data for IETF OSPF working group experience document*
    - *Convergence in large scale networks*
    - *Multiple autonomous systems*
    - *Virtual links*
  - IP/IPX over PPP testing (May '94)
  - Integrate and test over new WAN technologies
  - Additional protocol testing: IS-IS, BGP

COS Cooperative Router Testing

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