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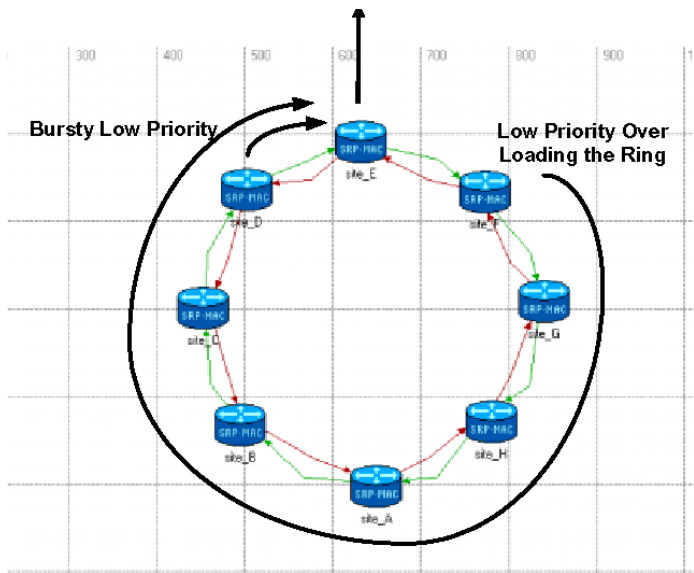
Performance Comparison of RPR MAC Proposals

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Vienna University of Technology, Austria

Overview

- Corner Case Scenarios
- Other Scenarios
- Automated Test Case Generation and Verification
- Conclusion

Scenario 1, OC-12

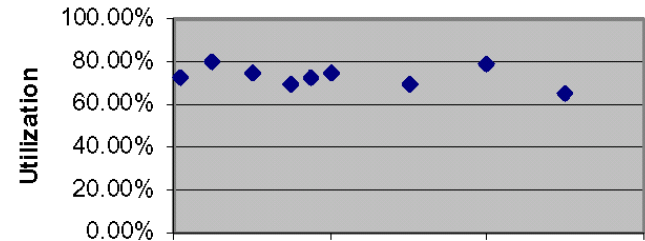


Gandalf

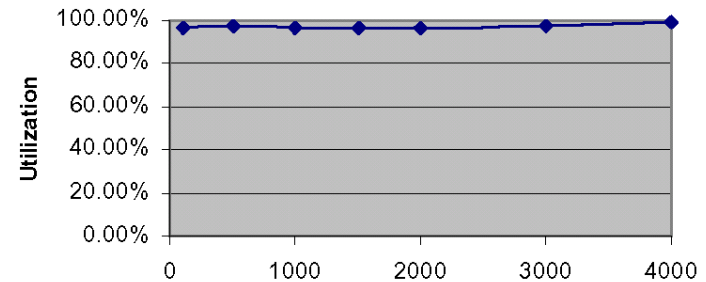
Alladin

IKN

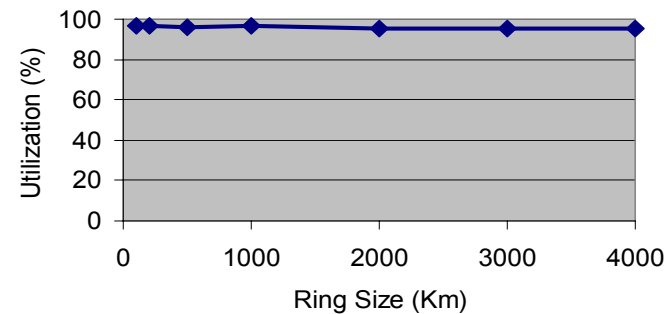
Low priority Bursty Traffic for OC-12



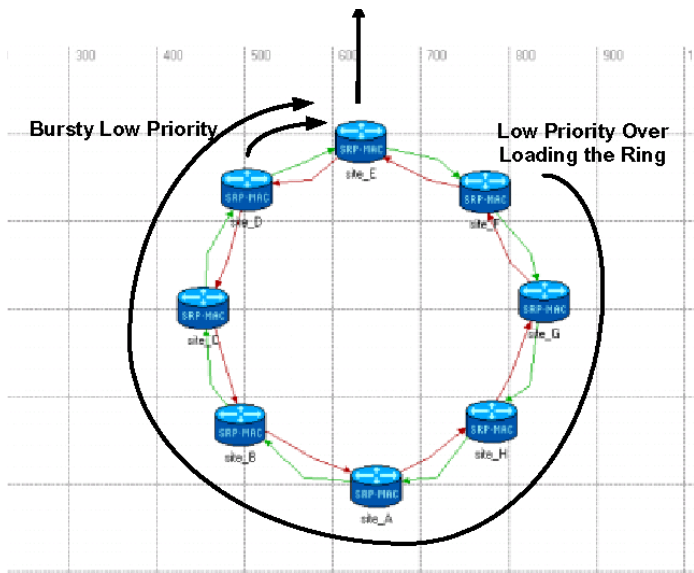
OC-12 Utilization



OC-12 Utilization



Scenario 1, OC-48

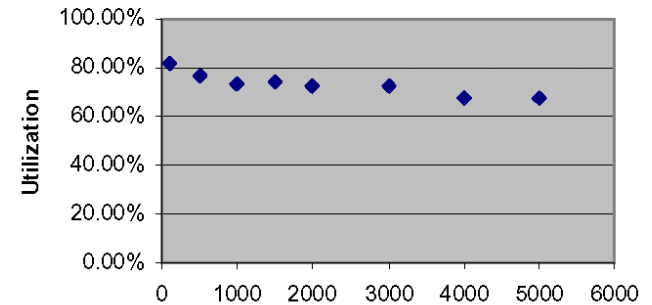


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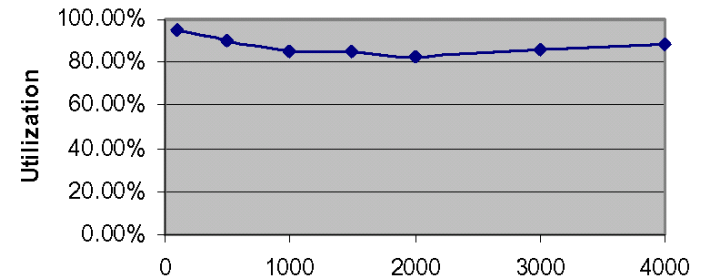
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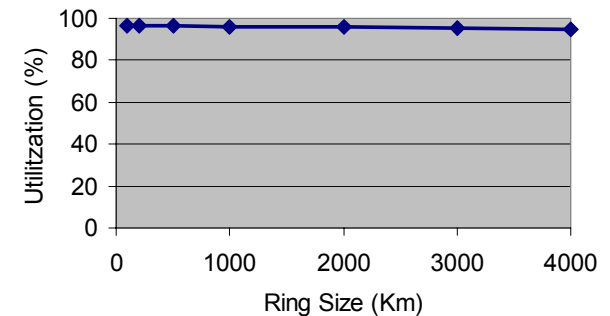
Low priority Bursty Traffic for OC-48



OC-48 Utilization

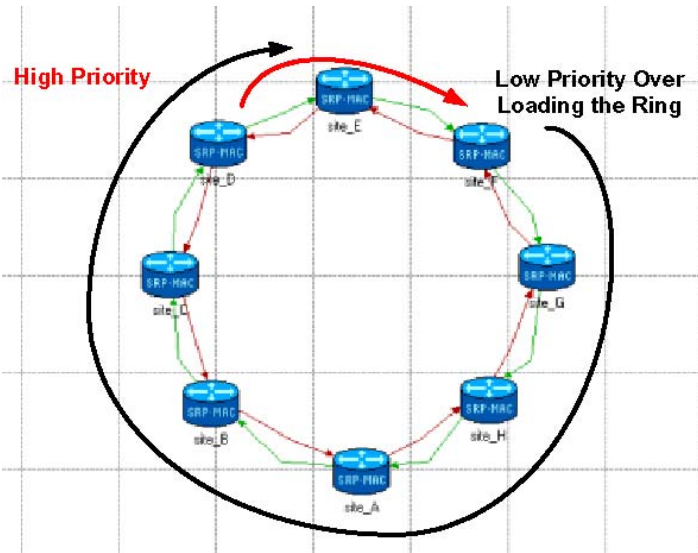


OC-48 Utilization



Scenario 3, OC-12

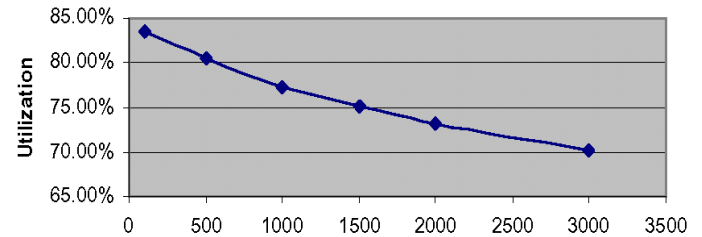
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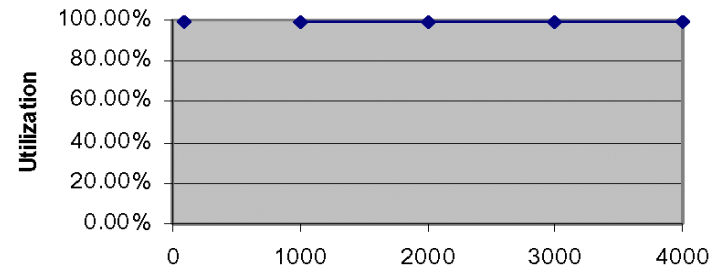
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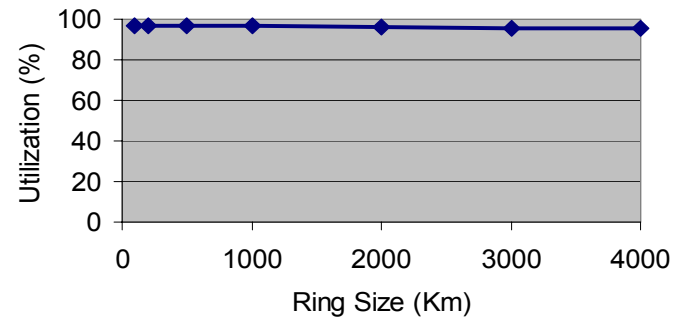
OC-12 Low Intensity High Priority



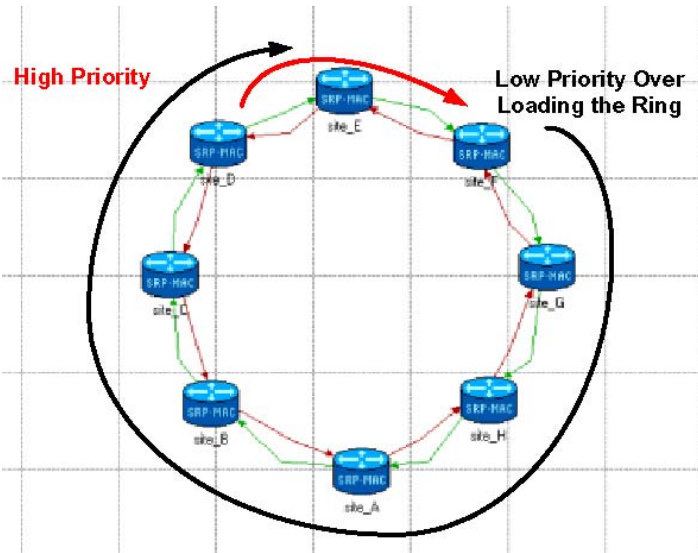
OC-12 Low intensity High priority



OC-12 Utilization



Scenario 3, OC-48

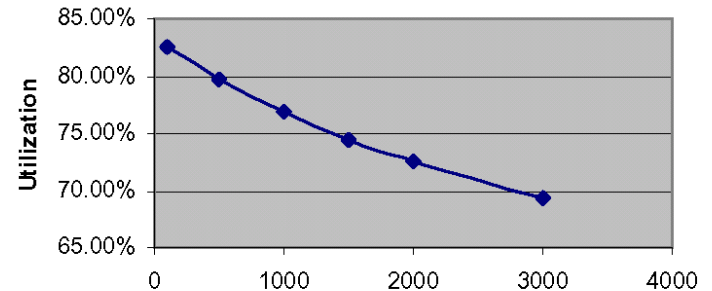


Gandalf

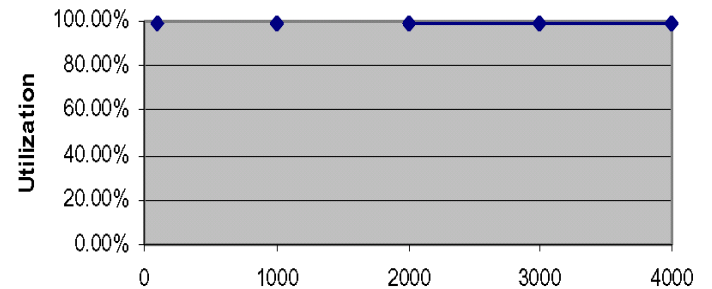
Alladin

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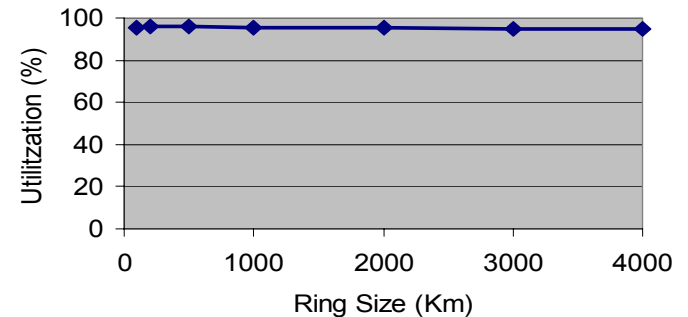
OC-48 Low Intensity High Priority



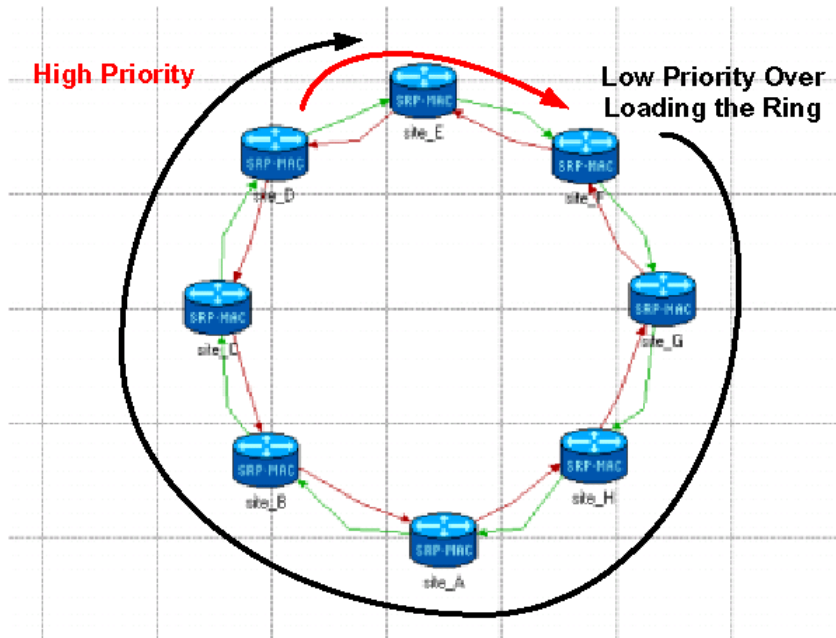
OC-48 Low intensity High priority



OC-48 Utilization



Scenario 4, OC-12

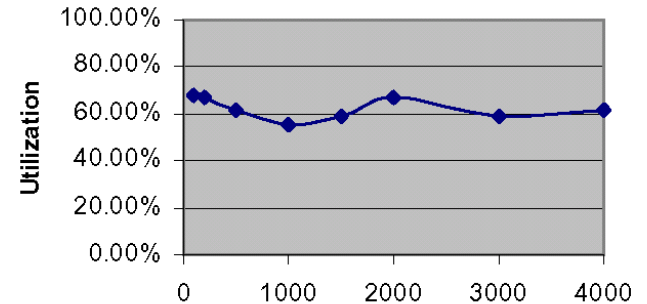


Gandalf

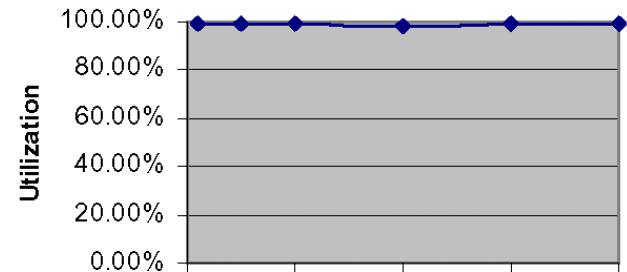
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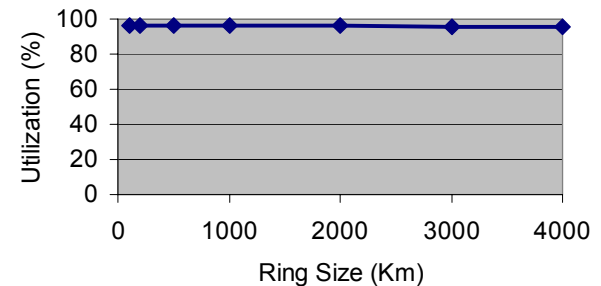
OC-12 (High Priority Oscillations)



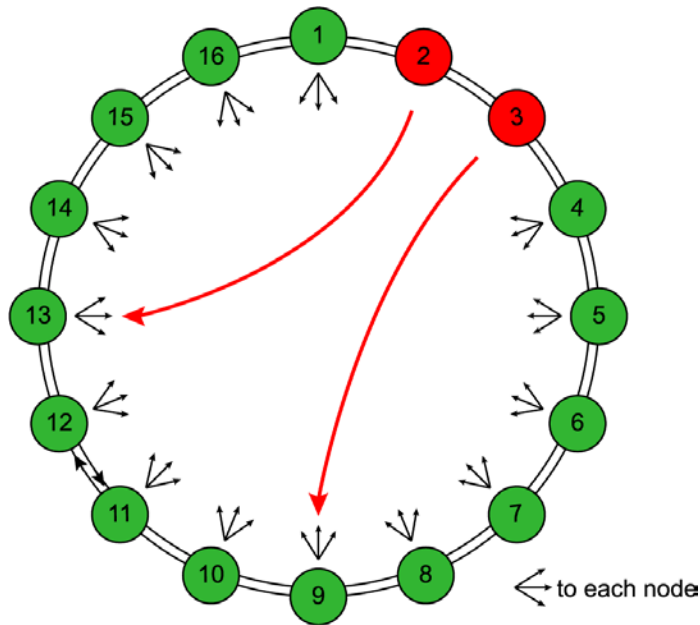
OC-12 (High Priority Oscillations)



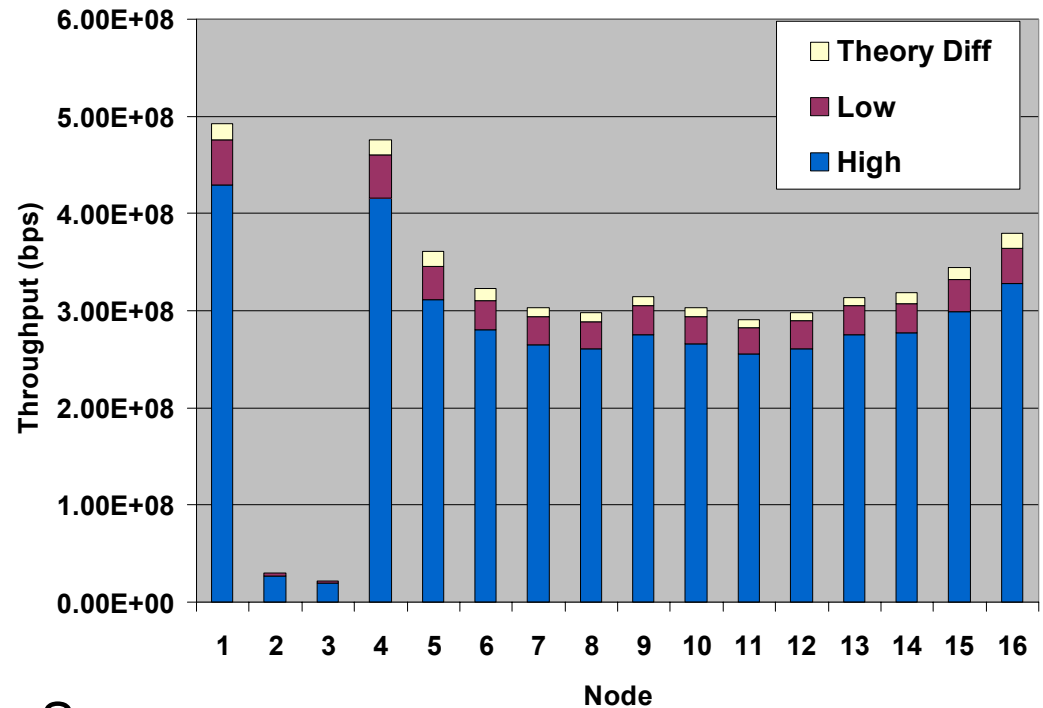
OC-12 Utilization



Hotspot Scenario



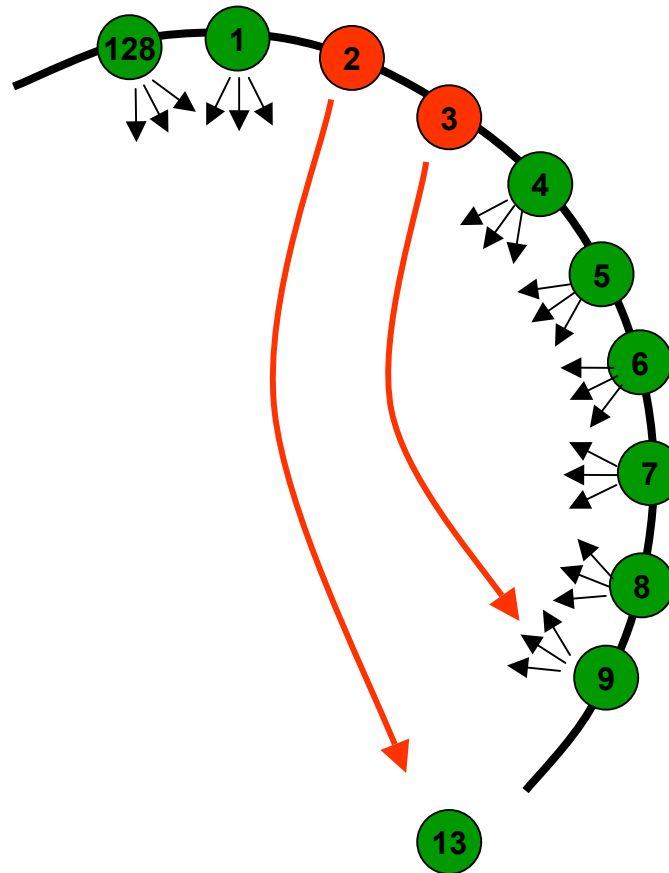
Throughput per Source Node



Saturated High and Low Traffic Sources
100km 1Gbps Ring

$$C' = 0.9 * C$$

Other Scenarios



Test Case Generation

- Automated Test Case Generation
 - To test the protocol design (fairness and performance)
 - Verification with theoretical absolute values where possible
 - Verification based on the fairness principle
 - To test the protocol implementation

Not Ready Yet

Other Test Cases

Conclusion
