

RPR 802.17 OPNET Model

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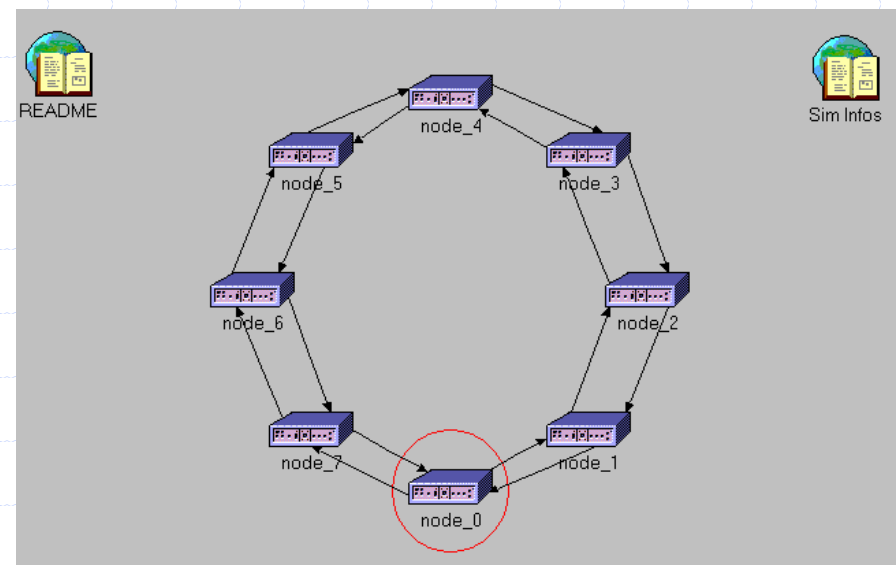
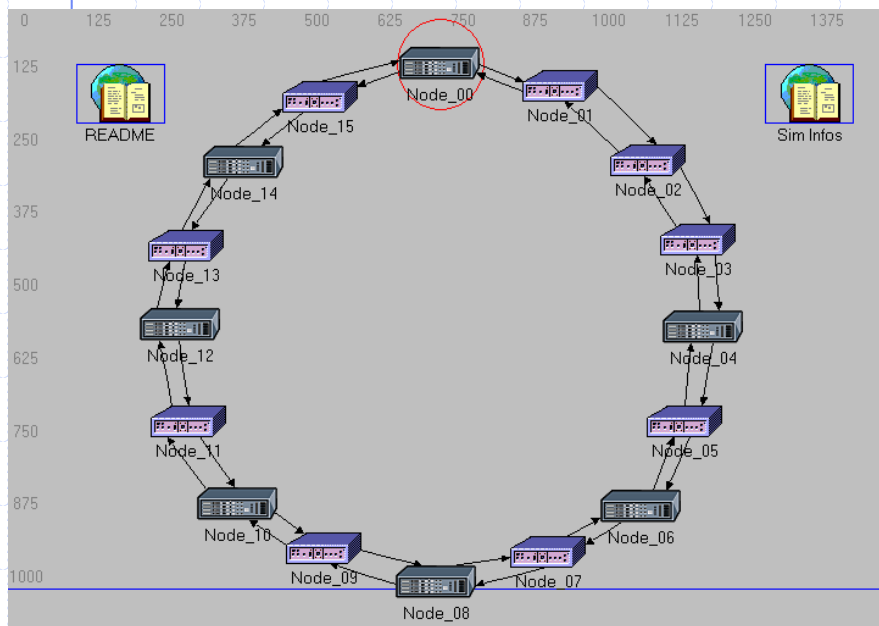
Ottawa, Canada

Project Status

- ◆ Support all P802.17 D1.1 message formats
- ◆ Support both RPR-Aggressive and RPR-Conservative Models
- ◆ Support fairness with single choking point
- ◆ Support multiple priority traffic streams
- ◆ Support OC-192 data rate links
- ◆ Support CBR traffic generation
- ◆ Support VBR traffic generation with exponential inter-packet arrival times and exponential packet sizes

Project Status (cont'd)

- ◆ Merging of RPR-A and RPR-C node models
- ◆ Support of single- and dual- transit buffers
- ◆ Support for activeStations
- ◆ Support up to 256 nodes



Project Status (cont'd)

(node_3) Attributes

Attribute	Value
name	node_3
model	RPR_Node_TG
RPR Fairness Mode	Conservative
RPR MAC Address	3
RPR Parameters	(...)
RPR-C Parameters	Default
Traffic Specification	(...)

☐ Apply Changes to Selected Objects

Details Promote

(RPR-C Parameters) Table

Attribute	Value
High Prio Transmit HOL Delay (seconds)	0.0001
Med Prio Transmit HOL Delay (seconds)	0.0005
Low Prio Transmit HOL Delay (seconds)	0.001
Low Threshold Rate	0.8
High Threshold Rate	0.95
RTT Interval (seconds)	0.005

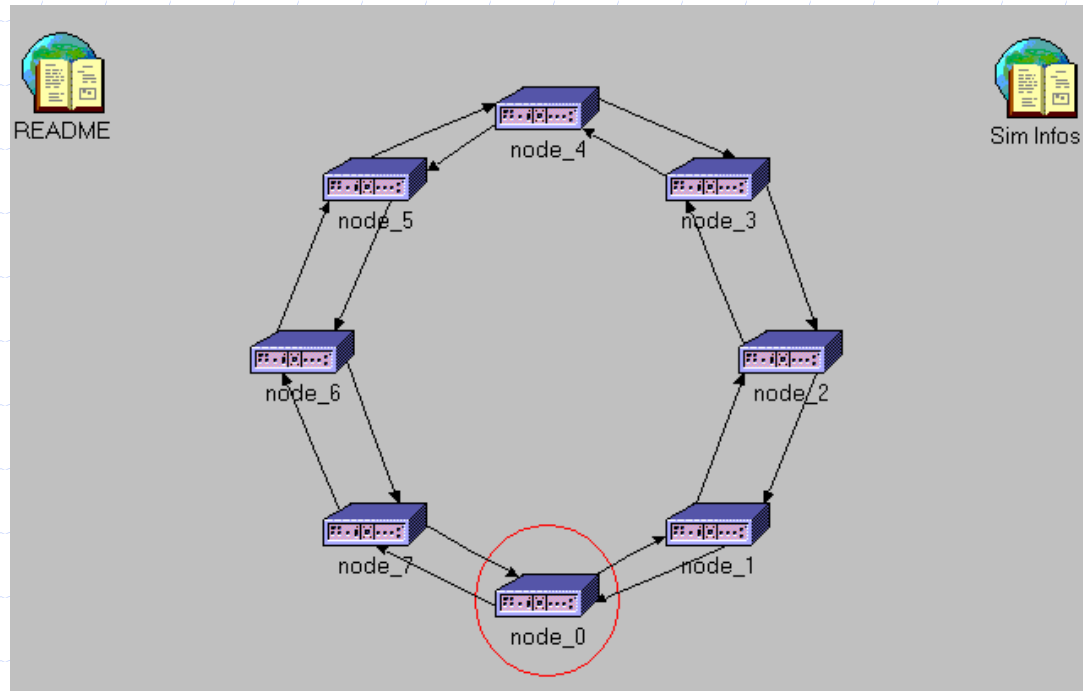
Details Promote Cancel OK

Features to be added

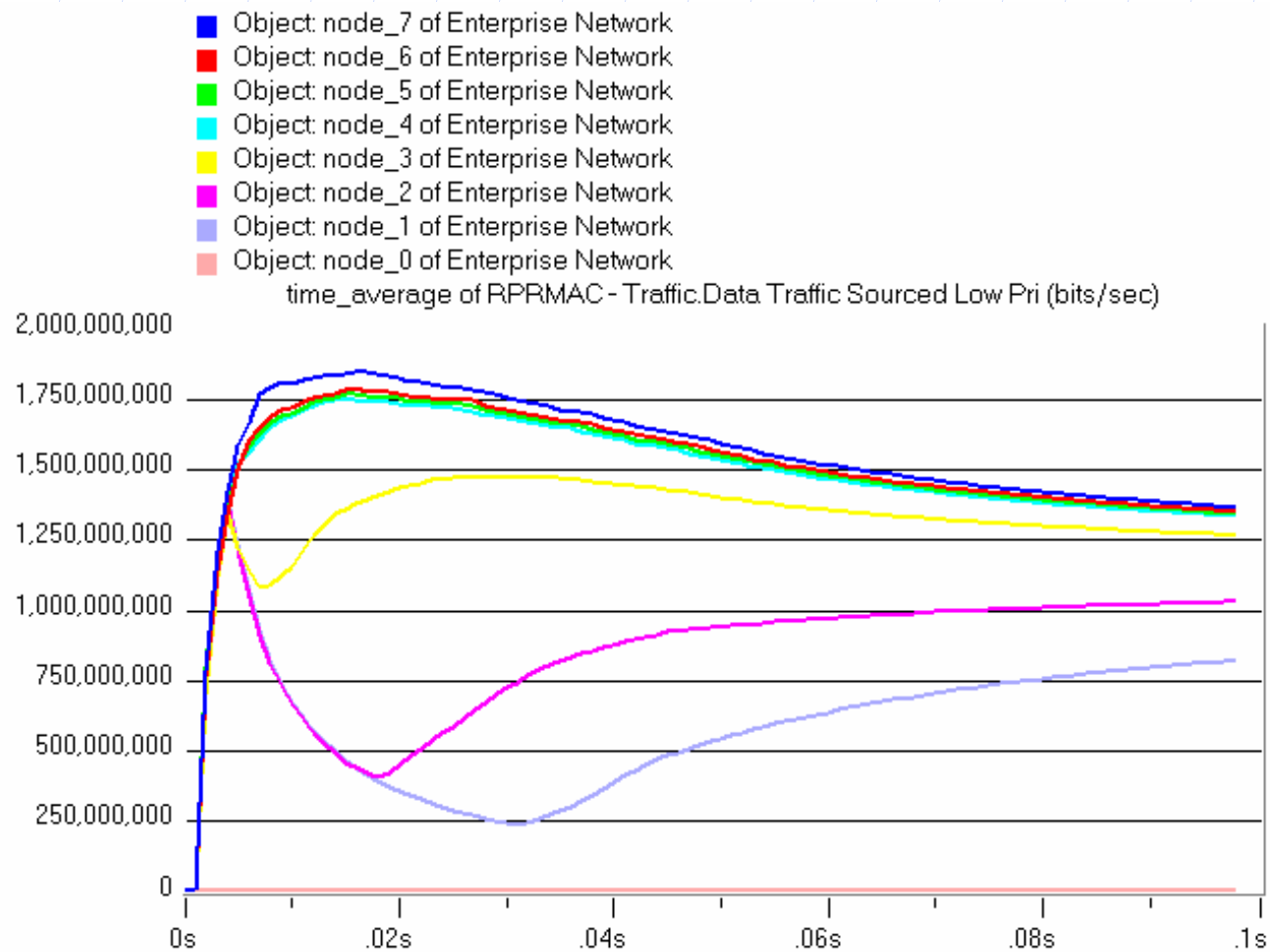
- ◆ Support for activeWeights
- ◆ Support for 802.17 topology discovery
- ◆ Standard MAC layer interface
- ◆ Outside packet generators
- ◆ Testing, testing, testing...

Example of RPR-C Bus Scenario

- ◆ Starting traffic from each node to node 0=2.14 Gbps
- ◆ Fair traffic in steady state=1.43 Gbps
- ◆ (Simple example used for sanity check)

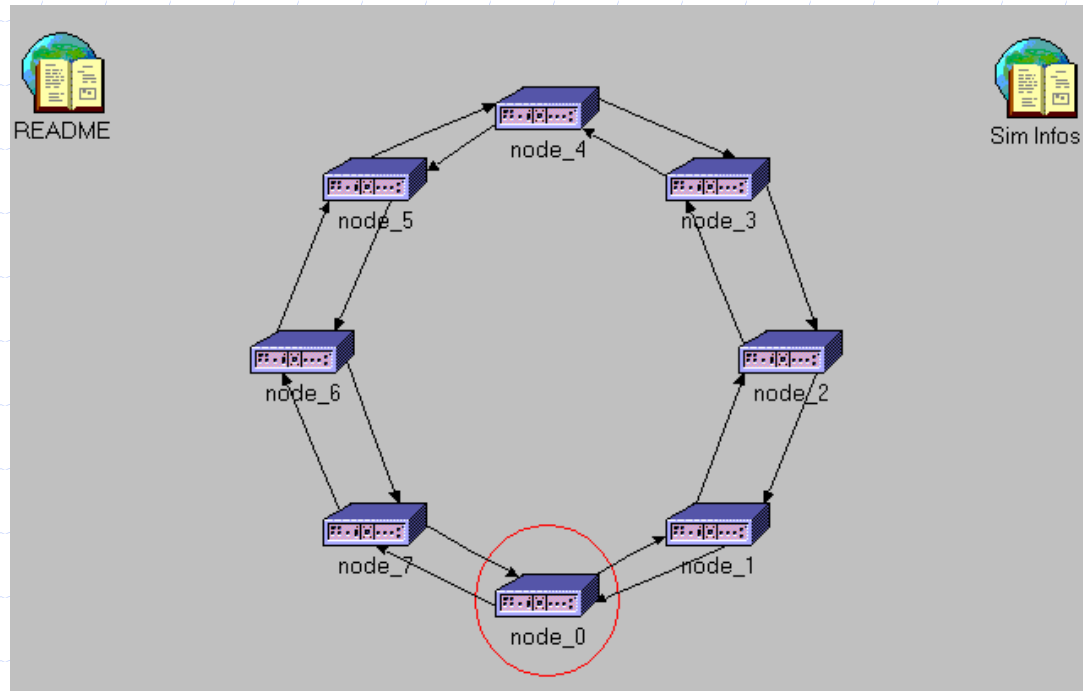


Results

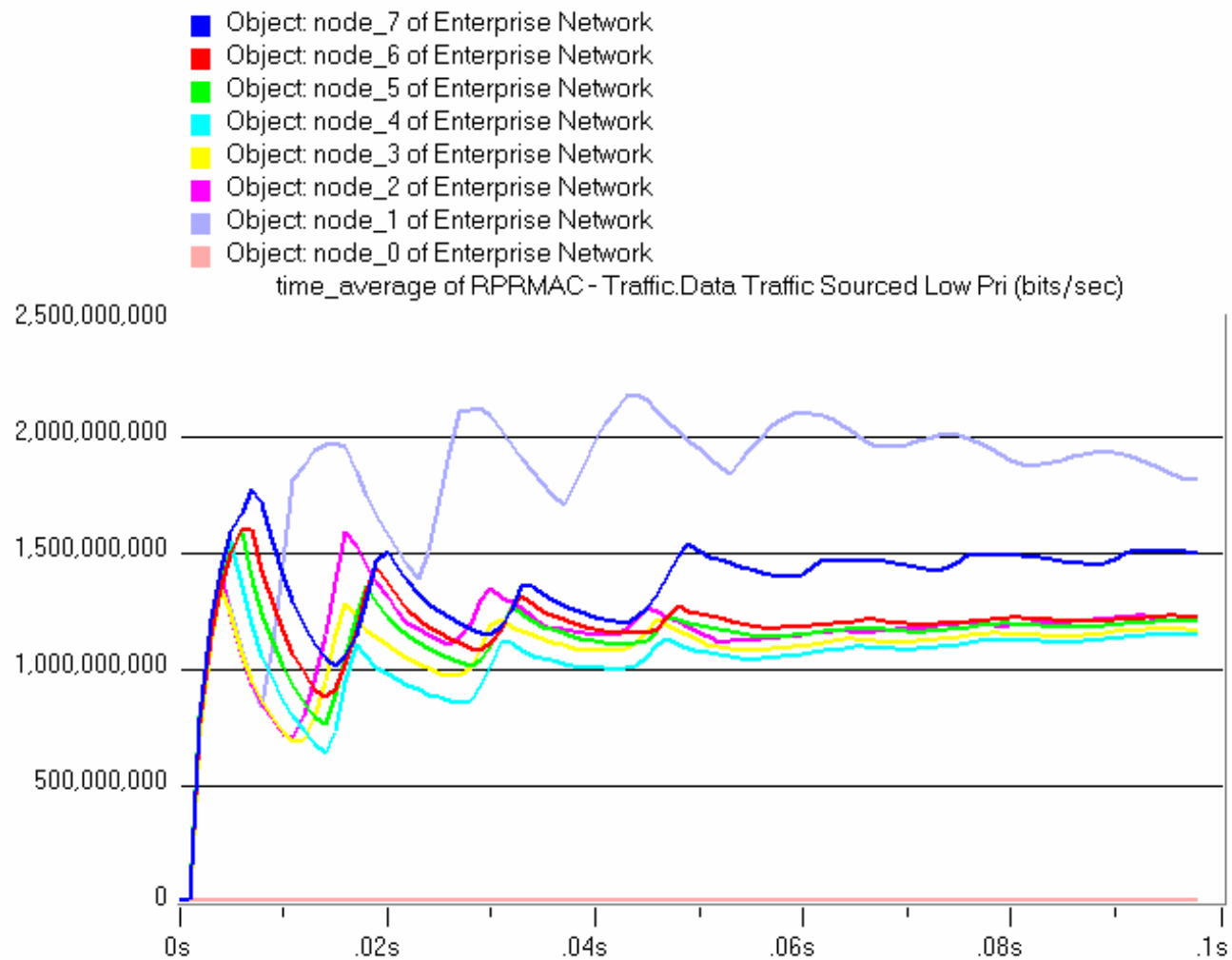


Example of RPR-A Bus Scenario

- ◆ Starting traffic from each node to node 0=2.14 Gbps
- ◆ Fair traffic in steady state=1.43 Gbps
- ◆ (Simple example used for sanity check)



Results



Comments and suggestion...

- ◆ ...are most welcomed

Thank you