RATE-BASED CONGESTION CONTROLLER FOR ROUTERS

Tech ID # GMU 10.028   **Patent No. US 8,537,670**

Description of Technology:

This invention has the potential to reduce congestion on the internet, enable Quality-of-Service, and provide faster file transfers.

The technology is a rate controller that computes a per-flow available rate for packet flows traversing an output port of a router, thereby limiting congestion. The available rate can be fed back to the sources of the flows via a signaling protocol. A traffic source that is cognizant of the signaling protocol can then limit its transmission rate according to the rate feedback. The technology solves problems associated with Transmission Control Protocol (TCP), including inefficiencies, packet loss and delays.

Primary Investigator:

Dr. Brian Mark is a professor of Electrical and Computer Engineering at George Mason University (GMU). Dr. Soonyong Sohn performed this research during the course of his PhD at GMU.

Advantages:

- Advanced rate controlling technology, limiting congestion
- Enables Quality-of-Service
- Increased speed achieved
- Solves problems associated with the implementation of TCP congestion control
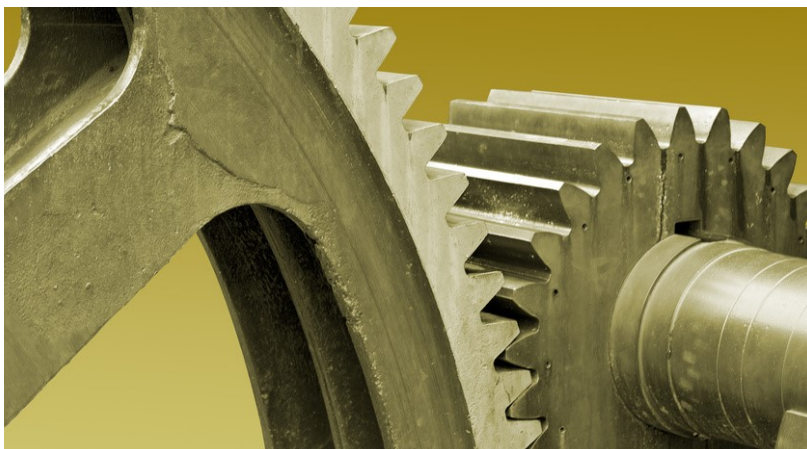
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