



University of Central Florida

Technology Available for Licensing

tt.research.ucf.edu

Novel Method Significantly Reduces Internet Traffic from Video Streaming

Most internet traffic comes from video streaming, and this percentage is likely to rise annually. With Net Neutrality legislation recently passed in Congress, this challenge also provides a great opportunity for innovative solutions within the video streaming market, involving key players such as content providers and internet service providers.

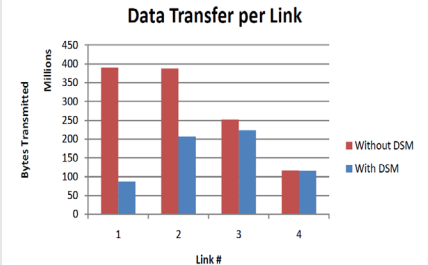
A specific issue arises when there are sudden instances requiring a high data demand, as shown in videos. Current events can create a large demand for particular videos which can significantly impact normal access to other videos and data. To remedy this, a variety of methods have been used to disseminate large amounts of data, including multicast technology. This technique allows many users to share a server stream, but with the same data at an appointed time, instead of on-demand.

Technical Details

A novel method from the University of Central Florida, Dynamic Stream Merging (DSM), enables the transmission of large amounts of data on the internet while accommodating internet on-demand surges with higher efficiency and lower costs. This robust network data access environment provides desired data traffic management, even during times of unexpected high data demand. This method uses content identifiers that can be encoded into video streams and can thus facilitate duplication detection in what researchers have called a SMART (Small packet MergeAble RouTers) network. Once a redundant data stream has been detected, the SMART network merges it using a deduplication technique called Redundancy Control Buffering (RCB) and then delivers the stream to the desired destination.

UCF Inventors

Kien Hua, Ph.D.



Without DSM: (1) More traffic, (2) Nodes near gateway completely saturated

With DSM: (1) Nodes near gateway are not saturated, (2) More mesh nodes can be accommodated to support even more traffic

Benefits

- Significantly reduces internet traffic
- Higher efficiency
- Low cost

Applications

- Video streaming
- Data transmission

Tech Fields

Communications,
Signal Processing

Keywords

video-on-demand, video streaming, multicast, internet traffic, internet on-demand, on-demand TV, internet TV

Patent Pending

If you or your company are interested in this opportunity, Contact:

Andrea Adkins | 407.823.0138 | Andrea.Adkins@ucf.edu | Tech ID # 33003

UCF Office of Technology Transfer | 12201 Research Parkway, Suite 501, Orlando, FL 32826