Delay Skew Packet Flow Control in Wireless Systems with Dual Connectivity

ABSTRACT

- The paper presents a new data flow controller for use in 4G and 5G wireless applications where the incoming internet data flow is split in support of multi-point downlink wireless transmission.

- The different paths of the data from the node of the split to the wireless transmission nodes and on to the mobile may then result in different travel times.

- The mobile can cope with small values of this delay skew by means of buffers and re-ordering protocols.

EXISTING SYSTEM

- In the past, a weak point of cellular wireless systems has been their high latency, a fact that is addressed in the ongoing 5G wireless standardization.

- However, it is foreseen that delay tolerant networked control will remain a critical component in this equation, which is one reason.

- Here the underlying packet flow controller algorithm that controls the latency between the controlling node and the node of the plant is of paramount importance.

PROPOSED SYSTEM

- The control objective is therefore to keep the delay skew within a pre-specified interval of time, when the packets arrive in the mobile.

- The proposed algorithm solves the problem by cascade control.

- The packet dwell time of each wireless transmission node data queue is controlled by an inner loop, with the reference dwell times being determined by an outer delay skew control loop.

- The delay skew control loop exploits a deadzone to achieve interval control.

HARDWARE REQUIREMENTS

- Processor   -   Intel core i3
- RAM   -   2B
- Hard Disk   -   20 GB

SOFTWARE REQUIREMENTS

- Operating System   : LINUX
- Tool   : Network Simulator-2
- Front End   : OTCL (Object Oriented Tool Command Language)

REFERENCE

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