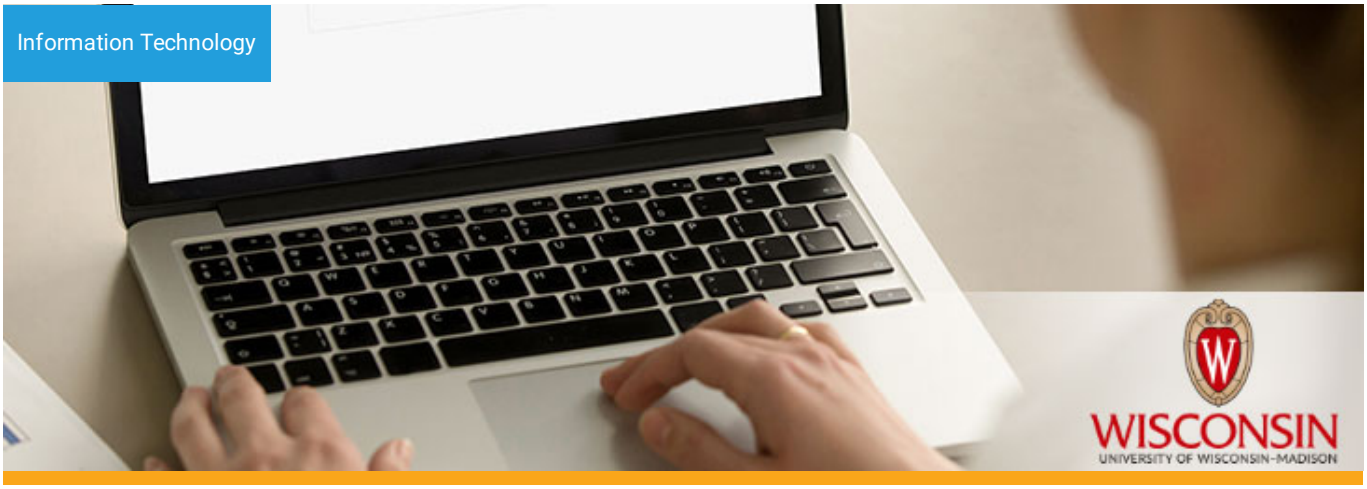
Information Technology



Improved Delivery of Rich Media Content over Wireless Networks

View U.S. Patent No. 8,767,552 in PDF format.

WARF: P100121US02

Inventors: Suman Banerjee, Sayandeep Sen

The Wisconsin Alumni Research Foundation (WARF) is seeking commercial partners interested in developing a media aware proxy to allow improved delivery of high quality media in wireless environments.

Overview

Rich, high quality media content is becoming increasingly available through the Internet. As a result, user expectation of accessing such content over wireless-enabled devices continues to grow. While currently available “Wi-Fi” technology provides adequate performance for lower quality media streams, consumers demand an improved high definition (HD) viewing experience. Even with current compression systems and network coding techniques, transmitting high quality video to multiple receivers using wireless network standards can be difficult. A need exists for a system that allows improved delivery of HD-quality media content over existing wireless environments.

The Invention

UW-Madison researchers have developed a wireless system that provides a new approach for media delivery using existing systems, such as the 802.11 wireless protocol. This approach, which is achieved through simple software changes, promises to improve the delivery of HD media over wireless networks and enhance the user experience.

The system identifies priorities of data units and assigns physical transmission parameters based on usefulness of the data. The usefulness of each data unit is used to control the transmitter parameters for the data unit. These parameters include the transmission rates of the bits of the data unit, the order of transmission of the data units and/or the number of retransmission attempts of the data units. This system provides both an ordering and a quantitative difference in usefulness between data units, permitting adjustment of the transmission parameters for different data units and a simple method of scheduling data units for transmission.

Applications

- Improved distribution of HD-quality media content over both multicast and unicast wireless network applications
- Streamed, on-demand television and movies
- Access to online academic and corporate material such as lectures and presentations

Key Benefits

- Substantially increases the ability of a standard wireless network to provide high quality video or similar data
- Improves the usefulness of transmitted data without the need for data redundancy associated with unequal error protection (UEP) systems
- Accommodates dynamic changes in channel capacity associated with changes in the bandwidth of data transmission

Stage of Development

The development of this technology was supported by WARF Accelerator. WARF Accelerator selects WARF's most commercially promising technologies and provides expert assistance and funding to enable achievement of commercially significant milestones. WARF believes that these technologies are especially attractive opportunities for licensing.

Additional Information

For More Information About the Inventors

- Suman Banerjee

Related Technologies

- For more information about prioritized data mapping on wireless networks, see WARF reference number P100120US02.

Tech Fields

- Information Technology : Networking & telecommunications

For current licensing status, please contact Emily Bauer at emily@warf.org or 608-960-9842