Ratnayake, D. S. L. U.
Dias N.G.J.
POSTER

Live Video Coverage over Wireless Ad-hoc Networks

D. S. L. U. Ratnayake, & N.G.J. Dias, Department of Statistics & Computer Science, University of Kelaniya

In the contemporary world, live video coverage usually works with more than one camera and one projector. Most of the devices may not be stationary. Wired composite or component video cables perform poorly with moving nodes (cameras/multimedia projectors) and need heavy video mixers to manage all nodes. With tools like Wi-Fi enabled micro-controller boards, laptops, netbooks and other lightweight devices we can replace the wired communication in live video coverage. By attaching each node (cameras and projectors) to a wireless enabled device and having a wireless enabled laptop(s) acting as video mixer(s) makes the whole network a wireless ad-hoc network. This means any node can be added when needed and any node can change its role as the need arises, i.e., Laptop attached to a multimedia projector can be used as a video mixer if needed. This increases mobility of every node and range of every node.

In this study, we discuss our implementation of wireless video live coverage. Every node is put into zero configuration auto node detection network which is easy for the user as the user only needs to turn on the service and it automatically detects the network along with other nodes and configures itself. We have used python socket programming on Linux platform with *Python* programming language for implementation of this network. We also used Ubuntu Linux built-in media platform *'gstreamer'* for handling media codes. We also discuss how we approached improving quality of service in contrast to utilizing bandwidth bottlenecks.