Abstract

This paper presents the research conducted to provide low cost traffic monitoring solution to the ever increasing traffic congestion problems in Pakistan. The embedded system created is a low-power system that can replace the expensive and complicated systems that add up to the high installation and controlling costs. The feasibility is demonstrated with the ability to determine traffic congestion at real time. Such a system could be used to operate traffic signals for the better flow on roads and to aid law enforcement agencies. The IP camera is constructed...
using an Arduino board, a camera module and Wi-Fi (802. 11) implementation as an embedded system. The video frames are wirelessly streamed (in HEX format) to the cloud-based TCP web-sockets server. The HEX stream is then converted by cloud application to JPEG images, which are displayed to user on web interface, providing live feed for traffic monitoring purposes.

References

- https://github.com/kanaka/websockify
- Python (2013), http://www.python.org/
- Autobahn Python, http://autobahn.ws/python

Index Terms

Computer Science

Information Sciences
Keywords
UART  TCP  WebSockets  802.11  Camera Module  IaaS  Cloud  real-time.