Video Streaming Robot using Android and Arduino

To build a robot which streams live video and can move round. The robot can controlled and watched either using WiFi or over the internet.

The robot captures video and streams through the internet or WiFi network through the android smartphone. The user can control the robot from a webpage or using an app(if over the WiFi). The user inputs are received by the android which using an android application sends signals to arduino over Bluetooth.

The arduino will be attached to chassis consisting of wheels and motors. The signals from android wil be received by a bluetooth module connected to Arduino. The Arduino send appropriate signals to the motor driver circuit which inturn moves the robot.

Components Required:-

1. Arduino Uno
2. Android Smartphone
3. Chassis with motors
4. Bluetooth Module
5. Motor Driver

Block Diagram



Applications:-

* Home secuirity- The robot can be used to give live video inside a building by moving around the building. The robot can be accessed from anywhere in the world.
* Excavation- The robot can travel through paths in which people cant travel and provide live feeds.
* Military- The robot can enter enemy base and provide information . This can be done from far way which doesn't risk soldiers life.

Advantages:-

A typical robot with camera can be bulky and costly. It would need an additional Ethernet module and a Camera. Here we use a smartphone for taking video and for communication. This makes it cost effective and sleek.