

ABSTRACT

In everyday life many events occur, including events that are actually not expected to occur, such as disasters or accidents. Public Protection and Disaster Relief (PPDR) is a system designed to reduce, respond to, and overcome the impact of the incident. In a public area that experiences an event, it must be responded very quickly and overcome, therefore the PPDR system in several locations is required for surveillance cameras for video surveillance services so that the observed events can be responded to quickly and to address certain cases such as identification of criminals in the public area. Video surveillance services are services that are included in the highest priority category in PPDR service applications, video surveillance services are also services that require broadband connectivity with a minimum transmission speed of 384 Kbps.

TVWS (TV White Space) is a wireless network technology that uses analog TV frequencies that are "empty" due to the migration from analog TV to digital TV in the 470Mhz-740Mhz band to be used as data transmission media with data rates up to 13.5Mbps in 5MHz channel bandwidth and even up to 54Mbps in 20MHz channel bandwidth and can be used as an alternative infrastructure for video surveillance services in PPDR applications.

Based on the tests that have been carried out, the use of 46 frequency channels (674 MHz) with a 5 MHz configuration gives the best performance results for video surveillance services in PPDR with a delay interarrival value of 3.89 ms and PLR value of 0.41% and the highest throughput of 6.33 Mbps a number of scenarios are performed compared to the use of other frequency channels where some results show that they cannot be used at all.

Keywords : PPDR, *Video Surveillance, TV White Space, White Space Device.*