Cameras, internet and digital report for PRABOA AGM 2017

Prepared by: Ryan Hawthorne
21 September 2017

1. Introduction

Parkhurst has made significant advances over the last three years in internet connectivity. Each household now has access to world-class fibre to the home. Fibre to the home enables a range of services and activities, including very high quality TV streaming (Netflix has a range of series available in 4K, for example), the use of cloud file sharing services (such as Dropbox, OneDrive, Google Drive etc.) and better security, including enabling high definition CCTV-based security. We have focused on the latter in the last year.

First, an overview of our internet and digital activities is provided, followed by a description of our work on CCTV over the past 12 months.

2. Internet and digital

The PRABOA website was migrated in the last 12 months to a free WordPress platform, hosted on a low-cost WebAfrica hosting account. The website was kindly built by Justin McCall, who we are grateful to. The content on the website and our email services are being managed by UltimateData at a very low monthly cost, who also manage the SafeParks / Parksec platforms. We continue to use Google Apps (the free, grandfathered version) for all of our committee emails.

There have been a number of complaints regarding Vumatel's service levels. Vumatel appears to have addressed these to a significant degree, including by participating on the I Love Parkhurst Facebook group. In the long term, the only means by which service levels will be addressed in Parkhurst is by means of greater competition among providers. We are hopeful that the expansion of fixed-wireless services from Rain and Telkom (who we encourage to also

[roll out FTTH in Parkhurst](#)), together with the other telecommunications providers, will facilitate greater competition in the suburb.

3. Aims of the CCTV project in Parkhurst

A small group of PRABOA committee members (Ryan Beech, Marius Homewood, Chris Diamond and Ryan Hawthorne) investigated a range of CCTV options over the last 12 months.

Parkhurst is an open suburb, and has large numbers of cars and people entering and exiting every day. Our approach to security is to secure the public spaces by means of pro-active vehicle patrols and a range of related measures (reported on separately by the SafeParks team). We would like to complement this approach with monitored CCTV services.

There are, broadly speaking, two ways in which CCTV cameras are monitored: (1) manually at a control room, with individuals monitoring banks of cameras ([this is the approach followed by the JMPD](#)); (2) using intelligent 'alerts', where security vehicles are despatched by a control room that monitors such alerts. However, neither method of CCTV monitoring is a panacea: in an open suburb like Parkhurst, where there is lots of vehicle and foot traffic, manual monitoring and intelligent alerts will not always be successful.

Rather than have stand-alone CCTV camera poles on each corner, we would prefer to integrate cameras that homeowners are already investing in into a network that is monitored intelligently, and from which storage can be centrally retrieved. This is partly to save on the costs of establishing independent poles on each corner (these cost well in excess of R60,000 to install, and more than R2,000 per month to monitor). Using existing CCTV installations also leverages investments that individual homeowners are making on their boundary walls, and leverages the fibre to the home that each resident has access to.

4. Proof of concept trials conducted in Parkhurst in 2017

PRABOA carried out two proof of concept trials in Parkhurst, with two different equipment vendors. Both trials took place over a number of weeks at the Jolly Roger, because of its visibility (from the balcony) over the intersection of 4th Ave and 6th St.

The trials made use of continuously recorded CCTV footage, using a network video recorder (NVR) and line of sight based cameras (rather than, for example, dome shaped cameras). Both trials worked well, and we were able to identify the party that had been moving the robots at the Jolly Roger intersection (this was in fact a dump truck turning the corner too sharply).

Key learnings from the trial include ensuring that a camera network is well-designed and that individual camera locations are carefully planned to ensure that sufficient data can be collected

on the areas in question. Furthermore, the amount of data used can be managed to relatively low data throughput volumes (less than 5Mbps), provided that the cameras themselves have sufficient intelligence on them.

During the course of the POCs, an Ekhuruleni Metro Police Department (EMPD) officer took us on a drive in a vehicle equipped with a mobile licence plate recognition system, which was very effective. The EMPD officer explained that he makes several arrests on an almost daily basis using the system.

5. Possibilities for CCTV in Parkhurst

There are several possibilities for CCTV in Parkhurst. The first is a licence plate recognition camera system at all 13 entry points into Parkhurst. However, we are concerned about value for money in doing so, given the large installation and the on-going monitoring costs involved. The SafeParks team has opted for a single CCTV installation for now at Jolly Roger and additional cameras in strategic locations.

The second option is partnering with a system integrator to store, process and analyse feeds using a system like Azure Cognitive Services. Microsoft is opening an Azure data centre in Johannesburg, which is already in place, we understand, and likely available to the public in August 2018. This should make lots of better camera-analytics-based security possible. In general, the quality of the security is dependent on the quality of both the cameras and the monitoring. A Parkhurst wide integrated monitoring enables suspicious persons to be tracked. We would need to go out on a request for interest in order to make this possible, since the vendors we have engaged with to date do not appear to have such capabilities.

6. Conclusion

PRABOA has made some progress this year in developing options for CCTV in Parkhurst. The SafeParks team will over time invest in a limited rollout of cameras at strategic locations, as funds become available. However, we are still in need of a wider solution, taking advantage of technical developments and cost reductions in video feed processing, storage and monitoring.