

Annex B

June 2015

FACTSHEET SMART NATION TECH CHALLENGE: VIDEO ANALYTICS

Background

Smart Nation Tech Challenge is one of the ideas proposed under the Infocomm Media Masterplan, to encourage individuals and businesses to come forward to join the Government in a concerted effort to tap on technology to tackle urban challenges. As Singapore embarks on the Smart Nation journey, we will uncover industry problems that will require technology to solve. The Smart Nation Tech Challenge is a series of challenges that sets out to tackle these. More importantly, it seeks to drive innovation and experimentation in Singapore's ICT sector, and encourage a "dare to dream, dare to succeed" culture.

It aims to inspire and push the boundaries of tech innovation to nurture an ICM system, build intellectual property (IP) and create commercially viable solutions that address real-world problems and improve lives.

Video Analytics as the first challenge

Video analytics is the use of computer algorithms to translate video footages into meaningful data to aid business and operation. Video is a big component of Smart Nation. As Singapore develops into a Smart Nation, there is a need for better video analytics techniques to analyse video data for better and more meaningful insights. This will in turn contribute to better service delivery in sectors that underpin a Smart Nation, such as transportation, healthcare, retail and security. Hence, the Smart Nation Tech Challenge will begin with a challenge focusing on video analytics.

Currently, there are constraints such as insufficient manpower to be deployed at the right time and conditions, to ensure security, cleanliness and efficient use of resources. The current state of video analytics needs to be enhanced in terms of accuracy and availability of algorithms in order to unleash greater value in camera investments. Thus the need to enhance the accuracy of video analytics to address the challenges mentioned earlier, and generate greater value from cameras.

In addition to addressing urban challenges, the Video Analytics challenge aims to nurture an innovative and competitive ICM ecosystem. The challenge encourages industry, research institutions and institutes of higher learning to come together, co-innovate and push the limits to develop algorithms that can enhance the accuracy of video analytics. This will, build up industry technical capabilities in video analytics and in the process, enable the creation of video analytics solutions that can enhance planning and operations in the areas of resource allocation, safety enhancement, and situational awareness.

Benefits of Video Analytics

The advancement of video analytics technology and solution is beneficial to a Smart Nation in three ways, namely enhancing public safety, optimising manpower utilisation and improving situational awareness:

- Public safety: The ability to detect anomaly in the environment such as unconventional crowd movement and spatial interaction through video analysis, so that alerts can be sent to agencies to provide greater public safety.
- Resource utilisation: Video analytics can provide additional insights such as crowd level, cleanliness status to assist with deployment of transportation and manpower. In addition, this data can help in long-term planning of facilities and amenities.
- Better Situational awareness: Alerts and event information provided by different video analytics can be used together or fused with other data sources to provide

better situation awareness. For example, vehicle speed and direction information provided by video analytics can be geospatially mapped to provide better understanding of island-wide traffic conditions to decide on the best course of actions such as traffic diversion.

How the Community Benefits

- a) Sectors: Different business sectors, such as service industry, will benefit because there will be new solutions created from this challenge that will eventually help with business and operational needs. These will include both public and private sector organisations. Organisations will have new video analytics options that can provide situation awareness that helps with better resource allocation and understanding on their customers.

- b) Tech companies (Start-ups, SMEs & MNCs), Research Institutes and Institutes of Higher Learning: They are encouraged to come forward and co-innovate with government to find new or enhanced video analytics solutions to address these challenges. In doing so, we can nurture an innovative and competitive Tech and media ecosystem that has the capabilities to create and champion “Singapore-Made” content, products and services on the global stage.

- c) Individuals: Individuals will benefit from better public safety and proactive service delivery. Video analytics enables early awareness of events, which in turn enables pre-emptive actions by service providers.

Implementation and roll-out plan

The Video Analytics Smart Nation Tech Challenge is expected to be a six month process and will kick off with the issue of the Challenge Brief and invitation to participate in July. A series of workshops will also be conducted to train or guide the challenge participants so that they can acquire new knowledge that can help their challenge



outcome. Judging evaluation, validation and announcement of winners for the challenge is expected to be announced in January 2016.

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