

FTSG Software for Video Analytics

Organization

University of Missouri

Industry:

Industries needing video analytics, such as safety and security, defense, driverless cars, work place monitoring, theft/loss prevention

Researchers:

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Filiz Bunyak

Status of Intellectual Property:

US Patent 9,454,819 issued

Next Steps:

Package software for specific applications and commercialize

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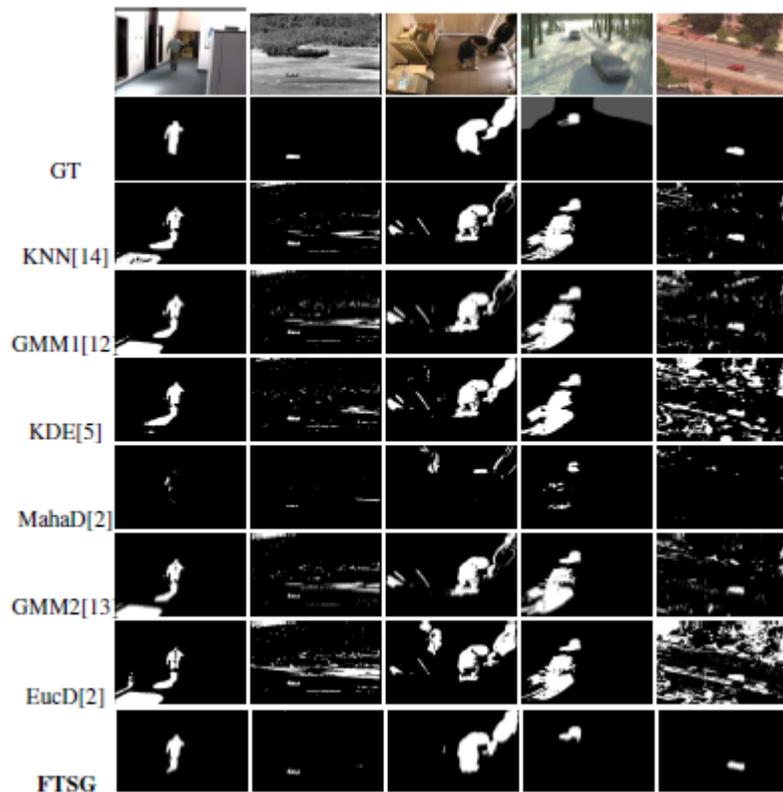


Wanted

Experienced leader to commercialize software in moving object detection

Customer Problem

Recognizing and tracking motion and change continues to be a challenge with artificial intelligence, particularly with the existence of noise, such as shadows, weather conditions, occlusions, stopped objects and thermal turbulence. The following chart shows processed images from FTSG as compared to other state of the art detection algorithms:



The FTSG was ranked the best change detection algorithm in the world at an international challenge called the CVPR 2014 challenge.

Potential Market Uses

This software has application in safety and security, defense, driverless vehicles, theft/loss prevention, vandalism prevention and work place monitoring. This software could be used in security at an airport, for example. The software and analytics could detect when a moving object, such as a piece of luggage, because stopped and could be used to further identify how far the luggage is away from the moving object that brought the luggage into the airport.

Market Size

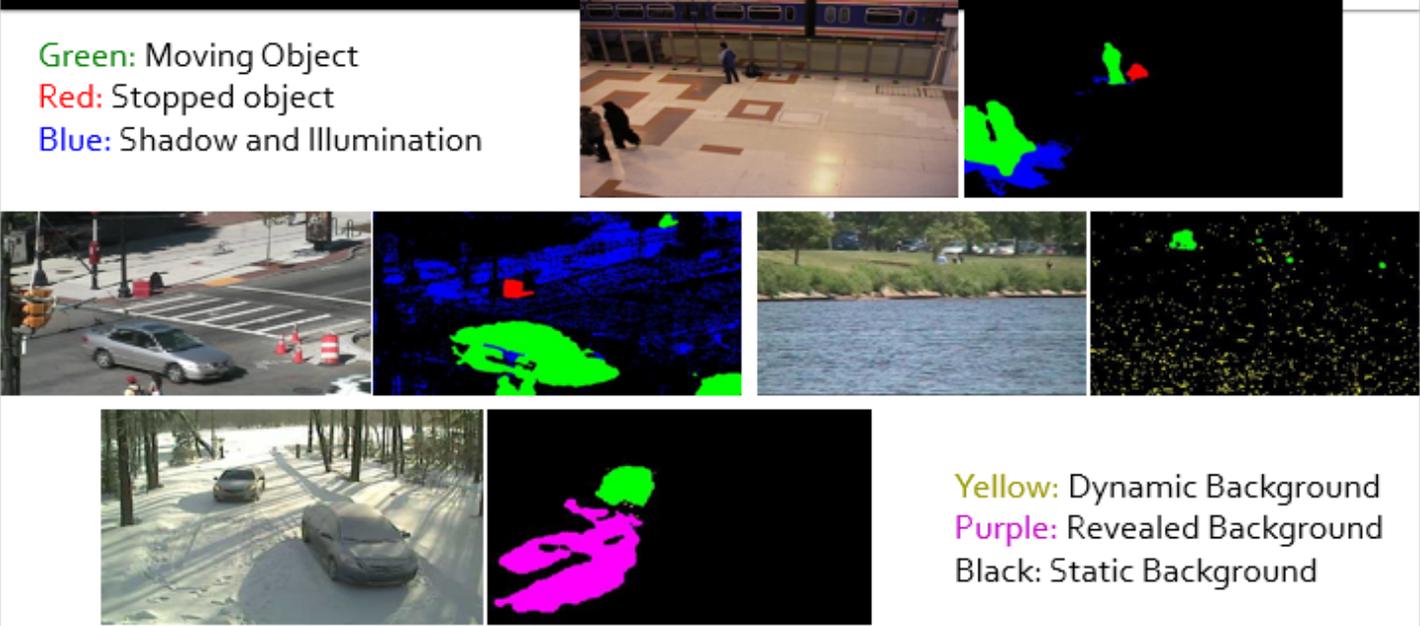
- The global video analytics market is over \$1.7 Billion
- 245 million video surveillance cameras used globally

Innovation

Categorization Examples



Green: Moving Object
Red: Stopped object
Blue: Shadow and Illumination



Yellow: Dynamic Background
Purple: Revealed Background
Black: Static Background

The image above highlights some of the complexities when dealing with real world videos that can be confused with the differences between a stopped object and a fixed object, as well as noise such as water flowing in a river, shadows on a moving vehicle and imprints left in the snow from a moving vehicle. FTSG contains the best algorithms for discerning target motion and target change from noise and other objects that are not of interest.

Stage of Development

Inventors have created the software and tested it in numerous applications.

Competitive Advantages

In the largest video analytics market of intelligence, surveillance, and reconnaissance (ISR), Intelligent Software Solutions, BAE Systems, Logos Technologies, PAR Government, and SAIC control about one-third of the ISR market, which is predominately an award market as opposed to a product market. In civilian applications, IntelliVision and 3VR have strong solutions.