Pengukuran densitas kepulan asap dari pemanasan material polimer sebagai dasar untuk pengembangan sistem deteksi asap berbasis citra = Measurement of smoke plume density originated from heating of polymer materials as a basis for the development of a video smoke detection system

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Abstrak

Seiring dengan pesatnya penggunaan kamera pengawas di dalam maupun di luar gedung , maka dalam beberapa tahun terakhir berkembang teknik pendeteksian asap memanfaatkan CCD camera berbasis computer vision. Namun tidak begitu jelas atas dasar apa nilai treshold harus ditetapkan untuk memenuhi persyaratan keselamatan. Penelitian ini mencoba melanjutkan pengembangan sistem deteksi asap berbasis video dengan mencari karakter dari asap, baik secara fisik (optical density) maupun berbasis citra, dari berbagai material jenis polimer. Kemudian akan dicari korelasi antara karakteristik asap secara fisik terhadap karakteristik asap berbasis pengolahan citra, untuk dapat meningkatkan akurasi sistem deteksi asap berbasis video.

.....Following the rapid expansion of surveillance video camera inside or outside the building, the development of smoke detection based on computer vision has increase as well in recent years. But it is still not very clear on what basis the threshold value of detection system for image processing should be set to meet the safety requirement. This research attemp to continue the development of smoke video detection by search for the characteristics of the smoke itself, physically (optical density) as well as digital imaging, from a variety of polymer materials. Afterwards this research will find out the correlation between them, in order to improving video smoke detection accuracy.