

# Brand New Tool for Forest Fire Monitoring: Small UAV Applications as on Everyday Practice. Experiences of Szendrő Fire Department, Hungary

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## Abstract

This is the Abstr Szendrő Fire Department is located in the north - eastern part of Hungary. The main task is to fight against wildfire and mitigate the impact of fire at the Aggtelek National Park – which is belongs to the UNESCO World Heritage list. In 2004 the Fire Department started a project called Integrated Vegetation Fire Management, which is also the frame of development using small UAVs for forest fire reconnaissance.

Szendrő Fire Department has carried out several real fire experiments using small UAVs for fire monitoring. The aims of the experiments were to demonstrate the tactical efficiency of using UAVs and to test control, data transmission and capacity. The objectives of the subsequent experiments were to analyse the effect of changing parameters, to predict spread of fires and to test the infrared camera system.

Parallel with experiments a small fire fighter group started a special training program. After the *flight simulations training* they made *real flight training* and the end the *real fire flight training*. After this program Szendrő Fire Department was ready to use small UAVs as on everyday practice.

From 14<sup>th</sup> August 2006 as operational small UAVs are in everyday service at the Szendrő Fire Department, supporting forest fire monitoring. As we know in fire services it is the 1<sup>st</sup> all in the World!

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