

Post

M2M General



A network of cameras and sensors to protect the forest from the flames

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The relationship between M2M and nature brings results which are very satisfactory. This does not only because machine-to-machine technology contributes toward a more sustainable world, but because many devices are designed specifically to protect the environment.

There are many examples of this collaboration which we have talked about many a time on our blog, such as technologies to protect [endangered animals](#) and to fight against [illegal tree cutting](#). Another one is the help that M2M can provide toward battling forest fires, one of the most dramatic issues in this time of year in the Northern Hemisphere.

It is impossible to avoid fires, be it because of natural causes or be it due to human intervention. The challenge is to extinguish it as soon as possible, before it becomes a tragedy. What M2M systems can do here is to give the authorities with sensors and camera networks that alert in real time when the fire starts, its magnitude and the areas the flames will probably extend to.

Since smoke is one of the visible signals of a fire, cameras only have to detect it to locate the flames. The previous requisite is that they have to know what smoke is. There are [mathematical applications which achieve this](#). The next challenge is to spread an extensive network of cameras in towers into a natural park to monitor the situation.

This is [what the U.S. Forest Service and the California Department of Forestry and Fire Protection did](#). "Our system now helps to protect over 31 million acres of private and public forests in California," said James Cinquini, president of Vicom, the company responsible for this technology.



In addition to cameras, [there are many sensors that can help detect and control a fire](#). By deploying sensors in a forest, we can find measure elements such as the temperature, humidity, wind and smoke in a given location, so that firemen can be aware of where a fire is taking place and where it will spread to according to these indicators.

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Telefónica m2m Team



@m2mtelefonica