



Green GreenPeak

There is a general consensus amongst scientists that the world is warming up based on overwhelming data. There is also a general serious concern about the impact from rising sea levels to the extinction of animals. There is still a serious debate whether the cause of this global warming is largely natural fluctuation or whether there is a dominant impact of human activities, but at the same time companies are looking at what they can do about it, largely lead by a concept called “carbon footprint” – based on the understanding that carbon emission is an important link between human activities and global warming and the belief that carbon emission reduction can help reduce global warming.

So, Pepsi Co. has tried to determine the carbon footprint of orange juice, to conclude that getting 1 liter of orange juice on the shelf in the supermarket produces about 1 kilogram of CO₂ “on the way” (NY Times, 22-Jan-09 – 0.5 gallon orange juice/3.75 pounds of CO₂). It is clear that there are significant uncertainties (fuzzy numbers and dubious assumptions) making it difficult to interpret this data or being sure what to do about it. But most important, according to Bryan Lembke, a Pepsi Co. manager on the Tropicana project: “If you do not measure it, you cannot improve it.”

GreenPeak goes to the core of what it takes to get to make our companies, our activities and essentially our culture so-called “carbon neutral” because GreenPeak builds networks that allow people to measure and control/improve their environment. The GreenPeak technology allows companies to build and maintain networks in a cost effective way so that these networks can help to optimize/reduce the usage of fertilizer (the number one culprit in the carbon footprint of orange juice), it can help the logistics to be optimized, the right temperature to be controlled/maintained and overall the waste to be reduced. GreenPeak technology is about understanding and controlling our environment and being able to manage it, but not only for agriculture.

What applies to agriculture applies to industrial activities in general. When companies like IBM, Nike, BP and Dell want to reduce their carbon emissions, it is about measuring and understanding carbon emissions in the first place. When it comes to practical things like reducing the waste of energy in buildings, like no heating or lighting in spaces where there are no people, then it is about building automation with networks that can sense presence and that can control resources – like switching of the lights and reducing the heating/cooling in an empty conference room.

It is not only about industrial activities that produce CO₂ emissions. It is generally known that one of the larger producers of carbon in the atmosphere is forest fires. Although discussions are going on about the level of impact (the Indonesian fires in 1997 produced 13 to 40% of the world’s carbon emission at that time) and difference compared to the alternative (rotting of dead trees and plants), there is consensus that early identification and containing of wildfires has a reducing effect on the worldwide carbon emission, not even to mention the devastating effects of wildfires running through villages in California. GreenPeak’s networking technology is an essential element in this early identification and containment of wildfires.





But there is more.

For sense and control networks to be practical, they have to be wireless and most sense and control networks today are wired. Not only because just recently wireless data-communication standards have become available, but also because wireless networks need batteries, and batteries need recharging and replacement, making high volume sensors distributed over a large area unpractical and costly. Therefore GreenPeak has focused with its implementation of these communication standards on extreme low energy consumption, making it possible for sensors to have a battery life that exceeds the life of the product, or even to use energy harvested from the environment (like solar cells, or bio-energy from trees) to operate. This will help cost-justify the network installation and maintenance cost for sense and control networks without having the wireless network becoming an environmental liability itself because of the heavy consumption of batteries.

So—GreenPeak is not about wind turbines or solar panel parks. But GreenPeak is about enabling measuring and control in an environmentally friendly way without compromising standards or functionality.

GreenPeak's communication technology is about understanding our environment, understanding our impact on the environment, and about taking measures to control this impact, without becoming a liability in itself. It is technology that allows us to understand and improve – and this is where the carbon footprint discussion is all about.

Do you have comments or suggestions? We appreciate your feedback!

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