Notes about the article:

"Wind energy evolution and expectetions: typical case of gigantism."

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First of all I would like to agree all the readers of my article. This article was only a first aproximation to the situation of the wind systems. This was my first own article and I think it was a quite good experience in the TRIZ world. I know that there is much to do...

Recently I have read the critic from *G. L. Filkovsky* about my artic le and I must answer it.

1.- He said that the ratio "kW/ Ton" is not an adecuate ratio.

Well, as I said in the conclusions (point 4): it is a workable performance ratio because you can compare different technologies throw the history. This is because we know the mass and the power of most wind systems (more or less) but it is dificult to know any other indicators about them. We should also consider its size (kW/m³) and others.

In electrical engineering, ratios like "kW/ Ton", "kW/ m²" and "kW/ $(cost)" are often used as performance indicators of the systems. So "kW/ Ton" is only a first aproximation to the great problem of defining the *Ideality* as a ratio. I wish that in the future we would have better performance indicators:

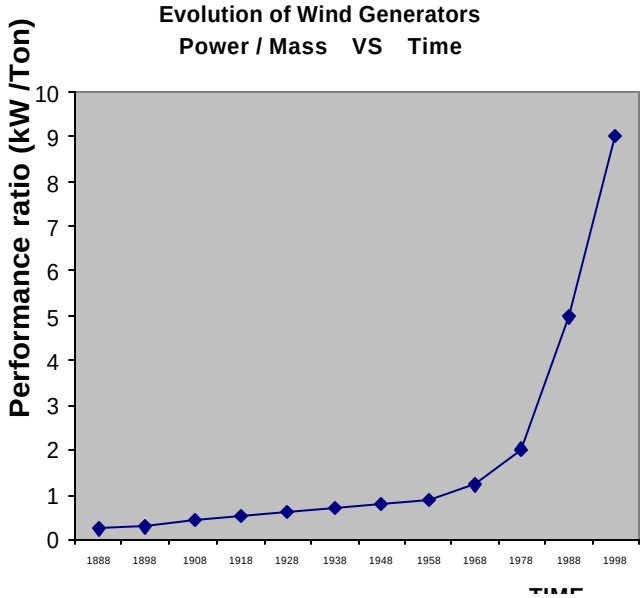

Figure 1: Performance ratio kW/Ton since 1888.

2.- I must recognize that the step 5 could seem unreasonable. I said "*At this point we have to maintain the blades up so we need an up-force for it*". Ok, that´s right, but the idea of eliminating the tower is good, so we must think about a system that does not need it.

The only aim of this step is to show that we should use already existing resources (without using the tower) to mantain the system up (IFR: the system mantains itself up). If we use already existing resources, for example:

-Wind. (Can we use it like an *up-force?)*
-Electric field?
-Magnetic field? (Produced by electric currents)
-Other fields...

We could think about any field, but I must agree with *G. L. Filkovsky* that the buoyancy effect is not the best effect to mantain it up.

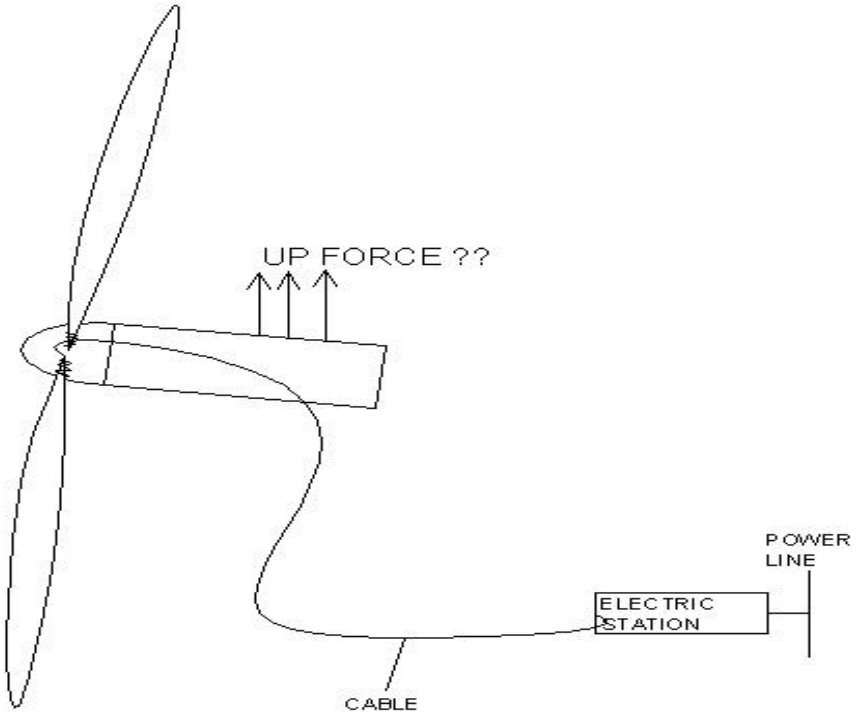

Figure 2: Posible elimination of the tower using an up-force.

3.- The best aim of the article was to show how using the TRIZ tools one can increase the ideality of the system. And see how the sytem has evolded along the history:

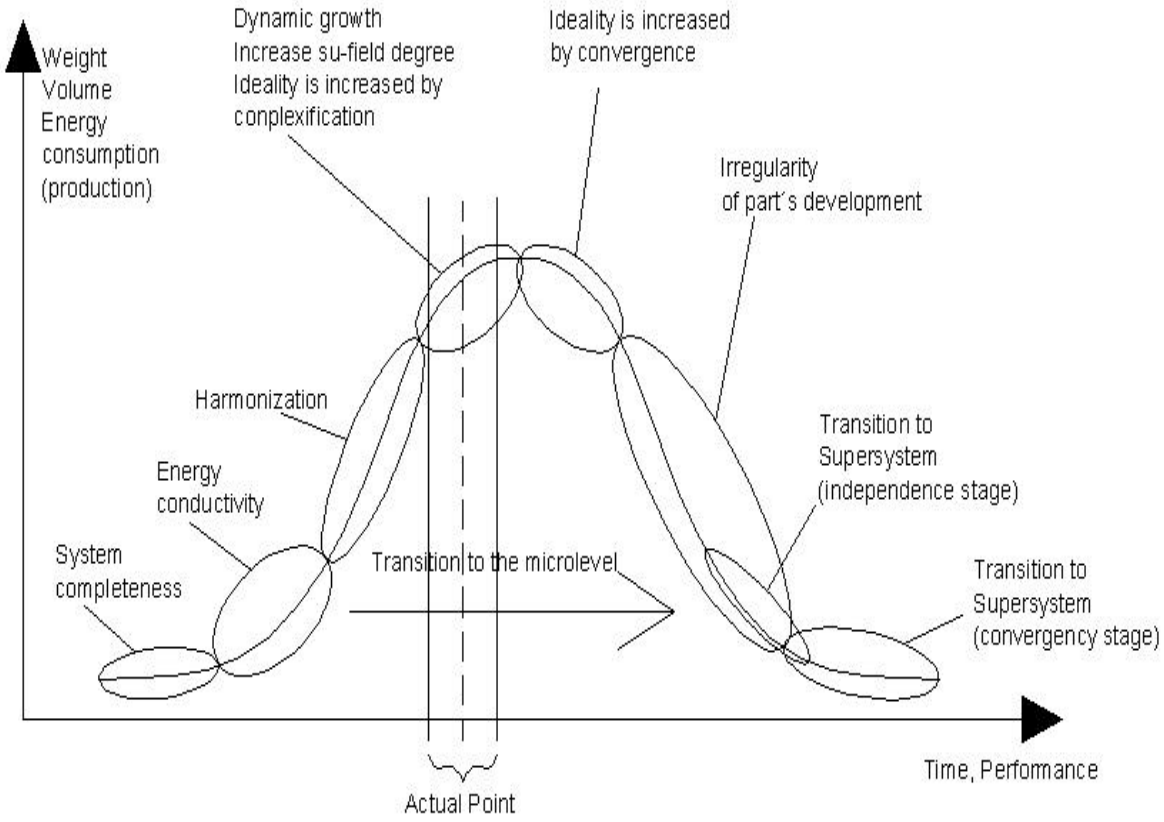

Figure 3: Evolution of systems and actual point (more or less). Source: "Mastere specialise en Conception Innovante basé sur la TRIZ" feb 2.005.

References

1.- "WIND ENERGY EVOLUTION AND EXPECTATIONS: A typical case of gigantism". http://www.triz-journal.com/archives/2004/01/2004-02.pdf

2.- "Mastere specialise en Conception Innovante basé sur la TRIZ". Since feb-2.005.

3.- Yuri Salamatov. " TRIZ: The right solution at the right time", 1999.