

Wings that can make you fly!

Dream of flying like a bird has obsessed mankind since centuries. The closest inventions near to the dream are the flying machines in which men lock themselves. Various flying apparels such as hanggliders, paragliders, and gliding wing suits were created. Flying fascination also gave birth to the Cartoon characters 'Batman' and 'Superman'. Despite inventions and imaginations, the primal flight like in the dreams did not get wings until a former military pilot Yves Rossy came closer to turn the dream into a reality with his latest invention. *International Aerospace* takes you by a fly-by trip on this latest achievement.



Dream of flying like a bird has obsessed mankind since centuries. The closest inventions near to the dream are the flying machines in which men lock themselves. Various flying apparels were also imagined and created such as hanggliders, paragliders, and gliding wing suits. Flying fascination also gave birth to the Cartoon characters 'Batman' and 'Superman'.

Despite inventions and imaginations, the primal flight like in the dreams did not get wings until a former military pilot Yves Rossy has come closer to turn the dream into a reality. Yves also known as FusionMan (Fusion of man and bird) has become the first man in the world to attach jet engines to a single wing and fly like a free bird achieving Leonardo Da

Vinci's greatest fantasy of flying through air.

Following a long line of predecessors, this Swiss man, who's lifetime passion is flying, once flew for the Swiss army at the controls of the Mirage III, then went on to fly as captain on Airbuses. The passion did not end here. He went ahead and built himself a set of foldable carbon wings able to be used from a Pilatus Porter plane allowing him to fly horizontally for over five minutes after tossing himself out of a plane.

Like the semi-mythical flying jet-backpack (which was actually tested by the US military in the 1960s) Yves around £150,000 flying machine, which with engines, wings and fuel weighs only 110lbs, sounds like something out of science

fiction. And believe it or not he is not gliding but actually flying achieving those daredevil's high.

Wings are built and personally tested by Yves for over the past 7 years; the inventor's dream became reality mainly because of 4 model-engines that were built under his wings making him the first man to fly strapped to a wing equipped with jet engines.

In his first attempt to fly, in June 2004, Yves dropped out of the Pilatus at an altitude of 4000m over the Yverdon airfield. He manages a horizontal flight at 1600m from the ground for more than 4 minutes, at a speed of 100 knots, in formation with the Pilatus. But because there was a loss of rigidity due to the inflatable side of the wings, Yves had to

On this incredible achievement, Masooma Jariwala talks to Yves Rossy – the Fusionman on of being world’s first jet wing flyer.

What is the maximum distance that you have covered and can cover with the personal designed wings?

I never did a “distance” flight straight, because I wanted always land at my point of departure... I have 5min 30 fuel endurance at full thrust , at a speed of 200 km/h, so I could do a distance of 18 kms (10 Nautical miles)

What are the difficulties faced during such kind of Air Travel?

As I jump out of an airplane with my wings folded, the exit first in freefall, and the deployment of the wing tips are always a moment of high concentration to be stable during this phase.

Once established in level flight, it’s a piece of cake! It’s completely intuitive and simple: bend down to descend, arch to climb, twist a little bit your body and help with a little move of the leg to turn; all moves very smooth and little. The only thing to avoid is to be contracted, you get oscillations on all axes...

The opening of the parachute in two steps is also a phase where you have to be very concentrated and ready to react promptly in case of malfunction.

What are the Efforts laid to make the concept a successful one

Perseverance! As no simulation is actually possible with a flexible fuselage... I had to experiment each new prototype directly in the air, step by step , once positive once negative, correct and learn from the last flight and go test again. The most important thing was to have set a cutaway system of the wings, permitting to go away of extreme situations like uncontrollable spins; without such a system I would have killed myself about twenty times...!



Yves Rossy

Do you term flying with personalized wings as a sport or just like any other mode of transportation?

Actually, at this stage of development, I think it will be the ultimate toy for people

Who has a good experience in sky-diving, and little experience in flying. But it’s the first prototype: too complicated, too heavy, aerodynamically not optimized: so the improvement potential is huge, and when you think that the man went on the moon before to invent something as simple as a paraglider... there is hope for the future of the project!

Do you things such an invention could bring revolution in Air Travel and can give tough competition to Aircraft manufacturers, especially regional jet makers?

No. Not at all, perhaps in one century but not now!

Are there any efforts made for others to learn this kind of flying?

As I said before that any experienced sky-diver with a little experience in flying

Would be able to learn it. I have many demands, but it’s too early and not reliable enough yet to begin with the teaching to fly it.

What are the future designs/ experiments likely to be undertaken by you?

The next step will be to optimize the form, the aerodynamic and the size of the wing

To be lighter so To get more place for fuel, and to put bigger engines, with the goal

To be able to fly aerobatic figures in the vertical, and later develop a system for a ground take-off...!



TECHNICAL DATA FUSIONMAN WING 4 ENGINES

- Span 10 feet
- Central part 5,5 feet
- Foldable parts 2,2 feet
- Deployable system electro-mecanic in 7 seconds
- Weight 90 pounds with fuel and smoke / 70 lbs dry
- Engines 4 Jet-Cat P200 of 45 Lbs thrust each, automatic start with stabilized idle in 25 seconds
- Fuel mix of kerosen and 5% of turbine oil for lubrication
- Performances — vitesse / speed 120 – 300 km/h
montée / climb 330 m/min à 180 km/h
1000 ft/min at 100 kts
temps de vol / flight time 5:30 – 6 minutes
- Parachute Parachutes de France « Legend R »
- Voile PD Spectra 260
- Harnest cut-away system with cut-off of the engines and automatic opening of a rescue parachute for the wing

stop his collaboration with “Prospective Concepts” and work only with “ACT Composites” who then created foldable carbon wings, able to be used from a Pilatus Porter plane.

In autumn of 2006, over Spain, he achieved the first powered climb turning his dream into reality because of 4 model-engines, which were built under his wings. With these, he can fly at over 200km/hr and conquer mountain summits. Yves trained to jump from an aircraft, spread his wings and fly like a bird until his fuel ran out.

In the next three years, “FusionMan” plans to achieve many firsts, reflecting his personal osmosis with the sky: start from a hot air balloon, overflight of mythical venues like the Grand Canyon, takeoff from the ground, formation flight and the first aerobatic figures.

Airline and military pilot, skysurfer,

parachutist and hang glider adept, Yves is an accomplished sportsman. On his flights he ignites the 4 miniature jet engines mounted under his wing while he is still on board the launch aircraft. He makes a free fall jump, deploys his wings and then steers solely by movements of his body; the only instrument at his disposal is an engine speed control. An acoustic altimeter also enables him to keep a continuous check on the safety distance between himself and the ground. The flight ends with the aid of a parachute once the fuel is exhausted— he carries three in all – the retraction of the wings and a soft landing.

And like Batman, he can also fly alongside airplanes and can also disappear at an incredible speed through the blue skies by activating the acceleration button.

Taking about this achievement Yves said, “ The basic idea of the all project is to have the same feelings of pure liberty

of flight as a skydiver fully in fusion with the air, but not only one minute in one direction vertical down, But in all three dimensions with only his body to guide through the air: primal flight like in the dreams!”

Around 48 years old, Yves opined that though the most important part of this project has been achieved, there still remains some fine-tuning which needs to be achieved before allowing me to take-off, do aerobatics, vertical climbs, and participate at various airshows.

Yves have done more than 30 motorized flights, improving this first prototype with the help of his team. Yves believes that the potential foreseen with this first powered wing is huge, and is waiting to be explored! Currently he is busy developing a second wing with ascensional and aerobatic capacities. Surely, air travel in years to come will bring revolutionary changes. ●

Dubai Aerospace Host Sponser of Dubai 2007 Airshow

Dubai Aerospace Enterprise (DAE) has announced a major sponsorship of the 2007 Dubai Airshow, which celebrates its 10th anniversary this November.

Ranked as one of the world’s top three most influential aerospace exhibitions, the Airshow attracts top international industry players, as well as visitors from high-growth markets such as the Middle East, India and China

Sheikh Ahmed bin Saeed Al-Maktoum, Chairman of DAE and President of Dubai Civil Aviation, said: “As we mark our 10th anniversary airshow, Dubai 2007 will underline Dubai’s development as a maturing global aerospace hub. It will enable us to showcase the significant investments we are making at Dubai International Airport for current travellers and at Dubai World Central for future generations.

“With global investments in various facets of aerospace, manufacturing and

associated services, DAE sits across this development of Dubai as an aviation hub, so this sponsorship is both logical and beneficial to all concerned.”



Bob Johnson and Virginia Kern

Bob Johnson, CEO of DAE, said: “We are delighted to have signed this sponsorship agreement with Dubai 2007. DAE is a dynamic business and the air show presents us with a key platform, in our home base, from which to underline our ambition to the world’s aerospace community.”

Dubai 2007 is organised by Fairs &

Exhibitions (F&E) in conjunction with the Department of Civil Aviation, the Government of Dubai and in collaboration with the UAE Armed Forces.

“This is the first time the Dubai Airshow has signed a host sponsor and we have a partner whose global ambitions are directly in line with our own,” said Virginia Kern, Chairman of F&E.

“The Dubai Airshow is now one of the biggest global aviation industry events and we are confident that all previous records will be broken in 2007. It generates billion-dollar business for those who exhibit and participate, so Dubai 2007 will ensure that DAE benefits from a significant increase in visibility among its key target audiences.”, she added.

Dubai 2007 has already signed 800 exhibitors from 50 countries. The 10th international Dubai aerospace exhibition will be staged at the UAE’s Airport Expo Dubai from November 11 – 15. ●