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## PRESS RELEASE

# Construction of the SYZ & CO hydrofoil catamaran: Mystery and passion combine with technology



Geneva, 31 March 2008 – **Six months after the announcement of the project last September, the definitive specifications of the revolutionary sailing boat are now known and construction of the different parts that make up the SYZ & CO hydrofoil catamaran is in full swing. Being a concentrate of new technologies, the project will thus be the first racing sail boat to benefit from the 3Di sails developed for Alinghi. At a time when hydrofoil projects abound, some key elements remain shrouded in mystery and will only be made public when the boat is launched, during an “unveiling day” worthy of the America's Cup.**

### **The different pieces of the puzzle are created**

The team involved in the design of the project, comprising its four initiators (Patrick Firmenich, Jean Pfau, Jean Psarofaghis and Alex Schneider), the VPLP firm (Van Peteghem – Lauriot Prévost), Yvan Ravussin, as well as the engineers, are radiant: the future boat whose ambition is to become the fastest sailing boat on the lake is becoming a reality in the Psaros shipyard in Vézenaz, near Geneva. The best specialists were called on to contribute to this prototype born of the most advanced technologies, and thus the different pieces of the puzzle have been built separately. The carbon hulls are built by the Psaros shipyard, the linking arms and the appendices are produced by Ravussin and the monolithic carbon mast is produced by Marström in Sweden. The hydraulics are produced in Italy and the sails, which are designed by North Sails Suisse, are in the production stage.

The construction of the boat and the parts of which it is made is a genuine piece of craftsmanship, making use of the most sophisticated materials (carbon, titanium, etc.). Each part is meticulously calculated to the smallest tolerances and then positioned very precisely. Delivery of the different elements will be staggered over the next few weeks so as to allow the boat to be assembled, the launch date of which has not yet been announced.

### **Specifications: between the M2 and the D35**

Halfway between the 28-foot M2s and the Decision 35s, the hulls of the SYZ & CO will measure 32 feet (9.75 m) in length. With its jib boom, the overall length will be 11.7 m. Equipped with a 15.4 m carbon mast, the sailing boat will have an air draught of 16.3 m. The planned total weight is thus around 630 kg, that is half that of the Decision 35. Weight is a critical factor to be able to “fly” and the drive to reduce weight has thus been one of the priority objectives.

### **A tremendous feat of engineering**

The SYZ & CO foils catamaran is a pioneer and the technologies to be implemented often have to be developed as work progresses. Little is in fact known about the strains that the different parts will undergo, which forces the engineers to perform a constant balancing act between two contradictory constraints: lightness, which is essential to be able to fly, and solidity, to withstand the enormous constraints that will be exerted on the boat. All these factors necessitated a greater amount of engineering work than for a conventional boat, which delayed construction proper.

The engineering calculations were performed exclusively with hydrodynamics engineer Giorgio Provinciali, Professor Clemens Dransfeld and the University of Applied Sciences Northwestern Switzerland (Fachhochschule Nordwestschweiz). *"The engineering work on the structures of such a boat has similarities with aircraft. Here the wing is a foil and the weight at takeoff is crucial. Therefore very sophisticated composite materials have to be used. The dynamics of the hydrofoil boat at a high speed cannot be compared to any other conventional boat and it is therefore important to study carefully and understand its behaviour. We are thus going to use sensor systems that will enable us to develop the hydrofoil catamaran in its first navigation phase. Validation of the hypotheses will be an important part of the process"*, explained Professor Clemens Dransfeld.

### **First use of the 3Di in a regatta!**

For the sailing boat's "engine", the SYZ & CO hydrofoil catamaran team got North Sails to let the project benefit from the very latest generation of composite sails and thus to be the first boat to use 3Di technology in a regatta. A secret weapon developed for Alinghi in the last America's Cup, the material of the 3Di sails relies on the same moulding process as the 3DL, but makes more efficient use of the fibres, which yields stronger and lighter sails. In particular, they allow for a weight saving of up to 25% compared with previous technologies, which is a crucial asset for the prototype. The team of North Sails Suisse consists notably of Pierre-Yves Jorand, who is in charge of project coordination, and Patrick Mazuay, who handles sails design. The latter has spent the whole winter working with the help of "Flow Membrain", a system that allows one to sail the boat virtually and to evaluate accurately how to manage fluctuations in sail power when the boat switches from the Archimedean mode, when it has to sail at full power, to sailing-on-foils mode, when it has to reduce its power almost instantaneously.

### **Suspense and secrets**

At a time when it is known that the next America's Cup will take the form of a duel between multihulls and when several other flying boat projects are under development, the SYZ & CO foils catamaran is arousing great interest, owing to its revolutionary concept and the many innovative solutions that have been developed. A number of patent applications have in fact been filed to protect the boat's technological innovations and some key elements remain confidential for the moment, in order to preserve those technological leads. They will only be revealed when the boat is launched on an "unveiling day" worthy of the America's Cup!

### **A new way to sail**

For Banque SYZ & CO, the hydrofoil catamaran project is particularly exciting because it has a number of parallels with the way in which the Bank conducts its business. *"Getting technology to further performance is also the way we conceive of our trade. When carrying out such a project - as in asset management - the best results are achieved by combining the best skills, even if we have to look for them outside our Bank. We are proud to support this project because we are convinced that this catamaran will be the pioneer of a new way to sail,"* said Ricardo Payro, Head of Communications at the private bank.

High-definition pictures and photographs available.

*For any additional information, please contact:*

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**Note to the Editors**

**About SYZ & CO**

Founded in 1996 by Eric Syz, Alfredo Piacentini and Paolo Luban, the Swiss banking group SYZ & CO has established itself as a respected player in the financial industry, thanks to its original concept and its proven long-term track record. SYZ & CO focuses exclusively on asset management, with 320 employees and assets under management totalling CHF 30.1 billion.

In addition to the Bank's headquarters in Geneva, the Group also has offices in Zurich, Lugano, Locarno, London, Luxembourg, Nassau, Salzburg, Milan, Rome and Hong-Kong.

Its activities are divided into three complementary units:

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**n|w** University of Applied Sciences Northwestern Switzerland  
School of Engineering

The polymers engineering school of the University of Applied Sciences Northwestern Switzerland focuses its research on new engineering processes and technologies for the structures of advanced composite materials. Its involvement in this project emphasizes its commitment to the development of the use of composite materials for sustainable development.