

# About the Cover...

by John H. Vargo, Publisher

Lex Filipowski was at his father house recently and found this fascinating 1934 magazine called Science and Mechanics.

I have always been interested in the future and actually have a number of patents based on my ideas. (And many more that I never tried to file for or I failed at) However that is another long, long story.

This cover came so close to what the modern personal watercraft has become that I thought it would be interesting to others as well.

As for the future it may very well be something like this concept now looking for partners in their venture.



Lex Filipowski.



## The Old, the Latest and Perhaps the Future

# The Skimmer 100 km/h Ground Effect Recreational Water Toy

by Mike Hanlon Recreational vehicles will come in many different forms in the future as a raft of developing enabling technologies spawn new categories of technologically-enhanced ground, water and aircraft – not only are these traditional categories splintering, but there are new variations of toys for big boys, some of which will develop their own categories – craft like the part boat, part sled, part ground-effect Tupelov aerosan, the Bionic Dolphin and Sea-Breacher, the SeaPhantom, a host of recreational submarines such as Deep Flight, the amphibious Quadski and the list just goes on and on of new RVs that break out their own category. One emerging area of enormous promise is that of powered ground-effect RVs – we’ve already seen human-bearing inflatable towable water kites such as the Kite Tube and the Manta Ray and the now dormant Sharkski but with light weight, high power and computer-aided design, the concept of an affordable powered ground-effect vehicle for under US\$50,000 is within reach. The Skimmer is a small jet-ski like ground-effect airplane that starts in the water and can be flown over sea, rivers and



lakes, steered partially by handlebars and partially by moving one’s body weight, similar to the way a motorcycle is ridden. With a maximum speed of 100 km/h and maximum flying height is 1.5 metres, the Skimmer offers maximum excitement and minimal fuss, because no flight papers are necessary. Dutch product designer Roel

Verhagen originally conceived the Skimmer concept as an entrant in the 2005 Braun Prize.

“Wing-in-ground effect has been in use from as early as the 1930’s,” says Verhagen. “Russia was even building enormous airplanes from in the early 1950’s using the same principles. The triangular shape of the wing with T-tail was invented in 1965 by Alexander Lippisch and makes for greater stability.”

“I’m also a fan of the Wankel engine which Felix Wankel invented in 1957 and has been developed and improved upon ever since. The wankel engine is being used in the Mazda RX-8 and the Moller Sky Car, which uses no less than eight wankel engines, and Mazda’s work with Hydrogen fuel in the wankel was the deciding factor.

“These known techniques have been getting some renewed attention lately as there have been some new technological developments. Innovations in the fields of materials knowledge and production techniques have been improving on the performances of, and make it possible to build lighter constructions.”  
Verhagen is now seeking partners in his project. “For the next step in the development from concept to product, a lot of expertise will be needed. First, the 3D model will need to be evaluated and optimized with the use of simulation software. Then, a radio controlled

scale model will have to be built, to test and prove the theory. When this is successful, we will be looking for a partner with enough resources, experience and facilities to produce a full scale prototype and, eventually, start up serial production.

Roel Verhagen can be contacted here.

Skimmer Specifications:

Length: 2.8 m. Width: 3.8 m. Weight: 250 kg Engine: 2 x two-cylinder wankel-engine, air-cooled, fuel injection, 60 HP. Fuel: Hydrogen

