U.S. interest was limited, and the patents were later sold by Collins to a German company. A key aspect, however, was the use of a reversed delta wing giving the platform inherent stability: this 'Lippisch-type' approach became the basis for many current designs.

The US, observing Russian progress through National Reconnaissance Office spy-satellites, seriously considered adopting military WIG vehicles for heavy lift. Instead it went ahead with the C-5A Galaxy aircraft, although research into WIG continued on in US Navy research facilities.

Military applications
Current thinking about the military applications of WIG envisages very different roles from those intended for Soviet Ekranoplanes. Commenting on Hypercraft's views of WIG, Taylor explained that the technology is regarded as relevant in a coastal patrol role. He sees this as a starting point for other applications: ‘[T]he coastal role will allow us, and the users, to evaluate, evolve and upgrade the concept to a warfighting vehicle.’ The current model is portrayed armed with a Boeing 12.7mm chain gun on a stabilised remote control mount, backed by a computerised targeting system for accurate weapon control.

Technology has also moved on. ‘There are several issues happening at the same time’, said Taylor. ‘The Cold War behemoths are 1960s technology. The Hoverwing is this century’s technology. It uses a different aerodynamic configuration to that of the Russian Ekranoplan school. This gives it improved performance, greater cruising height from the water surface and far greater manoeuvrability. It is also a far more ‘integrated’ craft with a blended-body form rather than a stick-with-wings form.’

Interest in using the technology extends to the transportation of military forces. ‘For example, there is currently a tendency within the leading navies to stand further offshore when deploying amphibious forces. This means that amphibious forces in landing craft have further to travel and take more time to reach the shore. As a consequence there is interest in a higher speed landing craft. The Western military are reviewing their interest in view of the potential role [of WIG craft] in special forces and amphibious landings.’ One such interested party is the United States Marine Corps (USMC), whose Warfighting Laboratory acquired a FlareCraft L-325, capable of delivering a five strong special operations team to shore from distances of up to 200nm, using a stealthy profile to avoid detection at a reported cost of $250,000. A WIG is particularly suited to avoid detection by flying very close to the surface (typically below radar’s search horizon) and leaving virtually no wake. The materials that could be used to construct the platform would enhance their inherently stealthy profile.

In 1999 it was reported that China was constructing a WIG vehicle at Shanghai’s Quixin shipyard sufficient to carry 100 light infantry. An earlier WIG, the 20m ‘White Swan’, was tested in 1997 and was very similar to the CHSB’s Volga 2. Chinese documents also show they consider WIG as the next fast attack craft of choice replacing both hydroplanes and hydrofoils.

Vulnerabilities
Discussing WIG applications for smaller coastal patrol vessels, Taylor admitted ‘there may be vulnerabilities. Firstly, the craft can only operate in the appropriate weather and sea conditions. This restricts the target market, but nevertheless there are over 300 million people living in the selected target market region of the Caribbean, South East Asia, the Middle East, the Mediterranean and Baltic.’ At the moment WIG platforms would operate up to sea-state 3, with a maximum wave height of 2.5m. If conditions worsen whilst in flight and exceed these parameters, Taylor said, ‘Our runway is always just below us, so putting down on water is no problem. If the sea state deteriorates the craft can put down and ride it out. It is similar to a hovercraft in this respect.’ In terms of specific military concerns, he said: ‘The craft is quite rugged, but we will do studies with military research establishments to assess the vulnerability and incorporation of local armour within the structure, in order to protect personnel and equipment.’

Conclusion
WIG is being given serious consideration by a number of militaries, not least the USMC, which should give the technology credibility. But WIG platforms suffer from a PR problem. Perceptions of the technology are still derived from grainy Soviet-era footage or more recent media coverage of decrepit Russian production facilities and underfunded design bureaux. Detractors would also add that with WIG, as with the Hovercraft, much was promised by its backers but little was delivered. Taylor addressed this Hovercraft/Ekranoplan legacy by saying: ‘We must all learn from the lessons in the story of hovercraft development. In the case of WIG most of the technical issues have already been resolved.’

Though tested by militaries, WIG has not yet broken the glass ceiling to enter military service in significant numbers. Until that happens the potential of WIG technology will remain just that: potential.