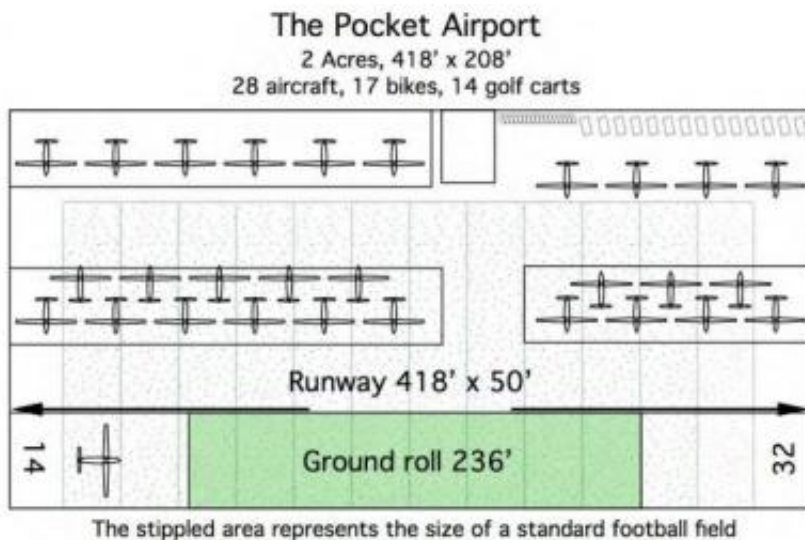


Suburban 'pocket airports' proposed

December 20 2010, by Lin Edwards



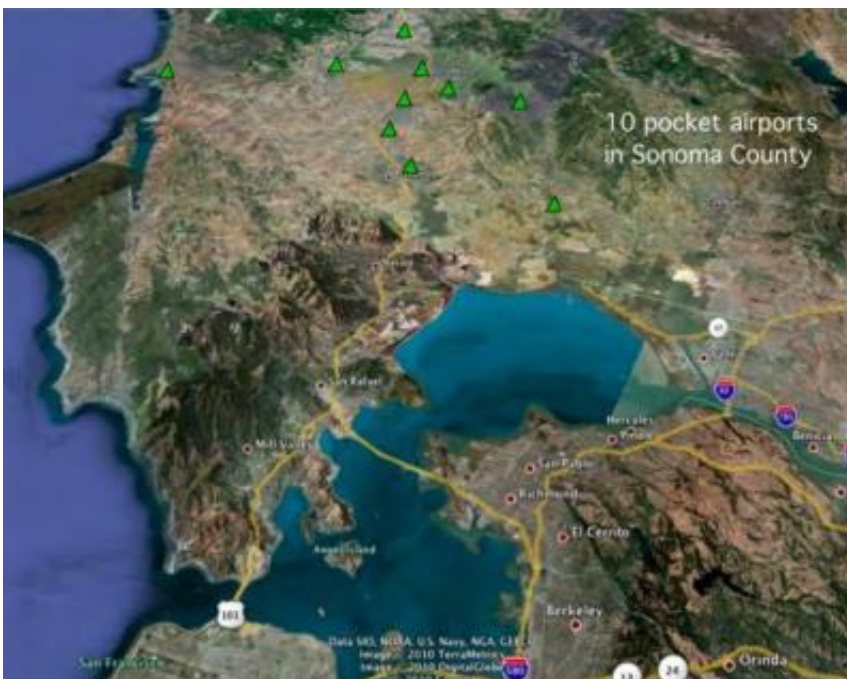
An idealized pocket airport. Aircraft depicted are motor-gliders that have 50 foot wingspan. Image credit: CAFE

(PhysOrg.com) -- A proposal has been put forward by the CAFE foundation that a network of small suburban airports should be developed in the future for the use of Suburban Air Vehicles.

[Comparative Aircraft Flight Efficiency](#) (CAFE) is a light-aircraft partner of NASA, and is running a US\$1.65 million competition, the Green Flight Challenge, to find the best design for a short take-off personal [aircraft](#) that uses little fossil fuel, is cheap to run, and is quiet in operation. The competition will be judged in Santa Rosa, California in July 2011.

CAFE envisages that Suburban Air Vehicles (SAVs) will become a common mode of transport in the future, with flights landing and taking off at small suburban "pocket airports." ([PDF](#)) CAFE's president, Dr. Brien Seeley, speaking at the Future of [Electric Vehicles](#) conference in San Jose, California earlier this month, said it was shocking that after a century of flight aviation has still failed to fulfill the dream of moving people fast, without needing roads.

Dr. Seeley said the travel on the ground to and from airports often negated the time saved by flying, but having pocket airports to fly travelers to the main city airport from tiny suburban airports would considerably speed up the process. Passengers would fly in two to four-person SAVs operated (on autopilot) by air taxis or shuttle services. ([Read: Puffin: the one-person electric aircraft \(w/ Video\)](#))



The Green Flight Challenge is NASA's first step in developing a new infrastructure for aviation, featuring small auto-piloted aircraft. Challenge vehicles will need to operate safely and achieve at least 1.18 L/100 km [fuel consumption](#). They will have a take-off distance of no more than 610 meters to clear a 15-meter obstacle, travel at 160 kph, and emit less than 78 decibels measured from 76 meters away. Each SAV would be equipped with parachutes. Dr. Seeley said he envisaged vehicles would be designed in future that did considerably better than the minimum requirements.

Dr. Seeley said the SAV would offer pilots fast travel with a de-conflicted air highway through the sky taking them directly where they wanted to go. Flight paths would be coordinated via a central control system to avoid collisions. Dr. Seeley said the system would allow people to travel in 3-D instead of on the "insanity" of increasingly congested roads.

CAFE has designs for a range of pocket airports, ranging from a 2-acre (0.8-hectare) single runway located in greenbelts just outside major urban areas and handling up to 120 operations an hour, up to a 12-acre (4.8-hectare) version with two sets of runways and parking for 320 ground vehicles. Flights would begin with a steep take-off to ensure the noise level was low enough by the time the SAVs reach the boundary.

The Green Flight Challenge is expected to be followed by further competitions in 2013 and 2015, with higher prizes for the winner of each. The Green Flight Challenge sprang from the Personal [Air Vehicle Challenge](#) of 2007.

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