

Rekindling the Love of Flying with Microsoft's Flight Simulator

Shôn Ellerton, January 3, 2025

It may not be quite the same as flying the real thing, but I got really hooked with Microsoft's Flight Simulator.



A good friend down the road called me up one day and announced that he had a new hobby. I asked what it was and he said that he got into flight simulators.

Specifically, Microsoft's Flight Simulator 2020.

I was intrigued on two accounts.

First, I had, long ago, played Microsoft's Flight Simulator something in the order of thirty plus years ago or so. It was fairly crude and the scenery wasn't particularly realistic nor was it very interesting to fly. I had more fun trying to crash into the Sears Tower skyscraper rather than flying properly. There were selected cities which looked better than others and everything seemed to be centred around Meigs Field Airport in Chicago, which closed in 2003.

Second, I had learned how to fly an actual aeroplane using the infamous and twitchy T-tailed Piper Tomahawk PA-38, which made flying a Cessna feel like a proverbial bus. After countless circuits out of Welshpool Airport, in Wales, I finally managed to find the confidence to do a circuit going solo, which, for all learning pilots, is the biggest milestone of all.

My father had flown and owned several planes during his lifetime. Remarkably, he had built two of them in his workshop, both two-seaters, one being a not terribly well performing Europa and the other, a very twitchy and scary Glasair

III RG, which he flew from Land's End to John O'Groats winning the world record for the shortest time achieved using a single-piston aircraft. Thanks to his exposure with aeroplanes, I had experience in flying more complex aircraft like Mooney M20s and Piper Arrows, both of which had constant speed propellers requiring the use of feathering the angle of the propeller with the blue lever in the cockpit.

From this time, I had never touched a flight simulator nor had any interest to do so. Indeed, the last time I had flown was back in the early 2000s in which I rented a Piper Arrow to fly around southern California and Nevada. Due to the costs of flying, work, and other personal circumstances, I had let my flying skills lapse altogether.

Anyway, back to the story.

I went to my friend's house and he had a powerful Alienware laptop sitting on top of a laptop cooling fan. Connected to that, he had a very nice joystick, the VelocityOne by Turtle Beach, with a variety of buttons and two sliding levers on the left and right side. He cranked up Microsoft Flight Simulator 2020, and I was utterly blown away by the graphics. The shimmering water surfaces, the topography of the land, the airports with all their facilities, the moving traffic, even the shadow of the plane on the ground when in mid-air. Not just that, the software connected to a myriad of real-time data sources integrating actual weather and live aircraft and shipping vessel traffic.

On his iPad, he had a free bit of software, called Little Navmap, which plotted his journey across a very comprehensive map which showed all the aeronautical stuff from VORs, NDBs, airspaces, FIRs, airports, heliports, airstrips, you name it, on an open source map. This is where you can create flight plans which seamlessly connect to the flight simulator. This free bit of software seemed so customisable that, when first using it, it felt overwhelmingly complex. However, it's almost a necessary requirement for me allowing me to get a real bird's eye view of the world.

Yes. I was blown away by the graphics, but I wasn't really intending to get the software at first sight. I was more interested in being able to explore the world in near-real time rather than do the actual flying with the simulator.

But this is what makes flight simulators so interesting. Everyone has their own reason for using and enjoying them. For my friend, it is the ritual of setting up

flight plans, fiddle with the knobs in the cockpit, obtain the correct clearances from ground and tower control, calibrating altitude using QFEs and QNHs, reading NOTAMs and METARs, setting up autopilots, and following all the checklists. In essence, all the stuff which every pilot has to learn as a matter of necessity whether they like doing it or not.

For others, flying simulators offers the enjoyment of trying out dozens of aircraft included in the software, from two-seater trainers to full-blown Boeing and Airbus airliners. There are hundreds of other weird and wonderful aircraft which can be obtained as add-ons. Never flown a helicopter or an airship before? Well, you can with a flight simulator.

However, for me, flying is the enjoyment of manually piloting the plane, from taking off, flying over interesting scenery, and the sublime skill of landing a plane smoothly, otherwise known as a *greaser*. And, of course, once the plane is secure, the experience of walking into the airport café with one's aeronautical chart and flight computer under the arm ready to plot the next sector to another exciting new destination.

Intrigued with the notion of rekindling the enjoyment of flying without the cost of doing it for real, I tried it out.

The software came with a variety of planes to choose from, but not the one I flew for real. So I downloaded the Piper Tomahawk and Piper Arrow, both products from Just Flight. I was later to learn that not all these simulated aircraft work very well, but the ones from Just Flight are very well rated by actual pilots. And I was not disappointed. The Tomahawk was incredibly realistic as it was twitchy to fly, had the propensity to balloon on landing, and of course, it's undesirable tendency to get into nasty difficult-to-get-out-of spins. Any pilot will tell you that learning on a Tomahawk is far more challenging than your average Cessna 152.

Eventually I got hooked with having the ability to fly around the world, hopping from airport to airport, but chose to fly one aircraft which I was quite familiar with, the Piper Arrow IV Turbo, which had a far higher service ceiling, higher speed, and far more power than the trainer Tomahawk. It was also very much in keeping from what I was used to. No fancy digital displays but your standard six analogue steam-punk gauges which monitors altitude, attitude, indicated air speed, turning, heading, and vertical speed. I was astounded by the realism of going from place to place, and by doing so, learned more about the geography of the area than I would ever have by just looking at a map. Being one of those people

who could sit for hours in an airliner looking out the window to the ground below while most others sleep or watch movies, I was totally enthralled with this product.

Some of the most memorable moments on the simulator was flying into Alderney island at sunrise, watching rainbows form flying out of Garden City in Utah, and flying over the city lights of Biarritz in the south of France. Most of all I enjoyed the challenges of trying out some of the most infamous, short and difficult landing strips high in the mountains against vicious crosswinds which really tested my flying skills.

I had noticeably got better at landing but how did it compare with landing an actual plane? And this being the case, could Microsoft Simulator be used as an actual training product?

There are many forums online discussing this very topic, but I'll give you my opinion.

The first thing anyone needs to do before running this product is get a decent joystick or yoke. Personally, I don't think it really matters which because I had used a yoke on an actual Piper and a joystick on an actual high-performance Glasair. I opted for a decent joystick which is far more portable than a bulky yoke setup. I don't have rudder pedals but the joystick has a twist function which acts in the same way. Incidentally, there are some aircraft with this function being a godsend to those pilots who are disabled, my father being an example having had one leg.

The second thing to do is ensure that all the control settings for the joystick or yoke are mapped out properly. This could take quite some time because the default settings that came with the product were terribly wrong when I first got it running. For example, the power quadrant control was the wrong way round. Anyone trying to learn how to fly an aircraft using this software *must* do some real research online to ensure that the mappings are as accurate as possible. An actual pilot to set these up would, of course, be best, but not all of us have access to such resources!

The third thing to do is change all or most of the default settings to *realistic*. For example, decoupling the rudder with the aileron, because you can't land in a nasty crosswind unless you have independent control of each other. Also, making it possible to crash or overstress the aircraft at overly high speeds. And so on. Personally, I do keep a few settings on automatic like fuel mixture, but only so,

because my joystick has limited sliding controls and I prefer to have my second slider set for propeller pitch.

Once all these things are set up properly, the simulator does provide a fairly realistic feel of flying the real thing, but alas, it is not the same.

For starters, it is disappointing that you can't crash into other aeroplanes in the simulator or other live traffic. Experiencing the wake from being behind a large jet airliner, known as a 'heavy' in aviation circles, doesn't exist, although this may have been addressed in the latest 2024 version of the product. Also, the ground is *way* too forgiving when landing a light plane. For example, I was disappointed to learn that I could land a plane in the middle of, what should have been, a rocky looking desert. I was generally pleased with the physics of how the plane moved along a sloping runway.

I haven't tried a VR set, but one of the most difficult aspects of using a simulator is not being able to move your neck to see where the runway is. The only way to do this is to ensure that your controller has the necessary buttons on it to look left and right, but it is not the same at all. And it is fiddly and awkward to use.

I'm sure there are some pretty heavy duty and fancy simulator controllers out there, but the biggest difference of all is the lack of feedback on the joystick. And most flight simulator users have controllers with physical feedback. This makes the overall experience feel far lighter than the experience of flying the real thing. However, this probably only applies to smaller or regular piston controlled aircraft, the only aircraft which I learned how to fly in the flesh.

As for larger aircraft, this may be a different case. Although I am not experienced with large jet airliners nor have much in the way of interest in flying them, the overall usefulness of using a flight simulator seems to be more appropriate. The reason being is that most of the training is around the handling and protocol of the flight. The actual flying is much in the way of 'fly by wire' where mechanical feedback of the controls is largely removed by the aircraft's servo mechanisms.

Another experience which is lost in a simulator is the emotional kick of getting into the aircraft and buckling yourself into it knowing that it is you and you alone whether you're going to get back safe or not. When I started to fly, I was dripping with sweat every time I got into that seat because once up in the air, I knew that it was down to me to ensure whether I could land it or not without breaking something. There is nothing quite so frightening when the weather does

something utterly unpredictable and this happened to me one time when an unexpected crosswind developed on the one and only runway at my little airport. Another scary thing about flying for real comes with those moments of not being able to find the damned airport from the sky. Our modern days of moving maps and GPS makes this easier, but I learned how to fly without such aids. It can be surprisingly difficult to find runways from the sky if you're not familiar with the terrain.

I really enjoy using Microsoft's Flight Simulator 2020 but it is not quite comparable to flying the real thing, although, it will certainly help with understanding the controls and the protocol of flying an arranged flight plan. The obvious danger is setting it up incorrectly and developing bad habits. For example, adjusting the flaps at the wrong time or approaching runways at the wrong descent angle.

At time of writing, I had also tried out Microsoft's latest 2024 version, but have not found it ready to use yet being terribly buggy and raw, but give it some time, and it might be an improvement in the way it handles ground and air physics, both aspects which need a bit of tweaking.

In essence, Microsoft's Flight Simulator is incredibly engaging and has a wealth of features supported by many third parties who lovingly recreate aircraft for consumers to buy and download. Scenery and airport packs, of which many are free, are available to download, and most are simply stunning and incredibly realistic.

Very impressed overall!