AVSIM Commercial Utility Review

Pilotedge

Introduction

Online ATC in itself, as well as voice communication outside of your simulator, is really not a new idea. The simming community has enjoyed countless hours of entertainment afforded by voice communication with other simmers with either peer to peer online voice communications via multiplayer sessions, the Microsoft MSN Gaming Zone and multiplayer sessions in conjunction with virtual flying clubs or virtual airlines that can attract an even bigger audience.

With VATSIM and IVAO, an even larger worldwide audience was attracted with some users acting as air traffic control while more and more pilots flew their respective aircraft through a virtual world where you could fly almost anywhere and have some kind of communication with a real live person acting as a controller rather than a computerized voice giving ever more familiar programmed dialogue. The simming community embraced these services sometimes with an almost maniacal loyalty, they couldn’t sim without (insert online service here) service being online.

VATSIM and IVAO are free online services that have helped push the limits of what is achievable in the simming world to the levels we enjoy today. You can fly almost anywhere in the world that an airport exists, all you have to do is familiarize yourself with how these services operate, get yourself online, track down who’s working which area and what frequencies to use.

A computer geek and flight sim junky’s dream come true to be certain. And the cost... certainly a factor that has to be reconciled with many in the flight simulation community was just right on the money... in other words they have been free.

The home computer based flight simulator with the help of ever increasing graphics and aviation specific hardware has moved from being a curious novelty to real pilots and flight schools to being a tool that many are now utilizing not just for training but also for proficiency. Even as much as ten years ago there were many flight instructors would still sneer at the thought of a real pilot benefiting that much from the home simulator... after all it was just a game! That attitude has fortunately changed.

For the real world pilot that wants to practice IFR procedural work, learn how to fly with GPS equipment, fly into an unfamiliar VFR/IFR area to gain familiarity and even practice some limited failure scenarios, the home simulator can help with proficiency and save countless dollars in Avgas and aircraft maintenance or rental.

I’ll tell you where the aviation industry, pilots, instructors, flight schools, etc, have always had a legitimate gripe. The
As soon as you break that pilot flying the aircraft concentration to mess with the computer that sense of realism goes right out the window. One mouse move or click, one keyboard entry, even reading some onscreen prompt that you then might have to respond to and the pilot concentration has just shifted from the scenario of a) flying the aircraft, b) navigating airspace, c) dealing with weather and d) ATC (the four things you have to be able to do and coordinate doing well when flying) to now “playing” with your computer so you can continue doing the other four things that you were actually trying to train or hone your skills at!

Enter Keith Smith, the driving force behind Pilotedge. A private instrument rated pilot, Keith has paid his dues acting as a controller on VATSIM for over 4,000 hours. In all of that time he tried continually to interest real pilots and flight schools into using the online ATC service in conjunction with home computer based flight simulation. While his enthusiasm is infectious the hurdle that kept real pilots out was the additional learning curve of how to use the existing online systems, their departure from real world frequencies and at times naming structures, and put on top of that spotty coverage. You could get some flights to work quite well, others not. The need for another system out there, not to compete with the existing services but instead to offer the kind of service that could attract a whole new customer to online ATC was recognized.

Here is one of the videos of Pilotedge in action in one of PFC's Modular Flight Deck simulators. Other than periodically noticing that the pilot is sitting in a simulator, this video could have been shot in a real aircraft, all the interaction with ATC is as you would do for a real flight. Notice that most of this interaction is of features you would not ever be able to do with any of the existing ATC computerized systems.

I know... all of us are going to want that simulator too, but all of the pilot’s interaction with ATC is now available to all of us with this service. Here is a short list off the top of my head of what is possible with Pilotedge that you cannot do with either the default ATC or even many of the options out there today:

- Voice interaction with ATC so no keyboard or mouse interaction
- Read back of IFR clearances, these aren’t always what you file or can include additions like obstacle clearance instructions or standard instrument departures (SID)
- Ability to get special VFR if part of the airfield is instrument conditions, like when a marine layer is off one to one side.
- Transition routing clearances through special airspace like you will find around the Los Angeles Class Bravo airspace.
- Ability to file IFR in flight for a pop up clearance to get above clouds or maybe you are flying the VFR traffic pattern and decide to shoot the ILS.
- Ability to file IFR in flight when your flight has been VFR and your destination airport is in instrument conditions.
- Ability to divert either to your alternate on an IFR plan or divert to an airport of your choosing, even use ATC to find a safe haven with better weather.
- Practice IFR approaches into multiple close by airports and even go back and forth opposite directions on the same runway with missed approaches.
- Get a block altitude clearance, handy when in turbulence or when crossing a mountainous area with updrafts/downdrafts.
- Get a cruise clearance (look it up!)
- Simulate emergencies with the kind of interaction that ATC would provide to help get you on the ground safely.

**Installation and Documentation**

The Pilotedge website has a very fresh and new appearance to it. It is easy to navigate and there is plenty of content to answer many questions before even getting started. To get started though, you will need to register and after doing so you can download the needed software. At the time of this writing Pilotedge is offering a two week trial period, after that there is a monthly fee to subscribe to the service.

What does that fee get you? Online ATC services for the Los Angeles ARTCC (ZLA) area, seven days a week, from 8 am to 11 pm Pacific time. I have included a WAC chart showing the coverage area taken from the Skyvector website.

Anyone that has used SquawkBox will recognize a familiar user interface. For Microsoft users (FS9 and/or FSX)
Pilotedge will operate outside of the sim installation and needs to be opened separately. In xPlane (v9 for now) it is a plug-in that can be accessed in the pull down menu within that sim.

The Pilotedge website does such a good job of explaining the installation process and then how to get online that I don’t feel the need to reinvent the wheel in this review. What I should point out at this point though is that you do need to have a fast internet service. Dial up users or those trying to utilize a 3G wireless internet connection will not have sufficient speed and bandwidth to allow for a reliable connection to the ATC network for voice communication and seeing other flying traffic.

A Real Pilot’s Experience using Pilotedge

I first heard about Pilotedge in mid August while they were finishing up their beta testing prior to going live in October. Precision Flight Controls, where I purchased my sim hardware from, was asking if I ever did any online ATC work with the sim and that I really needed to check this out. The software at that point really had all the bugs worked out and the final training for the controllers was taking place. I installed the client software on both my installation of xPlane (it is the PFC version which is FAA certified when used with the PFC hardware) and Microsoft FSX. The installation was simple and straightforward and it worked first time, so no difficulties to report.

My first few flights were done in xPlane and I have to say I was quite impressed with just how well I got the feeling I was not only in the plane but also dealing with real world air traffic control. I wasn’t dealing with any onscreen prompts, I hadn’t had to go to any website to find out which areas were active and the frequencies their controllers were using. Just pull out the real world charts and airport directory and use those frequencies. If I remember correctly my first flight was just going up VFR in the pattern for touch and goes at Santa Monica. Ground and Tower handled me just like I was really flying and I overheard other aircraft being dealt with, some IFR, others VFR.

My next flight was in the IFR system. I put my Baron at San Bernardino and filed for a routing to Santa Monica. Once you have connected to the Pilotedge server you can file a flight plan, the format is very much like you would use with software to file online for a real world flight. I do have to explain that I am not using the typical joystick many simmers enjoy. My hardware is from PFC and is their Cirrus II Category II hardware.

I reviewed this equipment in April of 2008 for AVSIM and it includes the radio stack, most switches, buttons and knobs to simulate much of what is found in many aircraft. It is FAA certified when used with the approved software so no mouse or keyboard when it does get used for that purpose. Normally to interact with the computer based ATC you do have to use the mouse or keyboard, but after entering that IFR flight plan every part of the flight simulation experience was utilizing the sim hardware. I did not touch the mouse or keyboard until after landing, taxi and shutdown and that was to disconnect from Pilotedge and shut the sim program down.

I tuned and listened to the ATIS first, then set the Com radio to the Ground frequency where I could hear someone was already talking. I waited for a break and pressed the push to talk (PTT) button and requested to open my IFR flight plan. I got something you never hear with default MSFS ATC or xPlane... an IFR clearance that didn’t say “as filed”! It gets even better!

It wasn’t what I had filed, there were revisions to the route I requested so I did what any good pilot would do, wrote them down and read them back. Afterward I had to reprogram the Garmin with the new flight plan but that’s what I’ve had to do in real life many times. With my first IFR experience using Pilotedge, I noticed that I would get handed off at the appropriate time/place and usually noticed a different person’s voice. You might hear that earlier voice in a subsequent handoff but the overall effect adds to the realism.

I got my private license back in 1986 and had flown a lot prior to that with my father. I took a break from flying between 1990 and 2003 during which time I did use MSFS to try to keep my pilot head thinking about those learned skills. When I went to get my currency back in 2003 the part that really surprised me was I had forgotten what to say...
on the radio!

I could fly the plane, I understood weather, there were some changes to airspace that I needed to get familiar with but what dumbfounded me was as I taxied out to the runway at an uncontrolled field and then sat there realizing that I didn’t know what to say next. No pop up screen with dialogue selections like in MSFS!

I spent the next few flight hours re-familiarizing myself with the pilot’s language. When I got my IFR rating last year I pushed that language skill even further and I can tell you when you haven’t flown for even just a few weeks you are not as sharp on the radio and it directly affects your thinking pilot’s head for everything else you are supposed to be doing in the cockpit.

To tell you I am ecstatic about this service is an understatement. This affords any pilot, as well as any simmer, the opportunity to gain the level of expertise with radio communication while flying that professional pilots that are flying many hours each week attain. Do you even realize for a moment the amount of money savings for a real pilot there is just right there?

As an instrument rated pilot there are additional currency requirements I have to complete for a given amount of time. For my private license I have to take off and land three times to take passengers (at night if I want to do it at night), for the instrument rating I have to intercept a radial, fly six approaches and fly a hold every six months. That’s a minimum and I can tell you that you’ll want to be doing it more than that!

I had flown three approaches and a hold a few months ago in a Diamond DA40 with a pilot friend acting as safety pilot and was due to perform another three approaches. I invited my instructor friend Trevin Carlson over to see my sim setup and introduce him to Pilotedge as well as allow me to log the approaches for currency. Trevin flies a Challenger for a living. I’ve got a picture of him landing in Dusseldorf and I consider him a professional pilot that is up on things in the aviation world.

This was a bit different of an instructor experience for Trevin since normally when he is dealing with a sim session he usually has to act as ATC as well as observe my flying the sim and then throw any trouble that comes into his mind through the sim at me. This time he got to act as a safety pilot or examiner observing as I dealt not only with flying the plane via the simulator but also interacting with ATC using Pilotedge.

We set up to takeoff from Gillespie Field (KSEE) just East of San Diego and fly to Montgomery (KMYF) and shoot the ILS/Localizer and RNAV approaches and do the hold on one of the missed approaches. I’ve included a set of shots from the experience starting with what my screen looked like with the sim and then what the controller in Pilotedge was seeing as the vectors for ILS progressed into KMYF.

We shot the first approach and went missed and did the published missed procedure including the hold at the CARIF.
intersection, then did vectors for the RNAV approach and finally the ILS again with full landing. By interacting with a
real controller this was all possible and in the fashion that it happens as if we were actually flying the approach for
real. It is interesting to note the controllers screen showing traffic coming off the Miramar Naval Station just to the
North. Those are fast movers and you have to be aware that the airspace between these two airports is quite close.

I’ve got to tell you, Trevin was amazed. He said that this is what sim training should be like and that he hadn’t seen
this level of sophistication, even with the work he has done at SimCom and FlightSafety. He could actually observe not
only my handling of the aircraft (sim) but how I handled navigation and interaction with ATC. On one of the
approaches he pushed weather past minimums so the missed approach would have been for real.

After the flight we were able to go to the Pilotedge site and review our flight much like you can do with Flightaware for
real world flights. I have included those shots as well below, you can see the repeated tracks for the approaches and
the hold as well as vertical track showing each descent and climb back to altitude.

This is truly a progression of not only flight simulation but of home computer based flight simulation I have dreamt
about for years. One of the most recent revisions to the Federal Aviation Regulations (FAR) had language that alluded
to flight simulators being able to be used for currency even without an instructor present. This still would have
required approved hardware and software but alas there was other contradictory wording in another area of the FAR’s
that led to a position letter stating that you still had to have the instructor present... at least for now.

Imagine a future where a flight instructor can give an assignment to their student and have them perform it on their
home flight simulator and the instructor can then review the flight... like what you see above and then they can sign
you off as having completed the assignment... and it would count for something too!

Even without being able to log the time or have it count for currency, this provides a missing link to home flight
simulation that has been sorely lacking. An instrument student could use this right now to polish up those radio skills.
A pilot that finds they aren’t flying as much as they would like (for whatever reason, health or other) can keep those
radio skills and their thinking pilot head in a working fashion so they aren’t so rusty next time they actually grab onto
a yoke.

I’ve had the opportunity to take my sim setup to my pilot’s club and demonstrate it with Pilotedge and the pilots and
instructors there were all in amazement that we were talking with a real controller person somewhere else. I heard a
familiar statement from the instructors... “this is how ATC should be when using a flight simulator”

The AOPA Summit that took place in late September in Hartford Connecticut had one of the neatest Pilotedge
experiences I have heard of. At the Summit there was a Pinch Hitter course being taught. The Pinch Hitter course is
for non pilots to learn about what is going on in the cockpit and even more importantly what to do if something were
to happen to the pilot that would prevent them from flying the aircraft.

Well, after this course had ended the video crew that had done a piece for Pilotedge at Oshkosh stopped by the Pilotedge booth to say hi and the suggestion came up that it would be cool thing to take someone from that Pinch Hitter course and put them on the sim with a controller and talk them to a safe landing. A little later the “cool thing” happened and it was videotaped for the AOPA site. I have included the link to watch the AOPA video.

As you’ve been able to read, I am not only a fan of Pilotedge I am enthusiastic user and a big proponent. Is it for every simmer? I don’t think so and in fact the existing online ATC services for simmers will in many cases be a better fit.

I don’t really see Pilotedge taking simmers away from the existing free services. But if you are a real world pilot that uses a home simulator, I am trying to figure out why you haven’t already signed up for Pilotedge. If you are a hardcore simmer that wants to take your radio skills to the professional level, this is certainly the way to do it.

I know I plan on using it from now on and hope to see it being used in the flight schools in the area in the very near future.

What I Like About Pilotedge

- Provides a realistic ATC experience from startup to shutdown
- Utilizes standard FAA terminology and procedures
- More than one controller so voices can change at handoffs
- Can work in VFR and IFR systems, controlled and non-controlled airports or any combination
- Can file IFR in the air when you’ve been flying VFR without having to pause the simulation
- You can visually see other traffic, other simmers using the service and also drones for added traffic
- Prompt, friendly customer service
- Doesn’t cost $100 an hour or more!

What I Don’t Like About Pilotedge

- Service area limited to Los Angeles ARTCC (ZLA) – but there are already plans to expand coverage
- Simmers might think it is a pay version of VATSIM or IVAO... it is NOT!