Connecting the Enigma or Odyssey simulator to Microsoft's Flight Simulator

Enigma and Odyssey simulators can be connected to Microsoft's Flight Simulators. This applies to Enigma version 1.2.0.0 and Odyssey version 1.1.0.0 onwards.

Flight Simulator versions up to FSX are supported. Recommended flight simulator is FS2004 Century of flight.

In order to do this you need the FSUIPC interface from Peter Dowson. This is a module that needs to be installed in your Flight Simulator. There are two different versions. FSUIPC is for versions up to and including FS2004 and FSUIPC4 is needed for FSX. These modules can be downloaded from
www.schiratti.com/dowson.html

Installation for FSUIPC is simple - copy the FSUIPC.dll into your flightsim modules folder. FSUIPC4 has its own installation program that you need to execute.

A word of warning: You need a fairly powerful PC to make this work.
A dual core system with at least 2GBytes of RAM is needed, more if you want to use FSX. Run Flightsim in windowed mode so you can see the EFIS and the Flightsim at the same time. You may need to reduce resolution, display refresh rates and scenery detail to get the speed to acceptable levels.

Alternatively, if you have two PCs, you can run them networked. One PC runs Flightsim, the other runs the EFIS simulator. Use Wideclient (also from Peter Dowson) to make the connection (very cool !!).

Start Flightsim before you start the EFIS simulator. If all goes well, the EFIS simulator will show a small message on the EFIS graphic showing the version of Flightsim it is connected to.

Items used from Flightsim are all primary flight data, AHRS, GPS (position, track etc). It is possible to use the built in autopilot to fly the aircraft in Flightsim. For this two Trio servos have been modeled, connected to aileron and elevator. Switch Flightsims rudder auto-coordination off and set all controls to maximum realism.

Please note that not all Flightsim aircraft can be successfully flown due to incorrect data supplied by the aircraft models. For example the Boeings don't do well as some data is not available in a sensible manner. Aircraft such as the Mooney, Extra300, Cessna, Piper cub can be flown well. The Extra 300 is very twitchy (as it is in real life) so it needs careful adjustment of the autopilot setup.
All autopilot setups are real and functioning exactly as in the real World so you need to setup the system for best behavior for every aircraft.

With full realism turned on and a bit of turbulence thrown into the mix the simulation is fairly

realistic. Real aircraft may require different autopilot settings compared to those you may find work fine with the simulator. This tends to have its cause in some simplifications present in the simulator which may not simulate aircraft mass effects, control surface effects and many other real World effects that influence your aircrafts behavior and real servo installation issues (such as tolerances and play).
Nevertheless, despite this, the simulator makes a good tool to try out the effect of various autopilot control settings for a given aircraft.

Be aware that many aircraft that can be installed in Flight Simulator do not correctly model the real aircrafts aerodynamics and are mainly intended to only look real. Often they simply "borrow" some other aircrafts defined models.

Be aware that Microsoft's navigation databases, terrain data and maps are different from those use with our EFIS systems. This can show up in various ways from terrain looking somewhat different to airports missing or runways not at the correct location or navaids that are different.

Known issues:
PC performance is critical in order to achieve acceptable frame rates both for Microsoft's Flight Simulator as well as the MGL EFIS simulator which make simultaneous but independent demands on the Direct-X system. Should you have insufficient performance on your system you will note that the EFIS takes a long time to show terrain and maps (it is starved of CPU time while nearly all available CPU time is used by Flightsim). You may find that the EFIS is unresponsive and that the AHRS displays slow and jerky with a lot of lag. In order for the autopilot to perform correctly it needs to execute critical routines in a timely manner. If the PC is unable to give the EFIS sufficient regular attention the autopilot will not work correctly. Consult the PC's performance monitor (ctrl-alt-delete). If your system is hovering at 100% all the time it is likely that not enough time is available to properly run the EFIS simulators many background tasks.
No engine data is currently used from Flight Simulator. Use the built in EFIS RDAC simulator to show engine data.

If you find Peter Dowson's Flight simulator interface useful, please support his work by registering your copy of FSUIPC and/or WideClient. You will find the relevant information on his website www.schiratti.com/dowson.html (link valid January 2009). These modules are very inexpensive and support is very worth while.