

WELCOME TO

WideviewW 2021 for Flight Simulator

Release 1.03 – October 2020

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1 - INTRODUCTION

Thank you for your interest in this add-on for **Microsoft Flight Simulator 2020**. WidevieW is an add-on that can be used to create simulator cockpits with panoramic external views on multiple monitors through networked computers. An high speed communication protocol working throughout the LAN, keeps all the views perfectly synchronized during ground operations and flight. Each computer can be easily configured to show a particular direction through a user's defined view angle.



Used in trial mode, WidevieW works for 10 minutes since the last time it was started, and handles only basic synchronization (no pitch up/down, no date/time, landing lights and so on).

The registration is necessary only on the computer acting as server (the computer where you actually fly). The clients are completely free of charge and can be connected in unlimited number.

Current release of WidevieW doesn't support weather synchronization and programmatic camera handling. These features will be added in the future, should new releases of SimConnect allow to work with weather and cameras.

CONFIGURATION IDEAS:

- Connect as many PCs as you wish and use them for additional external views;
- Do you have notebook and wish to use it in some way while flying ? Well... configure it for a permanent Spot Plane, Tower or Map view, or even for an additional Cockpit View looking towards a specific direction

WHAT'S NEW / UPDATE HISTORY / NOTE FOR UPGRADING USERS

From Version 1.00 to Version 1.03

- Fixed various bugs
- Added auto-execute option to WidevieW when system starts
- Added option to auto-execute MSFS when WidevieW starts
- Added option to skip "PRESS ANY KEY TO START" screen in MSFS
- **Mixed configurations with FSX and P3D on server are now much more better supported.** WidevieW on MSFS clients will automatically adjust runway elevation to compensate differences in the scenery and will compensate sloping runways. Horizontal runway alignment can be adjusted through a manual procedure. **WidevieW for FSX version 3.9** or **WidevieW 64 version 1.2 (P3D)** required on server. WidevieW 2021 must be registered on server as well (MSFS20 not required), **to activate the runway compensation option**. Please read chapter "USING MIXED FSX / P3D / MSFS SETUP" **for more details**.

From FSX / Prepar3D version to WidevieW 2021

!!! THINGS TO KNOW IF YOU ARE UPGRADING FROM FSX OR P3D RELEASE !!!

If you already know WidevieW and know how to configure and use it, it's useless to read the whole user's guide again. Please refer to this chapter, for the most important (new) things to know and for the current limitations.

- As before, you will need **Flight Simulator installed in each computer**. To do so, you will need a unique Microsoft account for each computer (therefore, a different email address for each computer) and buy only from that account the local copy of MSFS. This applies to Steam as well, for which you will need a unique Steam account for each computer. **DO NOT buy multiple copies of MSFS from same Microsoft or Steam account, otherwise you may be prevented to run them at the same time.**

- The demo mode (software not registered) handles ONLY aircraft's spatial position, **EXCEPT pitch up/down**. So, in demo mode, you will not see changing pitch, date/time, external surfaces, which is enough to understand if you like the software and runs fine on your systems.
- **WideviewW** is still based on **SimConnect**, the layer supplied by MS to let add-ons to "talk" with Flight Simulator. The current release of SimConnect has several important limitations affecting mainly weather and camera support. Therefore, this first release of WideviewW 2021, **doesn't handle weather** at all and doesn't handle (easy) **camera / view orientation**, like before. But WideviewW will be constantly updated along with SimConnect updates and I hope to add the missing features in a near future.
- WideviewW is no longer located into "**Add-Ons**" menu of Flight Simulator, but is an external program to be run separately from Flight Simulator.
- **WideviewW 2021** required a complete redesign of the application and it's a long term project, to be updated and improved along with updates of SimConnect. No upgrades or discounts are therefore possible for current users of FSX or Prepar3D release.
- **The registration procedure** has changed completely and doesn't rely on eSellerate anymore. Please refer to chapter 3 for full description and tutorial.
- So, **how to re-orient the view on client**, until this facility will not be provided again via WideviewW? There are actually several ways, but my preferred one is to:
 - o Open "**cameras.cfg**" of the aircraft you are using on client. This is usually located into:

Steam: C:\Users\YOUR_LOGIN_NAME\AppData\Roaming\Microsoft Flight Simulator\Packages\Official\Steam\ AIRCRAFT_NAME \SimObjects\Airplanes\AIRCRAFT_NAME

Microsoft: C:\Users\ YOUR_LOGIN_NAME \AppData\Local\Packages\Microsoft.FlightSimulator_8wekyb3d8bbwe\LocalCache\Packages\Official\OneStore\ AIRCRAFT_NAME \SimObjects\Airplanes\AIRCRAFT_NAME

- **Search for the followings lines:**
 - [CAMERADEFINITION.0]
 - InitialPbh = 0, 0, 0
 - InitialZoom =0.35
- Edit the values accordingly. **InitialPbh** means “initial pitch, bank, heading”. For example, for right side window, **InitialPbh = 0, 0, 90.0**. You may set the initial zoom as well.
- To get a real **full-screen outside view on client**, without aircraft model or virtual cockpit, there are several ways. Some are to move the viewpoint forward, out of the cockpit, or to edit the aircraft’s model. To move the viewpoint out of the cockpit, you will need to change the “**InitialXyz**” parameter in **camera.cfg** (section [CAMERADEFINITION.0]), as explained at previous point.

A reasonable value for a Cessna C-172 aircraft, may be “**InitialXyz = 0.03, 0.06, 5.00**”.

- To know more important tricks about view orientation and removal of virtual cockpit, **please consult chapter VIEW ORIENTATION ON SIDE MONITORS**
- To let the **client start automatically in a “ready to fly” situation**, without the “opening screen”, there isn’t a complete solution until now, but you may configure WidevieW to start MSFS automatically when Windows start. It will go straight to the “opening screen” (where you select departure airport and plane), from this point, manual action is required to put MSFS in a “ready to fly” situation, on runway, gate or parking, as applicable. To save initial loading time and resources, it is advisable to start clients in a location as close as possible to that on server.
- Preliminary test showed performance improvement with less micro stutters, **deactivating VSYNC option on clients** (Flight Simulator general options) and activating it on server. WidevieW should be configured with Intellibuffer size to at least 10 (but try also with 20 or 30).

- Like before, **on the clients only**, please set flight mode realism to minimum and **disable crash detection**, otherwise you may get inconsistent crash on clients.

!!! IMPORTANT !!! If you modify any Flight Simulator file, you must create a backup copy of the modified version as well, because any software update may overwrite the new version with the file coming from the Store.

2 – QUICK START GUIDE

- Check your **network configuration**: the computers you intend to use in a WidevieW environment, should be able at least to “see” each other (file sharing is not required by WidevieW, but is a signal that your LAN is running fine)
- **Install WidevieW** on all the computers using the downloaded installer. It is strongly recommended that you are logged as an **administrator** when WidevieW is installed and later, when the simulator software is used. A **desktop shortcut** will be automatically added.
- **Clients need to be put in a “ready to fly” situation before starting WidevieW.** I know, this is annoying, but should be done until I will not find a workaround to safely skip the opening screens automatically. So, before starting WidevieW, please be sure every client aircraft is initially positioned as close as possible to the departure location and “ready to fly” (on runway, gate, parking or any place you need).
- Run WidevieW 2021. The first time, Microsoft Windows **may** ask you to accept WidevieW as a trusted module (firewall). Just accept it. If Windows Firewall doesn’t recognize WidevieW 2021 as a trusted software, communication throughout the LAN will be blocked.
- The first time that WidevieW starts, the configuration window appears. Set the role of this computer (server or client). **During this phase, it is recommended to keep the simulator in a window, rather than full screen.**
- In the simulator software, set the proper view angle according to the position of the monitor. You may reorient the view by using just the mouse, or make permanent changes to camera.cfg (of the active aircraft) as later explained in chapter **VIEW ORIENTATION ON SIDE MONITORS**
- **On the clients** please be sure the flight model realism is set to minimum and **crash detection is deactivated**, or you will get inconsistent crashes on clients.

- If you would like clients showing running engines, moving landing gear and flaps, be sure in WidevieW configuration you selected "Enable animations" option throughout the LAN. This option requires a few resources, so leave it OFF if you are not interested in this feature.
- Once the configuration is complete, if you wish, save the current flight so the same situation will be restored the next time that the flight is loaded. Before saving the flight on the computers acting as clients, it is advised to make sure the followings conditions are met, in order to have the "cleanest" possible situation (this is not mandatory, but just suggested and can be done later if you prefer):
 - o Aircraft is conveniently parked on ground
 - o Landing gear is down
 - o View is correctly oriented
 - o Pause is NOT engaged
 - o Slew is NOT engaged
 - o Drone mode is NOT engaged
 - o Parking brake is engaged
 - o Throttle is at idle, engines are NOT running
 - o Flaps and slats are retracted
 - o Aircraft's lights are all OFF
- In case of problems, check the FAQ AND TROUBLESHOOTING chapter later in this user's guide, to identify the most common issues and find a solution (for example, stuttering or jumping aircraft). **Register WidevieW** if you like and decide to keep it (required on **Server PC only**). The clients are free of charge and can be unlimited in number.
- Read the next page for additional steps, then remaining parts of the user's guide. By default, WidevieW is shipped with the safest default configuration in terms of both features and performance, but your system may work better if WidevieW is customized and set in the right way.

3 - REGISTERING THE SOFTWARE (REQUIRED ONLY ON SERVER PC)

To register, activate and re-activate again after reinstallation, please proceed as indicated below:

!!! IMPORTANT !!! Older Installation ID or Activation Key **cannot be recycled**. Should you need to re-activate the software after a major hardware / software upgrade, you will need to **repeat the whole procedure below from step B** using your existing Order Number to get a new Installation ID and Activation Key.

- A)** If you don't have a Order Number, get it on line from <https://www.wideview.it/> The purchase can be easily done through any computer connected to Internet. Once purchased, a Order Number is e-mailed to your e-mail box. **Please store this e-mail with care, as the Order Number is needed also for future re-installations and will not be reissued.**
- B)** Run WidevieW 2021 and select **About -> About & Register**.
- C)** Fill-out the required details. As **email**, please use only the email you used to order the software and, for the **Order Number**, please refer to the sale's receipt received after payment.
- D)** Get the **Installation ID**. This is a unique long code used to identify your purchase. It can be copied to clipboard (so you can later Paste it) or can be saved into a text file to be later uploaded.
- E)** From any computer connected to Internet (which can be the same computer running the simulator, of course) open a web browser and browse to <https://www.wideview.it/activation.php>
- F)** Either **Paste the Installation ID** obtained before or upload it from a file, as applicable (if the computer with the web browser is the same running WidevieW, you may use "Browse" button from WidevieW registration window, to automatically open the default browser, with the Installation ID box already pre-filled).
- G)** Use the **Submit** button on the web page to send the Installation ID. The web browser will answer with an **Activation Key**.

H) Either Copy (select all and press CTRL+C) or Download the **Activation Key** from the web page, and enter it in the registration window of WideviewW (you may Paste it by CTRL+V or upload it from a saved file).

I) Click **Activate** and restart WideviewW.

In case you need to reinstall the software, it will be necessary to validate your original registration data. For this reason, please store your **sale receipt in a safe place**, as the procedure will ask for some specific data and I am not responsible if the **Order Number** will be lost.

Before buying the software, please make sure that it is fully compatible with your systems and that you like it. The trial version is very limited (aircraft pitch up&down not synchronized) but useful for testing purposes. Should further assistance be required, please feel free to contact Luciano Napolitano at info@wideview.it or visit the official software's Homepage at <http://www.wideview.it/>

> **Tip:** *A complete registration and re-installation tutorial is provided at <http://www.wideview.it/reghelp.htm>*

4 – REQUIREMENTS & CONFIGURING YOUR NETWORK

In order to run, WidevieW requires the following equipment:

- A)** At least 2 **networked PCs** capable of running the simulator software with all the options (add-on scenery) that you would like, accordingly to minimum, recommended and optimal specs suggested for Flight Simulator.
- B)** The simulator software and all the **scenery** desired should be installed on the local hard drive of each PC. The scenery and its related files, must be the same on every PC, otherwise the outside views may differ from PC to PC. The simulator software should be purchased through unique Microsoft / Steam account (one different account for each computer), or you may be prevented to run them at the same time.
- C)** In order to communicate, **WidevieW uses the TCP/IP protocol**. It is not necessary to have the file sharing facility working, but this may be useful to copy files and it is also a signal that the computers can see each other.

WidevieW will generate some LAN traffic, so the ideal situation is to have 2 network cards: one used only for WidevieW and one for everything else (file sharing, internet, etc.). WidevieW can be bound to a specific network card through a parameter in the configuration, where you may enter the network interface to which you want WidevieW to exchange data: enter 0 (zero) to attempt binding automatically to all the interfaces, otherwise, enter the desired interface. For example, in a network **192.168.0.x** with a subnet mask of **255.255.255.0**, enter **192.168.0.255** in WidevieW.

5 - CONFIGURING WIDEVIEW

First time execution

The first time that WidevieW software is launched, after the installation, Windows Firewall may ask to **accept WidevieW as a trusted module**. Please make sure to authorize it, or WidevieW will not work.

Later, as soon as WidevieW initializes for the first time, the configuration window opens automatically, letting to select the role of the workstation (server or client) and every other parameter. To properly see all the windows and the user's interface, it is recommended to run Flight Simulator in a window at this stage, rather than full screen.

After these simple steps, under normal circumstances, WidevieW should be already capable of synchronizing all the computers throughout the network. However, please read the remaining part of this chapter for important information on system optimization and to discover the many hidden aspects of WidevieW. These info will be useful also for troubleshooting purposes, should you get no synchronization after installation and first time setup.

Configuring WidevieW

To configure WidevieW, select menu **WidevieW | Configure**. A box is displayed, letting to enter network configuration and other preferences regarding speed and optimization.

Priority can be used to set the priority of WidevieW over the other running processes. WidevieW is a time-critical application: this means that its code **MUST** be executed at a very regular interval and many times per second. If this condition is not satisfied, the clients will not be smooth. WidevieW is an application that share time and resources with many other running processes (including the simulator software itself). The priority can be:

Low - minimum: WidevieW is executed only when the other running applications are not performing any other important / heavy task

Norm - normal: WidevieW is executed with the same priority of all the other "normal" applications with which it shares time and resources. The simulator software and almost any other application runs using this priority.

Higher / Highest: in this case all the other running processes having a lower priority are suspended when WidevieW have to execute its code. This ensure that WidevieW is executed at regular intervals, even when some other application needs to complete or to begin an important task.

Max – maximum: This is the highest possible priority. In this case the entire operating system could be suspended when WidevieW needs to execute its code. When this option is used, WidevieW is executed at very regular intervals, and the operating system will suspend its activity, even if it needs to perform other vital tasks, such as flushing the disk's cache, or updating the mouse's position (please note that in most cases, the operative system will not let such priority, but will fall back automatically to a safer "highest" priority).

Update Rate works mainly in conjunction with the **Priority** setting and can be used to set for how many cycles WidevieW must stop its execution, giving time to the simulator software to perform its stuff. The default value of 1 is usually fine, but you may increase it if WidevieW takes too much system's resources.

Protocol: Sets the protocol used by WidevieW and can be IPX or TCP/IP. Modern operative systems supports TCP/IP only, there is no need today to use IPX.

Socket ID: The default value of 8000 is usually appropriate for most situations. It should be changed only if another software is already using it, preventing WidevieW to connect. It **must be the same** on all the PCs and identifies the channel on which WidevieW communicate. Widetraffic uses by default socket 8001, thence do not use 8001 with WidevieW.

Buffers: The default value of 100 is usually appropriate for most situations. It represents the size of the network buffer in bytes. Higher settings may reduce stutters but will also delay the communication between server and client, leaving the clients "behind". It is usually not necessary to change this setting, provided only for experimental purposes.

Force TCP/IP Nagle algorithm deactivation: The Nagle algorithm is used to optimize network data flow, by grouping many small packets of

data into a larger one. While this is useful for most applications, this is very harmful to WideviewW, because it will cause lags on clients. By default, on broadcast and connectionless transmissions used by WideviewW, this algorithm is supposed to be already disabled internally by the hardware. However, should you get lagged clients, please try to check this box throughout the network, forcing the algorithm deactivation.

Use IntelliSmooth on this client: This option is useful to let the clients to run at their best, especially (but not only) when they are connected to a slower server or to unreliable networks. If this option is disabled, the actual client's FPS will never be higher than the server, even if they could perform much better, because the data from server doesn't come at client's expected speed. By enabling this option on a client, WideviewW will build the missing data dynamically by interpolation, letting to recover the skipped frames and thence increasing the smoothness. Applies to clients only, it isn't necessary to activate this option on a server.

IntelliSmooth buffer size: Works in conjunction with "**Use IntelliSmooth on this client**" and is used to specify the IntelliSmooth buffer size. Greater is the buffer, smoother is the flight on clients, but higher is the time lag. Smaller is the buffer, smaller is the time lag, but the client may result less smooth if data doesn't arrive from server at expected speed. Setting the IntelliSmooth buffer to the proper value, that is specific for your network and setup, **is very important to get the most and minimize the drawbacks**. Calculating the exact buffer size is not easy, for this reason, a "**Suggested IntelliSmooth buffer size**" box is provided to help you to set this parameter correctly. The correct value for this parameter is tied to many other parameters, like the Update Rate, the Priority, the use of External Booster and others. In case you change any of these parameters, as well as performance parameters in the simulator software (for example the target frame rate), **you need to adjust the IntelliSmooth buffer size accordingly**. Again, you may use the information provided in the "**Suggested IntelliSmooth buffer size**" box as a very good starting point.

Update this client date/time automatically: If activated, the client's date and time is updated automatically when it changes on the server. In case the difference is greater than about 5-10 minutes, the scenery loading window appear. To avoid this window appearing during critical phases of the flight, you can change the **Max tolerated difference in seconds, Update date/time only above** and "**unless ground speed is less than**" to avoid this event happen for example during approach or initial climb.

Run WideviewW on the followings CPU / cores: if you are using a processor with multiple cores and/or a motherboard with multiple CPUs, you can select the CPUs and cores where WideviewW must be executed. Currently, a maximum of eight CPUs / cores are supported. WideviewW may perform better if it runs on multiple CPUs / cores and you can select any combination of them (for example: 1+2+3+4+5+6+7+8 or 1+2 or 1+4 or just 2 or 3 alone...). Further performance may be obtained if the CPUs or cores where WideviewW runs, do not have other processes attached (you may use Windows Task Manager to check actual load for each processor and core and to set the affinity for each of them, when needed; if you are not expert about this, just search for affinity setting on multiple processors and Windows Task Manager over the internet).

Send data to the following network interface: Can be used to isolate your WideviewW network when multiple network interfaces (multiple network cards) are installed in your computer. In order to do so, just assign different IP addresses to each network card (this is done from Windows network configuration, please consult your operative system user's guide to know more). For example, assign 10.0.0.1 to network card #1 and 192.168.0.1 to network card #2 (both the networks will have 255.255.255.0 as subnet mask). To let WideviewW send data only to network card #2, just type in this box "192.168.0.255" (where "255" means "all the computers on the same IP address mask", thence the computers from 1 to 254). This option has effect only on the computer acting as server and only if WideviewW is set to TCP/IP mode. If, for whatsoever reason, you want to send WideviewW data to all the networks, or you are unsure about how to set this parameter correctly, just enter "0" (zero), which is the safest possible configuration, working always.

Run WideviewW automatically when Windows starts: if activated, WideviewW will self-execute when Windows starts. To activate or deactivate this option, you need to run WideviewW as system administrator (locate the folder where WideviewW is installed into, typically c:\program files\widevieww-2021, right-click widevieww-2021 app icon and select "Run as administrator").

Start WideviewW communication automatically as soon as it is launched: If activated, starts the communications automatically as soon as the simulator software starts. If not activated, WideviewW must be started manually, selecting WideviewW | Start (applies to server and clients).

Start MSFS automatically as soon as WidevieW is launched, executing it from: Microsoft Store or Steam Library: if activated, attempts to self-execute Flight Simulator as soon as WidevieW starts, decreasing the things to do each time the clients are powered-up. Do not forget to select from what store the license of Flight Simulator has been purchased.

Issue PRESS ANY KEY TO START automatically: if activated, attempts to send a keystroke automatically as soon as the annoying "PRESS ANY KEY TO START" screen is displayed at startup. Requires Flight Simulator to un-full-screen, since needs its window to have keyboard focus. If a mouse movement is detected, the procedure is skipped.

Enable animations: Is used to synchronize flaps, gear, spoiler, control surface status and engines for more accurate Spot Plane view or Virtual Cockpit view on the clients. In case you want this feature, this option must be activated on server and affected clients. To ensure best performance **DO NOT** activate this option if you do not need to synchronize these items. Consult chapter "CONFIGURING A CLIENT FOR SPOT PLANE VIEW" for more details.

Increase altitude (inches): the value, in inches, specified in this box is added to the real altitude of the aircraft flying on server. It is used to prevent stutters while on ground, avoiding collisions of landing gear with taxiways and runways. The default value of 15 is usually enough for a Cessna 172 flying on both server and client, but may be increased as necessary for other planes or if you notice stutters on clients while taxiing.

Performance monitor and optimization: The tools contained inside this frame, are used to get detailed information about how WidevieW performs and behaves, letting to optimize performance parameters accordingly. The statistics are based on the activity during the last elapsed second, this means that actual values may change depending on current computer load (due, for example, to current scenery, weather and AI traffic). **To get more accurate data, it's advised to proceed as follows:**

For servers:

- Make sure that WidevieW is started
- Enter into Configuration menu to read the detected values

- Exit the configuration menu, wait a few seconds, enter the configuration menu again and read the detected values. Repeat this step several times and, as result, assume the average values.

For clients:

- Make sure that the server is actually connected and sending data
- Use menu WidevieW | Stop on the client and wait a few seconds
- Use menu WidevieW | Start on the client and wait again a few seconds
- Enter into Configuration menu to read the detected values
- Repeat the entire sequence a several times, to see if the numbers change and, as result, assume an average of the values that you read.

If you have difficulties entering and exiting the configuration menu (for example, the screens turns black), do the experiments with the simulator software running in a large window, rather than in full screen. The performance monitor and optimization frame contains the followings readout and options:

Number of cycles per second: indicates how many times per second WidevieW does its synchronization job. In order to get best performance, this value should be above 250 on both server and clients, in any case, it shouldn't be lower than actual frames per second in the simulator software. Possible tweaks to increase this value are the followings:

- Set lower **Update Rate** (for example, 1)
- Set **Priority** to Max
- If none of these methods helps, activate the **External Booster** (see below).

The number of cycles per second is too low - activate the External Booster: if the Number of cycles per second is lower than expected, you can activate this option to try to increase it. The External Booster is a

small program, producing a black window in background, that runs behind the simulator software. Do not close the External Booster window manually, otherwise the effect will be lost. If your computers are already running at their best (for example the **Number of cycles per second** is already higher than 250, the External Booster will not have any effect).

Number of successfully sent packets per second: indicates the number of data packets successfully sent to the network by a server. If this number is lower than client's frames per second in the simulator software, it's suggested to activate the IntelliSmooth option on that client, setting the IntelliSmooth buffer size accordingly, to let it build the missing packets of data artificially and improving the smoothness. This ensures that the client performs at its best, regardless of how many packets of data the server is actually capable to deliver.

Number of successfully received packets per second: indicates the number of data packets successfully received from a network by a client. If this number is lower than client's frames per second in the simulator software, it's suggested to activate the IntelliSmooth option on that client, setting the IntelliSmooth buffer size accordingly, to let it build the missing packets of data artificially and improving the smoothness. This ensures that the client performs at its best, regardless of how many packets of data it actually receives.

Number of IntelliSmooth generated packets per second: indicates how many packets per second are artificially created by the IntelliSmooth, if this option is active on the client. To really get benefits from the IntelliSmooth, this number should be higher than 5. If this number is too low, you may try to increase it as follows:

- Set the **IntelliSmooth buffer size** as suggested in the **Performance monitor and optimization** frame (please make sure that you do the measurements as indicated at the beginning of this paragraph, entering and exiting the Configuration menu multiple times and calculating an average value)
- Set lower **Update Rate** (for example, 1)
- Set **Priority** to Max
- Activate the **External Booster**

If none of the above tricks help, it means that your client is already running at its best and nothing can be done to improve the performance furthermore.

Suggested IntelliSmooth buffer size (clients only): this field helps you to set the IntelliSmooth buffer size correctly. The value indicated here is the best compromise between smoothness and image lag on the client. To really get benefits from the IntelliSmooth, this number should be higher than 5. If this number is too low, please read above for suggestions. Please read the beginning of this paragraph (Performance monitor and optimization) to know how to read this value correctly.

6 – USING WIDEVIEW

WidevieW | Start Is used to start WidevieW in case the “Autostart” option is disabled. Applies to server and clients (also the clients must be started manually, one by one, if the Autostart option is disabled).

WidevieW | Stop Is used to stop WidevieW. On the clients lets the user to take control of the aircraft again, should it be necessary for whatsoever reason. On the server, it just suspends data sending, until Start isn’t selected again.

WidevieW | Configure Opens the configuration window of WidevieW, where operating parameters are set. Please consult the previous chapter to know more about available parameters.

WidevieW | Shutdown clients Turns OFF all the connected clients, after a regular and safe shutdown. May not work properly if the current user doesn’t have the “shutdown” privilege, please consult the user’s guide of your operative system.

About | About and register Gives information on version of WidevieW in use and opens the registration window, if necessary.

7 - CONFIGURING A CLIENT FOR A "SPOT PLANE" VIEW

*** PRELIMINARY ***

A client can be configured to show a permanent Spot Plane view, the configuration steps can be summarized as follows:

ON CLIENT:

- 1) Run the simulator software and create the Spot Plane view as required, selecting a suitable camera. To prevent stutters throughout the flight **please do not select any different option than "Locked Spot" and do not select cameras having "Track" mode or any dynamic movement active.**
- 2) Select the **Wideview | Configure** and make sure that the option **"Enable Spot Plane view mode"** is activated. This option lets to receive gear, flaps, spoiler and other animated parts status from server.
- 3) Save this flight to get the same situation automatically the next time that the flight is loaded.

ON SERVER:

- 1) Select **Wideview | Configure...** and make sure that the option **"Enable Spot Plane view mode"** is activated. This option lets to send gear, flaps and spoiler status to the clients.

To optimize the system's performance, **NEVER** activate **"Enable Spot Plane view mode"** if no spot plane view is used on the clients. **Selected aircrafts must be identical on server and client, to prevent stutters and let the synchronization work properly.**

IMPORTANT:

The Spot Plane view works normally fine on clients, however please consider that, because of the simulator software's limitations and in order to improve the performance without penalising the other clients showing normal views, the followings limitations exist:

- **Movement of some part may be less precise** if compared to server (for example, the aileron, elevator and trim deflection may arrive with a slight delay and with a lower resolution)
- **Special moving parts or lights** from custom aircrafts may not operate as expected. This function works with the simulator software's standard Gear, Flaps, Spoiler, engines, aileron, elevator, rudder, Strobe, Beacon, Landing Lights, Taxi Lights and MAY work fine also with many third parties aircrafts, although is impossible to give explicit guarantees.
- **Smoke on touchdown** (or spray with floatplane) will be visible only if the client's aircraft flies at the same altitude of server's aircraft. For this reason, make sure that WidevieW option "Increase altitude (inches)" found into **WidevieW | Configure...** is 0 (zero) on both server and client.

Performance may be slightly affected on server and/or clients when **Enable Spot Plane view mode** option is active in WidevieW. **Do not activate it, if not really needed, because stutters on clients may increase!**

8 - OPTIMIZING FLIGHT SIMULATOR AND WIDEVIEW

As soon as WideviewW is fully installed, configured, and operative, you can configure the simulator software on the server and on the clients in order to better optimize it for the multiple monitor support.

A) Display options, scenery and add-ons. One of the most important suggestion is to make a client the most possible similar to the server. Always install the same scenery and the same texture; if you install some patch on the server, repeat the installation on every client. Make sure that all the add-ons installed on a PC are of the same version used on the others. Set the same degree of realism and the same aircraft / scenery / graphic options on every PC – this very important !!! - Try to keep your simulators always smart, clean and very similar between them.

B) Selected aircraft. If a server is used for instrument panels only and hasn't a scenery view, it isn't necessary to have the same aircraft flying on the server installed and active on all the clients. For example, you may use a B737 on the server and an ultra light on the clients. Regardless of the aircrafts used, **please always make sure that the airplane on the client has the same or the lower gear's height than the airplane flying on the server.** This will ensure that the airplane virtually flying on the client will not be **buried underground**, creating **heavy and very unpleasant stutters or smoke while taxiing or taking off.**

On the clients please **disable crash detection** and set flight model realism to minimum, or you will get inconsistent crashes on clients.

Please note that if a server is used to display scenery in addition to instrument panels, then it may be advisable to use on the clients **the same airplane active of the server.** This will eliminate annoying view alignment problems, due to different eye point configuration present in different aircrafts. In case of needs the eye point can be edited in "camera.cfg", but this is annoying and tricky, I don't recommend to do it.

C) AI Traffic support. The synchronization of AI and multiplayer traffic is provided via Widetraffic, an optional module for WideviewW. For downloads, please see the official webpage at <http://www.wideview.it/>

D) Server screen. If the server is used for gauges only, make sure that the outside view is **as small as possible and put all the scenery's quality sliders to the minimum.** This will **greatly** increase the number of packets

sent by server and the overall performance of the network. This is, at my opinion, one of the most important step in order to get a lot of additional speed, which will make the clients a lot smoother.

F) Gauges on the clients (for advanced users only). As the clients are typically used to display scenery only, in order to gain performance, it may be advisable to create a "dummy" panel with no other gauge and fly with that airplane (closing a panel is not enough, as the gauges may work also if the panel is not visible). Deleting **all** the gauges form panel.cfg, may increase the client's speed as the simulator software has to do much less stuffs.

TRICKS TO IMPROVE PERFORMANCE AND HOW TO USE "INTELLISMOOTH" OPTION PROPERLY

A WidevieW client showing a full screen outside view, must perform as fast as it is when it runs alone, without WidevieW, or even better, as the total load is split among multiple computers.

Many options are supplied in both the Flight Simulator and WidevieW, to tune the performance accordingly and get the most from your systems, increasing the frames per second and reducing (or even eliminating) the stutters. This section explains several useful tricks to improve your systems.

- Applies to server and clients:

- First of all, make sure that your computers perform well and as desired when used alone, without WidevieW running. Set the video display settings (scenery, texture quality, clouds, traffic, etc.) as you wish, and check the performance. Continue to tune these options until you aren't happy about quality and frame rate. Check also all the options in your video display adapter's driver: set the anti aliasing, anisotropic filter and everything else, as required to get the speed and quality that you wish. **DO NOT push your hardware beyond the limits!** If some option takes too much resources or has unacceptable impact on frame rate, just roll back or try with lower settings. The clients should be tested while in full-screen outside view, with the view properly oriented to the actual view angle for that computer. The server should be tested with instrument panel ON and scenery (if required), in a configuration as much similar as that used in WidevieW mode.

- Disable everything that you don't need. For example, if a server is used only for instrument panels, put all the scenery & textures sliders to the minimum. Likewise, on clients, disable high quality virtual cockpit, sounds, etc.
- **Applies to server (if used to display scenery) and clients:**
 - Decide a target frame rate to be set into the simulator software display options. Using a fixed target frame rate, will ensure that you will get the most **constant** possible frame rate, without variable FPS that would give unpleasant visual effect and spikes in FPS, but do not select a too high FPS, beyond your hardware capabilities.
- **Applies to server and clients:**
 - Make sure that the "**Number of cycles per second**" readout, which is found into WidevieW | Configure menu, reports a normal value, which should be above 250.

In case the Number of cycles per second is too low, try to increase it by taking the followings actions:

- Set lower **Update Rate** (for example, 1)
- Set **Priority** to Max
- If none of these methods helps, activate the **External Booster**. This is one of the most important action that you can do to increase the Number of cycles per second a lot.
- **VERY IMPORTANT, applies to clients only and only when "IntelliSmooth" option is not active:**
 - Always use the same target frame rate used on server. If a **server** is locked on a determined target frame rate, say N, it is completely useless (and perhaps harmful) to set the **clients** to a target frame rate higher than N, because the clients will never receive enough data from server. Not doing so, you will waste

resources trying to get a frame rate that you will actually never get.

- **VERY IMPORTANT, applies to clients only and only when “IntelliSmooth” option is active:**

- The IntelliSmooth option is used by the clients to increase the local frame rate when a server is not powerful enough to deliver data at the same frame rate used by the clients or if there are bottlenecks over the network. This option is particularly useful, for example, when a server has a frame rate of 15FPS, while the clients have 30 or 40. In such case, the IntelliSmooth option will use a temporary buffer to build dynamically the missing frames, thence improving the client’s smoothness, as if more FPS would come from the server. So, you can display on server as many instrument panels, moving maps, spot plane views as you wish, without penalising client’s smoothness! **There are reported cases of the IntelliSmooth option improving the performance on the clients even when the server is very fast**, so it’s suggested to keep this option permanently activated, or at least, experiment how it behaves on your systems and decide how to set it. When the IntelliSmooth is activated, please keep in mind the followings rules:

- The IntelliSmooth buffer size should be set as indicated by the “**Suggested IntelliSmooth buffer size (clients only)**” readout.
- Avoid using too high target frame rate on server, because it is useless. Set a target frame rate that your server is actually capable to keep, as the IntelliSmooth will let the clients run at their best, regardless of server’s speed. In many cases, the clients are smoother if the IntelliSmooth option is activated and server is locked to 20 or 30 frames per second, rather than having a super fast server with 300 frames per second, but the IntelliSmooth option deactivated!
- When a server is used to display an outside view which is part of the panoramic view together with the clients, the IntelliSmooth option will increase the lag between server and clients, depending on overall systems performance

and IntelliSmooth buffer size. For this reason, is always best to use the server only for instrument panels or additional views not linked to panoramic outside view (for example, a permanent spot plane or tower view, a moving map, etc.). Alternatively, do not use the server for front view, but just for extreme left or right views, where the effect can be less noticeable.

- The IntelliSmooth option is particularly useful if you use a small notebook as server. These computers are normally much slower than regular desktop PCs, but with the IntelliSmooth activated, you may set the target frame rate to 10, have your instrument panel displayed on the laptop and get a full screen outside view on your desktop computer, at full speed!
- If the IntelliSmooth option is active and your clients have very different hardware specs, you may get slight lags between one client and another. This issue may be fixed by using different IntelliSmooth buffer sizes for each client (just experiment to find the best values), although a perfect synchronization may be tricky to get (synchronization is instead always perfect on identical hardware, even with the IntelliSmooth option activated).

- **VERY IMPORTANT – applies to computers actually used to display a view (clients and server as applicable):**

- make sure that all the display options in both the simulator software and video driver's control panel, are set exactly the same throughout the network. If a computer has different video display options (for example, but not only, the vsync deactivated, or different anti aliasing, or different target frame rate) you may get lagged images (for example, on turns, you will see a broken horizon line because one of the computer stays behind). This may be a problem when a server is used not only for instrument panel, but also for a view that is part of the panoramic view, but playing a little bit more, you should be able to get perfectly synchronized images throughout the network.

9 – VIEW ORIENTATION ON SIDE MONITORS

*** PRELIMINARY ***

The current release of SimConnect provided with Flight Simulator doesn't support cameras or programmatic view orientation (but this feature may be provided again by Wideview, should it be possible in the future). Therefore, views needs to be oriented editing "**cameras.cfg**" of the aircraft used on the clients. Such file can be located in a specific folder:

Steam: C:\Users\YOUR_LOGIN_NAME\AppData\Roaming\Microsoft Flight Simulator\Packages\Official\Steam\ AIRCRAFT_NAME
\SimObjects\Airplanes\AIRCRAFT_NAME

Microsoft: C:\Users\YOUR_LOGIN_NAME
\AppData\Local\Packages\Microsoft.FlightSimulator_8wekyb3d8bbwe\LocalCache\Packages\Official\OneStore\ AIRCRAFT_NAME
\SimObjects\Airplanes\AIRCRAFT_NAME

The relevant lines for this purpose are:

[CAMERADEFINITION.0]

```
...  
...  
InitialPbh = 0, 0, 0  
...  
InitialXyz = 0.03, 0.06, 0.15  
...  
InitialZoom =0.35  
...  
...
```

"**InitialPbh**" means "Initial **Pitch, Bank and Heading**". The values are in degrees, so if you wish to orient the view 45° to the right (front-right view), the proper value to enter is **InitialPbh = 0, 0, 45.0**

If you would like to pitch down the view a little too, you may consider entering **InitialPbh = -3.0, 0, 45.0** (this will pitch down -3 degrees and will orient +45 degrees right)

Positive numbers turns right / up, negative left / down.

“**InitialZoom**” indicates the default zoom. Every WideviewW user well knows that in order to get perfectly matching views, it is necessary to set the proper zoom depending on view orientation angle (narrower is the angle, higher zoom needed; wider the angle, lower zoom needed). Differently from previous releases of Flight Simulator, this parameter works opposite: lower zoom numbers are used to “zoom in” and higher numbers to “zoom out”. The default value is **InitialZoom=0.35**

“**InitialXyz**” is used to shift the eye point left/right, up/down, forwards/backwards, rather than rotating the view. This is useful on the clients to get a **full screen outside view** without cockpit or aircraft’s parts. For a Cessna 172 plane, it looks enough to push the eye point forwards by 5.0 units (outside the cockpit), using **InitialXyz=0.03, 0.06, 5.00** but you are free to experiment more.

!!! IMPORTANT !!! As the changes has been applied to [CAMERADEFINITION.0] you will need to choose such camera (0) in Flight Simulator. Usually [**CAMERADEFINITION.0**] is the default camera chosen when the flight starts, but just in case, check for it from Camera icon. The name of the camera you see in Flight Simulator is specified into Title line (of cameras.cfg), for example, Title ="Pilot".

!!! IMPORTANT !!! there is a shortcut in Flight Simulator, **letting to reload the aircraft** (and thence the changes you made to “camera.cfg”) without having to quit the **current flight and start over with a new one** (which is a real nightmare for the long loading time needed each time you adjust a value or need to experiment lot of values). This is done by activating the **developer mode** (from Flight Simulator general options menu). Once the developer mode is active, you will see a menu on top to Flight Simulator window. To reload the aircraft, just select **Windows | Aircraft Selector**.

!!! IMPORTANT !!! in addition to creating a backup of every file, before you change it, you must also create a **backup of the modified version**. This because Flight Simulator may overwrite your files (without warning) when a software update in downloaded from the Store.

INSTALLING THE MONITORS

In order to have the views properly aligned, with the horizon forming an "ideal" line on any pitch / bank angle, it is extremely important to meet the followings conditions:

- 1)** The monitors should be placed on a solid and flat surface, all at the same level
- 2)** The monitors should be of the same size --- or better --- of the same brand and model
- 3)** The resolution and refresh rate should be the same
- 4)** The size of the external view's window must be identical on the monitors (for example full-screen everywhere)
- 5)** The angle formed between the monitors should meet the actual view orientation used in the simulator software (for example, if 45 degrees is selected, that monitor should be placed at a 45 degrees angle from the front view)
- 6)** Your head should be in the "centre" of the cockpit and if you have a view configured to cover 90 degrees, you should actually rotate your head of 90 degrees in order to see the centre of that monitor.

SETUP SAMPLES

Configuration 1, Three clients with full-screen outside views – monitors having 4:3 aspect ratio

Front View - just set the zoom to 1.2, nothing else is required

Front-Right View - set the zoom to 1.2 and the view direction (heading) to 45

Front-Left View - set the zoom to 1.2 and the view direction (heading) to -45

Configuration 2, Five clients with full-screen outside views – monitors having 4:3 aspect ratio

Front View - just set the zoom to 1.2

Front-Right View - set the zoom to 1.2 and the heading to 45

Front-Left View - set the zoom to 1.2 and the heading to -45.0

Right View - set the zoom to 1.2 and the heading to 90.0

Left View - set the zoom to 1.2 and the heading to -90.0

If the excessive zoom produce blurred scenery (you are actually seeing very far away), you can use narrower view angles (for example 65° and -65° for front-right and front-left views), so you can zoom-out, for example to 1.00.

INTERESTING VARIANTS

Wide(R)viewW - A configuration idea by Gerard Salden

The following idea can be used to make the cockpit larger.

Normally you have to choose between a projector or a WidevieW setup. The nice thing about a projector is that it can fill the whole view for 2 pilots and WidevieW couldn't, because of the angles of the monitors. You would need about 35" monitors to make the circle wide enough to accommodate 2 pilots !!! But using video projectors you lose the side views... unless you buy 3 or 5 projectors... so, how to find a solution for this dilemma ?

As you can see normally, the monitors are standing in an angle of 45 degrees... but... why not change the amount of degrees to less then 45 ? For example, for a five monitors setup, the "heading" could be set from 0.0 to -45 , -22.5 , 22.5 and 45 degrees.

The only additional thing you have to do is change the ZOOM using the simulator software defined keys. The more monitors you add the higher the

numbers for the zoom, but also the more real the view will be. The max you can do is about 7 to make an half a circle. So now you can make the monitor setup wider with each monitor you add and for cockpit-builders there will be enough space for sitting in it instead of sitting in front of it. With 4 monitors it is wide enough for the cockpit of a little commercial plane and with 5 or more monitors it is wide enough for the cockpit of a real big commercial plane like the 777 or even the 747. And with this way you zoom in on the scenery , making it larger and even more realistic. With 4 monitors the runway is starting to look as a real runway and with 5 monitors it looks almost as wide as a real one.

The zoom factor can be calculated as follows:

Angle of the monitors towards each other X zoom = 56.25 example :

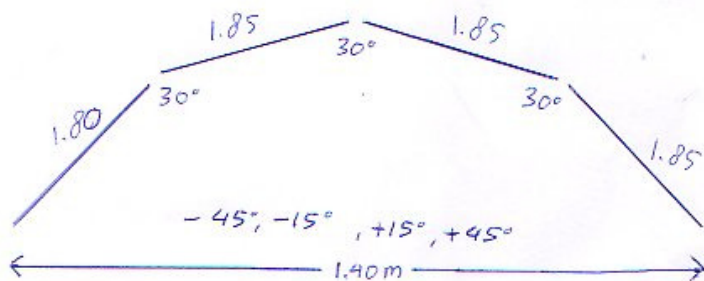
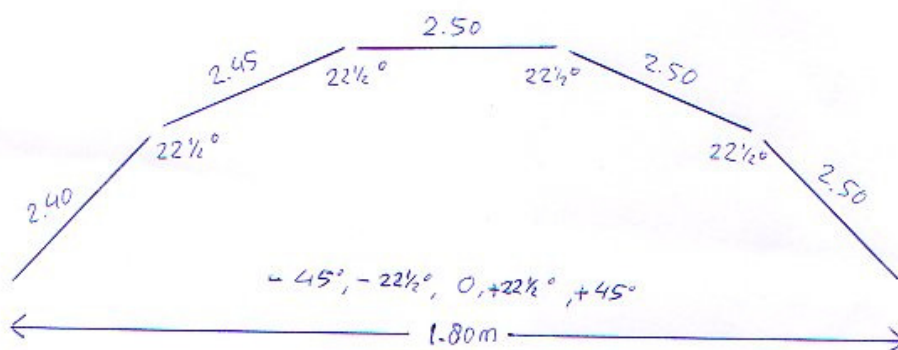
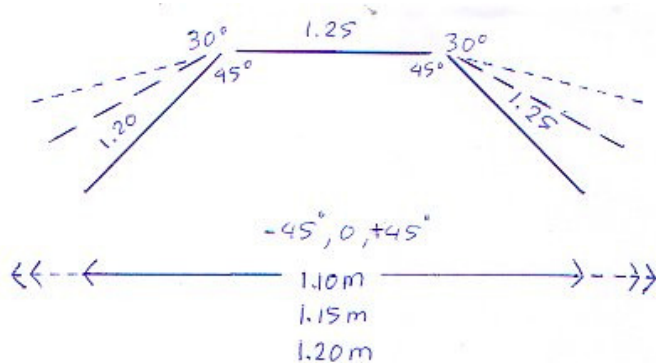
angle between the monitors = 30 degrees -----| the zoom will be $56.25 / 30 = 1.875$, so it will be 1.85 or 1.90

angle between the monitors = 45 degrees -----| the zoom will be $56.25 / 45 = 1.25$

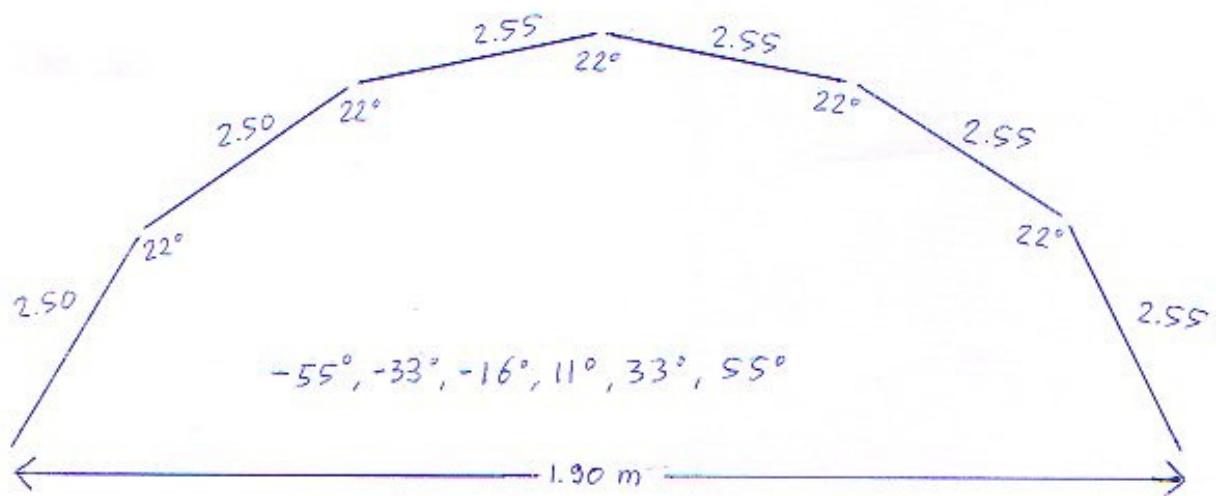
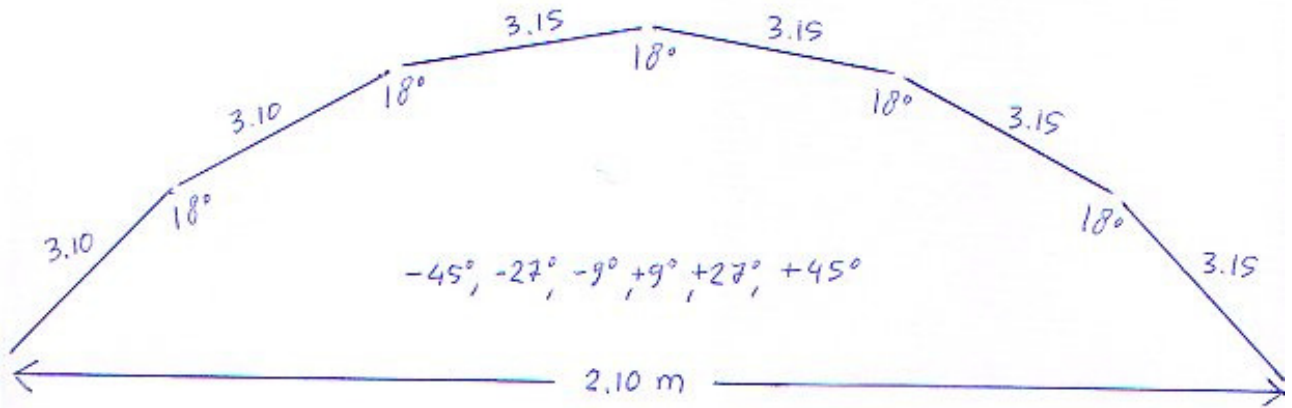
Please note that sometime it is necessary to add or subtract 0.05 from the resulting zoom factor. Just try on your setup and see what happens...

To better understand all that above, take a look at the followings pictures, where distances (metric), angles and zoom factors, are clearly indicated.

See next page for a diagram.



Wideview examples
Distances with 17" monitors
With 19" monitors distances + 15 %





Amsterdam on short final, a spectacular Wide(R)view example.

Drawings and picture by Gerard Salden.

10 – USING MIXED FSX / P3D / MSFS SETUP

WidevieW 2021 supports mixed configurations, so that you may use **FSX or Prepar3D on server** to actually fly and Flight Simulator 2020 on clients as just a visual generator. This is very useful if you like the new visuals of Flight Simulator 2020, but cannot switch to this simulator due to incompatible hardware or missing favorite add-ons.

WidevieW will automatically apply a **dynamic correction to fix runway altitude**, according to differences in the scenery among P3D/FSX and Flight Simulator 2020 (making it compatible also with sloping runways provided in Flight Simulator 2020). Horizontal alignment of the runway can be adjusted as well in most cases, with a manual (guided) procedure available inside WidevieW for FSX and WidevieW for Prepar3D.

The requirements to use this feature are the followings:

- **WidevieW 2021** must be installed on the clients hosting Flight Simulator 2020. There are no particular settings to configure in WidevieW 2021, but general rules and recommendations apply.
- On the computer configured as server, **WidevieW 3.9** or later (FSX) or **WidevieW 64 1.3** or later (P3D) is required. In the configuration window of WidevieW, you must activate "Clients are running Microsoft Flight Simulator (2020)" option.
- **WidevieW 2021 must be installed and registered also on server**, even if there is no Flight Simulator 2020 installed on server. You don't need to keep WidevieW 2021 open on server during the flight, but it is needed only once to complete the registration process. If WidevieW 2021 is not registered on server, **no runway correction will be applied**, so you may see the aircraft either floating in the air or buried in the ground on clients (while on ground on server).

As explained, runway altitude is automatically fixed by WidevieW. Horizontal alignment of the runway, in case the runway's position doesn't match among Flight Simulator 2020 and FSX / P3D, can be adjusted through a manual procedure **explained into WidevieW for FSX / P3D user's guide**.

11 - FAQ AND TROUBLESHOOTING

For additional FAQ not included here: <http://www.wideview.it/faq.htm>

- **The clients don't follow the server, no synchronization occurs**
 - Make sure you are logged as a system administrator throughout the network
 - Keep in mind that the trial version stops to works after 10 minutes since the simulator software was started.
 - Make sure the computers can see each other (can share files). File sharing is actually not required by WidevieW, but is a signal that your LAN is working fine.
 - Make sure that all WidevieWs are configured to communicate using the same protocol and the same Socket ID (default 8000) throughout the network
 - Some other software is using port 8000 too (port can be changed in WidevieW configuration)
 - Make sure that the server is actually configured as SERVER in WidevieW, and the clients as CLIENT.
 - Check if firewalls or antivirus are blocking WidevieW (check Windows Firewall in Windows Control Panel not blocking the simulator software)
 - Make sure your network is configured as required and shows traffic when WidevieW is started (observe the lights on the hub / switch blinking quickly)
 - Make sure that WidevieW is sending data to the correct network interface (enter 0 to send data automatically to all the networks, which is the safest setting). Check **WidevieW | Configure**
 - Additional troubleshoot may be available here: <http://www.wideview.it/faq.htm#3031>

- **I get stutters on clients, although the client's frame rate is high**
 - If the stutters are **only on ground**:
 - Make sure that the airplane active on the clients is smaller than (or identical to) the aircraft flying on server (example 737-800 on server, Cessna on client or both 737-800)
 - use menu **Wideview | Configure** and set the option "**Increase altitude (inches)**", specifying a number of inches sufficient to prevent the landing gear to collide with the ground (the aircraft flying on client should be a little "suspended" in the air, so the wheels will never actually touch the ground). If this parameter is set on a server, it will affect all the clients by the specified amount in inches. If this parameter is set only on a client, only that client will be affected.
 - If the stutters happen **always**:
 - Avoid to use the "**Enable Spot Plane View...**" option in Wideview, because it takes additional resources
 - If the stutter happens when **different cameras are selected** (for example Spot Plane view), please make absolutely sure that the camera is not using any "track" mode (Track = None). In case of a Spot Plane view, please select "Locked Spot" mode. **Never use dynamic camera movements.**
- **I get lagged clients staying behind the server, like if they are tied to an elastic rope**
 - Make absolutely sure that your video options are set identical throughout the computers used for outside views. This includes the graphic options in the simulator software as well as the driver options in the video display adapter's driver / control panel. Pay particular attention to video adapter Vsync (vertical synchronization) and Target frame rate in the simulator software.

- If the server is used for an external view and/or the clients aren't built on identical hardware, a fine tuning of the Update rate, IntelliSmooth mode & IntelliSmooth buffer size on the affected client, is required until the problem disappears or is greatly reduced. Just experiment the best settings.
- Perhaps your hardware (network cards and switch) require the Nagle algorithm to be deactivated. To do this, open **WidevieW | Configuration**
- If none of the above tips help, please try to set WidevieW as follows:
 - Use IntelliSmooth on this client: disabled
 - External booster: try with disabled and enabled

These settings are less performing (the client will be less smooth) but ensures a consistent synchronization. It remains still very important to set the graphics options in both the simulator software and video display adapter's control panel as explained before (identical throughout the network).

- **I cannot get smoke on touchdown or water sprays on the clients**

- Make sure the aircraft active on the client is exactly the same active on the server.
- Make sure the landing gear on the clients collides with the ground as expected (aircraft must fly at the same altitude). Check **WidevieW | Configure** and tune the "**Increase altitude (inches)**" option as required, to let the client's landing gear to touch the ground when the server also touches down.

- **I cannot get the instruments work on the clients**

- WidevieW synchronizes the image that you see outside the cockpit, there is no support for instrument panels. In fact, it has no sense to waste a networked PC just for instrument panels, because this task can be well handled through multiple monitors

on the same computer (typically the computer designed as WidevieW server). It will be cheaper and more efficient. Spare clients can be used for scenery, as the scenery really need the full power and the flexibility of a dedicated computer.

- **I'm having difficulties registering or reinstalling WideviewW**
 - o Please take a look at the on-line tutorial published at <http://www.wideview.it/reghelp.htm> and read it carefully. If the problem persists, please send an e-mail to info@wideview.it communicating your order number, at what step # the problem arises and a description of the error that you get. A detailed troubleshoot guide is also available at <http://www.wideview.it/troubleshoot.htm>

- **On the clients I get aircraft crashing somewhere even if I am in the air, or inconsistent crashes.**
 - o Please be sure to set flight model realism to minimum (sliders all to the left), making strictly sure that crash detection is deactivated.

MORE FAQ AND TROUBLESHOOTING

I get network errors on start-up.

The selected protocol (IPX or TCP/IP) is probably not installed as required or not bound to network card.

I get heavy stutters or aircraft "jumping" while taxiing or taking off.

Please make sure that the aircraft installed on the client has the same height (or lower height) of the airplane flying on the server, otherwise its gear (or even its cockpit) may be buried underground, creating the unpleasant effect. Alternatively, raise the landing gear on server and/or client via WidevieW configuration menu.

WidevieW creates conflicts with Internet, when Internet is accessed through the same network (shared ADSL, cable modem, etc.) or cannot access network while WidevieW is active

WidevieW requires some bandwidth to operate properly. Most modern computers can handle this without any problem, but performance can be greatly optimized using two network cards in the computer, binding one to Internet & file sharing and one only to WidevieW. Please consult the configuration chapter to know more about this.

Can I use keyboard-less, mouse-less, and floppy-less clients ?

It's up to you. As soon as you have installed and configured everything, you can uninstall the keyboard and the mouse: the simulator should work fine without those components (depending on the role assigned to it, of course). The shut-down can be made from the server by WidevieW.

Can I share the scenery on the server's hard drive, or a big hard disk must be installed in each client ?

I think that a big hard SSD drive installed on each client, containing a full copy of the simulator software and the required scenery is a basic requirement. Alternatively you may try to install only a "bare-bone" operative system and the simulator software on each client (so only a very small hard drive is required), then you may use the operative system built in network subsystem to share the common files (like the scenery), which will be installed on the

server only. But I've never tested this kind of installation. I've also heard about a totally diskless client (it can start with a floppy or with a boot EPROM on the network card, then it runs everything from the server).

Can I show instruments on a client PC ?

WidevieW no longer supports gauges on the clients, as they can be installed on a secondary monitor by simply installing a secondary graphic board in the server. The gauges are not power-hungry like the external scenery, so it has no sense to waste the power of a client PC just for showing a radio stack or something like it.

Does WidevieW work without a network? Is it necessary to use WidevieW if I own just one PC, but with two or more monitors connected to it?

No. WidevieW requires networked PCs in a LAN in order to work. There is no need to use WidevieW if you own only one computer with multiple monitors, as this task is accomplished by Windows itself without the need to use third party software. Please continue to read the next two Q/A for additional information about multiple computers on the same computer and for information about LAN having computers with multiple monitor each.

As there are video cards offering multiple video outputs on the same computer, for what reasons I would have to prefer multiple computers with only one monitor each and WidevieW? This will be expensive!

The software and hardware industry is promising painless multiple monitor support on the same computer since at least 25 years but unfortunately, I still have to see a really painless solution for this purpose, at least when we talk about full screen scenery view in the simulator software (please be aware that I'm talking about "**scenery**", not "**instrument panel**", for which multiple monitors on the same PC are indeed an interesting solution). The biggest limitation is that if the multiple video output is used just to **stretch** the same view onto multiple monitors in "**extended desktop**" mode, you will get **washed textures on side monitors** (because the view is unique, with a "flat" display angle). However, if the same equipment is used to create multiple independent views, with a specific view angle assigned to each monitor, **which is the only way to actually make your view angle wider and create a true panoramic, surrounding view**, your computer may be several times slower than normal because it has to handle multiple different views. So, if you get just 20 frames per second at 1920x1080 when just one

monitor is connected, try to think what happens when two independent views, **each one with its own customized view angle**, are running at the same resolution: even the latest generation computer eating 1000W of power will sit down; no matter how many cores your CPU has or if you are using QUAD-SLI video cards, your simulator software will probably look like a slide show coming from Microsoft Power Point.

Again, this applies only to full screen scenery view, when multiple views having different view angles are open at the same time. For instrument panels, or if you run the same view stretched over multiple monitors, then you may be fine. Multiple monitors on the same computer using different views and view angles, may be still acceptable if the resolution is lower, if the quality sliders in the simulator software are kept quite to the left and if you are not looking for ultra smooth flight. Please do not e-mail me asking support about how to get multiple monitors on the same computer working fine, because this is beyond the purpose of WideviewW, but rather contact the supplier or manufacturer of the hardware and Microsoft. I normally recommend to use multiple video outputs on the same computer just to make the instrument panel larger, then use additional computers for the external views.

Does WideviewW work on multiple computers having multiple monitors each?

Does WideviewW work on multiple computers having Matrox Triplehead 2GO?

Yes, providing that your systems work fine with multiple video outputs and you are happy about their features (please read the previous Q/A), you may use multiple monitors on both server and/or clients, to decrease the total number of PCs required.

11 - TERMS OF LICENSE

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For any question, comments, technical support, suggestions and special requests, please do not hesitate to contact me at info@wideview.it or to visit my web page at <http://www.wideview.it/>

Registered users will get priority technical support over non-registered users, please just make sure that the **Email's subject contains your order number** to be sure that you will receive this service. "Blackout" dates will be announced in advance on WidevieW website at <http://www.wideview.it/>

I always answer all the e-mails. If you get no response in the next 1-3 working days, it is likely that I either didn't receive your message or you didn't receive my answer because of some e-mail trouble. If you are using SPAM blocking filters, please make sure that wideview.it domain is added to the "friend list". If your e-mail provider is using SPAM blockers, please make sure they are not blocking wideview.it Alternatively, please try writing from a different email account.

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