



Moscow scenery add-on

by Vladimir Shilnikov

It is my small contribution to the FREWARE WORLD

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Table of contents:

1. [History](#)
2. [Installation](#)
[For FS Global Upgrade users](#)
[For all who are using default FS98 World](#)
3. [Static scenery](#)
4. [Dynamic scenery](#)
5. [Credits](#)
6. [Legal notes](#)
7. [Disclaimer](#)

HISTORY

This scenery is a result of a half-year work. It is far from final completion, because it seems to me that it is principally impossible to finish such a huge work for one person. At first it was an idea only to add some Moscow airports to MSFS scenery and make corrections to nav aids. But later on the appetites grows more and more. And now I began to fill Moscow with real buildings. It means that the buildings You will find in my add-on is only the very beginning. The motivation to start this work was a simple joke. Once one of my friends comes to me. I was working on scenery of Tushino airport at that time. The work was coming to it's final and I was adjusting some buildings and testing the airport. He looks at the airport and said: "Yep, It's just as in real!" (Here I must to say that he is not only "old buddy flight simmer", but also a real pilot, and rather often he is flying at Tushino on his helicopter. And his words about the scenery sounds as a sweetest song for my ears). But than he noticed - "It's very good, but look - Moscow itself is empty! You can not see here even your own house!" And we began to make my house, joking that while he will fly to my house (in FS) I must look out off my window and see him flying around.

Thus second part of this work was launched.

INSTALLATION

If You are reading this document it means that You have already unpack main archive file to some temporary folder.

For FS Global upgrade users:

- 1) Run all SFX archive files (scenery.exe and texture.exe) while choosing the path You what to this scenery be stored in FS. If You are always using FS Global upgrade its better to install this files to the directory where FS98 files located, as usual it is main FS directory. Two new directories will be created.

- 2) Run Flight simulator.
- 3) Go to **"World | Scenery Library..."** menu - small panel will appear, You must click **"OK"** button on it.
- 4) Main **"Scenery Library"** panel will appear. Highlight with a mouse **"FSGlobal Scenery World"** in a small window and press **"Files..."** button.
- 5) Another panel, called **"Scenery Areas"**, will appear. Check - the second line on this panel must reads: **"Scenery world: FSGlobal Scenery World"**. If yes - proceed to step 6, if you are reading there **"Scenery world: FS98 WORLD"**, it means that you haven't highlighted "FSGlobal Scenery World" in previous panel - click **"Cancel"** button and return to step 4.
- 6) Press **"Add..."** button.
- 7) In **"Scenery area path"** window write (assuming that your FS path is: C:\FS98): **c:\fs98\Moscow Addon\Scenery*.BGL**. If you choose correct path to the scenery folder - the lower window, called **"Scenery area title"** will become accessible: proceed to step 8. If it is still not accessible - you have made a mistake in **"Scenery Area Path"** window, - check it!
- 8) In the **"Scenery area title"** window print **Moscow addon**, or any other way you like to name it. In the **"Scenery area type"** menu select **"Local"** click on **"Scenery area active"** checkbox, than click **"OK"** button.
- 9) Panel **"Scenery Areas"** will appear again, with scenery we have just created listed in the first line. Now we must create another scenery area. Press **"Add..."** button. In **"Scenery area path"** window write (assuming that your FS path is: C:\FS98): **c:\fs98\Ramenskoe\Scenery*.BGL**. In the **"Scenery area title"** window print: **Ramenskoe, Moscow**. In the **"Scenery area type"** menu select **"Local"** click on **"Scenery area active"** checkbox, than click **"OK"** button. Panel **"Scenery Areas"** will appear again, with two new scenery areas we have created.
- 10) **VERY IMPORTANT!** - Scenery "Ramenskoe..." must always have lower scenery layer number than "Moscow addon" scenery. In our case "Ramenskoe, Moscow" has layer number 001, "Moscow addon" has layer number 002. It is OK and must be always this way. NEVER mix them or change their order. Press **"OK"** button on this and on the next panel.
- 11) FS98 will create new database. And after if You can select new airports that will appear in the **World | Go to | Airport...** menu while **"Scenery from 6.0 and before"** button is highlighted.

That's all - You are ready to use them!

For all who are using default FS98 World:

- 1) Run Texture SFX archive file. Choose the path to FS (for example - c:\fs98). Click **"Extract"** button. Run Scenery SFX archive file. Choose the path to FS Scenery folder (in our example it will be - c:\fs98\Scenery). Two new directories will be created in your FS Scenery folder - "Moscow addon" and "Ramenskoe".
- 2) Run Flight simulator.
- 3) Go to **"World | Scenery Library..."** menu - small panel will appear, You must click **"OK"** button on it.
- 4) Main **"Scenery Library"** panel will appear, press **"Files..."** button.
- 5) Another panel, called **"Scenery Areas"**, will appear. Press **"Add..."** button.
- 6) In **"Scenery area path"** window write (assuming that your FS path is: C:\FS98): **c:\fs98\Scenery\Moscow Addon\Scenery*.BGL**. If you choose correct path to the scenery folder - the lower window, called **"Scenery area title"** will become accessible: proceed to step 7. If it is still not accessible - you have made a mistake in **"Scenery Area Path"** window, - check it!
- 7) In the **"Scenery area title"** window print **Moscow addon**, or any other way you like to name it. In the **"Scenery area type"** menu select **"Local"** click on **"Scenery area active"** checkbox, than click **"OK"** button.
- 8) Panel **"Scenery Areas"** will appear again, with scenery we have just created listed in the first line. Now we must create another scenery area. Press **"Add..."** button. In **"Scenery area path"** window write (assuming that your FS path is: C:\FS98): **c:\fs98\Scenery\Ramenskoe\Scenery*.BGL**. In the **"Scenery area title"** window print: **Ramenskoe, Moscow**. In the **"Scenery area type"** menu select **"Local"** click on **"Scenery area active"** checkbox, than click **"OK"** button. Panel **"Scenery Areas"** will appear again, with two new scenery areas we have created.
- 9) **VERY IMPORTANT!** - Scenery "Ramenskoe..." must always have lower scenery layer number than "Moscow addon" scenery. In our case "Ramenskoe, Moscow" has layer number 001, "Moscow addon" has layer number 002. It is OK and must always be this way. NEVER mix them or change their order. Press **"OK"** buttons on this and on the next panel.
- 10) FS98 will create new database. And after if You can select new airports that will appear in the **"World | Go to | Airport..."** menu while **"Scenery from 6.0 and before"** button is highlighted.

We have done it! Have a good flight!

STATIC SCENERY

You will find three new airports in Moscow - Bykovo, Tushino and Ramenskoe. Scenery was tested on Pentium 200MMX with 48Mb memory, without 3D accelerator. And on maximum scenery complexity preset there was no less than 6 frames per second in all cases. If you have faster processor or 3D card - there must be no problems with the frame rate at all.

To find more about navigating in Moscow airspace, technical and navigation info for 6 Moscow airports - check file: "Moscow airspace navigation.pdf", included in this pack. To read it - you must have Adobe Acrobat Reader installed on your computer. Sorry, if You have not. Files in MS Word are too big. (For example - file you are reading now, in MS Word format occupies more than 750 kB. That's why it is in Acrobat Reader format.)

As for visual scenery - I was trying to create it as close to reality as it was possible. But there are some difficulties in MSFS and in real life too. As for MSFS - visually Moscow landscape remains "flat world". I have no time, resources, and geographical data enough to create landscape for such a big piece of the world, sorry. As for airports scenery: I have very good technical information about Bykovo and Tushino and much less about Ramenskoe. So Tushino and Bykovo are exactly as they are, except that they have been simplified in order to have acceptable frame rate on most of computers. As for Ramenskoe - all runways and taxiways are shown precise. All other visual scenery I was creating it according to my memories of the last visit there two years ago.

Bykovo - Moscow airport for local and some regional routes, located in 30 km to the South-East from the center of Moscow, near Bykovo - small Moscow satellite town. Technically can accept big planes such as IL-76, Tu-154 and An-12. In practice it accepts them only in situations when overhauling is required. On this airport Aircraft Repairing Plant is based. You can see a small part of this plant in my scenery at the North-West end of the airport. In other cases it accepts only medium and small airplanes. The biggest among them are: - Yak-42, IL-18 and An-74. Others are: An-2; An-8; An-24; An-26; An-30; An-32; Yak-40 and L-410.

Tushino - small airfield, located in the North-West part of Moscow city, in 14.5 kilometers from the Center of Moscow, between two Moscow districts - Tushino on the North-East and Strogino on the South-West.. In practice it is used only by lightest planes, military and civil helicopters. Tushino is the place where International, All Russian Aerobatics Championships and some local air-shows and parachute competitions are held from time to time. It has three grass/mud runways without any radio and light equipment, but two bigger can accept planes with gross weight up to 30 metric ton due to their good base. The only radio navaid is NDB station based on mobile platform and located at the East part of the airport - in the military sector, near the tiny helicopter control tower. This airport is in operation at the daytime only.

Ramenskoe - Very big airfield, located in 39 kilometers to the South-East from the center of Moscow, and 9 km to the South-East from Bykovo, near Zhukovski - small Moscow satellite town.

In general, it is a military aircraft-testing airfield belongs to the "Gromov Institute". It has one of the biggest runways in Eurasia, if not the biggest in the whole world. I'm talking about runways that was built for planes - not specially make for US Space Shuttle landings... ☺ (maybe I'm not correct, but I have no other information). This runway is 5400 m long and 120 m wide (17,716 X 394 ft). Its length is enough to make "fly-up"¹⁾ or "interrupted takeoff"²⁾ (it is not the same as "aborted takeoff") even on the biggest and fastest planes. At this airport a lot of Russian military aircrafts are passing tests. Here was tested the prototype of the Russian space shuttle "Buran" with its unique ALS - automatic landing system. Now here is applying into life the Russian-USA joint project of the future supersonic airplane, with making tests on Russian SST TU-144M, which can fly up to 22 km (72,000 ft) at Mach 2.5. Also this airfield is used as a base for airplanes belongs to the Ministry of Emergency Situations. Maybe I have not correctly translated the name of the Ministry but I believe that you'll understand what is it, when I'll say that this Ministry is sending humanitarian cargoes now to Yugoslavia, and other countries.

Ramenskoe airport is also the place where all Moscow International Aviation Salons (MAKS) are held each two years.

Remarks: I'm sure that English have terminology equal for this Russian slang, but I'm not a native English or American and I don't know it. That's why I have simply translated this Russian slang into English.

- 1) **"Fly-up"** - the normal situation while first test flight of the airplane, when it reaches normal takeoff speed, fly few meters above the runway for some hundred meters without changes in its course and then uses the remained part of runway for normal landing.
- 2) **"Interrupted takeoff"** - situation when You have already taken off the runway in normal manner. In a few seconds after it, if one of Your two engines - or single engine fails, You are executing emergency landing without any changes in course and using the remained part of runway. I wish You will never have such a situation in real flight.

Moscow City - I have created and added to Moscow scenery some famous buildings: Ostankino TV tower, Moscow State University, hotel "Intourist", "HydroProject" institute, some roads with light pillars, water surfaces, bridges and finally my own house with some buildings and other scenery details surrounds it. I will change the design of Moscow State University - I don't like textures I have use for it. I will create my own. As for other buildings, like Ministry of Foreign Relations, Ostankino TV Center etc. I have plans to create them in the nearest future. And I will place these files as an update.

DYNAMIC SCENERY

I have created dynamic scenery only for Bykovo airport. To view it you must go to Bykovo airport at first ☺. Go to **"World | Go to... | Airport..."** menu. Check that the button **"Scenery from 6.0 and before"** is highlighted click on **"UUBB, Bykovo"** in the right window, and in the left window you'll see four different locations where you can jump. For the first time I recommend you to select UUBB RW10. When your plane will appear on the runway - switch Slew mode ON (press Y key). Then raise your plane to 230m MSL (754ft), turn your plane to heading between 82-92 and remove panel view by pressing W key. Then go to **"World | Dynamic scenery..."** menu select **"Very dense"** in Scenery frequency menu and check that **"Aircraft service traffic"** is marked, other checkboxes are playing no role in this dynamic scenery. And click OK. (If you select **"Normal"** or **"Dense"** instead of **"Very dense"** you'll see only some static aircrafts in the scenery). You will see aircrafts appeared in the scenery - first is taking off from the runway 28, second you can see on horizon following landing pattern, others are at their park places.

All planes in the scenery are located as in real life, with two exceptions - IL-76's are never use park places they are occupying in my scenery. In real life they are parking at the place where you can find two Mi-24 helicopters. This park place is used either for helicopters or for IL-76. And the second - You will never find light planes at the place they are standing in my dynamic scenery.

It is an endless-lasting show, where aircrafts will NEVER crush each other - pilots of all these planes are professionals ☺. If some of them is taxiing or already holding short at the runway, and another is on final or close to final - the first one will hold short, waiting for landing of the approaching aircraft. Also you can learn from this scenery how you must taxi to start position at this airport etc.

All dynamic planes are following real-life taxiing, patterns, routes and executing real-life arrival and departure procedures.

Aircrafts in operation: Tu-154B - "Aeroflot", only first takeoff; IL-76 - "Aeroflot", only first landing; Yak-42 - "Aeroflot", two planes in operation; Dornier-328 - "Sakhalin Air Transport", one plane in operation; Yak-40 - "Aeroflot", one plane in operation; An-24 - "Sakhalin Air Transport", one plane in operation. All other planes in this scenery are static.

While playing this scenery, You can notice that while taxiing some of the aircrafts can rise a little than lowered down again and vice-verse. It is because different aircrafts has different reference points, and in order to save space (the length of dynamic scenery file is limited by MSFS to 32 Kb) I was forced to make them shearing taxiing paths. (You can see Dornier-328 floating above taxiway while moving to hold point, and after passing it - it's on the ground again). Sorry for this! ☹

Frame rate: - in case this dynamic scenery is very complex I do not know how it will go on your computer? On mine - I have only 2.5 fps. And in this case it's impossible for me to fly with this dynamic scenery active. But I have only Pentium 200 and no 3D card. If You have PII 350 - 400 with 3D, I think that You'll have 10-14 fps. Lucky You are! Because, when I have finally decided to change my computer to the newer of the next generation - my company was sold and I have lost my job ☹. That's why I have no perspectives to change it in the nearest future.

That's all. Enjoy flying in Moscow, You're always WELCOME!

Feedback is welcome too! seid@hotmail.com

If some person has a wish to join me in my further work on Moscow scenery - he/she is WELCOME!

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CREDITS

Thanks for:

- 1) **Pascal Meziat, Bryan McWilliams and Tom Hiscox** - for their great program "Airport 2.10", without it this work will be impossible
- 2) **Manfred Moldenhauer** - for his Scasm and Sclink
- 3) **Rafael Garcia Sanchez** - for his excellent programs Visual Object Designer v2.7, Dynamic Object Designer v3.0 and dodlib5 collection
- 4) **Konstantin Kukushkin** - for his great DynKit Hangar v2.03
- 5) For all textures and .api files designers which files was used for creating this scenery
- 6) For all aircraft designers which aircraft models was used in Bykovo dynamic scenery
- 7) And, finally - **Microsoft Flight Simulator'98 Team** for their excellent work

Thanks for everybody! And excuse me for my English.

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