VR-Cloud® Release Notes
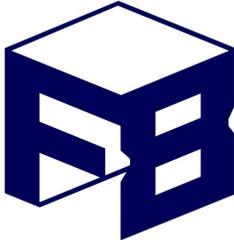
Version 4.2 - 2013/03/29

1. Multi-user conferences

Users connected to the same VR-Cloud® server can now participate to online conferences. During a conference users share the same view of the virtual environment and can communicate using text messages. Video and audio communication is also supported using third party software such as Skype™.

Conferences can easily be created and joined by users. It is possible to limit access using a password.

During conferences all VR-Cloud® features are accessible and therefore any user can bring attention to any location or collaborative content of the virtual environment. This feature greatly helps discussions about any project that can accessed using VR-Cloud®.

Once a conference is finished, a report is automatically generated. It uses the HTML format for easy viewing and can be automatically uploaded to any website.

This feature is only available on the PC version of VR-Cloud® Client.

2. Traffic and environment reset

In order to increase the server performances, the VR-Cloud® server resets the traffic and the environment of the UC-win/Road project if there is no clients connected to it.

3. URL parameters

it is now possible to add parameters to a3s:// links to jump to a predefined position in the virtual environment after connecting to a VR-Cloud® server.

4. UC-win/Road 8.1.2 base

VR-Cloud® version 4.2 is based on UC-win/Road version 8.1.2 and therefore includes many new simulation features as well as many improvements from previous versions. New features are included in UC-win/Road itself as well as in new plugins.

5. Small bugs and improvements

As with each release, VR-Cloud® version 4.2 includes several bug fixes and improvements that increase the reliability of the system.

Version 4.1.1 - 2012/12/20

1. Fixed a critical bug in scripts

When a script was executed by a VR-Cloud® Client, in some cases it happened that the VR-Cloud® Client got the possibility to execute another script in the same time that made the UC-win/Road server crash. This has been fixed and scripts have been tested successfully.

2. Fixed a critical bug on Android VR-Cloud® Client

When the collaborative photos were not enabled, taking control after connecting with an Android VR-Cloud® Client made the client crash. This has been fixed and all collaborative options have been tested successfully.

3. Small bugs and improvements

As with each release, VR-Cloud® version 4.1.1 includes bug fixes and improvements that increase the reliability of the system.

Version 4.1 - 2012/12/03

1. Collaborative photos

Collaborative photos have been added to VR-Cloud®. By using the Android client it is possible to take a photo and send it to the server. Photos can then be displayed, edited or deleted from both the Android and the PC client.

Just like other collaborative content, photos are displayed in the virtual world using an icon. Users can display edit or delete photos by either clicking on this icon or by selecting it from the photo list.

While taking a photo with the Android client, it is possible to choose where the user wants to save the photo, by either using the GPS feature of the Android device if available or by using the current location within the virtual world.

2. Local opinions into 3D Forums

It is now possible for the users to give their own opinion about any location of the virtual world. When users find an interesting point of view (for example: in front of a new building), they can rate this location and start a discussion in the same way as discussions in 3D Forums.

The way to create, edit, delete and comment local opinions is exactly the same as it is done for normal discussions (except the rate which is specific to opinions).

Finally, it is possible to export all local opinions contained into a project from UC-win/Road. The exported result is an HTML file which can be easily added to a website.

3. Author name, date and time saved into all collaborative content

All collaborative content (discussions, local opinions, annotations and photos) now include an author name to identify who has created the content. If no author name has been set, it will appear as *Anonymous* when displaying the content.

In the same way, when a collaborative content is created or edited, the date and time are saved automatically and will be displayed with the corresponding content.

These two new features are available on both the Android and the PC client.

4. Collaborative lists can be sorted

Collaborative contents list (discussions, local opinions, annotations and photos) can now be sorted either by title, date, author or rate (rate is only supported for local opinions). The sort order can be either ascending or descending.

This feature is available on both the Android and the PC client.

5. Uniformity of the collaborative lists

All collaborative lists have been rearranged to be used in the same way. For each collaborative content, it is possible to jump to, fly around or open the content in the same way. This improvement is available on both the Android and the PC client.

6. Off-road driving

Users can now drive around from off-road points defined in the UC-win/Road project. If they do so, they can drive anywhere and not just on roads.

This feature is available on both the Android and the PC client.

7. Return to home menu

The previous version of VR-Cloud® introduced the home menu which displays list of available contents as well as the user history and favorites. It is now possible to return to this home menu after connecting to any content, making it easy to switch between several virtual worlds.

8. Splash screen

The previous version of VR-Cloud® already displayed a splash screen while launching the Android client. A splash screen is now also displayed when starting the PC client.

9. UC-win/Road 8.0.1 base

VR-Cloud® version 4.1 is based on UC-win/Road version 8.0.1 and therefore includes many new simulation features as well as many improvements from previous versions. New features are included in UC-win/Road itself as well as in new plugins.

10. Small bugs and improvements

As with each release, VR-Cloud® version 4.1 includes several bug fixes and improvements that increase the reliability of the system.

Version 4.0 - 2012/09/07

1. Home menu

A home menu has been added to both the PC and Android versions of the VR-Cloud® clients. The home menu shows a list of all contents accessible from a given location (for example, all contents provided by Forum 8). Users can also create bookmarks and browse through their content access history.

This feature allows a direct connection to contents, without inputting any URL. It will greatly help users to stay up to date with the latest released contents.

2. Vehicle selection for driving simulation

Users can now select the car they will use when they start to drive. Any of the vehicle defined in the UC-win/Road project can be used (various types of cars, but also trucks, bus and bikes). It is also possible to choose whether to start driving from the beginning or the end of the road.

3. Videos in scripts and scenarios

Video being played by scripts and scenarios is now viewable in both the PC and Android versions of the VR-Cloud® clients, allowing content providers to create more creative and easy to understand contents.

4. GPS feature for Android client

The Android version of the VR-Cloud® client can now use the GPS, if available. It enables the user to localize himself into the 3D virtual world easily. The user can also lock his position in the virtual world with the real position retrieved by the GPS.

5. Annotation categories

Annotations can now be arranged into categories, which is convenient to help users find the annotations that they want to participate easily. Categories are defined by choosing a color for each annotation allowing to group annotations about the same subject using the same color. The color has to be chosen from a set of ten colors that are configurable in the annotation options.

6. Annotation read-only mode

A read-only mode has been added to the annotation options. This may be convenient to make presentations using VR-Cloud® because the presenter can be sure that the annotations will not be changed by other users.

7. Possibility to lock the camera

It is now possible to lock horizontally the camera into UC-win/Road, which help to move around while keeping a constant alitutude.

8. UC-win/Road 7.1.2 base

VR-Cloud® version 4.0 is based on UC-win/Road version 7.1.2 and therefore includes many new simulation features as well as many improvements from previous versions. New features are included in UC-win/Road itself as well as in new plugins.

9. Possibility to reconnect to a project

If the connection to the server has been lost, it is now possible to go back to the home menu or to reconnect to the same project. This is convenient when the network connection between the client and the server is not optimal. This feature is supported on both the PC client and the Android client.

Version 3.1 - 2012/05/09

1. Easier audio configuration

From version 3.0, VR-Cloud® supports audio streaming but setting the audio sources in order to stream the correct audio was difficult. Version 3.1 solves this issue by streaming the audio just before it is sent to the speakers. This is automatic and does not require any kind of configuration of the server side.

Also, in version 3.0 headphones or speakers had to be connected to let Windows know that the audio has to be generated. Version 3.1 fixes this issue and will stream the sound even without any sound output device connected.

2. Improved audio latency

From version 3.1, VR-Cloud® streams the audio by capturing it just before it is sent to the speakers. The latency of the audio is therefore greatly reduced. While it is difficult to calculate audio latency, audio playback surely feels much more natural than in the previous version. Driving is greatly improved because the noise of the motor matches quite perfectly the image.

3. Audio support even when several instances of the server run on a single machine

From version 3.1, VR-Cloud® can be run several times on the same server without having any audio issue. The clients connected to one instance will only receive the audio generated from the instance they are connected to.

4. Audio support even when the server window is inactive

In version 3.0, VR-Cloud® could only stream audio when the window of UC-win/Road was active. Version 3.1 fixes this issue and streams the audio correctly even when the window is inactive, hidden or minimized.

5. Scriptable XPSWMM simulations

VR-Cloud® version 3.1 allows to use XPSWMM simulations from within a script, allowing remotely connected users to interact with XPSWMM data. The interaction is indirect and has to go through scripts, which requires a short time of preparation but makes things much more easier for the end user.

6. Small bugs and improvements

As with each release, VR-Cloud® version 3.1 includes several bug fixes and improvements that increase the stability of the system. In particular, some memory issues have been solved.

Version 3.0 - 2012/04/20

1. Audio support

The audio component of a virtual environment is very important to enhance the user immersion. From version 3.0, VR-Cloud® supports audio streaming to allow the user connected through VR-Cloud® to experience the same level of immersion as when using UC-win/Road locally. The audio data is recorded and encoded on the server, streamed on the network and decoded and played at the client side, just like video. It is still possible to stream video-only contents by disabling audio streaming in the configuration dialog.

Audio streaming is supported both on PC and Android.

2. List of discussion

In the version 3.0 of VR-Cloud®, the user can display a list of all discussions of the project and jump to any of those easily. This new feature greatly helps to access and participate in discussions of interest quickly. The old way of moving in the 3D virtual environment and clicking on discussion icons to open them is of course still available.

This feature is supported both on PC and Android.

3. Discussion categories

In many cases, it is convenient to classify discussions into separate categories to help users find the discussions that they want to participate easily. It is now possible to choose a color for each discussion allowing to group discussions about the same subject. The color has to be chosen from a set of ten colors that are configurable in the discussion options.

This feature is supported both on PC and Android.

4. Inline help

Previous versions of VR-Cloud® provided a help file in PDF format. Because it is difficult and unintuitive to open a PDF file at the same time as the VR-Cloud® client application, an inline help system has been implemented. The inline help can be toggle on or off from the menu of the VR-Cloud® client application and shows the currently available actions depending on the buttons or other interface elements currently displayed. Even when the inline help is displayed the user can continue to use VR-Cloud® normally.

This inline help system has been implemented both on PC and on Android. In the case of android, if the device where VR-Cloud® is run has a small screen, the inline help is displayed as a full screen overlay.

5. IME improvements

From version 3.0 of the PC client of VR-Cloud®, the IME has been improved to display candidate lists that the user can choose from when typing Japanese, Chinese or Korean text.

6. Small improvements and bug fixes

The version 3.0 of VR-Cloud® has been the opportunity to fix many small issues, bugs and annoyances. These corrections took place both in UC-win/Road itself and in the client applications.

Version 2.2 - 2012/03/19

1. Support of the "world file" format for streetmap import

A world file is a plain text computer data file used by geographic information systems to georeference raster map images like satellite pictures, etc. By loading a satellite picture with its world file, it can be placed automatically at its geographical position.

The Load StreetMap editor has also been improved.

2. Support of Android 2.2 and 2.3 phone

Android 2.2 and 2.3 phones are now supported, allowing the huge number of people using those cell phones to use VR-Cloud®. The supported features are exactly the same as with later version of Android (versions 3 and 4).

3. Fixed the menu display on Android 4.0 phones

Some Android 4.0 phones had trouble displaying the top menu of the VR-Cloud® client. For example, the Samsung Galaxy Nexus phone could not display the menu at all, thus not allowing any interaction with the virtual world. A new menu has been implemented to solve this issue.

4. Fixed a critical bug in discussion forums

When a discussion forum was modified (when a discussion was added or deleted) by a UC-win/Road server, all other UC-win/Road servers displaying the forum had a critical error that made them crash. This has been fixed and forum updates have been tested successfully.

Version 2.1 - 2012/02/10

1. UC-win/Road 6 base

VR-Cloud® version 2.1 is based on UC-win/Road version 6 and therefore includes many new simulation features as well as many improvements from previous versions. New features are included in UC-win/Road itself as well as in new plugins.

2. Faster texture loading

The algorithm used to load and size textures has been updated to be both faster and of better quality. During design it is also possible to use a low quality but outstandingly fast algorithm. Opening a project with many texture takes up to 20% less time than before.

3. Release control option

As it is possible to take the control of UC-win/Road through the VR-Cloud® client, the option to release the control before it times out has been added.

4. Discussion forums on Android

Discussion forums are now supported on the Android client. It is therefore possible to communicate effectively from a mobile terminal. Tests show that the experience is as good using 3G phone networks as using Wi-Fi.

5. Language selection from the PC client

The PC client now provides a way to change the language used in the user interface. The change does not require to restart the client. The selected language is saved as the default language.

6. Better multilingual support (Android client)

The way of handling multiple languages on the Android client has been change to provide a more seamless integration. The language is automatically selected to be the same as the language set in the Android settings.

7. Japanese, English and French support (PC and Android)

Both the PC and Android clients have been updated with translation in three languages.

8. User interface improvements

Based on user comments and requests the user interface has been improved to be easier to use. For example, the way dialogs are shown has been unified.

9. Unified PC and Android user interface

The PC and the Android client user interfaces have been unified to provide a more seamless experience. The improvements made on Android have been applied to the PC client.

10. More stable and powerful

Many small improvements have been made to make this version of VR-Cloud® the most stable and powerful to date.

Version 2.0 - 2011/12/19

Basic functions

1. Latency improvements

The delay between the time a command is executed (for example, another camera is picked from the camera list) and the time of the visual feedback (the 3D scene of the new camera position is displayed) has been reduced even further than in version 1.1. Using a typical office LAN connection, the latency is always between 80 and 120 millisecond, and can drop up to 40 milliseconds.

2. Video encoding for each client

In order to keep a good visual quality at all times, it is now possible to encode video separately for each client. If the connection between a client and the server becomes slow, the image will be less updated but will not deteriorate.

3. Mouse wheel support

The mouse wheel is now supported and provides an easy way to zoom in and out.

4. Various bug fixes

Many small bugs and annoyances have been fixed resulting in a more stable experience.

5. New sky rendering method

A new way to render the sky has been implemented. This new sky rendering method uses a single texture mapped on a sphere.

6. Faster and smaller installer

The installer has been updated, resulting in faster installation and uninstallation. The install package size has been reduced.

7. Improvements of UC-win/Road 5.2.3

VR-Cloud® version 2.0 is based on UC-win/Road version 5.2.3 and includes several improvements and bug fixes in the UC-win/Road core.

3D Forums and annotations functions

1. New server save system

The software used to save forum discussions and annotations to the server has been updated. It is now much faster and less prone to bugs.

On the server side, the system does not require to use Apache and PHP anymore, which makes the installation much easier.

2. Unified Simplified settings

The settings of the 3D forums and annotations have been unified into a single window. The settings are easier and faster to set.

3. Various bug fixes

Many small bugs and annoyances have been fixed resulting in a more stable experience.

Version 1.1 - 2011/08/05

Basic functions

1. Latency improvements

The delay between the time a command is executed (for example, another camera is picked from the camera list) and the time of the visual feedback (the 3D scene of the new camera position is displayed) has been reduced by up to four times. The use of VR-Cloud™ becomes more natural and some time critical commands (for example driving or mouse drag) are now fully supported.

2. OpenGL display

Because the latency was reduced the risk of crashes has lowered significantly. When a blocking dialog is displayed (for example the road section editor), the OpenGL display area shows the last rendered image in grayscale.

3. Mouse control

The camera looking direction can be changed by dragging the mouse in the client.

4. Video wall performance improvements

Video walls used to be very slow but the rendering speed has been greatly improved, up to a hundred times in some cases. Video walls can now be heavily used in projects without having to care too much about the performance impact (even when playing simultaneously more than 10 high resolution videos the performance is still acceptable).

5. Fly path improvements

You can fly backwards on fly paths (it will loop from the beginning to the end of the fly path).

6. Model visibility groups

The model visibility group (Before/After/...) can now be chosen from the client so it is easy to demonstrate various steps in a project.

7. Scenarios

The currently running scenarios are now listed in the client. The client can stop all running scenarios or start a new one.

8. Administrator mode

The client now provides an administrator mode that is protected by a password. In the administrator mode all actions are allowed and any user created content (forums topics, comments and annotations) can be edited or deleted.

When the administrator mode is in use, the interface becomes red.

3D Forums

1. Access to the forum

Clients can now access forum discussions and add comments by clicking on their icons even if when they do not have the control. This helps to allow many clients to participate in the forums at the same time.

2. Editing and deleting forum discussions and comments

Discussions and comments can be edited or deleted by providing the password set during the creation. By sharing passwords a group of people can easily moderate forums. Discussions areas can also be edited or deleted if all the discussions of the area have been deleted.

3. Forum cache

A forum cache has been implemented to help reduce the loading time of forum discussions. The loading time is now nearly immediate.

4. Forum interface improvements

The discussion window has been improved to add links to edit and delete discussions and comments. The window can be resized for better reading comfort.

Annotations

1. Animations to display annotations

After clicking an annotation the camera is smoothly moved to the annotation position. The annotation is progressively displayed by raising its opacity.

2. Editing and deleting annotations

Annotations can be edited or deleted by providing the password set during the creation. By sharing passwords a group of people can easily collaborate on same annotations.

Manuals

1. Setup manual

Explanations of the new functions have been included into the setup manual.

2. Client manual

A client manual is now provided (it is installed with the client).

Version 1.0 - 2011/06/21

Initial release of VR-Cloud®.