

SANAKO Study 500 and 1200

TECHNICAL GUIDE

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SYSTEM COMPONENTS

MAIN SYSTEM COMPONENTS

SANAKO STUDY TUTOR APPLICATION

Teachers use the Study Tutor application, which is the main interface to the Study 500/1200 system. The Tutor application allows teachers to instruct with the Study 500/1200 system and to control the classroom computers.

SANAKO STUDY STUDENT APPLICATION

The Study Student application is installed onto all student computers. Study Student connects to SANAKO Crossroad at system startup and runs in the background listening for commands from Study Tutor. Students can open the student interface to work independently, however, teachers are able to control student computers, regardless of whether the Student application is visible on student screens or not.

SANAKO CROSSROAD

The SANAKO Crossroad server program is the information center of the SANAKO Study system and both the Tutor and Student components automatically connect to it. All system data is passed through SANAKO Crossroad and it allows communication between the Tutor and Student components.

If you do not have a separate server computer, you can install SANAKO Crossroad onto the same computer as Study Tutor.

COMPONENTS RELATED TO DYNAMIC LICENSING

SANAKO LICENSE SERVICE

License Service is a server module (Windows service) that handles license reservation requests from student or tutor applications. It is also responsible for handling automatic procedures related to license lease expiration in servers.

SANAKO LICENSE MANAGER

License Manager handles general license administration tasks; adding and removing licenses to and from the database and editing existing licenses.

SANAKO LICENSE DATABASE – LICENSE POOL

License Database stores the license data that is handled by the License Service according to license use requests in the network

Note: these components are only needed when the dynamic licensing option is selected during installation of the Study system.

REQUIREMENTS

MINIMUM REQUIREMENTS FOR TEACHER AND STUDENT PC

- Microsoft® Windows® XP or Windows Vista operating system
- Microsoft .NET Framework® 1.1 or 2.0
- DirectX 9.0c
- 1 GHz processor
- 512 MB of system memory, 1 GB recommended for Tutor PC
- 100 MB of free disk space for installation *
- 1024*768 display resolution with 16-bit colors
- AC97 or HDA compatible sound card
- Network Adapter, TCP/IP support required
- PC Headset – recommended SANAKO models to ensure high quality audio
- QuickTime® 7.0.3 or later is required for displaying certain file types and for the SANAKO Study Video Live Module

*) The amount of free disk space required during the use of Study 1200 varies primarily according to the use of the recording functionality - longer recording times require more disk space.

Note: Actual requirements may vary based on your system configuration. It is essential to make sure that the operating system runs smoothly on each computer where a Study Tutor or Student application will be installed.

NETWORK REQUIREMENTS

The following requirements should be met by the network.

- Student and teacher workstations should be located on the same TCP/IP sub-net

- Student and teacher workstations should be able to PING each other and the Crossroad with TCP/IP packets.
- It is recommended that all the workstations within the room are connected to the same network switch with support for Multicast transmission.
- Minimum of 100B bandwidth or greater dedicated to each workstation.

FIREWALL SETTINGS

The following programs have to be added to the firewall exceptions or the firewall has to be disabled.

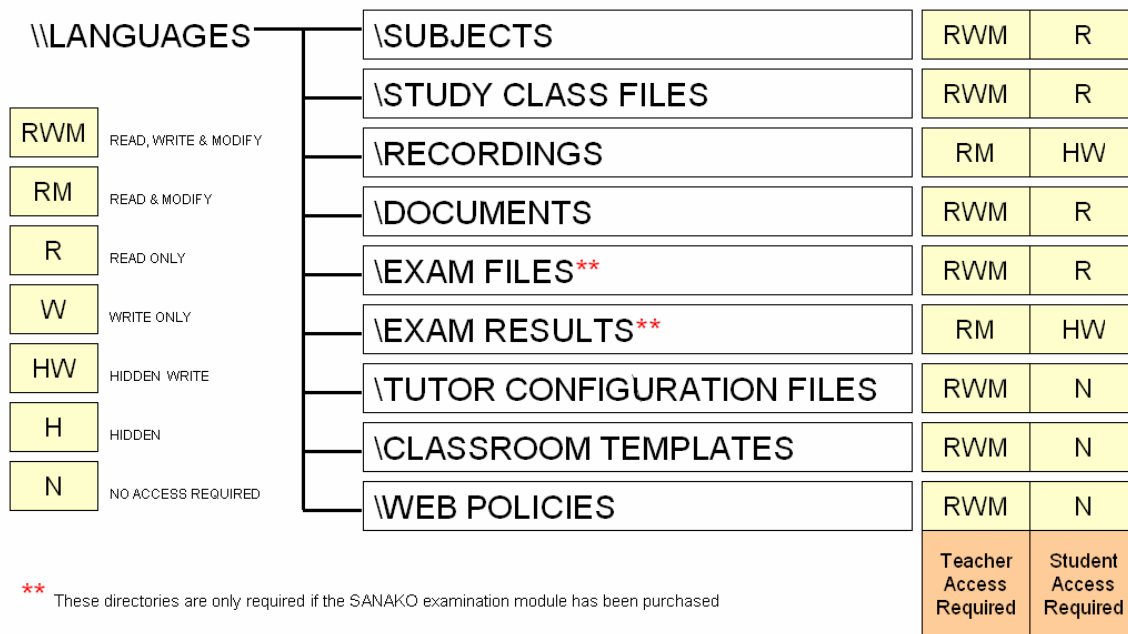
- Rsrv.exe (Crossroad computer/server)
- Tutor.exe (Teacher computer)
- Student.exe (Student computers)

The default TCP ports used by SANAKO are:

- PORT 6100 for command packets
- PORT 6131 for screen multicast packets
- PORT 5060 for audio packets
- PORT 6121 for screen monitoring packets

SUGGESTED NETWORK DIRECTORY STRUCTURE

We recommend that you structure your network as shown below – below example is designed for Study 1200 users.



The amount of hard disk space required for the storage of digitized files depends on how much material will be made available to the students at any one time and how much work the students are likely to save to their own area. Disk quota sizes usually vary between 20 and 50MB per student. However, students using Study 1200 typically require a disk quota of 100MB minimum to allow them to save work during class for self-study reinforcement.

A typical MP3 audio file size (default setting in Study 1200) is approximately 1MB per minute.

Therefore, a typical 160GB hard disk drive would allow for the saving of approximately 2600 hours of audio.

In order to ensure that this information can be delivered to all the student desktops simultaneously (i.e. smooth video and audio playback) SANAKO strongly recommends the use of hardware RAID controllers on the server or the use of Network Attached Storage (NAS) devices.

SANAKO also recommends that you take regular data backups. The use of a CD/DVD writer is also recommended to save student oral recordings and/or source material that are infrequently used. When this material is required it can be copied to the server from the CD archive.

INSTALLATION

LICENSING METHODS

Before installing SANAKO Study software you need to decide on a Study licensing method. From Study 500/1200 v.3.0 onwards it is possible to choose between two different licensing methods.

LOCAL LICENSING

When using local licenses the license information is stored in Windows Registry on Teacher computer.

DYNAMIC LICENSING

When using Dynamic Licensing, product licenses will be added to an SQL Express Database using the SANAKO License Manager application. Tutor application will reserve a license from the License database after it has been started and the connection to XRD is established. Student applications will reserve licenses from the licenses database after they join the classroom of an active Tutor. Licenses will be returned to License database after Students leave the tutor's classroom or after Tutor disconnects XRD.

This means that customers can deploy the solution to any room (or combination of rooms) so long as the total number of users at any one time does not exceed their concurrent user licenses

RECOMMENDED INSTALLATION ORDER WHEN DYNAMIC LICENSING IS USED

When dynamic licensing is used, we recommend that the different components are installed in the following order:

1. SANAKO License Service Database and License Manager
2. Study components: Crossroad, Tutor and Students

Note: If the Study system is installed using Local Licensing you can skip the SANAKO License Service Database and

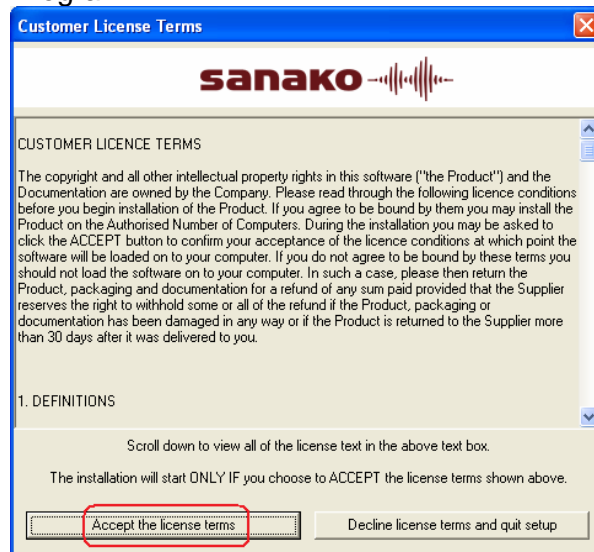
License Manager installations and start directly with the Study components installation.

INSTALLATION INSTRUCTIONS

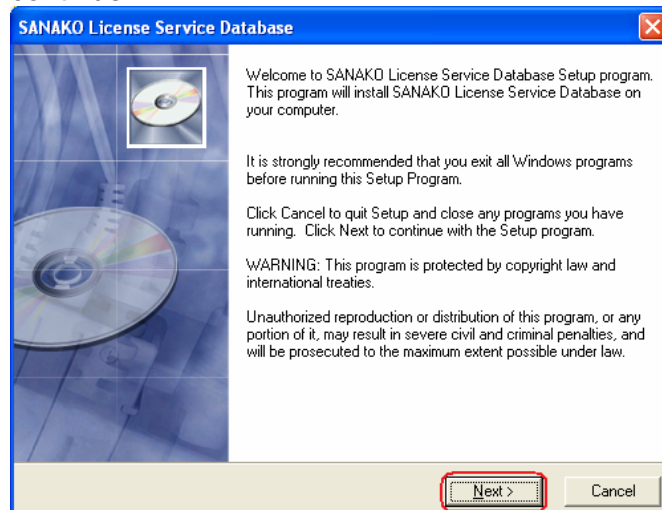
LICENSE SERVICE DATABASE & LICENSE MANAGER INSTALLATION

Follow the installation instructions below to install License Service Database and License Manager

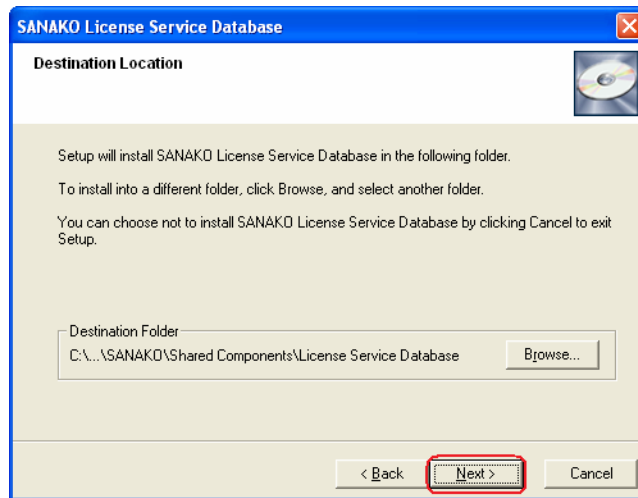
1. Select License Service Database in the Installation CD menu to start the installation program
2. Click **Accept the license terms** to start Setup Program



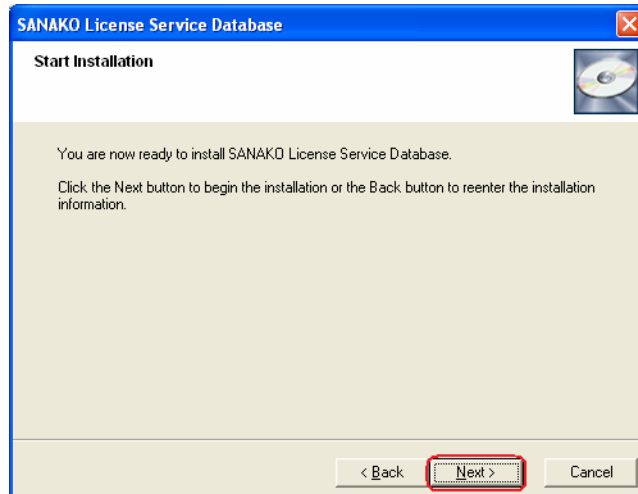
3. It is recommended to exit all Windows programs before running the Setup Program. Click **Next** to continue.



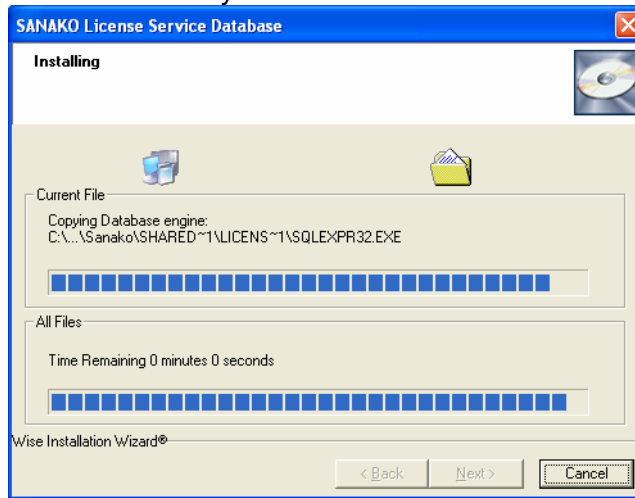
4. Select a destination location for the License Service Database installation. Click **Next** to continue with the default destination folder or click **Browse...** to change the default destination folder.



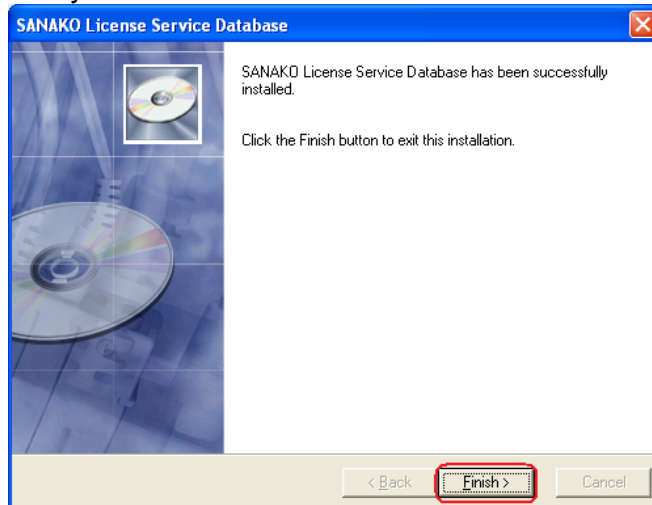
5. Setup Program is ready to begin the installation. Click **Next** to start the installation.



6. Setup program has begun installing License Service Database. It may take a few minutes to finish.



7. The License Service Database installation is now complete. Click **Finish** to exit Setup Program. Continue system setup by adding Study 500 and Study 1200 licenses to the License Service Database.

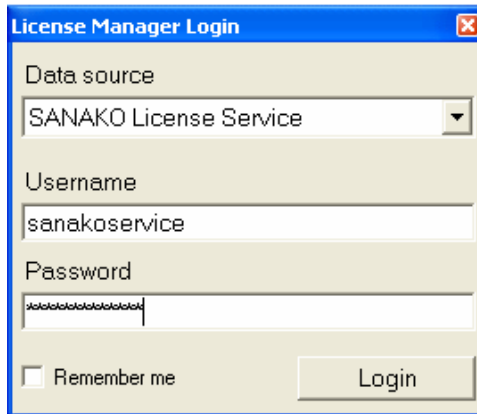


ADDING STUDY LICENSES TO THE LICENSE SERVICE DATABASE

Follow the instructions below to add Study licenses into the License Service database

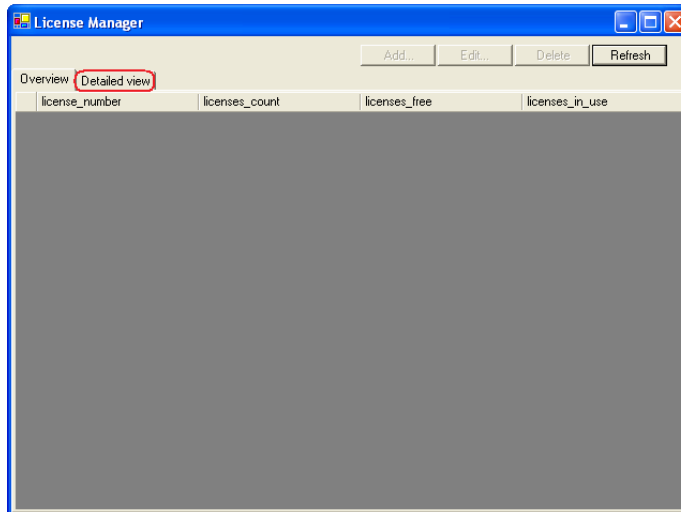
1. Open the License Manager application via Windows Start menu: Start/All Programs/SANAKO License Service/License Manager.
2. Insert the information below to the login fields and click **Login** to log in to License Manager Application.

Data source: SANAKO License Service.
Username: sanakoservice
Password: 5anako5ervice

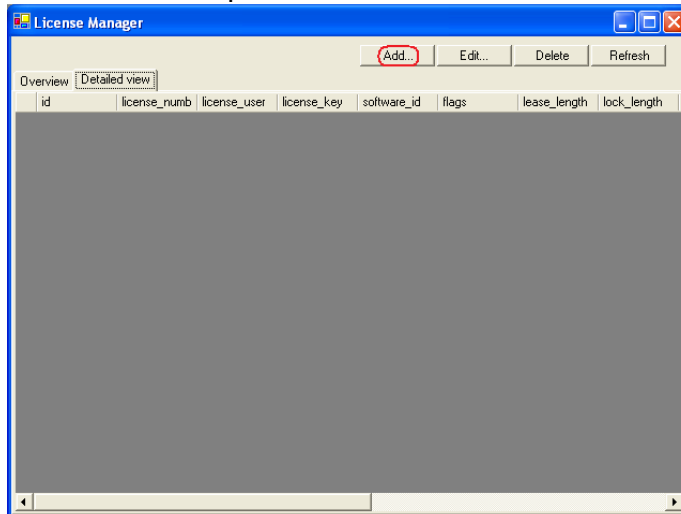


The image shows a 'License Manager Login' dialog box. It contains a dropdown menu for 'Data source' with 'SANAKO License Service' selected. Below it are text input fields for 'Username' (containing 'sanakoservice') and 'Password' (containing masked characters). At the bottom, there is a 'Remember me' checkbox and a 'Login' button.

3. Click **Detailed view** to continue.



4. Click **Add...** to open Add license window



- Enter the Study license information to the license number, license user and license key fields. There is no need to fill the other fields displayed in the add license window. Click **Add** to add a license to License Service Database.

- The added licenses are now visible in the License Manager window.

id	license_number	license_user	license_key	software_id	flags	lease_length	lock_length
1	3879202-01000	SANAKO PR	WHMDV DM	73	0	10	1440
2	3879202-01000	SANAKO PR	WHMDV DM	73	0	10	1440
3	3879202-01000	SANAKO PR	WHMDV DM	73	0	10	1440
4	3879202-01000	SANAKO PR	WHMDV DM	73	0	10	1440
5	3879202-01000	SANAKO PR	WHMDV DM	73	0	10	1440

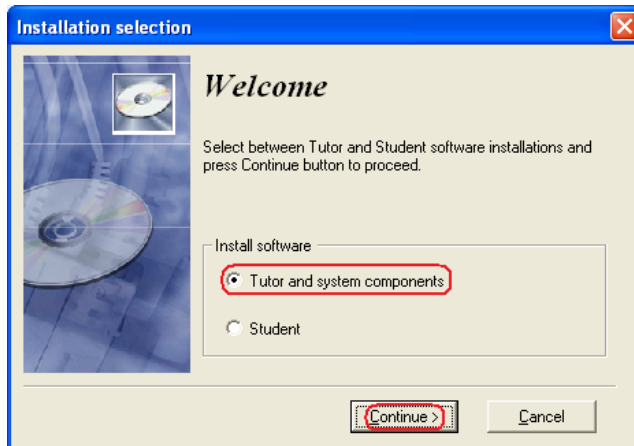
After Study licenses have been added to the License Service database you can continue with Study 500/1200 installation.

STUDY 500/1200 TUTOR AND CROSSROAD INSTALLATION

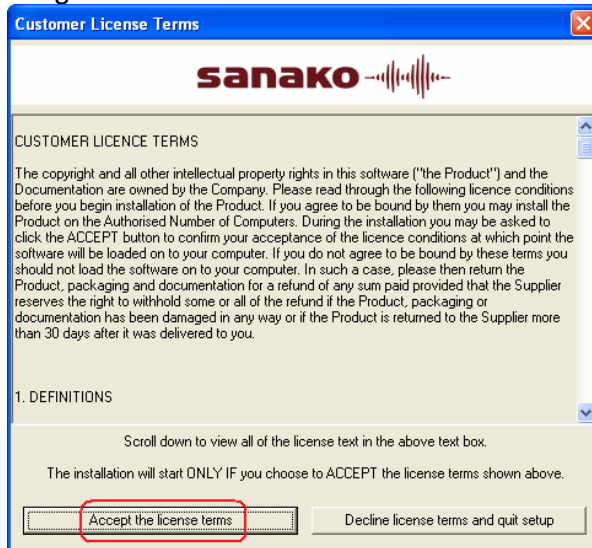
Follow the installation instructions below to install Study 500/1200 Tutor and Crossroad applications

- Start installation program by selecting Study Tutor in the Study installation CD menu

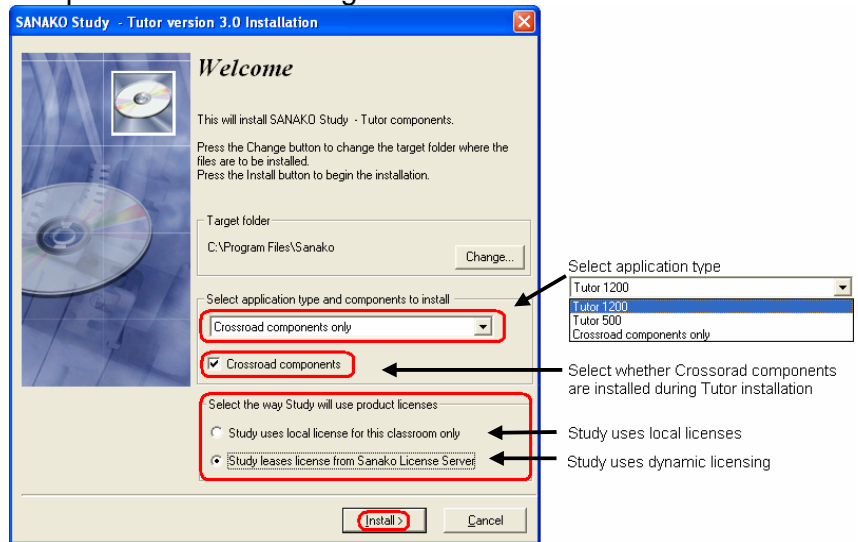
2. Select **Tutor and system components** and click **Continue**



3. Click **Accept the license terms** to start Setup Program



4. Select a target installation folder, application type, components and licensing method.



You may select between the following applications

- Tutor 1200
- Tutor 500
- Crossroad components only

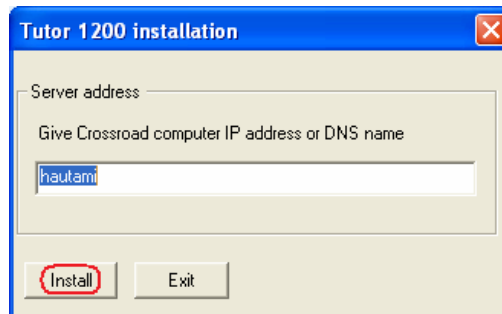
Tutor 1200 or Tutor 500 should be installed on the Teacher computer and by default Crossroad will be installed along with the Tutor installation. This is recommended if you do not have a separate server computer for the Crossroad installation. If you do have a separate server computer, install the Tutor 500/1200 application onto the Teacher computer and SANAKO Crossroad onto the server computer.

Remember to uncheck the 'Crossroad components' selection when installing Tutor 500/1200 applications only – refer to the picture above

Select your licensing method by checking between the following options:

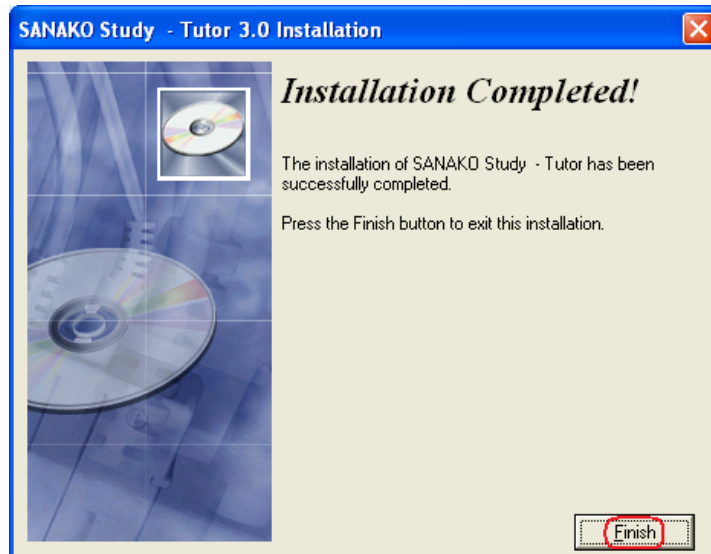
- Study uses local license for this classroom only
- Study leases license from Sanako License Server

5. When installing Tutor 1200 or Tutor 500 application, you need to define the IP address or name of the computer where Crossroad will be installed. Click **Install** to start installation.



Note: If you selected 'Crossroad components' installation, the above dialog will not be displayed.

6. Click Finish to complete the installation and to restart the Teacher PC

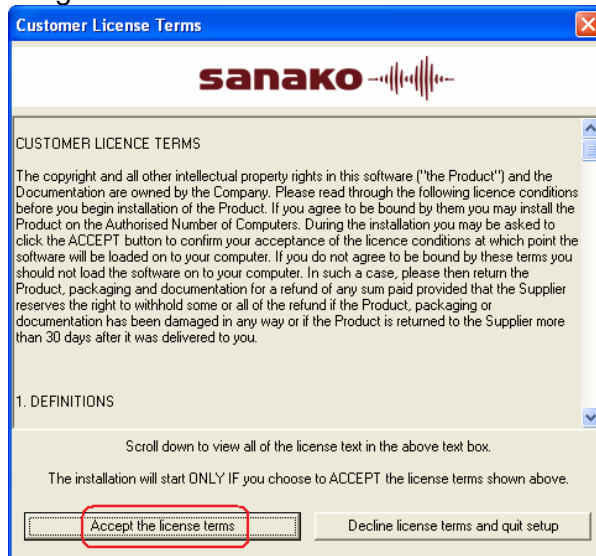


STUDY 500/1200 STUDENT INSTALLATION

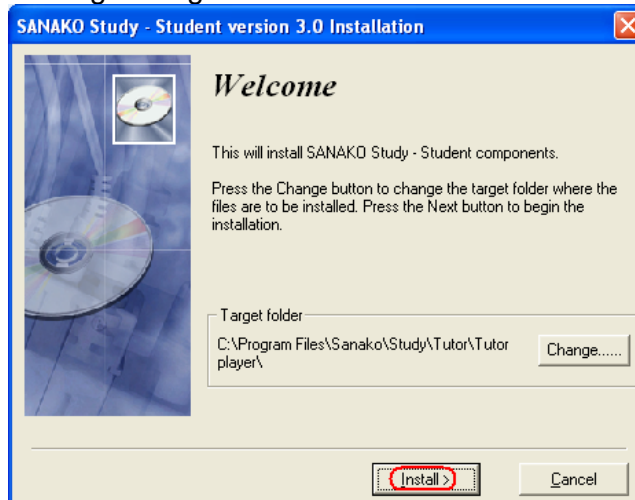
Follow the installation instructions below to install the Study Student application.

1. Start installation program by selecting Study Student in the Study installation CD menu

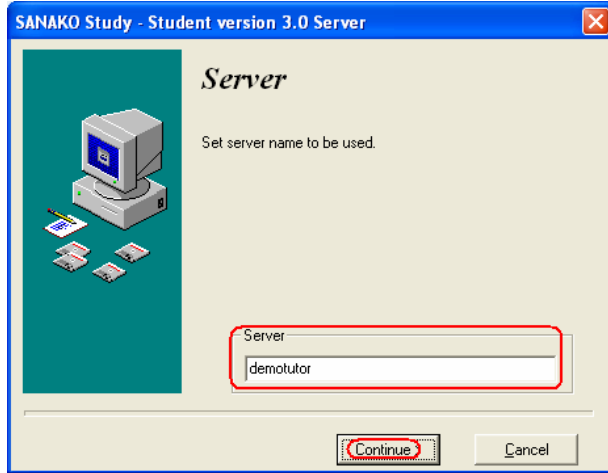
2. Click **Accept the license terms** to start Setup Program



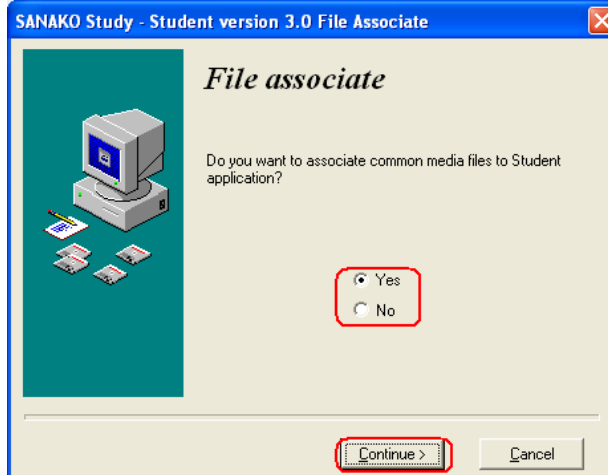
3. Click **Install** to start the Study Student installation. You may also change the target installation folder by clicking **Change...**



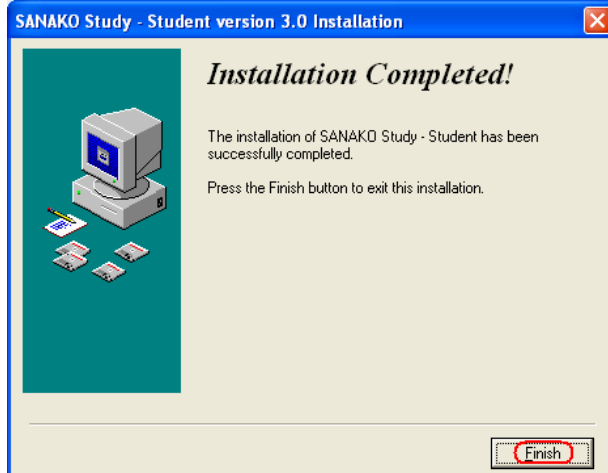
4. Define the IP address or name of the computer where the Crossroad is installed and click **Continue**.



5. Select whether to associate common media files with the Study Student application. We highly recommend that media files are associated to the Student application, especially when setting up a Study 1200 classroom. Click **Continue** to proceed with installation



6. Click **Finish** to complete installation



UPGRADE INSTRUCTIONS

Due to major changes in the Study Software it is not possible to use the Study update mechanism when upgrading from previous Study versions to version 3.0.

We recommend that you read all the upgrade instructions carefully before starting to upgrade your current Study software

STUDY STUDENT UPGRADE

Study Student software can be upgraded according to instructions described in the technical document *How to upgrade Study applications from previous versions to version 3.00.doc*, available on the SANAKO Web site.

STUDY TUTOR AND CROSSROAD UPGRADE – DYNAMIC LICENSING

If you have decided to use dynamic licensing, you can upgrade Study Tutor and Crossroad applications by performing a standard installation according to the installation instructions earlier in this guide.

STUDY TUTOR AND CROSSROAD UPGRADE – LOCAL LICENSING

If you have decided to use local licensing, you can upgrade Study Tutor and Crossroad applications by performing a standard installation according to the installation instructions earlier in this guide. After the installation is completed the product license should be entered into teacher computer as follows:

1. Browse to the following location on the teacher computer: **C:\Program Files\Sanako\Study\Tutor**.
2. Double click the **TutorBasicLicenseUpdate.exe** file
3. Enter your license information to the License Number, Responsible license holder and Licensed user ID fields

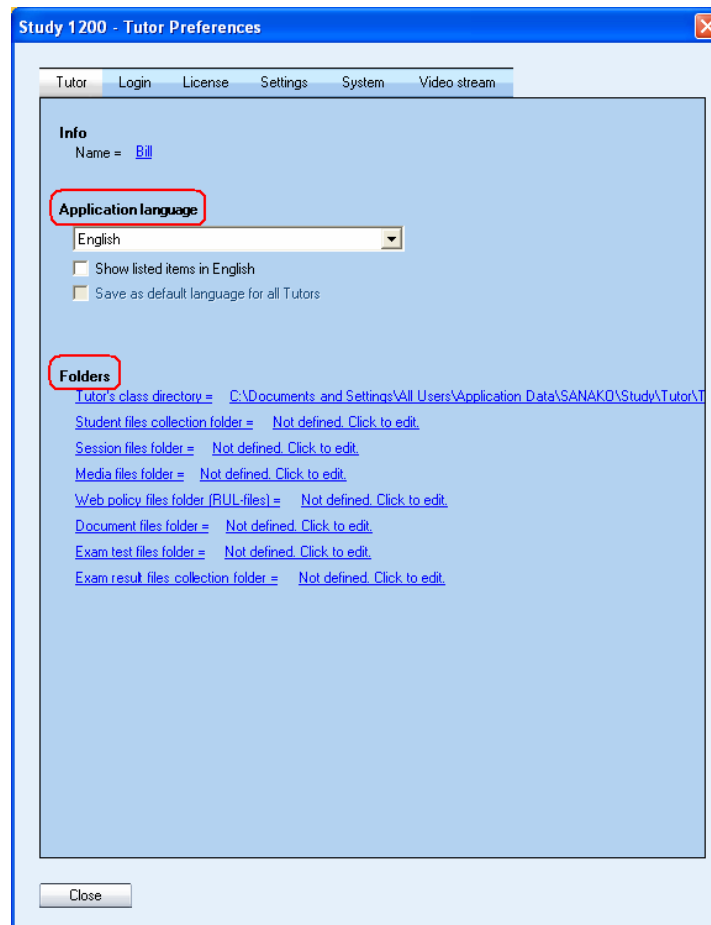
CONFIGURING STUDY SYSTEM

CONFIGURING TUTOR SPECIFIC SETTINGS

After installing Study 500/1200, the system should be configured to ensure the best possible system functionality.

Most Tutor specific settings are available under the **Tutor** tab in the Tutor application **Preferences**. To open the Preferences window, start the Tutor application and then open the **Tools** menu and select **Preferences**.

All the information in the Tutor tab is saved in a .TCF file (Tutor Configuration File).



The above window includes settings for **Application language** and **Folders**.

Application language determines the Tutor interface language. The default selection for the interface language is English. Additional interface languages can be selected in the drop down menu.

Folders settings allow you to define default locations for different folders that are accessed by Study Tutor and Student. It is recommended that these folders are located in a separate file server.

Note: The Tutor's class directory can also be located on the local teacher computer.

The table below provides information on the folders and their access rights:

Folder	Purpose Of The Folder	Teacher Access Required	Student Access Required
Tutor's class directory	Storage area for teacher's class files	Read/Write/Manage	No Access Required
Student files collection folder	Collecting student recordings	Read/Modify	Hidden Write
Session files folder	Sharing teaching content. Subfolders for sessions A,B,C,D,E,F and Tutor will be created under this folder	Read/Write/Manage	Read
Media files folder	Storage area for different media source files, which can be used during teaching activities	Read/Write/Manage	Read
Web policy files folder	Saving Web policy files, which are used during the Web browsing activity	Read/Write/Manage	No Access Required
Document files folder	Storage area for document files which are used during the reading practice activity	Read/Write/Manage	Read
Exam files folder*	Storage area for exam files, which are used during the Exam activity	Read/Write/Manage	Read
Exam result files collection folder*	Collecting exam result files from students during the Exam activity	Read/Modify	Hidden Write

*These folders are needed only if SANAKO Study Examination Module has been purchased

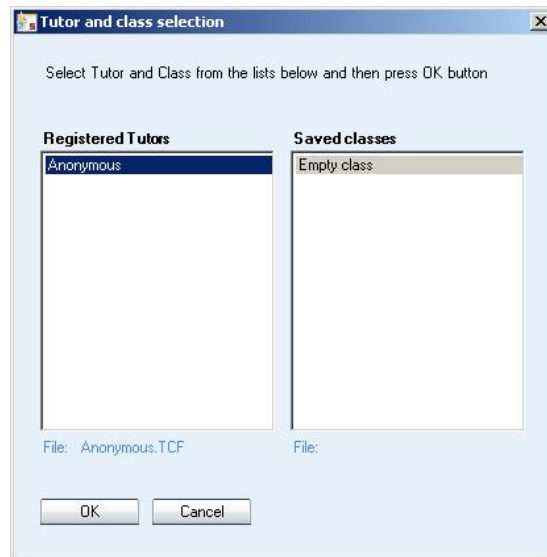
CLASS FILES AND TUTOR CONFIGURATION FILES

The purpose of Class Files and Tutor Configuration Files is to store tutor and classroom specific information in Study 500/1200. Each tutor has their own personal Tutor Configuration File, but they can have multiple Class Files. When tutors open the Study 500/1200 application they need

to select their own tutor name and the class file that they want to use.

OPENING STUDY 500/1200 FOR THE FIRST TIME

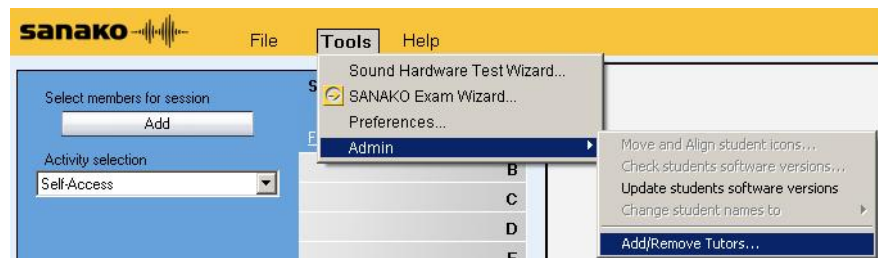
After Study 500/1200 Tutor application has been installed it is ready to be configured for further use. When the Tutor application is started for the first time, the only available login option is **Anonymous** tutor.



While logged in as Anonymous, you can create tutor names for all the tutors that will be using the system. However, the name and directory settings for the Anonymous tutor cannot be edited.

ADDING A NEW TUTOR

In order to add a new tutor to Study 500/1200, open the **Tools** menu and then select **Admin** and **Add/Remove Tutors...**



You can now enter a new tutor name that will be used for logging into the Study 500/1200 Tutor application. To set the folder where the new tutor's class files are saved, click on the **Browse** button.

After a new tutor has been added to the system, a tutor specific Tutor Configuration File (.TCF) is created automatically by the system.



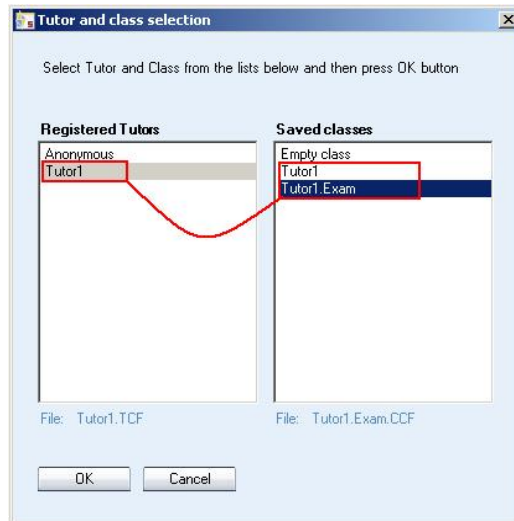
When you have entered a tutor name and defined a folder for the tutor's class files, click on **Save** and then exit the Study application. When the Study application is restarted, the new tutor name is available in the log in window.



CLASS FILES

Class files are files that store information on the current classroom layout, including student names, groups and default activities.

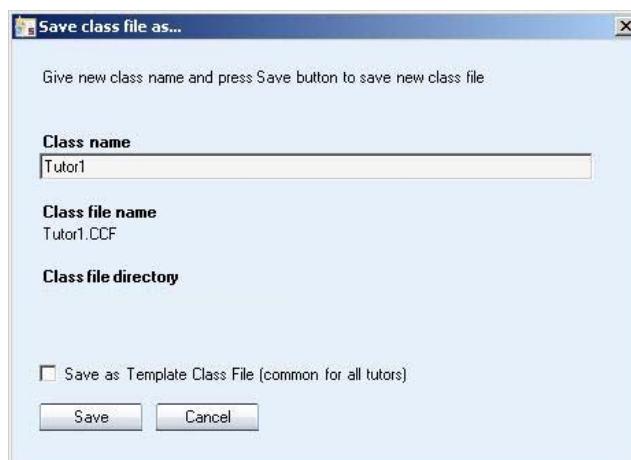
Each Tutor can own multiple personal class files (.CCF) and can select which class file they want to use when logging in.



Tutors can also manually open, save and remove class files by opening the **File** menu and selecting **Class file**.



When a class file is saved for the first time, a window opens where you can name the class file and then save it. If you save the file as a **Template Class File**, the class file will be available for all tutors when they log in.

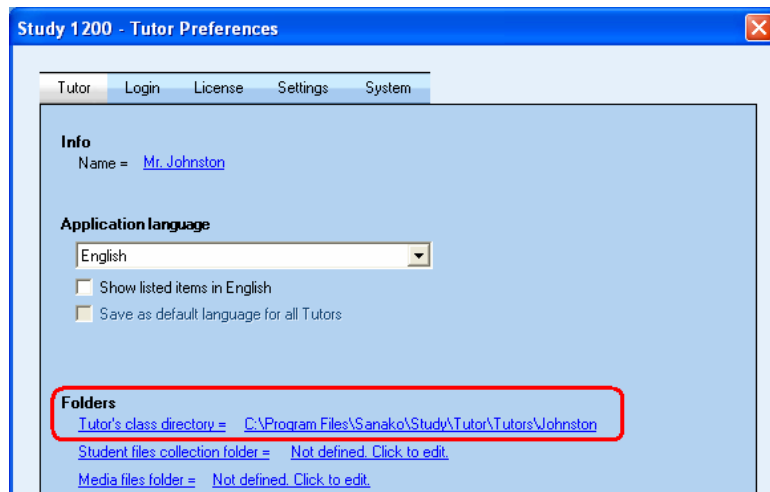


If changes have been made to the classroom settings during a lesson, Study will automatically ask you whether you want to save the changes when the Tutor application is closed.



SAVE LOCATION FOR CLASS FILES (.CCF)

To set the location where the Class Files are saved, open the **Tools** menu and select **Preferences** and then the **Tutor** tab.



TUTOR CONFIGURATION FILES

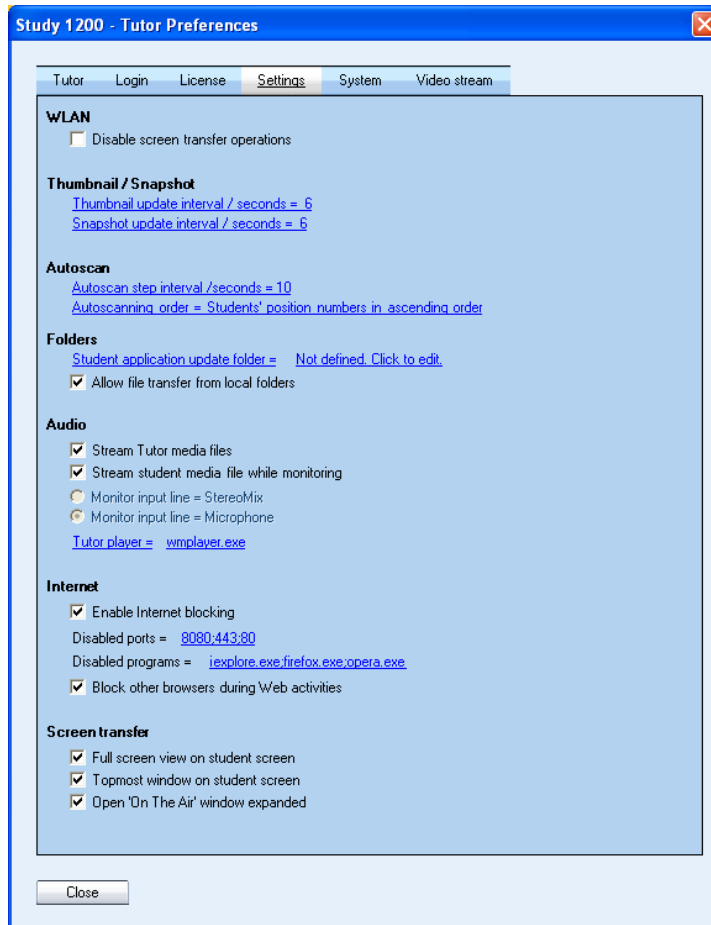
Tutor Configuration Files are files that contain the personal settings of each tutor, including:

- Tutor name
- Save folder for class files (.CCF)
- Interface language selection
- Session file folder
- Student file collection folder
- Program shortcuts for application launch
- Last used class file
- Auto scan interval
- Auto scan order

Each tutor has their own Tutor Configuration File (.TCF) which is created when a new tutor is added into Study 500/1200.

STUDY SYSTEM SETTINGS

You can set general Study system settings in the **Settings** tab of the Tutor **Preferences** window.



WLAN

Disabling the screen transfer operations will deactivate all screen transfer features in Study. This is beneficial in wireless environments where using the screen transfer operations could slow the system down.

THUMBNAIL

Set the default time for updating thumbnails and snapshots of student screens.

AUTOSCAN

Set the default time that each student screen is displayed during the autoscan function and select the order in which the student screens will be shown.

FOLDERS

Set the folder that will be used to update the student applications. Please note that the student computers must have access rights to the student application update folder.

Checking the **Allow file transfer from local folders** option will allow the teacher to copy and launch files to students from any local folder. The students do not need access rights to the folder, since the launched file will be copied to the student computer. This will also apply when a file in a local folder has been selected as the media source and when the copy and launch function is used with a file in a session file area.

AUDIO

Stream Tutor media files means that when a file is used as the audio source to students, the audio is sent as a VOIP stream instead of the students opening the file.

There are two different ways of monitoring student audio in Study.

If **Stream the student media file while monitoring** is selected, the student audio is streamed to the teacher as a VOIP stream during monitoring. The teacher will hear the student's microphone and any media file that the student may be listening to.

Note: Student microphone cannot be monitored during an activity, if the media source is Tutor player, CD audio or an External source.

If **Monitor input line** is selected the mixer audio lines are monitored and you can choose what you'll be able to hear when monitoring students. **Stereomix** allows you to hear whatever the student hears. **Microphone** means you will hear the student microphone during monitoring.

Note: Regardless of the selected option, if students are monitored while they are recording their voice, only the student voice can be heard.

The **Tutor Media Player** option allows you to select the default Tutor media player, which can then be used as a media source during the different Study activities.

INTERNET

The Internet options allow you to block Internet ports and Web browsers.

Enable internet blocking will disable all Internet traffic on student computers when the teacher uses the 'Disable Internet' function in the Tutor application PC Control features.

Block other browsers during Web activities allows the Web browser applications opened by the teacher, but prevents students from opening any other browser applications.

SCREEN TRANSFER

The Screen Transfer settings are used when a Tutor or Student screen is shared to others.

STUDY AUDIO SETTINGS

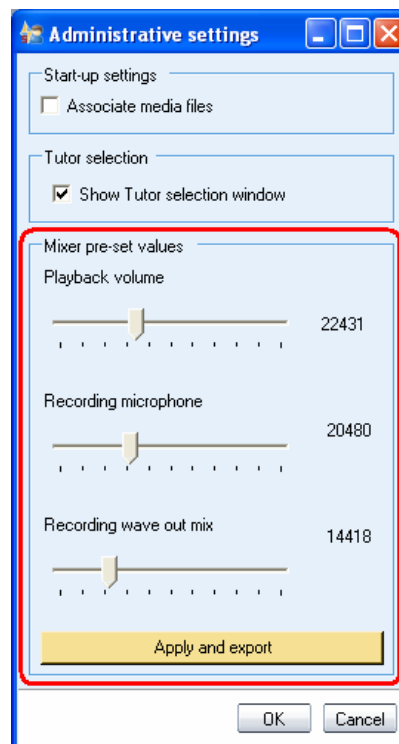
TESTING SOUND HARDWARE COMPATIBILITY

SANAKO Study includes an inbuilt application for testing whether the sound hardware on a given computer is compatible with Study. To test your sound hardware compatibility, open the Tutor or Student **Tools** menu and select **Sound Hardware Test Wizard**.

STUDENT AUDIO LEVELS

To adjust the mixer level settings for a student, open the Student **Tools** menu and select **Admin** and then **Settings**.

Note: In order to access the Admin settings you need to be logged in with Administrator rights.

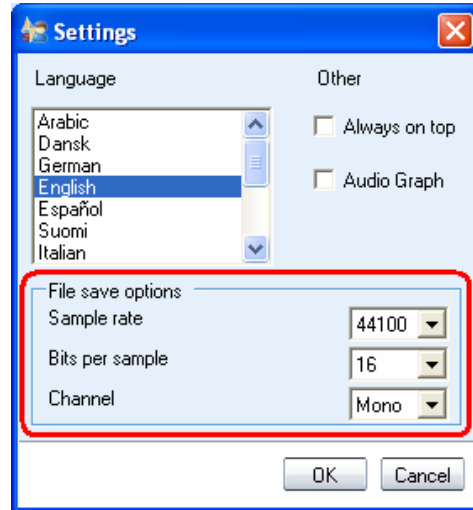


The **Mixer pre-set values** allow you to set default audio levels for the player

Clicking the **Apply and export** button creates a registry file of the current audio levels, which can then be, for example, launched with the Tutor application to student workstations in order to ensure that all computers have the same default audio levels.

SETTING DATA PROPERTIES FOR SAVED AUDIO FILES

To set data properties for saved student recordings, open the Student **Tools** menu and then select **Settings**.



STARTING THE STUDY SYSTEM

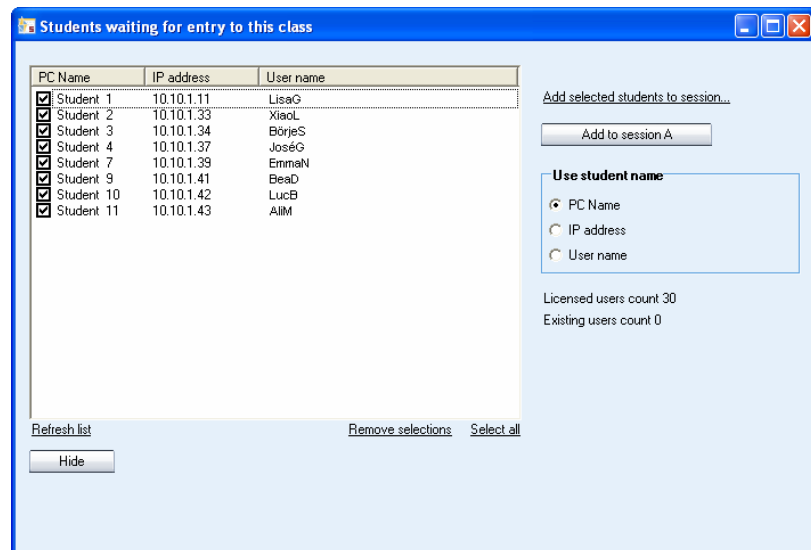
STARTING STUDY TUTOR

After the installation, you are ready to start Study. To start Study Tutor, open the Windows **Start** menu (lower left corner on your screen) and select **Programs – SANAKO Study 1200 – Tutor**.

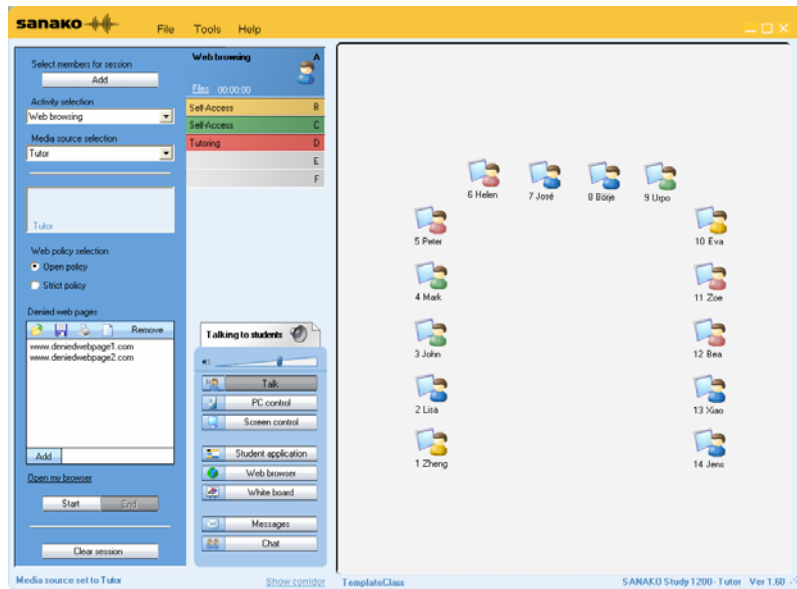
CREATING A DEFAULT CLASS

When you start the Tutor application for the first time, the main window of Study opens without any student icons. You can now add students to the classroom and create a default class layout.

To add student computers to the classroom, click on **Show Corridor** at the bottom of the Tutor application. This opens a dialog displaying all the student computers in the classroom that are switched on.



You can now select the students you want to include in the class. To add all the students to the classroom, click **Select All** and then **Add to session A**. The student icons are now added to the classroom.



To save the current classroom layout as the default class, open the **File** menu and then select **Class file** and **Save**.

STARTING STUDY STUDENT

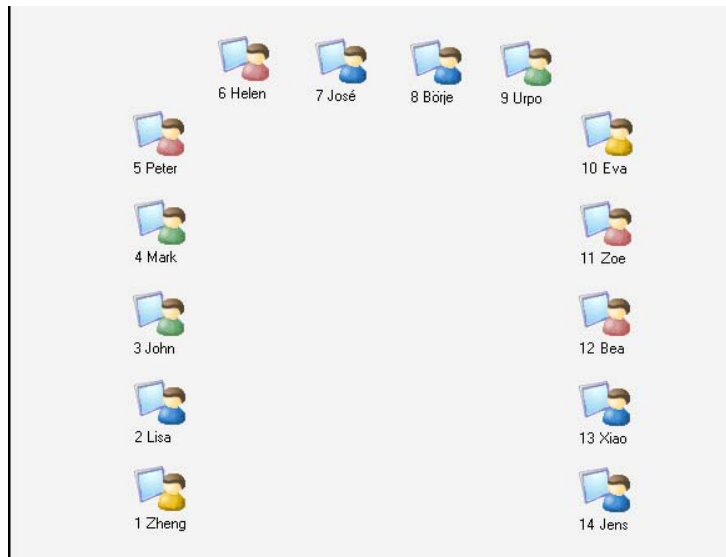
To open the Study Student interface, click the Windows Start menu and select **Programs – SANAKO Study Student – Study Student**. The teacher can also at any time display or hide the Student applications on student workstations by clicking on the **Student Applications** button on the Tutor interface.

Even if the Study Student application is not open on the student screen, it is always running in the background listening to commands from Study Tutor when the workstation is on.

STUDENT ICONS

CLASS VIEW

The Study class view is a graphical layout of your class. Your students are displayed as student icons that reflect their current status.

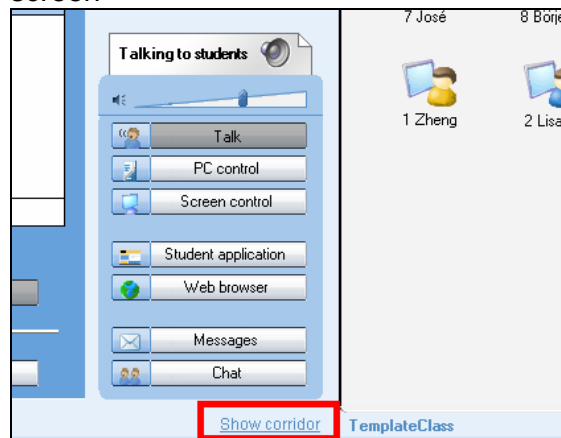


The student icons are also color-coded according to the session they are in, allowing you to see at a glance, which session the students belong to.

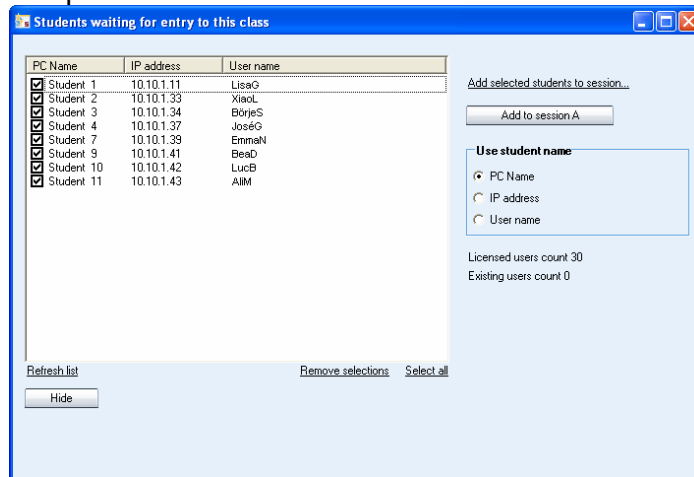
ADDING STUDENTS

To add more student workstations to the current classroom:

1. Click on **Show Corridor** at the bottom of the Tutor screen



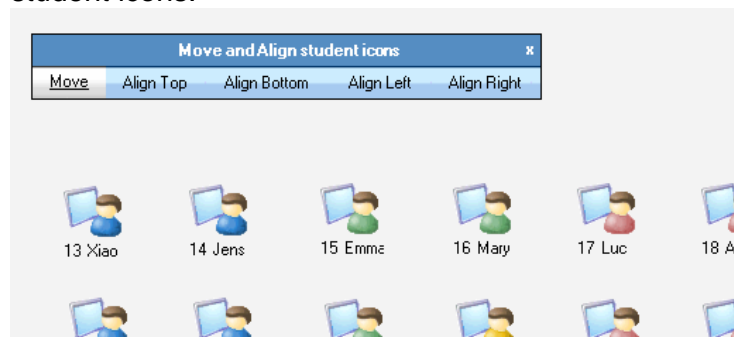
- This opens a dialog displaying all the student computers in the classroom that are switched on.



- Select the students you want to add and click **Add to session A**, or if you want to assign them to specific sessions, click **Add selected students to session...**
- The added students are now displayed on the classroom view.

MOVING AND ARRANGING STUDENT ICONS

You can rearrange the student icons on the layout to correspond with your actual classroom. Open the **Tools** menu and select **Admin – Move and align student icons...** to open a panel with commands for moving and arranging student icons.



To move a student icon, select **Move** and hold your mouse button down over the student icon.

To align student icons, select one of the alignment options, hold your mouse button down and drag the mouse pointer over the student icons that you want to align.

You can also move student icons at any time by holding down the **Ctrl** and **Shift** buttons on your keyboard and holding your left mouse button down over a student icon.

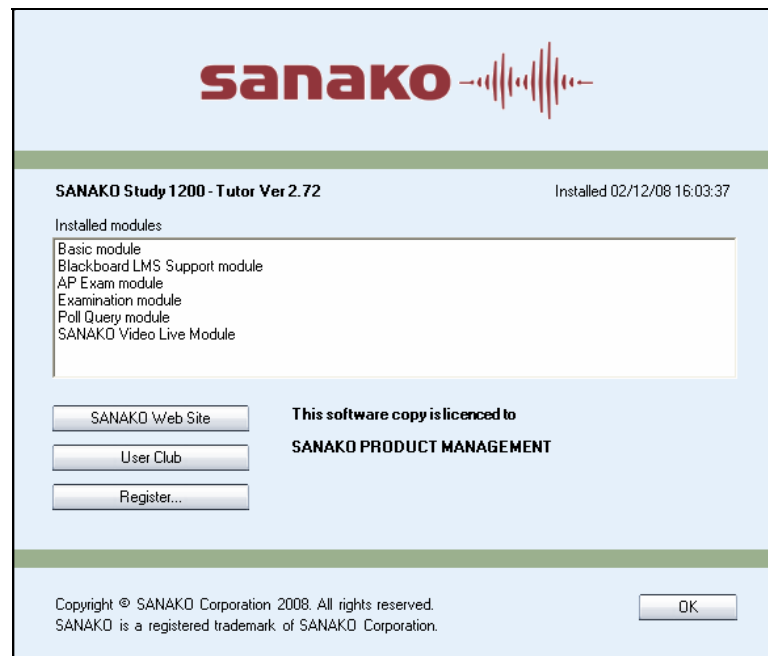
REMOVING STUDENTS

To move a student from the class back to the corridor, right-click a student icon and select **Send to corridor**. The student can then be selected to another class by another teacher.

To remove a student and the student icon from the class view, right-click a student icon and select **Exclude from class (and layout)**. Once the student icon is removed, the classroom configuration can be saved as a new class.

VIEWING PRODUCT INFORMATION

Open the Tutor or Student **Help** menu and select **About** to open a window displaying product information, your software version, and the Study modules that you have installed.



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