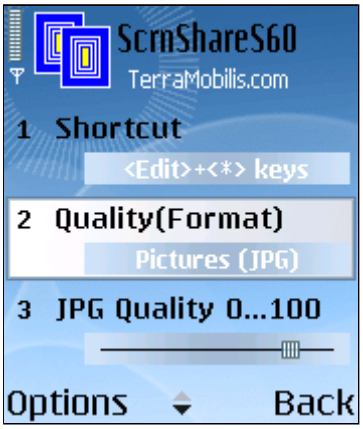
SCREENSHARES60 USER MANUAL

1. General description

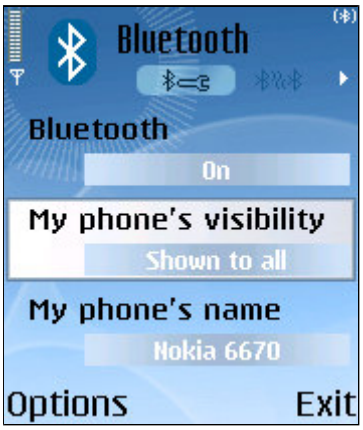
ScreenShareS60 is a tool which allows you to share the screen of your phone with other users who can connect to your phone via bluetooth and receive on their phone a copy of the screen image of your phone.

ScreenShareS60 is ideal for sharing pictures or showing a demo of the latest S60 software application you installed on your phone. You can draw the attention to a particular detail by moving a special arrow pointer to it!

When enabling camera mode ScreenShareS60 allows you to take and share pictures of documents, objects, your computer screen... or turns your phone into a genuine phonecam taking and displaying moving images which can be viewed remotely on a second phone.



It is possible to send screens in different sharing modes (continuous, interval or single mode) and in a variety of qualities and formats (High, Text, Pictures and Low), set delay and interval times, customize the notification message (visual message and/or tone), configure the shortcut keys and specify memory location, directory name and file name when saving a screen.



1. Quick start guide

ScreenShareS60 is easy to use. This "Quick start guide" will get you up and running. Go to the next chapters for more detailed and/or reference information. In order to avoid any confusion, the following terminology will be used in the remainder of this manual:

Master : phone sending screens to 2nd phone (slave)

Slave : phone receiving screen images from the master

ScreenShareS60 has to be installed on both the master and the slave on which it respectively behaves as a "server" (master) and a "client" (slave).

a. Install & launch ScreenShareS60 on master & slave

b. On both phones: switch bluetooth on

c. On the slave: set bluetooth visibility to "Shown to all"

d. On the master: select Options | Start Bluetooth

e. On the slave: select Options | Connect

f. On the slave: select master on the "Devices found" list

g. On the master: select Options | Start screensharing

h. On the master: navigate to screen to share

i. On the master: press shortcut keys (*) to pause screensharing

j. On the master: move arrow pointer with the joystick

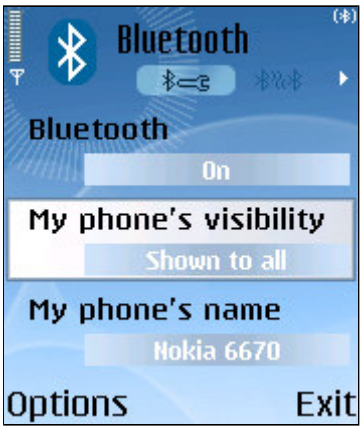
k. On the slave: image of the screen of the master and the arrow pointer are shown

l. On the master: select Options| Resume scrnsharing to continue screensharing

(*) Shortcut key combinations (default: <Edit> + <*>) allow you to start and stop screensharing when ScreenShareS60 is switched to the background. The <Edit> key is the key with the "pen" symbol (see picture on the left). First press the <Edit> key, then while keeping it pressed, press the <*> key.

To go to camera mode select Options | Go to camera mode before connecting the phones via bluetooth. Select JPEG with quality 50.

The default settings allow you to use ScreenShareS60 in "Continuous mode" and "Text" quality. Select Options | Change settings to choose different settings.



2. Bluetooth settings : visibility and pairing

ScreenShareS60 is a bluetooth application sending information between two phones connected with each other via bluetooth, a short range wireless communication method. Before any bluetooth connection can be active, the bluetooth settings on both phones have to be correct. For increased ease of use it is recommended to "pair" the phones with each other in order for bluetooth connections to take place automatically without confirmation. Also, all information sent over the bluetooth link is encrypted and will only be able to reach devices that are authorized to do so by the pairing process. Although pairing phones is a standard procedure (which is clearly described in any phone user manual), it is also described in detail in Appendix 1. If you are familiar with bluetooth settings and pairing, go to chapter 2.

The bluetooth settings screen can be opened as follows:

a. Press the menu key to open the menu

b. Open the "Connectivity" folder

c. Click the bluetooth icon

In order for ScreenShareS60 to work, the following minimum bluetooth settings are required:

ON YOUR PHONE (MASTER)

a. "Bluetooth" setting item set to "On"

b. "My phone's visibility" setting item set to "Shown to all"

ON THE OTHER PHONE (SLAVE)

a. "Bluetooth" setting item set to "On"

Remark: when the "Bluetooth" setting item on the slave is set to "Off", the phone will prompt you to switch it to "On" when trying to connect by displaying the message: "Bluetooth is currently switched off. Switch on?"

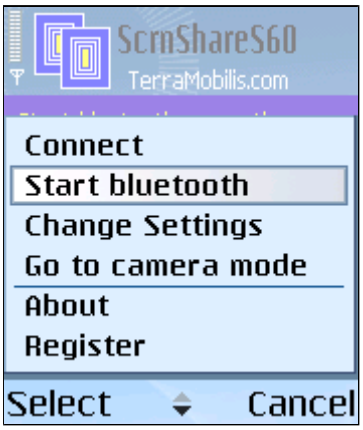
It is also important to know that Symbian phones may be limited to one active bluetooth connection at any one time. So the connection will fail if the phone is e.g. already connected to your PC for use with PC Suite. You will have to disconnect the phone before you can use ScreenShareS60.

3. Starting up ScreenShareS60

When starting up ScreenShareS60, you are presented with a start-up screen providing you with a summary of instructions to use ScreenShareS60:

- start the bluetooth connection

- start sharing screens.



4. Starting the bluetooth connection

The procedure to connect the master phone with the slave phone via bluetooth consists of 2 phases:

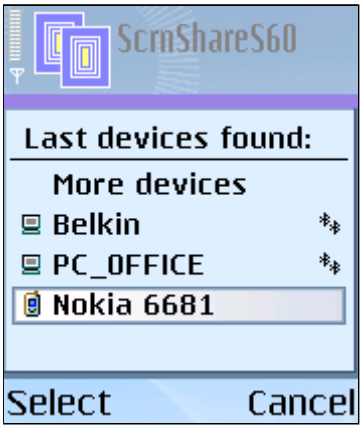
a. Master : start bluetooth

The master is started by selecting Options | Start Bluetooth.

A waiting dialog " Waiting For Connection" is displayed indicating that the master phone is now waiting for the slave phone to connect.

b. Slave : connect

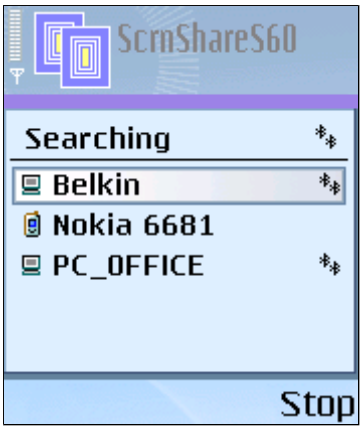
The slave is connected to the master by selecting Options | Connect on the slave phone.



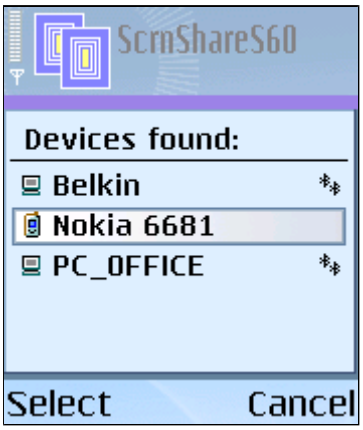
If previously bluetooth devices have been found they are displayed (Last devices found) and can be selected for connection. This speeds up the connection process as it avoids having to go through the bluetooth search process.

If the phone with which a connection has to be established is not listed, select "More devices" to start a new bluetooth search process.

If previously no search process has taken place or no devices have been found, the bluetooth search process starts immediately after selecting the "Connect" menu item.



Wait until the right device has been found. You can stop the bluetooth search process by pressing the right selection key (Stop) as soon as your device has been found. This avoids having to wait until all bluetooth devices have been found which potentially can take a long time.

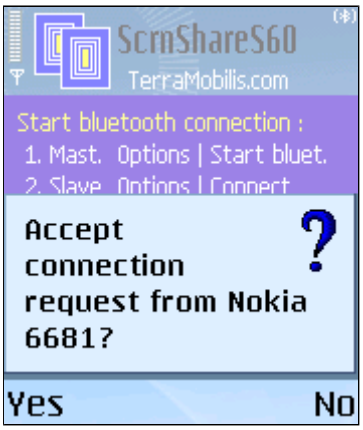


Select your device and press OK.

A "Searching for service" dialog is displayed.

When the master phone has not been properly set up, a "Service not found" error message is displayed.

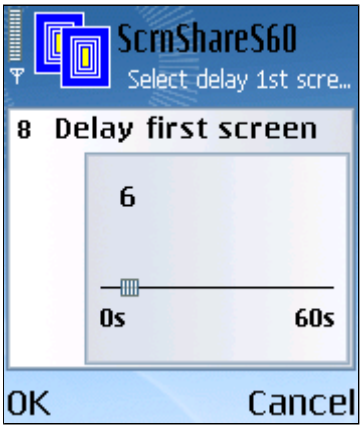
If the master and slave are paired and the bluetooth connection of the master is "set as authorised" the bluetooth connection is established automatically and the message "Slave connected" is displayed (see below).



When the master and slave are not paired with each other (see Appendix 1) or when they are paired but the bluetooth connection is set as unauthorised, the connection will have to be manually accepted by the master.

In some cases (e.g. when 2 devices are connected for the first time) pairing will be required (if it has not yet been established) and a passcode will have to be entered on both the master and the slave. The device will appear in the list of "paired devices".

When the confirmation dialog "Slave connected" is displayed on both the master and the slave, the slave is connected to the master and is ready to receive screen images.



5. Start sharing screens

Starting the screensharing can only be done on the master which completely controls all screensharing aspects.

There are 2 methods to start sharing screens:

- Press a shortcut key combination e.g. <Edit> + <*>

- Select the "Start screensharing" item on the options menu

The shortcut key is the default method, enabling to conveniently start (or stop) screensharing using the phone while ScreenShareS60 is switched to the background.

The "Shortcut" setting allows to select one of 3 possible shortcut key combinations:

<Edit> + <*>

<Edit> + <0>

<Edit> + <OK>

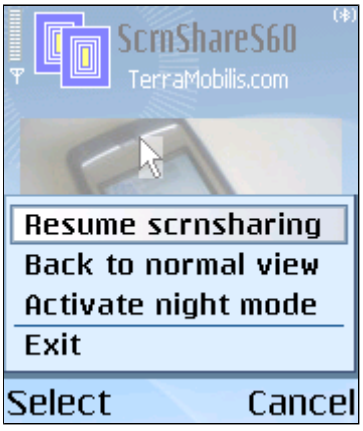
The shortcut keys are toggle keys allowing to consecutively start and stop screensharing by repeatedly pressing the shortcut key combination.The selected shortcut key combination is displayed on the start-up screen for easy reference.

The behaviour of ScreenShareS60 following the start-up of screensharing depends on the mode. In screen mode ScreenShareS60 is automatically switched to the background. In camera mode ScreenShareS60 is automatically switched to the foreground in order to display the camera viewfinder.

The method using the options menu item can be used in combination with the setting "Delay first screen", allowing time to switch to the screens you want to share after selecting the "Start screensharing" menu item.

In single shot camera mode, setting "Delay first screen" allows to keep the camera still while the picture is taken.

The master is notified when screensharing has started (or stopped). The notification can take the form of a visual message, a tone (camera click sound) or both. It is also possible to deactivate all notifications (see the "Notification" setting item).



6. Stopping the screensharing and bluetooth

Similarly to starting the screensharing, the screensharing can be stopped using either the shortcut keys or the "Stop screensharing" menu item of the Options menu on the master. A notification message is displayed when screensharing has stopped. Stopping the screensharing is only applicable in continuous or interval mode, not in single mode.

Immediately following the stopping of screensharing - both in screen mode and in camera mode - ScreenShareS60 is automatically switched to the foreground and the last screen image sent to the slave is displayed.

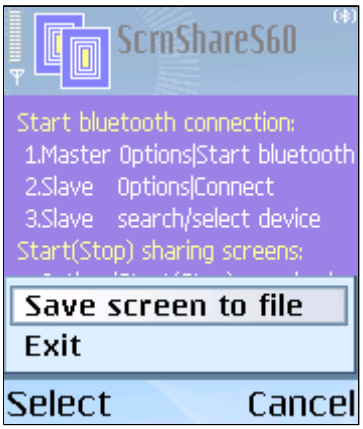
An arrow pointer is also displayed on the master which can be moved around using the joystick to point to a specific part of the screen. This arrow pointer is sent to and displayed on the slave (the pointer only becomes visible on the slave after having been moved on the master, hence not disturbing the slave screen image when no use is made of it).

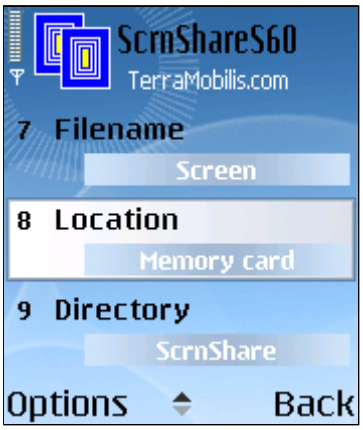
This feature makes it possible to see the screen image exactly as it has been received by the slave (allowing to check the quality and if needed adjust the quality settings, avoiding having to verify the slave phone!) and allows to use the arrow pointer while discussing the screen image. This feature is also available in single mode, each screen image taken being displayed together with the arrow pointer. When stopping ScreenShareS60 in screen mode via the Options menu item, the last sent screen image is NOT displayed.

Screensharing can be resumed by selecting Options | Resume scrnsharing. Alternatively, "Back to normal view" can be selected to go back to the default instructions or camera viewfinder screen.

This feature is also accessible via the "View last sent scrn" Options menu item. The "View last sent scrn" menu item is only available when the bluetooth connection is active and no screensharing is taking place. The arrow pointer is only available when the last sent screen is still being displayed on the slave. When no screen image is available to view (e.g. after start up, before any screen images have been sent to the slave), a "No screen image available" error message will be displayed.

After the screensharing has been stopped, the bluetooth connection is still active. To stop the bluetooth connection select Options | Stop bluetooth. The slave will be disconnected from the master and a "Disconnected!" message will be displayed on the slave. Stopping the bluetooth connection can be useful to connect to another device, as only one bluetooth connection can be active. The image on the slave is cleared when bluetooth is stopped.





7. Saving a screen received on the slave to a file

At any moment the slave can save a screen image to a file for future reference by selecting Options | Save screen to file.

It is possible to specify exactly where and under which name the screen image is saved.

The "Filename" setting allows you to specify the filename.

The "Location" setting is a toggle function allowing to select either the phone memory or the memory card.

The "Directory setting" prompts you for a directory name. If the directory (path) does not already exist, it is automatically created for you.

A notification message is displayed when the file is saved, showing the complete path under which the image file is saved.

Screen images can be saved while screensharing is taking place.

When no screen image is available to save (e.g. after start up, before any screen images have been sent to the slave), the "No screen image available" error message will be displayed.

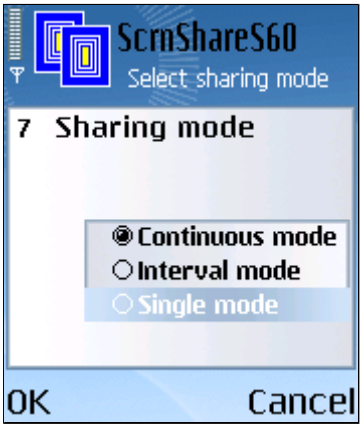
IMPORTANT!

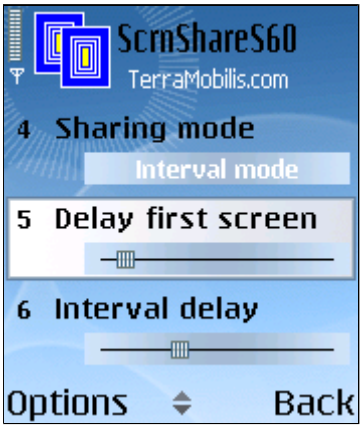
The directory specified by you is created under the "images" directory in the root directory of the memory card (E:\Images for Nokia phones!) when you choose the memory card as location and under the default phone memory "images" directory (C:\Nokia\Images for Nokia phones!) when you select the phone memory as location.This is done as S60 phones only provide access through the default file manager to certain directories in order to prevent access and possible irreparable damage to system files. So, when using the default file manager you will see a directory "Images" both on the memory card and on the phone memory (Nokia Phones). When using the freeware FExplorer filemanager you can see the full directory paths.

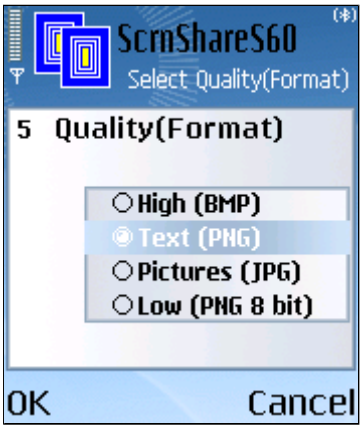
A 4 digit serial number is appended at the end of the filename (e.g. Screen0025) in order never to overscribe previously saved screen images .

The file is saved with the correct extension according to the selected screen quality/format setting on the master.

When insufficient memory is available on the phone memory, the screen will not be saved and a notification message will be displayed.







8. Screensharing modes

ScreenShareS60 offers 3 different screensharing modes:

- Continuous mode

- Interval mode

- Single mode

Continuous mode is the default sharing mode whereby screen images are taken repeatedly on the master and sent to the slave as fast as possible. Due to the limitations of bluetooth transmission speeds, sending speeds will not be much higher than about one screen per second, still enough to comfortably following on the slave phone what is happening on the master phone.

In Interval mode the time between the sending of successive screen images can be specified in the "Interval delay" setting from 1 sec to 60 sec.

In Single mode individual screens are taken and sent at demand, one at a time. This can be useful to draw attention to specific information on certain screens (freeze mode). In this mode the shortcut keys do not work in toggle mode. Each consecutive shortcut key press will result in the sending of one screen image.

9. Screen image quality and format

ScreenShareS60 supports a wide range of image qualities/formats which can be chosen based on requirements of image quality and sending speed / refresh rate.

Available qualities / formats:

- High (BMP true color: bitmap, non-compressed format)

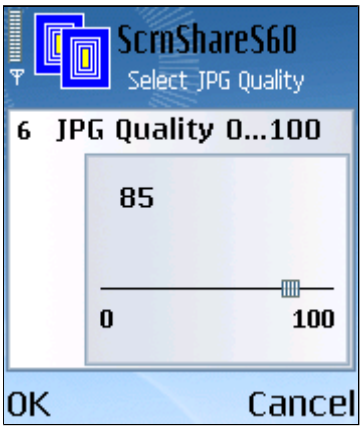
- Text (PNG true color: compressed, for text based screens)

- Pictures (JPEG : compressed, ideal for photos)

- Low (PNG 8 bits)

The actual number of bits per pixel for true color depends on the phone model. A screen image in PNG 8 bit format can be as small as 5 kbyte and still offers good quality for text based screens while allowing a high sending speed.

For the JPEG format, the quality can be chossen on a continuous scale from 0 to 100, allowing fine tuning of the JPEG quality, compared to the traditional high/medium/low quality scale.



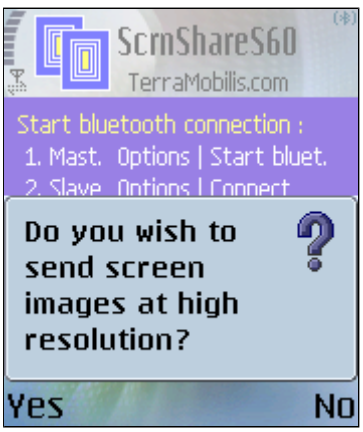
For normal use in continuous mode it is recommended to use Text quality (PNG true color) as this is the best compromise between quality and speed (approximately one screen per second).

When using Picture quality (JPEG), a JPEG quality of 85 is recommended which results in a picture quality which is not noticeable lower than the original image while still maintaing good response speeds (one image per second).

When sending single screens (e.g. when showing individual pictures) High quality (BMP) can be used, however with sending speeds going down to one image about every 5 seconds.

When the sending speed is very important (e.g. when showing a demo of an application with primarily text based screens) Low quality (PNG 8 bits) can be chosen.

10. Support for high resolution screens (Nokia N90)



The screen size of all S60 2nd Edition pre Feature Pack 3 phones is 176 pixels (width) on 208 pixels (heigth). S60 2nd Edition Feature Pack 3 introduces high resolution screens, the most important screen size being 352 x 416 (Nokia N90 is currently the only 2nd edition phone with a high screen resolution, Nokia N70 is a 2nd edition Feature Pack 3 phone but features the standard 176 x 208 screen size).

Two issues arise:

- How to send screens between devices with different resolutions

- How to cope with the much higher files sizes and hence lower sending speeds of high resolution phone screen images.

These issues are solved by a combination of automatic detection of the screen resolution of the slave, image scaling, the right choice of image formats and a "screen resolution" setting item allowing maximum flexibility for the user to define his preferences.

This "screen resolution" setting item will only appear when you install ScreenShareS60 on a phone with a high resolution screen (Nokia N90).

The "screen resolution" setting item offers 4 options:

"Ask confirmation"

Each time screensharing is started with a high resolution slave phone, the user is prompted to confirm whether the

screen images are to be sent in their original high resolution format (352 x 416). Images are automatically scaled down to 176 x 208 size when the slave phone is a low resolution phone (no confirmation is asked). This is the default setting when installing ScreenShareS60 and offers a compromise between image quality, sending speed and user control.

"Always low"

Screen images are always sent at low resolution even when the slave phone has a high resolution screen. This setting should be selected when the sending speed is priority.

"High when slave high"

Screen images are sent at high resolution only when the slave has a high resolution screen. This setting is used to share screen images between two high resolution phones, without image quality loss (images are sent in their original format). If the slave has a low resolution screen, the images are automatically scaled down and sent at low resolution.

"Always high"

Screen images are always sent at high resolution even when the slave phone has a low resolution screen. Images received by the slave are scaled down before they are displayed at low resolution. This setting could be useful if the screen images received on the slave have to be saved to a file at high resolution for further use (e.g. transfer to PC).

RECOMMENDATIONS AND REMARKS

Sending screen images at high resolution is much slower, so only select this option when absolutely necessary.

When sending screen images at high resolution, always use a compressed image format (PNG or JPEG) as the BMP format results in very high image file sizes (400 kbyte) and would take very long to send (maybe BMP could be used occasionally when sending a single screen image).

Scaling down images causes important quality loss, hence using ScreenShareS60 between a high resolution phone (master) and a low resolution phone (slave) results in suboptimal operation.

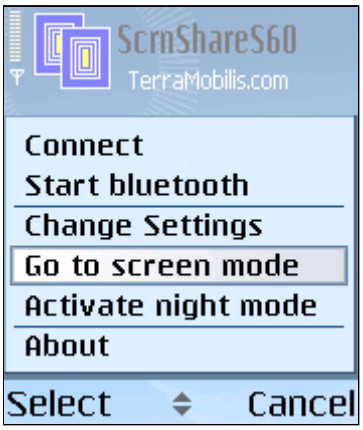
When a high resolution phone used as a slave receives low resolution images from a low resolution master, screen images are scaled up before they are displayed. This results in good quality display, though at low resolution.

11. Camera mode

Select Options | Go to camera mode to activate camera mode. This menu item is a toggle function between camera mode and screen mode.

To use camera mode, ScreenShareS60 needs to be registered.

Camera mode needs to be selected before connecting the phones via bluetooth (the camera mode menu item is not visible once the phones are connected).



Select Options | Go to screen mode to go back to screen mode.

As soon as camera mode is selected , camera viewfinding is started. Use the up and down keys of the joystick to respectively zoom in or out. Zoom levels may vary between phones (from 4 times to 20 times).

Use the procedure described above to connect via bluetooth and start screensharing with another phone. A replica of the viewfinder image will be displayed on the slave phone.

Camera mode can be used either as a remote "phonecam" or to take and sent individual pictures.

All functions and settings are available when in camera mode, however the recommended settings for optimum camera/phonecam use are mentioned below.

REMOTE PHONECAM

- Quality/format : Pictures(JPG)

- JPG Quality : 50

- Sharing mode : continuous

These settings result in the rendering of moving images with an acceptable quality. Even better rendering of moving images can be achieved with a JPG quality of 30, however with a lower quality.

High(BMP) quality in combination with Interval sharing mode can be used to watch high quality snapshots at regular intervals.

INDIVIDUAL PICTURES

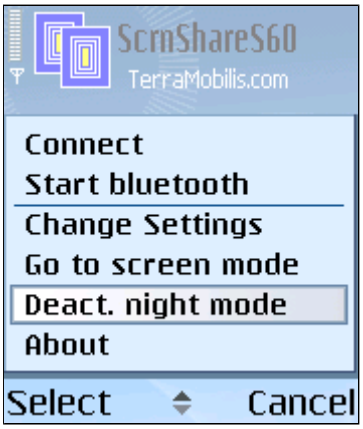
- Quality/format : Pictures(JPG)

- JPG Quality : 85

- Sharing mode : single

High(BMP) quality can be used for images with a lot of detail.

The camera mode also supports high resolution screens (see chapter 10).



When in camera mode an additional toggle menu item is available to switch between normal and night exposure mode. Night exposure allows to use the camera mode when the light conditions are not optimal, which is often the case when using a phone camera indoor. However, there is an additional delay to take pictures in night mode, resulting in less fluent rendering of moving images. Both the camera and bluetooth are quickly draining the battery, so for extended use leave the master phone connected to the charger.

Typical use of ScreenShareS60 as a phonecam application involves leaving the screensharing session active in the background and regularly switching ScreenShareS60 to the foreground to check the camera images. Switching ScreenShareS60 to the background also enables the standard screen light time out function (Screen light stays on during screensharing when ScreenShareS60 is in the foreground, see chapter 17). So don't leave ScreenShareS60 in the foreground while not using the phone in order to save battery time.

12. Other options menu items

One setting is accessible via the options menu - and not via the settings dialog - as it has to be readily accessible from the main screen and typically is only switched on during brief periods:

"activated / deactivated mode" for shortcut keys

The "Deactivate shortcuts" function is a toggle menu function between deactivating and activating the shortcut keys used to start/stop screensharing.Typically this would be used to allow other applications to use a shortcut combination in case of conflict. Remark however that there is a choice of 3 different shortcuts in order to avoid this kind of conflicts.

This setting is not stored when exiting ScreenShareS60. When starting up the default setting is "Activated".

The options menu also features an "About" screen with essential information about ScreenShareS60 and registration information.

You will notice the options menu is a dynamic menu. Menu items are only displayed when they are relevant and logical e.g. Connect and Start bluetooth menu items are not visible after the bluetooth connection is active, the Start screensharing menu item is only visible after the bluetooth connection is active, the Change settings menu item is not visible while screensharing is ongoing...

Finally the "exit" menu item closes ScreenShareS60.

The soft "back" button at the right sends ScreenShareS60 to the background, ready to start / stop screensharing using the shortcut keys.

13. Settings

The settings dialog comprises 10 settings as outlined above. An additional screen resolution setting is available for high resolution phones (Nokia N90). Settings can be changed by selecting Options | Change settings. All settings are saved when exiting ScreenShareS60.

Settings applying to the use of ScreenShareS60 as master:

- Shortcut

- Quality(Format)

- JPG Quality 0 ...100

- Sharing mode

- Delay first screen

- Interval delay

- Notification

- Screensize (Nokia N90)

Settings applying to the use of ScreenShareS60 as slave:

- Filename

- Location

- Directory

14. Registration

The trial version of ScreenShareS60 is available as a free download. All functions and features except camera mode are enabled without time limit. However, the screen image quality is fixed at JPEG with quality factor 15 (quality/format settings are disabled). To unlock ScreenShareS60 a registration code needs to be purchased.

When purchasing ScreenShareS60 at Handango a 5 digit registration code is made available. During the on-line purchasing process, the IMEI-number (a unique 15 digit phone identification number) has to be provided. For your convenience, The IMEI number of your phone is displayed at the bottom of the "About" screen (Options | About), under the "Trial version" label.

The registration dialog is launched by selecting Options | Register.

To register ScreenShareS60, you simply enter the 5 digit registration code in the input box.

When the correct registration code has been entered a confirmation dialog is displayed and ScreenShareS60 is registered. Once registered the registration code is displayed under the "Registered version" label at the bottom of the "About" screen, replacing the IMEI-number.

An "invalid registration code" message will be displayed when entering a wrong code.

Registration has to be done only once. The registration code is saved by ScreenShareS60. Only when reinstalling ScreenShareS60 on your phone, you will need to re-enter the registration code.

It is important to realise that ScreenShareS60 only needs to be registered when used as a master. A registered version of ScreenShareS60 on a master can share screens with any slave on which a trial version of ScreenShareS60 is installed.

It may be useful to store the ScreenShareS60 .sis installation file on your phone in order to be able to transfer it to other phones with which you want to share screens, allowing quick installation and set-up of ScreenShareS60. Unfortunately forwarding of .sis files from one Nokia phone to another via bluetooth is blocked on some phones, so you will have to swap memory cards to install ScreenShareS60 on the other phone.

15. Notifications

At many moments, notification messages are displayed. Below an overview of all messages:

"Screen saved in xxx"

"Screensharing stopped" / "Screensharing started"

"Phone memory full! Screen not saved! Delete data before trying again!"

"ScreenShareS60 activated"/"ScreenShareS60 deactivated"

"Screen sent"

"Invalid registration code"

"ScreenShareS60 registered"

"No screen image available"

Bluetooth connection notifications:

"Service not found"

"Slave connected"

"Waiting for connection"

"Disconnected"

"Connection lost"

"Could not connect"

"Unknown error"

Camera mode notifications

"Camera mode activated" / "Screen mode activated"

"Camera in use by another application"

"Please register ScreenShareS60 to enable camera mode"

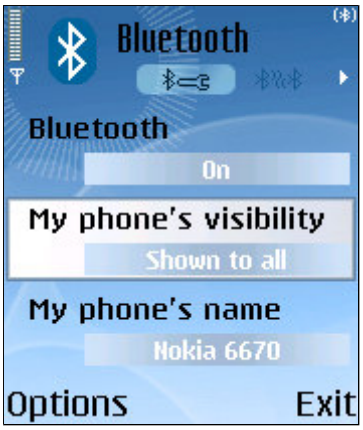
16. Other remarks

Each time a screen is received by the slave the light time-out is reset in order to automatically keep the screen light on during screensharing avoiding to repeatedly have to press a key to switch the screen light back on. This feature is only active when ScreenShareS60 is in the foreground. When switching ScreenShareS60 to the background by pressing the back key, the light time out will function as normal again. So don't leave ScreenShareS60 in the foreground while not using the phone in order to save battery time.

Settings are not saved when upgrading.

The actual time it takes to take and send a screen image has to be added to the interval time in order to know the total interval time.

When frequently using ScreenShareS60, it may be a good idea to configure it as one of the 5 standby applications (only on some phones) or even have it assigned to the left or right selection key.



Appendix 1 : bluetooth pairing instructions

Make sure the bluetooth setting items " Bluetooth" and "My Phone's visibility" are respectively set to "On" and "Shown to all" on the phone with which you want to pair.

a. Browse to the right tab on the bluetooth settings screen

b. Select Options | New paired device

c. Wait while phone is searching for other phones

d. Select desired phone when devices are found

e. Enter pass code (any 4 digit code)

f. Enter the same pass code on the other phone

g. Message : "Pairing with <name other phone> complete"

h. The other phone now appears in the "Paired devices" list

i. Select the other phone in the "Paired devices" list and select Options | Set as authorised in order for connections to take place automatically without confirmation which greatly simplifies the use of ScreenShareS60

j. Repeat i. on the other phone

Remarks

The pairing process can be initiated from either phone.

For security reasons the "Set as authorised" settings in Steps i. and j. should only be used when the other phone is a trusted device.

Pairing only has to be done once, it remains valid after switching the phone off and on (the pass code does not have to be remembered).

As mentioned above, it is possible to use ScreenShareS60 without pairing the phones, but each time you try to connect, the master will be prompted to manually accept the bluetooth connection ("Accept connection request from ...?").

Appendix 2 : bluetooth communication

Some technical details on bluetooth, file sizes and speeds:

The theoretical speed of bluetooth is 721 kbps (kilobits per second), but in reality it is more likely to be around 200 kbps (= 25 kbyte per second) , of course dependent on the phone, more recent phones featuring higher speeds (Bluetooth 2.0).

Image file sizes for an average 176 x 208 screen image:

- Bmp true color : 107 kbyte (fixed size , no compression)

- PNG true color: 5 to 15 kbyte depending on image

- JPEG with quality 85 : 20 kbyte depending on image

- PNG 8 bit : less than 5 kbyte

When taking into account the bluetooth speed and the delays caused by internal processing of files within ScreenShareS60, it becomes clear that sending speeds will at best be around one screen per second, which is however sufficient for the purpose of sharing your phone screen with others.

Different generations of bluetooth:

- Bluetooth 1.2 (Nokia 6670,7610,6630,6680/6681/6682)

- Bluetooth 2.0 (Nokia N70)

The speed of bluetooth 2.0 can be up to 100 % higher than bluetooth 1.2 which unfortunately does not fully compensate for the 4 fold increase of screen image size (352 x 416) of high resolution screens (N90).

Appendix 3 : typical use cases

USE CASE 1 CONTINUOUS SCREEN MODE TEXT

In this mode the screen images of the master are sent repeatedly to the slave, as fast as possible (in practice about 1 screen image every second).

Application: software demo

Start: "Start screensharing" Options menu item

Stop: shortcut keys (sent screen view / arrow pointer)

Settings: Text (PNG 24 true color / 8 bit), continuous mode

USE CASE 2 CONTINUOUS SCREEN MODE PICTURES

In this mode the screen images of the master are sent repeatedly to the slave, as fast as possible (in practice about 1 screen image every second).

Application: share pictures

Start: "Start screensharing" Options menu item

Stop: shortcut keys (sent screen view / arrow pointer)

Settings: JPG with quality 85, continuous mode

USE CASE 3 SINGLE SCREEN MODE

In this mode individually selected screen images of the master are sent to the slave.

Application: share specific information , slave not allowed to see certain information (confidentiality)

Start/Stop: shortcut keys (sent screen view / arrow pointer)

Settings: high quality (BMP, PNG true color), single mode

USE CASE 4 SINGLE CAMERA MODE

In this mode individual camera pictures are taken and sent to the slave.

Application: share pictures of documents, objects, persons,...

Start/Stop: "Start screensharing" Options menu item in combination with "Delay first screen" (sent screen view / arrow pointer)

Settings: JPG with quality 85 or BMP, single mode, delay first screen

USE CASE 5 CONTINUOUS CAMERA MODE

In this mode camera pictures are taken and sent repeatedly to the slave, as fast as possible.

Application: phonecam for moving images (monitoring)

Start: "Start screensharing" Options menu item

Stop: "Stop screensharing" Options menu item (sent screen view / arrow pointer)

Settings: JPG with quality 50, continuous mode

USE CASE 6 INTERVAL CAMERA MODE

In this mode high quality individual camera pictures are taken and sent to the slave at regular time intervals.

Application: phonecam for still images (monitoring)

Start: "Start screensharing" Options menu item

Stop: "Stop screensharing" Options menu item (sent screen view / arrow pointer)

Settings: JPG with quality 85 or BMP, single mode, interval delay