

smartControl - User Guide

Version 01.01



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Revision History

Version	Created	Note
1.01	04.10.2006	First version

Introduction

smartControl is an application which allows remote-controlling Symbian OS smartphones. The solution consists of an application running on the mobile phone and a viewer application which shows the phone display on the pc screen. This combination offers the possibility to control the phone using a PC.

A connection between phone and PC can be established in different ways:

1. via USB data cable connection
2. via wireless connection (WLAN)



Figure 1: smartControl viewer connected to the phone

1 **Evaluation version**

smartControl is being provided as a demo version which features some limitations.

1.1 **Limitations**

The evaluation version neither cuts down functionality nor does it limit the trial period. It does constrain the usability in the following aspects:

Limitation	Description
Timelimit of the sessions	A remote session is being closed automatically after a random time interval (two to five minutes).
Pause between two sessions	After closing a session it is impossible to reconnect within the next 60 seconds.
Watermark in the display area of the viewer	The display of the phone on the pc is watermarked. Screenshots are also watermarked.

1.2 **Full version**

To remove the limitations and unlock the full version, a personalized license is required.

The afore-mentioned limitations are removed as soon as the license is installed.

1.3 **Obtaining a license**

Information about how to obtain a smartControl license can be found on our web site

<http://www.smartphone-solutions.com/>

2 System-Requirements

Mobile phone	
Operating system	Symbian OS 9.1, S60 3rd edition (e.g. Nokia E50, E60, E61, N80)

PC	
CPU	minimum 600 MHz
RAM	minimum 256 MB RAM
Operating system	Windows 2000 or XP
Connectivity	USB data cable and/or possibility to access the PC via WLAN
Software	Java Runtime Environment 1.5.0 or higher Nokia PC Suite supporting the phone

The connection via data cable is supported by all phones.

Connections via WLAN are only possible if the mobile phone supports WLAN.

Java Runtime Environment - Download:

<http://java.sun.com/javase/downloads/index.jsp>

Nokia PC Suite - Download:

<http://www.nokia.com/pcsuite>

3 Installation

Before the phone can connect to the pc, two components need to be installed.

3.1 Viewer

The viewer-application is usually distributed as a file archive. It needs to be extracted to a directory of choice. To check whether a suitable Java Runtime Environment (JRE) is installed, the viewer should be started by executing the file "smartControl.exe" which can be found in the installation directory.

3.2 Phone

The application "smartcontrol.sisx" (which is also contained in the file archive) has to be installed on the mobile phone, e.g. via Nokia PC Suite.

To do so connect the phone via data cable, double click the file "smartControl_S603rd.sisx" and follow the instructions. If you encounter any problems regarding the installation please see the PC Suite documentation.

The installed application can be found in the menu of your phone (depending on the phone used it may reside in a subfolder).

4 User interface: viewer

The viewer can be divided in different areas (see next figure):

- (1) Current state
- (2) Statistics
- (3) Message window
- (4) Key window
- (5) Menu bar
- (6) Display
- (7) Phone skin



Figure 2: smartControl viewer

4.1 Current state

This field describes the current state of the viewer. The following states may occur:

State	Description
Device not connected	The phone is not connected to the viewer.
Checking local ports	The viewer checks the pc for local ports and prepares them for incoming connections.
Waiting for connection	The viewer listens on the ports and waits for an incoming connection.
Device connected	The connection between viewer and phone has been established.

4.2 Statistics

The statistics area displays information about the current session.

4.3 Message window

Messages relevant to the user are shown in the message window. These include state changes and license information.

4.4 Key window

The key window logs key presses the viewer sends to the phone.

4.5 Menu bar

The top menu bar offers settings and ways to customize the look of smartControl. Those options are described later on.

4.6 Display

This area shows the exact same picture the phone displays.

4.7 Phone skin

The phone skin can be set to match the controlled phone. It also allows the user to send key events to the phone.

4.8 Menu bar – Phone

This allows the user to select a phone skin which is used to display the display of the phone. The most current models are included, future models may be included with updates. If you have questions about the support of a specific phone please contact us (see chapter "Contact").

4.9 Menu bar- Options

4.9.1 Color mode

The color mode used may be adjusted here. There are several supported modes, both grayscale and color modes. The lower the mode is, the higher the frame rate gets ("the faster the display shows the changes of phone display"). When using data cable or WLAN connections the highest mode is usually suitable. This menu also allows to reduce the resolution of the transferred picture. This also results in a higher frame rate. Again, using data cable or WLAN connections usually does not require this setting to be activated.

4.9.2 Show key boundaries

This setting paints borders around the keys of the phone skin (if a skin featuring keys is selected). This is helpful to determine what keys may be used. Please note that this setting does not activate/deactivate the function of the phone skin keys.

4.9.3 Enable keyboard input

With this setting activated also key presses on the pc keyboard are transferred to the phone. Please note that a mobile phone does not support all available characters of a pc keyboard.

4.9.4 Check for updates

This option performs a check for online updates, for details see chapter 4.9.5.2. Please note that there must be an active internet connection to obtain updates.

4.9.5 Setup

This option opens the setup dialog, which offers the options described as follows. The changes are saved by clicking "OK". Selecting "Cancel" discards any changes. Please make sure the file "smartControl.ini" is not set to be read-only as smartControl could not save any settings then. Any changes made may require a restart of the viewer.

4.9.5.1 Connection

The connection setup allows the user to select whether connections to the phone may be established via data cable, WLAN or both. The speed of the data cable connection may be lowered. This should only be done if problems occur using the default speed. The listen port for incoming WLAN connections may be changed. The default port is 2202. This port needs to be reachable from your phone connected via WLAN. No other application should listen for connections on this port. Please note that cable speed and listen port need to be the same on both phone component and viewer.

4.9.5.2 Online updates

smartControl is able to update itself. It checks for updates every time it is started. Updates may include new phone skins, add new features or fix some problems. It is recommended to have the auto update setting activated. The server stated in the top field is searched for updates. Usually there is no need to change this. If you require a proxy to connect to the internet you should enter the information in the text fields below and activate "Use proxy". If you can not connect to the update server please contact smartphone solutions GmbH to obtain the correct update server address data.

Important note: For the update to work it is important that the file "smartControl.exe" is not set to be read-only.

Future updates for the phone component may be available on our web site.

4.9.5.3 Miscellaneous

The miscellaneous panel allows the selection of the viewer language. It is also able to restore the default configuration.

4.10 Menu bar – Capture

4.10.1 Screenshot

Selecting screenshot creates a screenshot of the currently displayed picture in a subfolder of the installation directory. It is named "capture". Screenshots are saved using the jpeg format. Possibly selected zoom factors do not have any influence on the file created. The color depth and resolution setting, however, do influence the quality of the screenshot.

4.11 Menu bar - View

4.11.1 Zoom

This options allows the user to scale the phone skin for better usability. Different zoom ratios are available.

4.11.2 Always on top

Whenever this option is activated the smartControl viewer will reside on top of all other windows.

5 User interface: phone component

The component installed on the phone also has a user interface. It can be started by clicking the smartControl icon. Depending on the phone used it may reside in a subfolder of the main menu.



Figure 3: smartControl icon

After opening smartControl the user interface shows up.

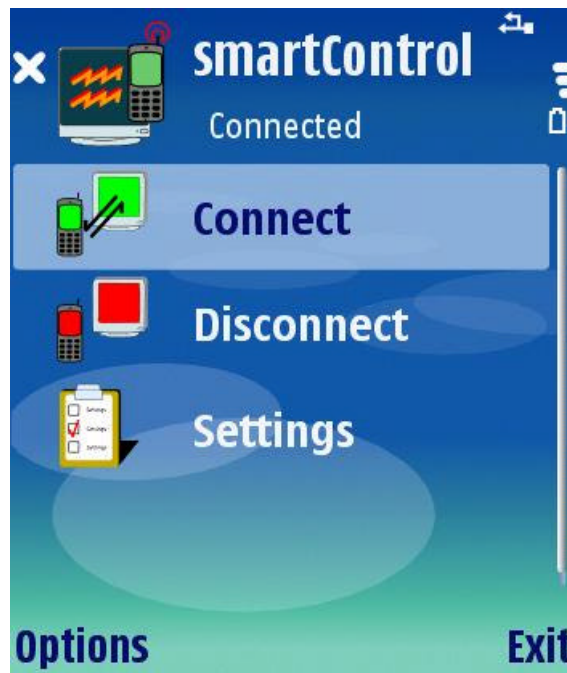


Figure 4: phone component user interface

Just below the headline the current state is displayed. The following states may occur:

State	Description
Idle	The application is idle, there is no active connection.
Connecting	The application tries to connect to the viewer using the selected bearer (Cable, TCP/IP)
Connected	The connection between viewer and phone has been established. The evaluation version displays the remaining session time next to the state.
Locked	The time displayed next the state is remaining before a new connection may be requested. This only applies to the evaluation version.

The option "Connect" starts a connection to the viewer. After choosing it, it allows the selection of the connection to be used. "Access point" tries to establish a connection via a predefined access point. This would typically be a WLAN access point. The other option connects via data cable.

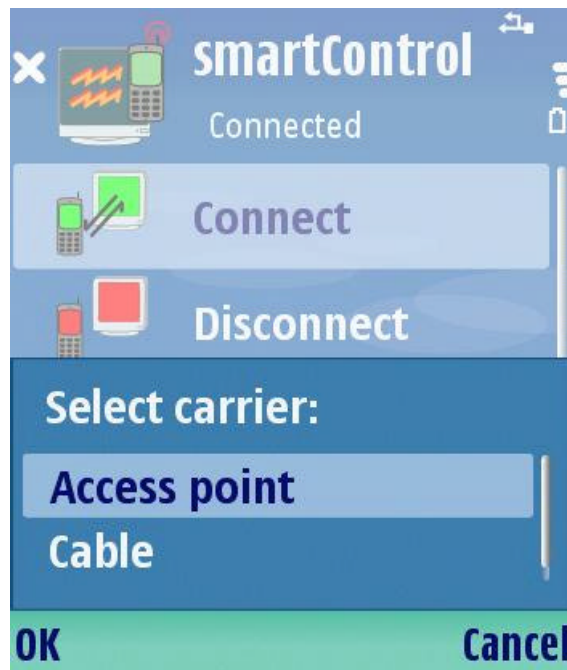


Figure 5: Starting a connection

„Disconnect“ quits any existing connection. Clicking „Settings“ opens the configuration panel. The configuration panel features two tabs which can be switched by clicking left/right.

The APN panel takes a host to whom the connection shall be established. The port may also be entered. Please note that the port must be the same as the one configured in the viewer (default is 2202).

The panel “Cable” only allows setting the connection speed from “normal” to “slow”. This should only be done if there are problems the “normal” setting. Please note that both phone component and viewer need to have the same setting configured.



Figure 6: Settings - APN



Figure 7: Settings - Cable

5.1 Establishing a connection

To establish a connection start the smartControl viewer on the PC and select "Connect" from the phone component user interface. If you choose to use the data cable be sure to have it plugged in and select "PC Suite" when the phone asks for the mode to use. If it does not ask you the mode for usb connections is not set to "always ask". You can set the mode to use in the phone menu. To do so see the documentation that came with your phone.

If you choose to connect via APN (usually WLAN) be sure to have an appropriate access point configured. Connections via this access point must be able to reach the PC that runs the viewer.

5.2 Closing a connection

The connection is alive until the user selects "Disconnect" in the phone component or closes the viewer. The connection may also break due to connection problems (especially some WLANs are not as stable as they should be). In this case the viewer waits for a new connection. It is not necessary to restart it.

6 Troubleshooting

The following table lists some typical problems and ways to solve them.

Problem	Possible reason	Solution
The viewer display is watermarked.	smartControl is running in evaluation mode.	Obtain a license, see chapter 1.3.
The screenshots taken are watermarked.	smartControl is running in evaluation mode.	Obtain a license, see chapter 1.3.
The sessions always break down after a few minutes.	smartControl is running in evaluation mode.	Obtain a license, see chapter 1.3.
After a session has ended a new session can not be established. After 60 seconds a new connection may be made.	smartControl is running in evaluation mode.	Obtain a license, see chapter 1.3.
After rotating the picture the colors displayed by the viewer are wrong.	The color depth of the pc is too low.	Increase color depth of the operating system to 24 or 32 bit. This is due to a bug in the Java Runtime, it may be fixed in a later JRE release.
The connection can not be established when using cable mode. The phone component state immediately changes back to "Idle".	The data cable is not properly plugged into the phone.	Plug the cable into phone again. You should see a small USB symbol in the title bar of the phone.
Connections break down very often when using WLAN.	The phone lost the connection to the access point.	Try other WLAN hardware or check if the phone is always in range of the access point. Unfortunately, some access points may lose connections quite often.
Connections break down very often when using USB data cable.	The phone lost the connection to the PC.	Check the plug of the data cable. Those plugs sometimes are very sensitive to being moved around.

		Don't move the connected phone around and check if connections still break down.
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If you encounter further problems feel free to contact us.

7 Contact

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