

Live2Phone Personal TV

Version 1.0

User's guide

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Overview

Live2Phone Personal TV is a mobile television solution developed following a client-server model. **Live2Phone Personal TV Server** is the central component of the system. It is installed on a personal computer equipped with a TV Tuner. The server will grab audio/video data from the TV Tuner hardware and stream it to the mobile phone. This way the user do not depend on a predefined set of channels streamed from our servers, instead he can see any TV channel available at home and he can, as well, stream other video sources, for example the output of a DVD player.

The **Live2Phone Personal TV Server** is running on Windows XP or Windows 2000 computers and the client is installable on S60 3rd Edition Symbian phones.

System requirements

- Server recommended:
 - Intel® DualCore or AMD® Athlon processor personal computer.
 - TV Tuner (with high quality antenna or cable for TV reception).
 - Broadband Internet connection (256Kbps or more)

- Phone:
 - Symbian S60 3rd Edition
 - Broadband Internet connection: WiFi, 3G, a.s.o.

Quick start

■ Installation and startup:

- Unzip and start setup program for **Live2Phone Personal TV Server** on PC.

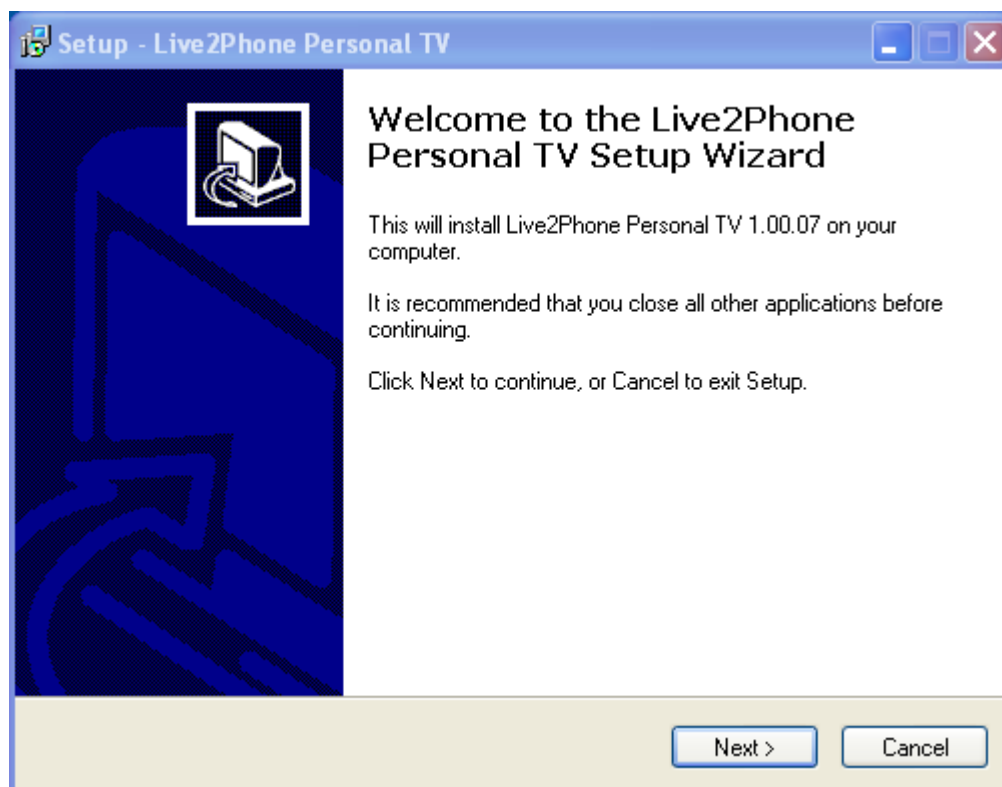


Image no. 1

- Start Live2Phone Personal TV Server.
- Enter TV Tuner Settings

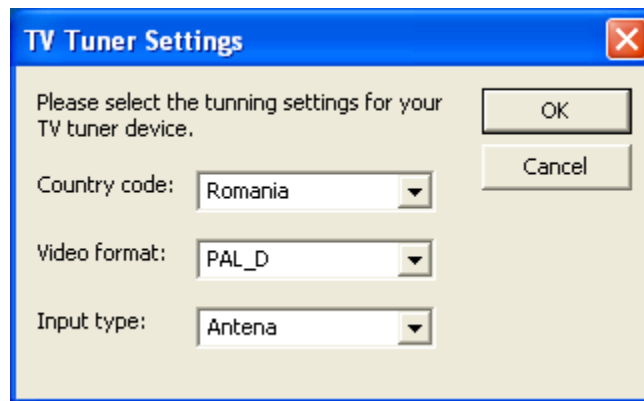


Image no. 2

- Enter Phone IMEI and registration key when requested. Allow access to the server by marking "Has access" check box.

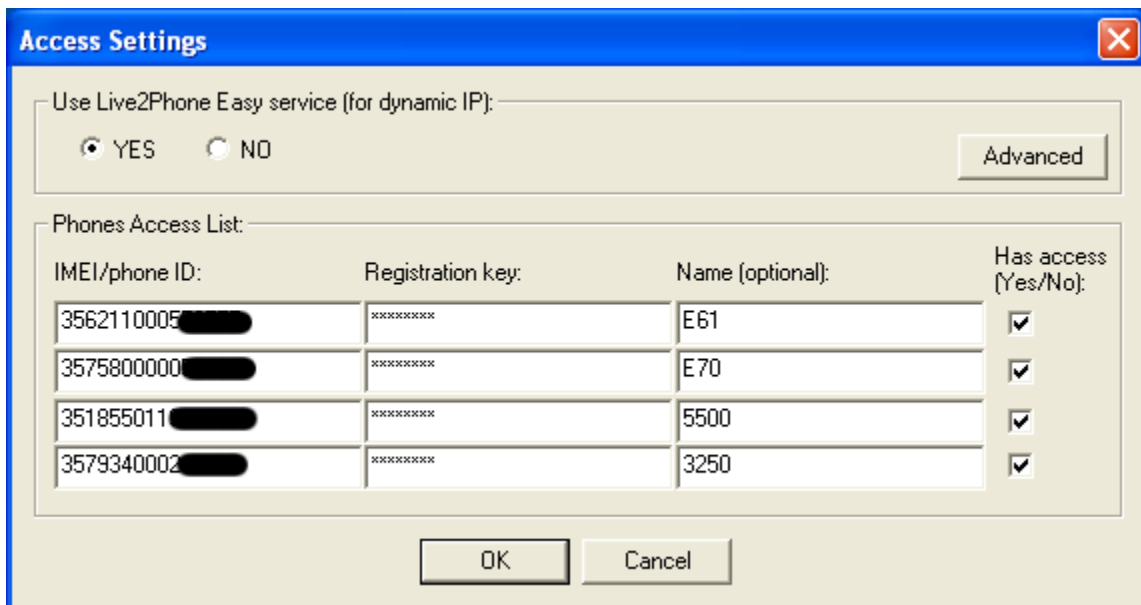


Image no. 3

- **Note:** the application will try to select the appropriate audio device. In case sound is not heard you might need to try another audio device from the "Audio Input" menu.



Image no. 5

- Unzip and install the .sis file on the phone
- Enter registration key when requested.
- The phone is ready to connect to the server and start streaming TV.



Not connected

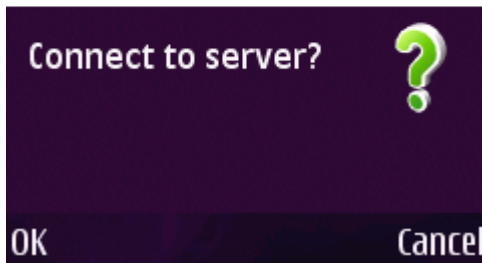


Image no. 6

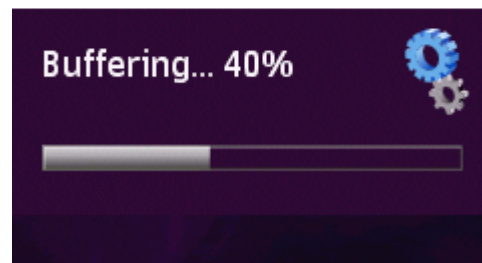


Image no. 7

■ Phone's navigation key functions:

- Navigation key UP – switch to previous channel
- Navigation key DOWN – switch to next channel
- Navigation key LEFT – volume down
- Navigation key RIGHT – volume up

Live2Phone Personal TV client application (mobile viewer)

The client application can be installed on S60 3rd Edition mobile devices (an updated list of S60 phones can be found at: www.s60.com). The application will use about 8-12 MB of the phone memory. Better streaming results and high frame rate can be obtained through a broadband Internet connection, so it is recommended to use 3G access point or WLAN (WiFi) connection.

Full Screen

The viewer can be switched to full screen at any time, no matter if it is connected or not. For devices with portrait display full screen view will usually rotate the images. If the switch is made during streaming there would be a delay before existing buffers are fully processed.



Image no. 9: normal view

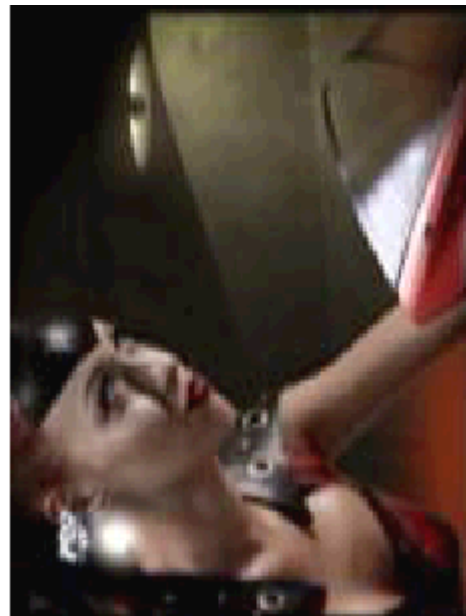


Illustration 1: Image no. 10: full screen view

Channel change

The current channel can be changed only when the application is connected. The "Options" menu has a "Change Channel" entry that will display a list of all available channels. "Next Channel" and "Previous Channel" entries are available, too. The current channel can be changed also using the navigation key up/down functions.

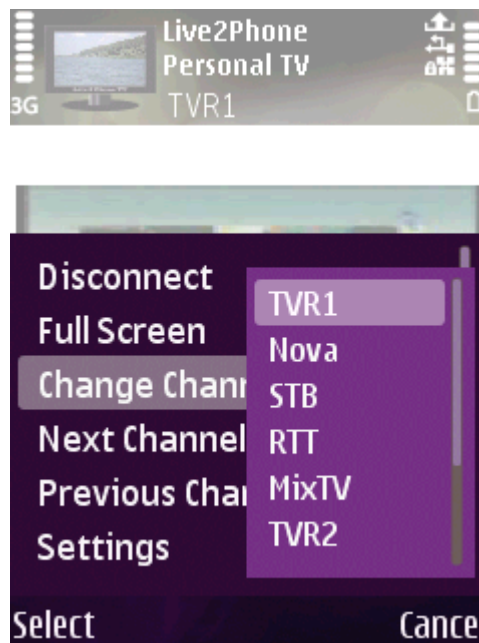


Illustration 2: Image no. 11

Audio Volume

Audio volume can be modified using the navigation key.

Default access point

After the first successful connection the network access point is memorized and reused each time a new connection is initiated. In case of connection failure or if access point has changed the default access point can be reset by setting "Reset Access Point" on **True**.



In order for the application to function a full Internet access point must be used. WAP access points are not compatible with the application.

Simultaneous multiple clients access

The server supports up to four simultaneous clients. Clients are discriminated using IMEI numbers. Allowed clients are defined on **Live2Phone Personal TV Server** into Settings->Access Settings dialog. (*Image no. 3*)

Individual access for any client application can be granted or denied by checking (unchecking) "Has access" box that corresponds to each IMEI.

Although possible simultaneous clients access is not recommended. When more than one client is connected the server will need much more bandwidth and computing resources. If this is not provided poor reception might be experienced. Also channel changes by one client will reflect on the other clients screen.

Direct connection vs. "Live2Phone Easy" service

"Live2Phone Easy" service is enable by default. This permits a very simple network setup. In fact you do not need to change any of the default setting, you will need only to enter the correct IMEI values. *(If you are not interested in setting up a direct connection to your Live2Phone Personal TV Server, then you can skip the following sections.)*

For a direct connection the discussion is follows. When considering the network configuration of your Live2Phone server, in general, there are three situations:

- 1) The first one is when your computer is connected directly to Internet having a static and visible IP address. In this case you can setup a direct connection from your Symbian Live2Phone client and server.
 - First on the server Access Settings (*Image no. 3*) you must set the "Use Live2Phone Easy service (for dynamic IP)" option on "NO".
 - Then you can change server ports (or as well use the default ones) on the server Settings->Direct Connect->Server Ports. The same port numbers should be used in the phone configuration.



- The Symbian phone client must be configured not to use automatic management. Set this option on **False** (by default it is on True). Then you can choose any server IP and port numbers. The IP address must match the real IP value of your server computer.
- 2) The second situation is when you have a broadband router or another computer running NAT (masquerading). In this case the IP address of the local computer can not be used, it is only a local address. You must find out your public address and use this address when you setup the phone. The public address is assigned to the router and usually it is called WAN address, while your desktop computer address is called LAN address.

You will need to perform the same configuration steps as on the previous point, using WLAN address on phone configuration.

Then you have to configure the router such to forward the streaming and command ports to the machine where Live2Phone server is installed. Port forwarding should be documented in your router manual.

In this situation a direct connection is possible to setup (as discussed above), but Live2Phone Easy service might be a better choice.

- 3) The third case is when you do not have a static IP or when your IP is not visible. For example the router performing NAT is located at your ISP so it is out of your reach and you can not configure port forwarding.

In this situation you must not change any of the default settings. The system will connect using Live2Phone Easy service.

Final Note

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