### SAMSUNG'S GUIDE TO DLNA

Welcome to the era of 21<sup>st</sup>-century television! Samsung's added a new level of functionality to its HDTVs with DLNA CERTIFIED<sup>™</sup> connectivity. Now, your compatible Samsung HDTV can remotely access files on your PC so that you can download music, video, and photos and enjoy them anywhere in your home, using the same remote control as your TV.<sup>1</sup>

What is DLNA? It stands for Digital Living Network Alliance, and is a cross-industry organization of consumer electronics, computing industry, and mobile electronics manufacturers. DLNA actively promotes wired and wireless networks of consumer electronics products, personal computers, and mobile devices, in the home and on the road, for sharing new digital media and content services.

And digital content is everywhere, from the Internet to handheld players and optical disc media. Your photos, videos<sup>2</sup>, and music<sup>3</sup> files can be stored on your DLNA-compliant networked PC<sup>4</sup> and accessed by Samsung 7-series plasma HDTVs and 7-, 8-, and 9-series LCD HDTVs through their rear-panel Ethernet ports.

#### HOW IT WORKS

A DLNA-compatible Samsung HDTV easily connects into your home network just like any other desktop or notebook computer, printer, or media player. Once the connection is established, you can browse selected folders on your media server PC and select music to listen to, or photos and videos to watch.

Samsung's PC Share Manager software for Microsoft Windows<sup>®</sup> XP and Vista (included with all DLNA CERTIFIED Samsung TVs) installs quickly on your Windows PC and provides the interface between TV and computer. You access the files you want by simply pushing the WiseLink button on the TV remote and navigating through a user-friendly graphical interface.

Music files are listed by title, artist, date of release, and cover art (if available), while photos are shown as thumbnails for quick selection and videos are listed by file name. You simply scroll to the desired music, video, or photo file, and then click to play or view it.



Figure 1 – Sample WiseLink screens, showing MP3 music files (left) and photos (right) available as shared files from your networked PC or media server

<sup>3</sup> MP3 music files protected by DRM may not be accessible.

<sup>&</sup>lt;sup>1</sup> DLNA-compatible Samsung HDTVs must use a direct (wired) LAN connection to home network computers.

<sup>&</sup>lt;sup>2</sup> Video files protected by DRM may not be accessible.

<sup>&</sup>lt;sup>4</sup> In addition to networked PCs, WiseLink Pro will only work with DLNA-compliant media servers such as Buffalo's Terastation,

TwonkyVision, and Promise Technology's NAS. UPnP media servers are not compatible with WiseLink Pro.

## SETTING UP A WISELINK DLNA CONNECTION

Here's how to set up your Samsung 7-series plasma or 7-, 8-, or 9-series LCD HDTV to operate on a home media network or connect to a networked PC.

**Software:** You will need to install Samsung's PC Share Manager software on your networked PC. A software CD should have been included with your new DLNA-compliant Samsung HDTV's operating manual.

Make sure the software version on the CD is 1.4.2 or higher. If the version is lower, you can download the latest version by setting your Web browser to <a href="http://www.samsung.com/us/support/download/supportDownMain.do">http://www.samsung.com/us/support/download/supportDownMain.do</a> and then search by the model number of your Samsung HDTV. Once it appears, click on the Software tab near the bottom of the Web page to show the PC Share Manager download icon.

To run PC Share Manager, you will need a PC running either the Microsoft Windows XP Service Pack 2 or Microsoft Windows Vista operating system. PC Share Manager will not work with older versions of Windows, nor will it work with Apple operating systems.

Your PC should have at least 20 MB of hard disk space free for the PC Share Manager program. You will also need an additional 20 MB of space for every 100 files you want to share through WiseLink.

Compatible files: DLNA-supported file types and extensions are listed below.

Music – MP3 (.mp3) Photos – JPEG (.jpg, .jpeg) Video – MPEG1 (.mpg, .mpeg) MPEG2 (.mpg, .mpeg, .trp, .ts, .tp) DIVX (.mpg, .mpeg, .avi) MPEG4 AVC (.mpg, .mpeg)

**Network:** DLNA-compliant Samsung HDTVs have an Ethernet port on the rear panel. This port must be connected to a home network through a router or other network interface through a wired Ethernet connection. <u>Your Samsung HDTV can only use a wired LAN connection to the network interface</u>.

However, your networked PC can share files to your Samsung TV through both wired and wireless connections to the network interface. It is recommended that you use at least an 802.11g wireless connection (54 Mb/s) to your networked PC for viewing photos and videos and listening to music.



Figures 2a-2b. (Left) Rear panel view, showing Ethernet (LAN) connection on Samsung DLNA-compliant HDTV, and (right) connection to home network wired/wireless router

# STEP 1: SOFTWARE INSTALLATION

Load the PC Share Manager CD in your PC. You should be prompted to start in the installation screen automatically, after you designate the language to be used for the installation. If you do not see the installation program load automatically, use Windows Explorer to view the contents of the CD, and launch the program labeled **Setup** to start the installation.



When prompted, start the installation.



PC Share Manager will install automatically in a folder by the same name. You can also choose a different location for the installation. If you are not sure, use the default file folder name.

	The Installsheld Wizard has successfully installed SAMSUNS PC Share Manager. Click Finish to exit the wizard.
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PC Share Manager will finish the installation. You should restart your computer after installation.

### STEP 2: SETTING UP A DLNA-COMPLIANT SAMSUNG HDTV

In order to complete the connection from your networked PC to your Samsung HDTV, you will need to perform a quick network configuration. Make sure the Ethernet (LAN) cable is plugged into the rear of your Samsung HDTV. Connect the other end to your home network router (wired or wireless) through one of its Ethernet ports. Most routers provide at least four such connections.

	Mode	• Standard
-	• Wode	· Standard
	Backlight	
	Contrast	: 95
4	Brightness	: 45
Ø	Sharpness	: 50
-	Color	: 50
-	Tint (G/R)	: G50/R50
	Detailed Settings	

Push the **MENU** button on your Samsung HDTV to bring up the main menu screen, as shown.



Scroll down to the Plug and Play menu and select it.



In the Plug and Play menu, scroll down and select Cable Network Setup.

# STEP 2: SETTING UP A DLNA-COMPLIANT SAMSUNG HDTV (continued)

Cable N	etwork Setup	Cable Ne	twork Setup
Internet Protocol Setup	: Auto Setup	Internet Protocol Setup	Auto Setup
Network Test		Network Test	Manual Setup
	: 192 168 2 11	IP Address	192 168 2 11
	: 255 255 0	Subnet Mask	: 255 255 255 0
	: 192 168 2 1	Gateway	: 192 168 2 1
	: 192 168 2 1	DNS Server	: 192 168 2 1
	Move PEnter D Beturn	± M(	ove 🕞 Enter 🏷 Beturn

Enter the Cable Network Setup menu (left) and select **Auto Setup** (right). Your HDTV's Internet address setting will be assigned using DHCP by your home network router.<sup>5</sup>

C	able Network Setup	Network Test
Internet Protocol S	Setup : Auto Setup	✓ MAC Address ( 00:12:fb:10:1b:b7 )
Network Test		✓ IP Address, Subnet, Gateway, DNS Server
		✓ Gateway Ping
	: 192 168 2 11	✓ Domain Ping
	: 255 255 255 0	Your network is operating properly. If you still have a
	: 192 168 2 1	network problem, contact your network service
	: 192 168 2 1	provider.
	Move I Enter ⊃ Beturn	C Retu

Next, scroll to the Network Test menu (left) and perform the test. Once the test is completed, a screen prompt (right) will tell you if you have successfully connected to your home network.

Your DLNA-compliant Samsung HDTV is now ready to link to your networked computer through your home network. In the next steps, you will start up PC Share Manager, choose the folders and/or files you want to share, and complete the connection to your Samsung HDTV.

# CAUTION: If you try to activate the WiseLink feature (below left) before launching and configuring PC Share Manager, you will see an error screen (below right), as your TV will be unable to make the connection to your networked PC or media server.



<sup>&</sup>lt;sup>5</sup> You can also assign the IP address manually. You should have a thorough knowledge of TCP/IP protocols in order to do this.

# STEP 3: LAUNCHING AND CONFIGURING PC SHARE MANAGER

This is the final step in completing your DLNA link. On the networked PC where you have installed PC Share Manager software, launch the program.

File Share Server Help				Server : WiseLinkPro
ly Computer			Shared Folder	
🗿 Desktop	-		Folder	Full Path
Name /	Aodified	^	My Documents	C:\Documents and Sett.
My Conjunters My Network Places My Computer My Network Places Places Control C	5/27/2007 10 2/22/2005 5 2/15/2006 1 5/26/2008 4: /29/2007 9: 7/18/2008 11			

After launching the program, you will see the main PC Share Manager screen (above). This screen lists all available folders for sharing. The factory default setting shares the My Documents folder. (You can change and designate different shared folders in the Share tab.)

Upon launch, PC Share Manager should automatically detect the connection to your Samsung DLNAcompliant HDTV. Your PC will be listed in the upper right Server window with the default name "WiseLink Pro." If no server appears, or the server is listed as Unknown, you will need to start the server connection.

🖾 SAMSUNG PC Share Manager		_ X
File Share Server Help		
🛃 🛃 🚺 😒		Server : •
My Computer	Shared Folder	Change server name(R)
🕼 Desktop 📃 📄	Folder	Full Path
Name     Modified       My Documents     11/14/2008 5       My Computer     11/14/2008 5       My Network Places     11/14/2008 5       Microsoft Outlook     6/27/2007 10       Adobe Acrobat 8 Profe     6/27/2007 10       Adobe Photoshop Albu     12/15/2006 1       AlZ2p     12/15/2006 1       ATI Catalyst Control C     326/2008 4       AVG 7.5     1/29/2007 79       ColorFacts     7/18/2008 11		

To start the connection, pull down the tab on the Server box and select Start Server (Y). Once "WiseLink Pro" appears, you will have to authorize the connection between your networked PC and your Samsung HDTV.

# STEP 3: LAUNCHING AND CONFIGURING PC SHARE MANAGER (continued)

🖄 SAMS	SUNG P	C Share M	lanager			- X
File	Share	Server	Help			
	Share Unsha	e Folder(S) are Folder(	N)			Server: WiseLinkPro 🔻
My Cor	Refre	sh DB(R)			Shared Folder	
🞯 Des	Set D	evice Polic	y(D)	•	Folder	Full Path
Nami → My → My → Re → Adi → Adi	c Cocurr Compu Netword Cycle B ernet Ex- crosoft obe Acro obe Acro Acro Acro	nents iter rk Places in cylorer Outlook obat 8 Pro otoshop Al st Control More for C	2 M 11 11 12 12 12 12 12 12 11 12 11 12 11 12 11 12 11 12 11 12 12	27/2007 10 27/2007 10 2/22/2005 5 2/15/2006 1 29/2008 4 29/2007 9 18/2008 11		

Pull down the Share tab and select Set Device Policy (D).

Set Security Policy			
			Delete Item
IP	Device	State	Set State
-	29W20NG IA	Deniea	Accept
VG 7.5 hecks & More for Qu	ОК 1/29/2007 9: i 4/7/2008 9:5	Cancel	

Next, select Accept under Set State, then select OK. Your Samsung HDTV is now connected.

🛃 SAM	SUNG PC Share M	anager			- X
File	Share Server	Help			
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My Cor	Refresh DB(R)			Shared Folder	
🞯 Des	Set Device Policy	(D)		Folder	Full Path
Nam My My My My My Mi Mi Mi Ad Ma Ad Ma Ad Ma At Ma Co	e y Documents y Computer y Network Places scycle Bin ernet Explorer crosoft Outlook obe Acrobat 8 Pro- obe Photoshop All Zip 1 Catalyst Control G 7.5 ecks & More for Q lorFacts	<ul> <li>Modified 11/14/200</li> <li>11/14/200</li> <li>12/27/2007</li> <li>12/22/200</li> <li>12/15/200</li> <li>12/25/2007</li> <li>12/25/2008</li> <li>1/29/2007</li> <li>1/29/2008</li> <li>7/18/2008</li> </ul>	10 5 5 6 1 4 9 11 V	Samsung PC Share	C:\Documents and Sett

Use the Share Folder (S) and Unshare Folder (N) tabs to designate folders and music, video, and photo files that you can access from WiseLink Pro.

### DESIGNATING FOLDERS FOR SHARING

The best way to set up PC Share Manager for your networked PC is to create and name specific folders for WiseLink Pro to access. Use the Windows New Folder option to create a folder, and then name it accordingly. Copy or load in all photo, video, and music files you want to access.

2 🙁 🕻	5 🥸			Server: WiseLinkPro
y Computer			Shared Folder	
Public		- 🖬	Folder	Full Path
Name Favorites Public Deskt Public Docun Public Docun Public Docun Public Por Public Vid Recorded Ty	op nents loads Share Folder Property	Modified 11/2/2006 5: 9/9/2008 1 9/9/2008 4:1 11/2/2006 7: 11/2/2006 7: 6 7: 6 7: 9/7: 9/7: 9/7: 9/7: 11/2/2006 8:	Sample Pictures	C:{Users}Public}Pictur C:{Users}Public}Videos.

PC Share Manager will only access those folders you designate as being shared. Here's how to do that. Select a folder you would like to share, or create a new folder for sharing.

y Computer Pictures Property Folder Name : Pictures Share C:Users\Public\Vir Public Desktop Public Desktop Public Desktop Public Content : Folder 1 File 17	0 3		Server : WiseLinkP	0
Public         Four value         Four value         Share         Four value         Four value	Pi	ctures Property	×	
Name         C:Users/Public/Vir           Favorites         Kind : File Folder         C:Users/Public/Vir           Public Desktop         Path : C:Users/Public/Pictures         C:Users/Public/Vir           Public Documents         Size : 4.61 MB         Cusers/Public/Pictures           Public Downloads         Size : 4.61 MB         Content : Folder 1 File 17		Policer Name . Pictures	Full Path	
Public Pictures Created Date : 2006-11-2	sktop cuments wnloads usic ctures teos	C Unshare Kind : File Folder Path : C:(Users\Public\Pictures Size : 4.61 MB Content : Folder 1 File 17 Created Date : 2006-11-2	C;Users\Public\Vid C;Users\Public\Vid C;Users\Public\Vid S	ic ure
Recorded TV OK Cancel	TV	OK Cancel		

Right-click on the folder to bring up the Share/Property tab. You can select the folder to be shared, or open the Property tab to see the size and contents of that folder before you share or unshare it.

2 😫 🗘 😏	]	Server : WiseLinkPro	
y Computer	Shared Folder		
Public	Server Update	Full Path	
Name Favorites Public Desktop Public Documents Public Downloads Public Music Public Pictures	Please wait while updating changes on PC.	C:\Users\Public\Videos C:\Users\Public\Music C:\Users\Public\Picture	
Public Pictures Public Videos Recorded TV	4/27/2008 8:		

Finally, update your folder choices by selecting the Share tab and using the Refresh command. Shared folders will show up in the right-hand column of the PC Share Manager window.

### USING WISELINK PRO TO ACCESS MEDIA FILES

Accessing your media files is as easy as pushing the WiseLink button on your Samsung HDTV. Make sure that your media server or networked PC is turned on, and that that the PC Share Manager application is running so that WiseLink Pro can find your shared files and folders.

You can access WiseLink Pro directly from your remote, or from the main menu. (The red Device button, located directly below the Info button on your remote control, lets you choose between one or more networked PCs and the WiseLink USB connector on the side of your Samsung HDTV.) Once you have started WiseLink Pro, you will see the main menu shown below.



Using this menu, you can easily navigate to your photos, music, and movie/video clips. Use the cursor to select the file you want to view or listen to, and then select. You will then see a selection of files in your shared folder(s) for playback. Text in the lower left corner of the screen will show you whether you are accessing a networked PC or a flash drive that is connected to the USB 2.0 port.







Example of WiseLink Pro Music Selection Menu

# OTHER TIPS FOR USING WISELINK PRO

You can configure PC Share Manager to startup automatically each time you launch Windows XP or Vista. PC Share Manager will run in the background as you access other applications.

Server : On(S) Start server at Windows start(A)		n(S) er at Windows start(A)	Server: WiseLinkPro		
ly Computer Change server name(R)			hared Folder Folder Full Path		
Name Favorites Public Destr Public Docur Public Down Public Music Public Music Public Video Recorded TV	op nents loads es s	Modified 11/2/2006 5: 11/1 4/2008 1 9/9/2008 4:1 11/2/2006 7: 11/2/2006 7: 11/2/2006 7: 4/27/2008 8:	a Samp Music Pictur	le Videos 2 es	C:\Users\Public\Videos. C:\Users\Public\Music C:\Users\Public\Pictures

To launch PC Share Manager at Windows startup, open the Server tab, and then select **Start Server** at Windows Start (A). Remember to **Refresh** your changes! PC Share Manager will launch automatically the next time you start your networked PC.

As mentioned earlier, the default shared folder for PC Share Manager is My Documents. If you have many files in folders within this directory, it may take several minutes for PC Share Manager to refresh and update all of the shared folders.

To work around this, shut down PC Share Manager either by closing the program, or by using Windows Task Manager. Then, re-launch PC Share Manager and reconfigure the shared folders you want to use. As mentioned earlier, it's better to set up a specific folder on your desktop for shared music, photos, and videos, and avoid using My Documents.

You can define and share as many folders as you want. PC Share Manager will locate all compatible file types from your shared folders and automatically list them under the Photo, Music, or Movie menus on your DLNA-compliant Samsung HDTV.

For more details about using the slide show and music playlist functions in WiseLink Pro, please consult the owner's manual that came with your Samsung HDTV.

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