Chapter 9: Ethernet-Transfer

9.1 General information

The Ethernet Transfer program is installed automatically when you install the SMART EDIT 4 system software. This program enables you to connect your Casablanca device to a TCP/IP network. You can then exchange video data (incl. original soundtrack) at high speed with PCs on the network and use other programs installed on the PCs to edit your video data, print images, send footage via email, etc.

The edited video footage can subsequently be transferred back to the Casablanca. (This is only possible with a Casablanca that is already equipped with an Ethernet port. Some Avio devices do not have this kind of interface.)

Since it is not possible to transfer individual images (e.g. BMP, JPG, etc.) to the Casablanca, we recommend you create a scene from the image and then transfer the scene as an AVI file.

Your PC must fulfill the following software requirements: Windows (XP, 95, 98, 2000 or ME), Internet Explorer version 6.0 or higher and applications for editing the DV data (DV codec, Windows Media Player version 9.0 or higher, programs such as Adobe Premiere, etc.) The DV data are transferred as type-2 AVI files (see "Disk Transfer").

Please note: The following instructions describe how to use Ethernet Transfer with a PC that is installed with the Windows XP operating system. The various settings might be slightly different for the other operating systems – if necessary, please refer to the instructions for your operating system.

9.2 Cable connections

The easiest way to connect two devices (e.g. a PC and a Casablanca) is by plugging one end of an Ethernet crossover cable into your PC's Ethernet port and the other end into your Casablanca's Ethernet port (see Chapter 2.3 "**How to connect your Casablanca**" in the SMART EDIT 4 manual, connection no. (8)). You will need a Cat 5 type cable (or better) – you cannot use a Cat 3 or Cat 4 cable.
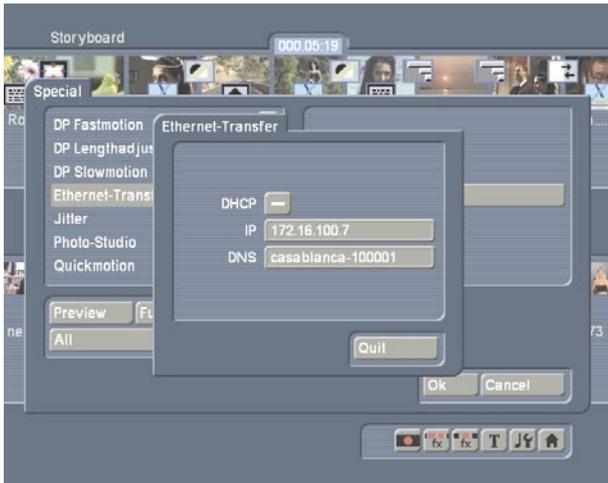
Note: Although the Casablanca Solitaire is fitted with two Ethernet ports, please only use the port that is located beneath the DV connection and labeled as "Ethernet".

If you want to connect several devices to one another (e.g. two PCs and a Casablanca) you should connect the devices via a hub or switch. We recommend using 100 Mbit hubs or switches in order to achieve an optimum speed.

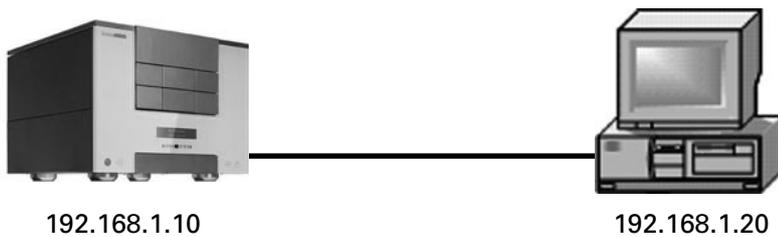## 9.3 Ethernet Transfer on the Casablanca

You can start the program by clicking on the "**Special**" button in the **Edit** menu. You will see the Ethernet Transfer program listed there alphabetically in the upper effects section of the Window. After you have selected it, click on the "**Start Ethernet-Transfer**" function in the effect options section (right).
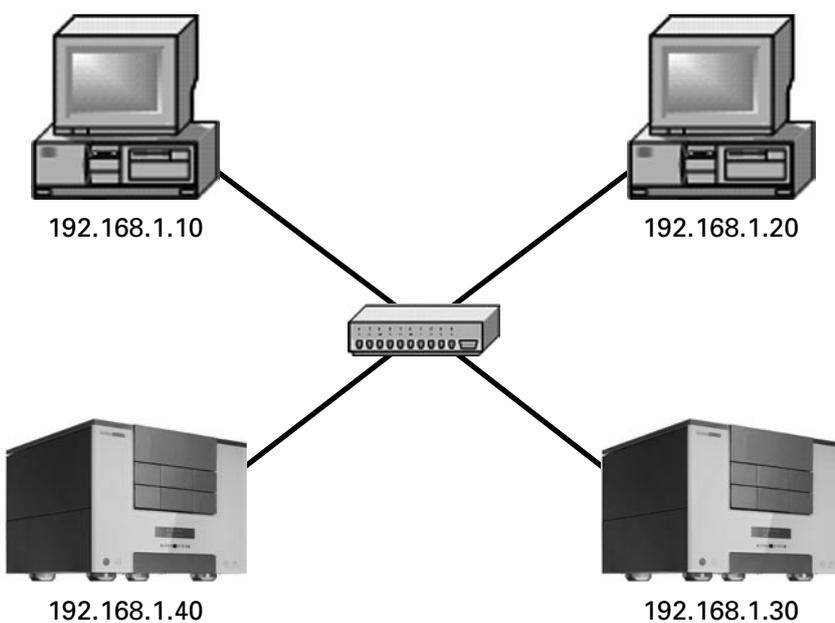
The following window then opens:

9.3.1 Manual configuration

In the "IP" field, specify a free (!) IP address on your network for your Casablanca (e.g. 192.168.1.20). The check mark for the DHCP setting must remain deactivated –the name, in this case, also remains deactivated.
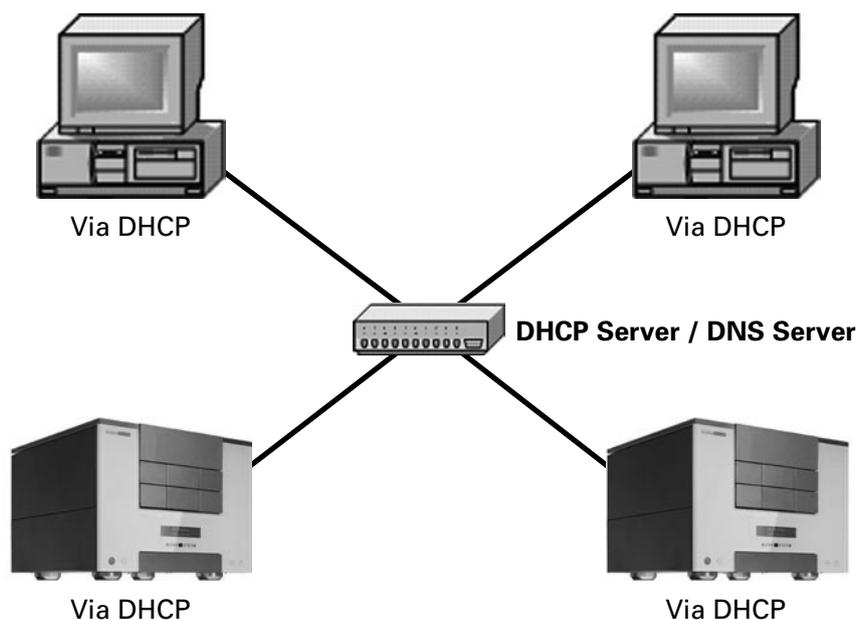

192.168.1.10   192.168.1.20

Direct connection between a PC and a Casablanca (via a crossover Ethernet cable)

192.168.1.10   192.168.1.20

192.168.1.40   192.168.1.30

Star-shaped network (switch, hub)

9.3.2 Automatic configuration via DHCP

In the "DHCP" section, you can first of all decide whether your Casablanca should be assigned a network address automatically. This function can only be used if a DHCP server exists on the network. If this is the case, activate the check box so that a check mark appears. You will then see a window appear for a while that indicates that a network connection is being started. This might take a little time depending on the size of the network.

Afterwards, a number will appear in the "IP" field below and you can begin transferring data using Ethernet Transfer by starting "Internet Explorer" on your PC (see below).

If the automatic configuration (connection to the network) has failed or was not possible or if you decide to assign an address to your Casablanca manually, you can specify a free (!) IP address within your network for your Casablanca in the "IP" field.
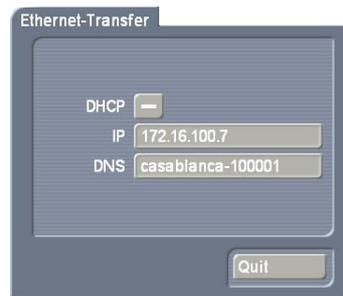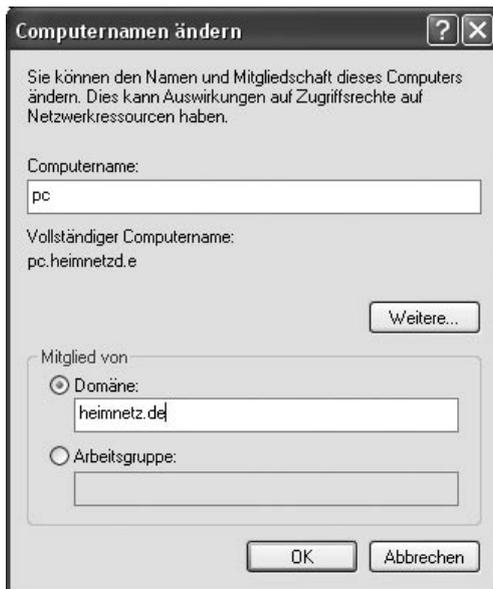
Only applies to DHCP:
If you prefer to work with the name of the Casablanca device instead of its IP address and if there is a Domain Name Server (DNS) present on your network, a hostname will be configured automatically for your Casablanca device (default value: casablanca-"S/N"). The PC should then also have been configured with DHCP or should be present in the same domain.

In any case, the PC that is supposed to communicate with the Casablanca over the network should have an IP address from the same "address space". The safest way of doing this when assigning an address manually is to change only the last segment of the IP address.

Examples:
If you are using a domain server and it is configured in the "mynet.com" domain, your Casablanca could then, for instance, be called "Solitaire.mynet.com".

In this case, the "Name" field on the Casablanca is activated. (Capitalization is ignored when used in the browser):
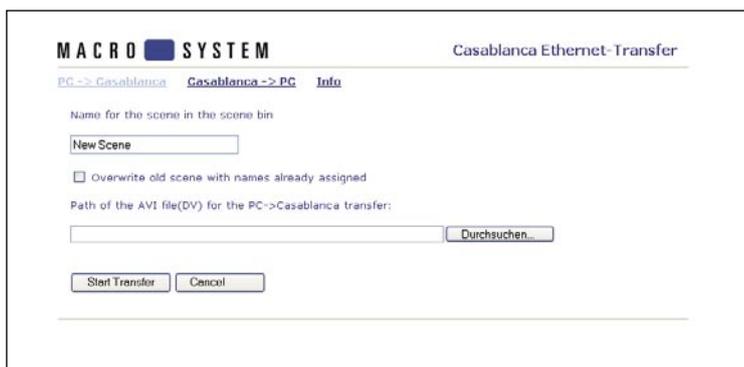
"Solitaire"= Solitaire.mynet.com

PC.mynet.com

The PC being used must also use the same domain server or be logged on to the same domain. (Manual login via: Control Panel->System->Computer Name->Change)

Access via "http://solitaire".

9.4 Ethernet Transfer on the PC

Now, on your PC, start the "**Internet Explorer**" browser (at least version 6.0 or higher). Once you have entered the IP address of your Casablanca (e.g. 192.168.1.10) or the configured hostname (e.g. "**Solitaire.mynet.com**") in the "**Address**" field you will be given access to your Casablanca. You will now see the following window of the "**Casablanca Ethernet Transfer**" program:

1.) PC -> Casablanca

If you want to transfer your video data from the PC to the Casablanca, click on the "**PC --> Casablanca**" button.

A window opens in which you can first of all specify the name that you want the scene to have in the Casablanca's scene bin after it is transferred. If you do not choose a name here, the system will call the scene "**New Scene**".

Beneath this is a little check box that you can activate if you want to overwrite an old scene that already has the same scene name.

Afterwards, press the "**Search**" button to enter the path of the AVI file that you want to transfer. A file browser will subsequently open in which you should select the AVI file that you want and then click on "**Open**". The path then appears in the window provided for this purpose and you can then click on "**Start Transfer**".

If a file transfer is unsuccessful, an error message will inform you of this. Please try again (or with another file) by clicking on the "**Further transfer PC --> Casablanca**" button.

If the transfer was successful, a message will inform you that the file has been saved on the Casablanca under its name.

If you want to transfer further files from the PC to the Casablanca, click on the "**Further transfer PC --> Casablanca**" button.

Note: The file size is restricted to a maximum of 1 GB when transferring data from a PC --> Casablanca.

2.) Casablanca --> PC

Playing a scene

If you want to transfer video footage from the Casablanca to the PC, click on the "**Casablanca --> PC**" menu item. You will see a list of all the scenes that are available in the Casablanca scene bin. Fifteen scenes are displayed per page. There is a bar at the bottom edge of the window that you can use to display the subsequent pages ("Jump to..."). The scenes are displayed with their names and the first frame of the scene.

Now click the left mouse button on the file that you want – this action directly opens the Windows Media Player and plays the file. In order to be able to play the video, a DV codec must of course be installed. Before you can play the video footage using Media Player, it must first be transferred to the PC as a temporary AVI file. This process might take a few seconds to complete (depending on the length of the scene). You will see a progress bar on the Casablanca screen during the transfer. After your video has been played you have the option of saving the file on the PC by pressing the "**File**" button and then "**Save as**". (You might first have to press the "**Show menu**" button that is located at the top left before you can access the "**Save as**" button in the "**File**" menu.
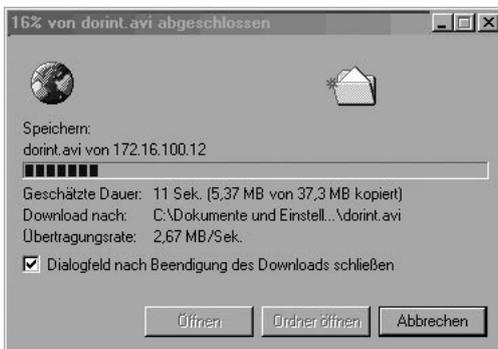If you click on the "**Save as**" button, a file browser opens in which you can select the location that you want to save the file as well as change the name if you wish. Finally, save the file by clicking on "**Save**".
Please note: If Media Player is not installed or you are prohibited from opening AVI files directly, the left click will cause the file to be downloaded!

Saving a scene
If you do not want to play the scene but instead transfer the scene immediately to the PC and save it there, you can avoid playing it by clicking the right mouse button on the file name or on the scene's thumbnail image so that a menu opens. In this menu, use the left mouse button to select the "**Save target as**" option so that a file browser opens in which you can select the location that you want to save the file to as well as change the name if you wish. Finally, save the file by clicking on "**Save**". You will see a file transfer window that informs you about the approximate length of time required, the location where you are saving the file and the transfer rate.
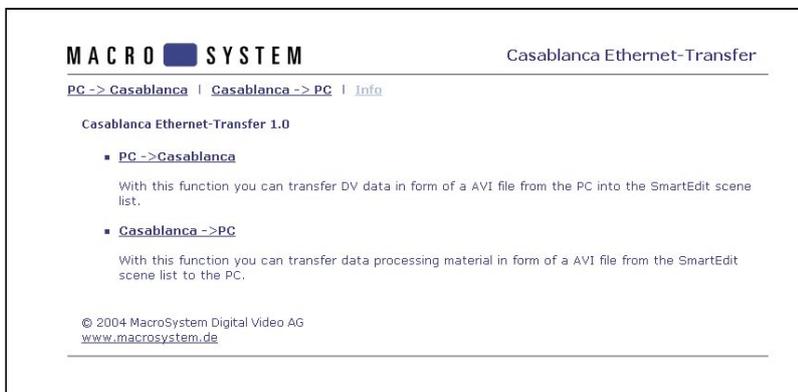

Special case: If you want to transfer a scene from the Casablanca to the PC that exceeds a length of 4:43 minutes or has a file size greater than 1 Gbyte you must transfer the scene manually in sections of 1 Gbyte (+ the remaining portion of the scene). The scene sections are indicated accordingly in the web browser with [2], [3], [4], etc. The first section can be opened via the scene's name and via its thumbnail image.

3.) Info

If you click on the "**Info**" button you will be provided with information on both transfer directions ("PC --> Casablanca" and "Casablanca --> PC").

9.5 Background knowledge

DHCP stands for "Dynamic Host Configuration Protocol"
-> Automatic connection to the network through a DHCP server (e.g. present in the local DSL router) upon request by the DHCP client (Casablanca, PC)
Basic functioning: when a network connection is initialized and DHCP is activated, the client (i.e. the PC or in our case the Casablanca) sends a query to the network asking whether a server exists that can assign an IP address to the client. If this kind of server exists, additional data can then also be assigned such as the hostname, the address of the relevant DNS server, etc.

DNS stands for "Domain Name System"
-> Management and resolution of "Names<->IP" allocations by the DNS server (e.g. present in the local DSL router)
The DNS server is like a telephone directory on the network. Since it is easier to remember a name (like "Solitaire.mynet.com") rather than an address (like "123.456.7.890") DNS servers are used on networks to simplify our work.

IP network classes and subnet masks:
Version 4 IP addresses (IPv4) are made up of 32 bits that are generally written in decimal form in four segments of 8 bits each. The classical subdivision of the address space that arises from the 32-bit addresses (a total of 4,294,967,296 computers can be addressed) provides for three network

classes that are differentiated by way of the first segment of the address.

For a "normal home network" all you need to know is that there are private address ranges that are not and cannot be used on the internet and are therefore "free to use"). Under normal circumstances, it is sufficient if you assign, for instance, the IP address 192.168.0.1 to the PC and the IP address 192.168.0.2 to the Casablanca. Further PCs, Casablanca devices, etc. can then be assigned addresses that differ in the last segment of the address.
Then, in order to display the Casablanca user interface, all you need do is enter "http://192.168.0.2" in the web browser on the PC.

Further notes:

- The PC might only react very slowly whilst large files are being transferred from the Casablanca to the PC or from the PC to the Casablanca. We therefore recommend you do not work with other programs during a file transfer and that you close these programs beforehand.
- When starting Ethernet Transfer, there might be a delay if the DHCP function was used beforehand. The program should start immediately if the IP address has been assigned manually.
- File transfers via Ethernet are only possible if the Ethernet Transfer program has been started on the Casablanca. It is not possible to work with the Casablanca during an active transfer/connection.
- Audio files cannot be transferred using Ethernet Transfer. If you want to transfer an audio file from the Casablanca to the PC, you must first of all use the special "Sample->Scene" function to create a black scene from the audio file that you can then transfer to the PC using Ethernet Transfer.
- If a file is transferred from the PC to the Casablanca, the progress bar is run through twice. The scene is transferred during the first step and in the second step it is converted for the Casablanca's scene bin.
- In order to maintain as high a level of compatibility as possible with the various PC video editing programs, a type-2 DV-AVI is saved/created when transferring a scene from the Casablanca to the PC. Alongside the original DV video (in which the audio and video components are mixed), the audio component is saved separately as an additional component in the file in accordance with the present AVI standard.

A DV-AVI codec must be installed on the PC before you can play and edit AVI files on the PC.