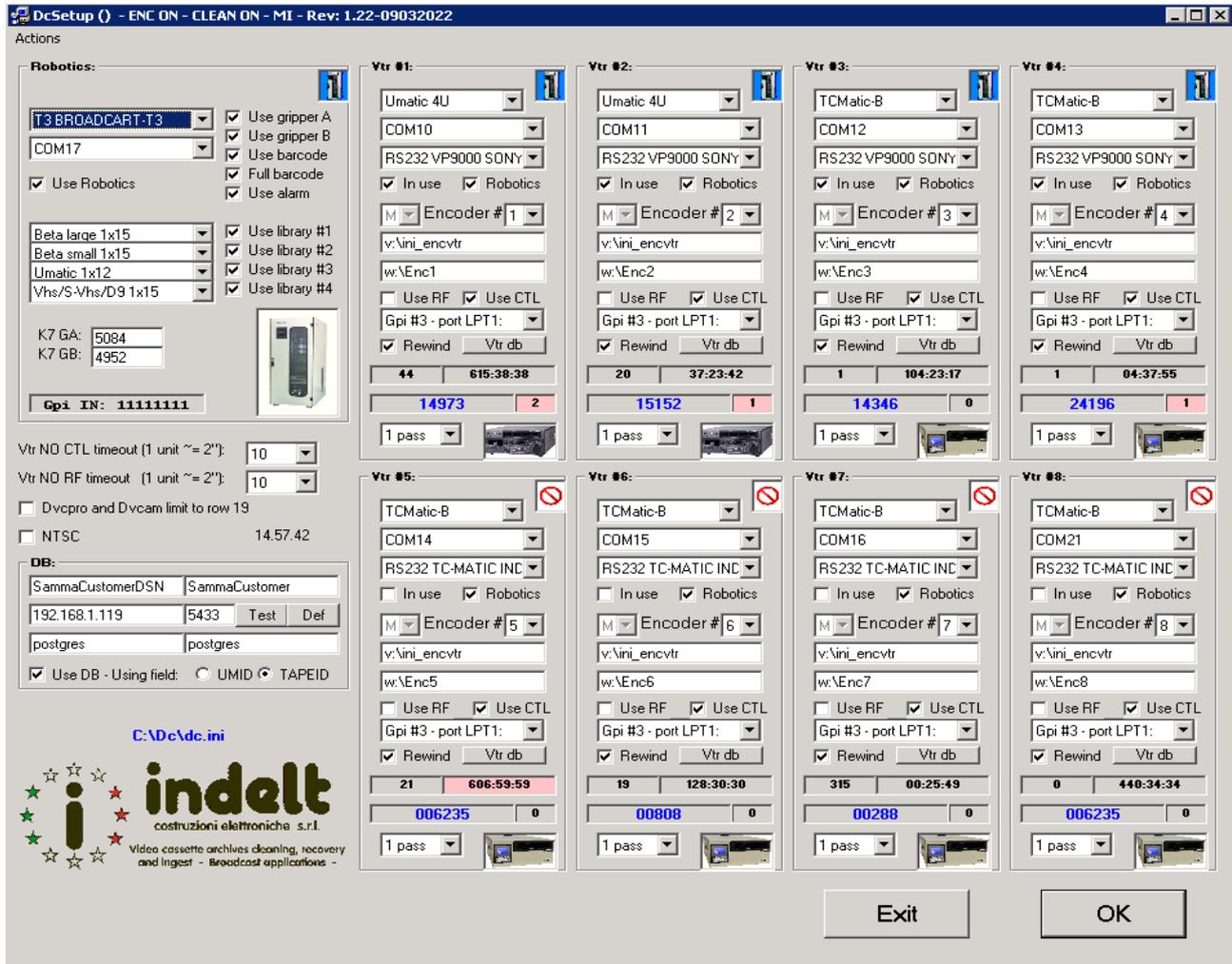


DcSetup

DcSetup application

This utility is used to configure all the informations required to describe the system and the



hardware connected to it. The main form contains a robotics description area and one area for each of the vtr and encoders connected to it.

Information concerns serial ports and makes use of the system COM port numbering. Any serial port accessible as a standard COM port may be used. Normally serial ports are part of a LAN connected serial hub. The first information to set is the serial COM port used for each device attached. Leave enabled only Vtr that are to actually be used and disable all the others.

Robotics informations

Robotics:

T3 BROADCAST-T3

COM17

Use Robotics

Use gripper A

Use gripper B

Use barcode

Full barcode

Use alarm

Beta large 1x15

Beta small 1x15

Umatic 1x12

Vhs/S-Vhs/D9 1x15

Use library #1

Use library #2

Use library #3

Use library #4

K7 GA: 5084

K7 GB: 4952

Gpi IN: 11111111

Vtr NO CTL timeout (1 unit ~= 2"): 10

Vtr NO RF timeout (1 unit ~= 2"): 10

Dvcpro and Dvcam limit to row 19

NTSC 14.57.42

DB:

SammaCustomerDSN SammaCustomer

192.168.1.119 5433 Test Def

postgres postgres

Use DB - Using field: UMID TAPEID

Selects the COM port used to connect with the robotics.

Tip: use the COM port associated to the port #8 of the serial hub (assuming an 8 port serial hub) in order to facilitate maintenance.

The information in this windows should match exactly the configuration of the robotics Broadcast T3. Only robotics T3 are supported .

Tip: when you will run DcServer with the robotics connected all the applicable configuration data will be automatically read overwriting any mismatches that could exist.

From this window you may disable a gripper using only the other. The "Full barcode" check box tell to the robotics to use the full barcode string. Warning: if unchecked long barcode strings would be truncated.

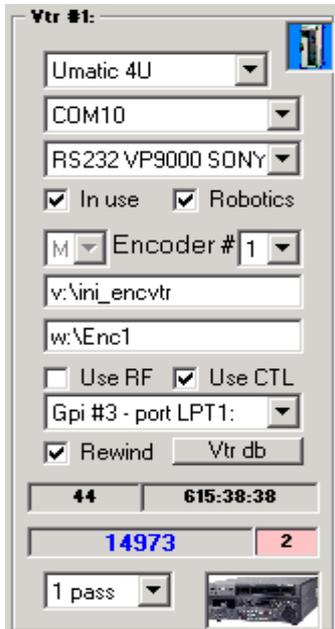
CTL track of Vtr is always tested and you may select after how many seconds of a "NO CTL" condition recording will be stopped.

RF of Vtr may be tested too but this requires that an RF output is available on Vtr too. This feature also requires a GPI input hardware (an eight bit input parallel PCI express card for instance). Default address is the same as LPT1: but may be changed from inside Dc.ini configuration file at section [Robot] modifying the variable GPIPortAddress. The default value is GPIPortAddress=888. It is also required some hardware to change the RF analogue

signal in a TTL signal generated comparing with an assigned fixed threshold. Also for RF you may select after how many seconds of a "NO RF" condition the recording will be stopped.

Using DVCPRO/DVCAM library and some models of barcode reader it is required to limit to bin #19 the library size (that normally arrives to bin #20). If you need to change this check box, ask before to tech support. The NTSC check box should be checked if the Vtr are running this video standard. The NTSC check box affects the way in which time codes and CTL are shown in all the applicable windows.

Vtr and encoder informations



The type of Vtr refers to the cassette format, size and shape of the Vtr more than to the exact model of it. So you should select the description that matches more closely the actual Vtr model you have. This will change the position and the extension of the gripper to correctly get and put the cassette. To talk with the Vtr the protocol and the COM port used are the most important information. Protocol supported derives from Sony standards. VP9000 RS232 and UVW-1200 RS232 Sony protocols are very similar but the few differences require two different settings. Most of the professional Vtr, of any types, will be driven using the RS422 Sony protocol instead.

Tip: use consecutive COM ports starting from the COM port of Vtr #1 in order to facilitate maintenance.

The "In use" check box enables or disables the Vtr.

The "Robotics" check box tells to the software if this Vtr must be served by the robotics or if it is for manual use only

The only model of encoder supported is Metus Ingest. Inside Metus configuration encoders are numbered from 1 to 8 and you have to select which encoder is associated to this vtr.

Tip: associate Vtr #1 to Encoder #1 and so on in order to facilitate maintenance.

Communication with the encoders happens via the file system (if necessary using appropriately mapped network drives). There are two paths to be specified. The first path points to the folder containing the configuration files (.ini files) of EncVtr.exe. Communication with Metus encoder happens modifying and reading this .ini files. The app must have read and write privileges on this folder. The second path points to the folder containing the recorder video files. The app must have read and write privileges on this folder.

The "Use RF" check box enables checking RF from the Vtr. If there is no hardware to detect the RF this check box must be left unchecked.

The "Use CTL" check box enables checking the presence of CTL or TC from the cassette in the Vtr. The "Rewind" check box instruct the Vtr to rewind the cassette before recording it. If left unchecked recording starts from the current point in the cassette.

The "Vtr db" button opens a windows where are shown and modifiable several information concerning the Vtr. A serial number identifies the vtr while counter of the lifetime hours is maintained and updated together with the number of cassettes and the number of get/put errors from the robotics. Counters may be cleared or written to a specified value.

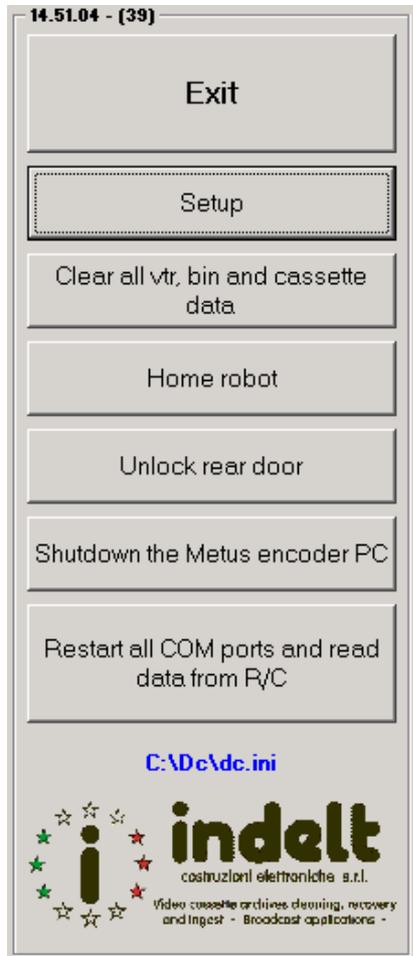
DcServer

DcServer application



This is the engine that executes both the ingest and cleaning tasks. Vtr, robotics and encoders are

directly and exclusively connected to this application that is responsible of all the operations. DcClient application just send packets of ingest or cleaning commands, one for each cassette, to DcServer that queue them and execute as soon as the required resources are available. DcServer has a simple GUI where are shown all the current available informations about the connected devices. Except that for special test purposes normally it is not necessary to use the few buttons available.



Exit button is the only way to close the application. If any tasks are under execution a warning appears giving the possibility to brutally close the tasks or wait for their completion. The preferred way to operate is anyway to wait or interrupt the tasks from DcClient and shutdown the server from DcClient.

Setup button access the DcSetup application as it is possible to obtain from DcClient application too.

Home robot button executes and Index of the robotics as soon as the robotics is not used by other tasks. The Index is queued and executed as soon as possible. The same may be obtained from DcClient application too.

Lock (Unlock) button may be used to lock and unlock the rear door overriding the normal management of this door that is closed for the operator safety.

Shutdown the Metus encoder PC button closes the encoder application and shuts down the PC that is running Metus (Note: it may also be the current PC!). Obviously this command is not intended to be used except that for test purposes. The same may be obtained from DcClient application too.

Restart all COM ports and read data from R/C is used to test connection or to restore connection with robotics and Vtr.

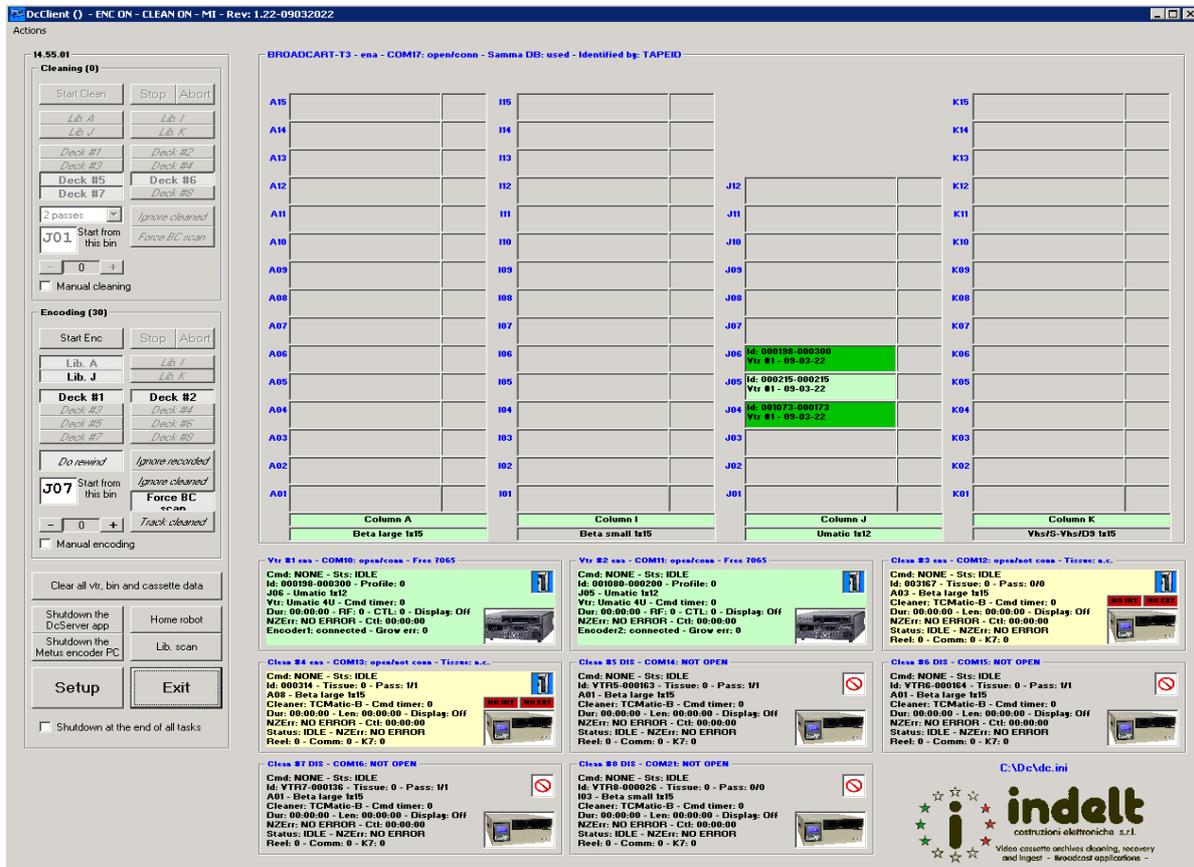
Used during an ingest or cleaning task may generate some errors so it should be used only if strictly necessary and as a last chance just before deciding to restart the PC.

Double clicking on the blue .ini file name it is possible to open the configuration file and inspect it. This operation is for test purposes only and should not be used normally.

Note: the DcServer application minimizes itself after about five minutes to leave free the screen.

DcClient

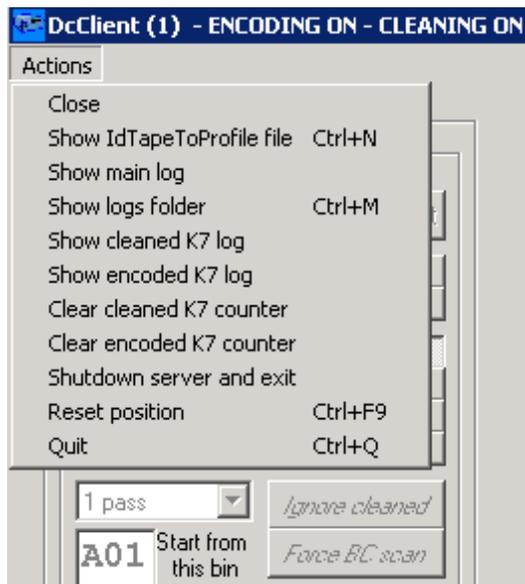
DcClient application



DcClient is the user graphic interface used to send packets of commands to DcServer. Each packet contains all the information necessary to encode (or clean) a cassette: format, position in the library, encoder to be used. Once a packet of information is sent to DcServer, the packet is processed and the operation is completed even if DcClient is closed.

The DcClient software tries to use all the available encoders. When all the encoders are busy, the software waits for an encoder to free up before sending the next packet. As soon as an encoder is available a cassette is taken and inserted, if the format matches, in the Vtr connected to that encoder. The cassette is played and recorded from the beginning (if the rewind flag is checked) or from the current position (if the rewind flag is unchecked) up to the end of tape. If the CTL flag is checked, CTL presence is monitored and the recording is stopped after a certain time that the CTL is absent. If the RF flag is checked and the appropriate RF detecting hardware is present and working, RF presence is monitored too and the recording is stopped after a certain time that the RF is absent. On some Vtr, to get the RF from video heads may be necessary a hardware modification. The RF detector must generate a TTL level signal according to RF presence YES=1 or NO=0. Recording is stopped also if for any reasons the Vtr is not in PLAY state. As soon as the recording is stopped the cassette is ejected, taken from the Vtr and put back in the library. Rewind, CTL and RF flags can be changed using the Setup application. The rewind flag may be changed from DcClient application too.

How to associate a profile to an ID tape



Each MetusIngest encoder may contain several profiles numbered from 1 on. DcApp allows using up to 8 profiles using the same exact numbering used by MetusIngest. The number 0 (or any other out of range number) is used to use all the available profiles at the same time recording multiple files. If the file is missing or empty a 0 is always assumed and all the available profiles are used at the same time.

The association between the ID tape and the profile number is contained in a .INI file that may be open and edited using the shown item of the “Actions” menu indicated in the picture on the left. You just have to add a line containing the association in the form 000123=1 meaning that the cassette whose ID tape is “000123” will be recorded using the “Profile 1” named profile of the encoder that will be assigned

to that cassette. Standing that it is not possible to decide which encoder will record a cassette it is up to the operator to configure all the encoders in the same way, using the same profiles and in the same order. Below is an example of the content of the file.

```
[IdTapeList]
;Tape id=Profile number (1 to 8)
001076=2
000167=0
001169=2
000047=1
109755=2
000168=1
000021=1
000169=0
000022=1
000314=2
003167=1
```

EncVtr

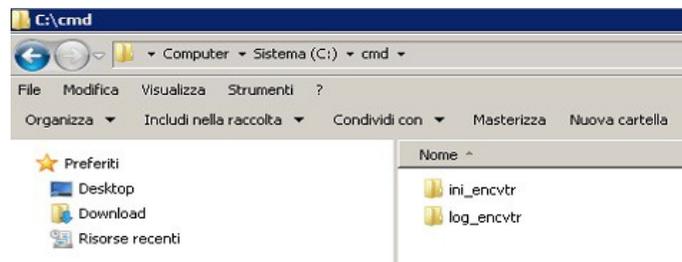
Installing EncVtr

Operations on the PC that contains the Metus software

The PC should run a 64 bit version of Windows 10 Professional. A 16:9 video monitor and a 1900 by 1200 pixels resolution are recommended. It is normally the same PC where is running the Metus software.

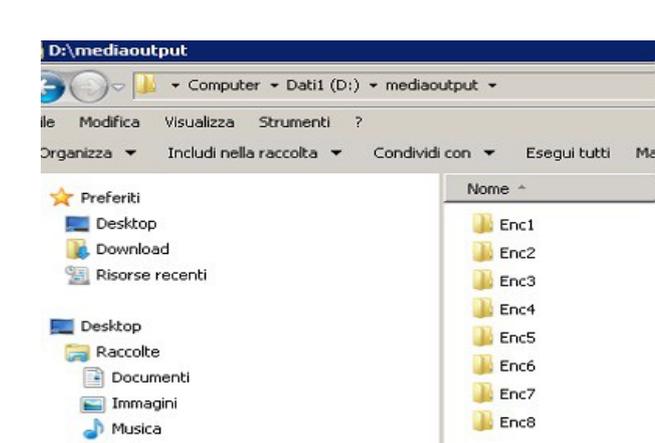
System C: drive

On the C: drive create a "cmd" folder and share it in the network with full R/W rights. Inside the "cmd" folder create a "ini_encvtr" and a "log_encvtr" folders. Look at the picture below:



Video D: (or other letter) drive

On the D: (or other letter) drive create a "mediaoutput" folder and share it in the network with full R/W rights. Inside the "mediaoutput" folder create eight folders, one for each encoders, named "Enc1", "Enc2", and so on up to "Enc8". Look at the picture below:



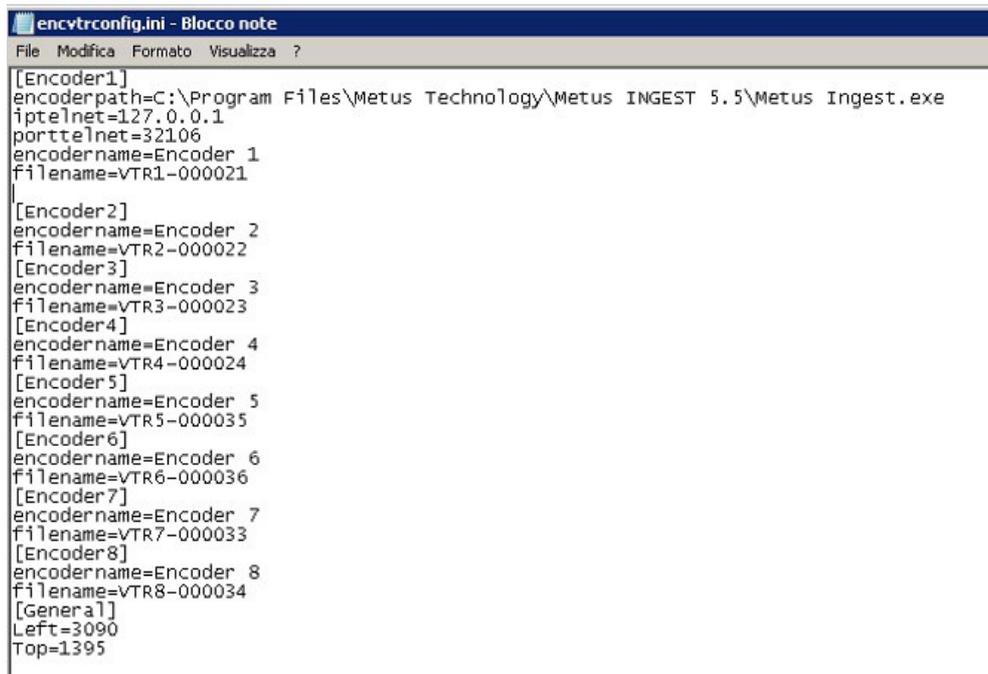
Metus software

Inside the Metus software setup eight encoders with the default name "Encoder 1", "Encoder 2" and so on up to "Encoder 8". Each encoder must put the video files in the "D:\mediaoutput\EncX" folder with "X" replaced with the appropriate number (from 1 to 8). The folder must already exist. Be sure that Telnet remotage is enabled with the default port "32106" correctly assigned. Save changes and exit the Metus software.

EncVtr.exe software

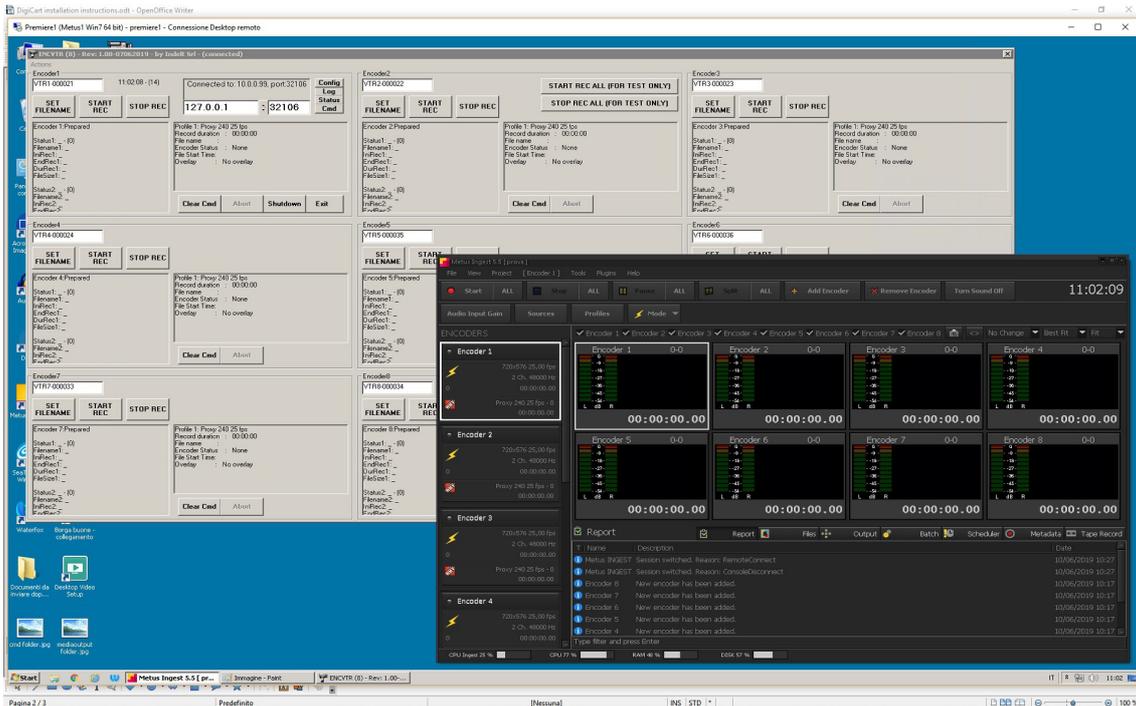
Install the package named "Encoder" using the Setup.exe executable and accepting all the defaults. This software runs freely and without dongle and is used as an uniform interface between DigiCart and Metus software. In the Start menu you will find a new EncVtr folder. I suggest to create a shortcut on the desktop to easily run the EncVtr.exe application.

Run the "EncVtr.exe" application for a while (few seconds) and then quit it using the "Exit" button. Open the "C:\cmd\ini_encvtr\encvtrconfig.ini" file and double check (only in "[Encoder1]" section because all the other sections will inherit "[Encoder1]" values) that "encoderpath" points to the correct path and name of the Metus application .exe executable. Also double check the Telnet port (port 32106) and the Telnet ip (local host ip 127.0.0.1 is normally the best choice). If you made any modifications, save them and exit. Look at the picture below:



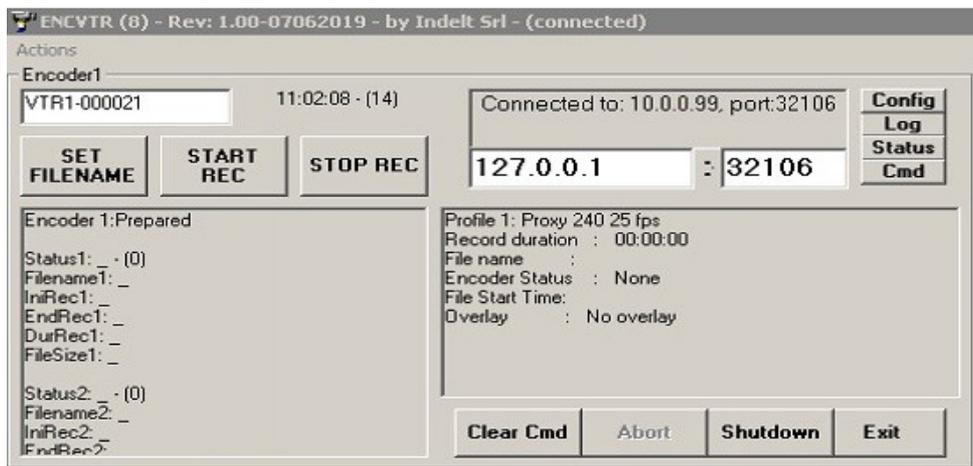
```
encvtrconfig.ini - Blocco note
File Modifica Formato Visualizza ?
[Encoder1]
encoderpath=C:\Program Files\Metus Technology\Metus INGEST 5.5\Metus Ingest.exe
iptelnet=127.0.0.1
porttelnet=32106
encodername=Encoder 1
filename=VTR1-000021
[Encoder2]
encodername=Encoder 2
filename=VTR2-000022
[Encoder3]
encodername=Encoder 3
filename=VTR3-000023
[Encoder4]
encodername=Encoder 4
filename=VTR4-000024
[Encoder5]
encodername=Encoder 5
filename=VTR5-000035
[Encoder6]
encodername=Encoder 6
filename=VTR6-000036
[Encoder7]
encodername=Encoder 7
filename=VTR7-000033
[Encoder8]
encodername=Encoder 8
filename=VTR8-000034
[General]
Left=3090
Top=1395
```

Now run again the EncVtr.exe application. After about 30" it will automatically try to run the Metus application and after about other 30" the application minimizes itself in the taskbar. If this happens



just right click the icon in the taskbar and visualize it again (or double click on the icon). Of course, if you run the Metus application before running EncVtr, it is ok the same. The desktop would appear something like this:

Setup a filename in the textbox and click on the "Set Filename" button. Then click on the "Start Rec" button to start recording. Click on the "Stop Rec" button to stop recording. Try this on all the encoders to check the connection with the Metus software. Status info should change accordingly.



Using the "Start all" and "Stop all" buttons, that are for test only, you may start and stop all the eighth encoders. If everything works the EncVtr.exe application setup is completed.

```

;
; ERROR CODES RETURNED BY THE R/C (READABLE USING THE GET_ERR_CODE COMMAND).
;
; ERR_CODE = 0    oK (no error).
; ERR_CODE = 1    stepper motors (grippers and X/Y axis) timeout.
; ERR_CODE = 2    gripper A: IN/OUT movement timeout.
; ERR_CODE = 3    gripper B: IN/OUT movement timeout.
; ERR_CODE = 4    gripper A: tape is present after a 'put tape' operation.
; ERR_CODE = 5    gripper B: tape is present after a 'put tape' operation.
; ERR_CODE = 6    gripper A: tape is not present after a 'get tape' operation: the bar-code is readable.
; ERR_CODE = 7    gripper B: tape is not present after a 'get tape' operation: the bar-code is readable.
; ERR_CODE = 8    gripper A: OPEN/CLOSE movement timeout.
; ERR_CODE = 9    gripper B: OPEN/CLOSE movement timeout.
; ERR_CODE = 10   command temporarily unsupported (ie: during a LOAD_OPE).
; ERR_CODE = 11   a non existent position has been addressed (ie: Z54).
; ERR_CODE = 12   'tray out' error.
; ERR_CODE = 13   'tape out' error.
; ERR_CODE = 14   not issued: ex 'Vtr door opened' error.
; ERR_CODE = 15   'motor fault' due to a power-supply failure.
; ERR_CODE = 16   timeout due to a 'speed reduced to zero' error (ie: front door open).
; ERR_CODE = 17   Vtr not in configuration (ie: TIPOVTR_NULLA).
; ERR_CODE = 18   library block not in configuration (ie: TIPOLIB_NULLA).
; ERR_CODE = 19   timeout during the rotation of the grippers.
; ERR_CODE = 20   gripper not existent (meaningfull only after a gripper test on B).
; ERR_CODE = 22   gripper A: tape is not present after a 'get tape' operation: the bar-code is not readable.
; ERR_CODE = 23   gripper B: tape is not present after a 'get tape' operation: the bar-code is not readable.
; ERR_CODE = 50   no connection with the gripper controller.
; ERR_CODE = 51   no connection with the loader led/fc controller (not used).
;
; ERR_CODE = 52   Timeout gripper A.
; ERR_CODE = 53   Timeout INDEX gripper A.
; ERR_CODE = 54   Timeout gripper B.
; ERR_CODE = 55   Timeout INDEX gripper B.
; ERR_CODE = 56   Timeout INDEX axis Z (HOR.).
; ERR_CODE = 57   Timeout axis Z (HOR.).
;
; ERR_CODE = 60   X calibration aborted (meaningfull only after a SETPOS or CALIB command).
; ERR_CODE = 61   Y calibration aborted (meaningfull only after a SETPOS or CALIB command).
;

```