

# Eliau

## User's Handbook for all Versions

**Version 2.1b**  
of the January 9th, 2014

© Eliansoftware/Seldage/Crédage 2005 - 2014

### CRÉDAGE

« Centre de recherche et d'études sur le dessin,  
les activités graphiques et l'écriture »

(Association déclarée selon la loi de 1901)

23, allée des petites garennes, 91190 GIF SUR YVETTE, FRANCE

Distributed by the **SELDAGE**, limited liability company with variable capital  
[www.seldage.com](http://www.seldage.com), e-mail: [info@seldage.com](mailto:info@seldage.com)

# Forewords

The digital pen (DP) opens an entirely new field for the psychologists, the doctors and the experts of several disciplines. It gives access the dynamics of the drawing, with the order of the features, their direction, their speed, acceleration at each point, etc. It thus treats drawings, graphic tests and the writing.

“Elian” (“*Expert Line Information Analyzer*”) was developed to visualize and analyze the data resulting from the DP. Several versions are available:

- “Research” which provides a data file for Excel<sup>®</sup> or similar,
- “Testing” proposes a percentile analysis to aid the diagnosis,
- “Expert” gathers these two versions, and brings complementary functions.

“Elian” allows an immediate evaluation of the drawer or writer. Before it needed a heavy and uneasy material (cinema or video, watch, rule...). Now all is automated. The result is given in the moment. In clinical practice, one can carry out tests during the first meeting without disturbing it. It is no need to call upon another professional, and you save a lot of time and money.

“Elian” and the DP give access very precise objective data (1/10 of mm, 1/100 of sec.). It supports the clinical intuition, without replacing it, as well as the biological data for the doctor.

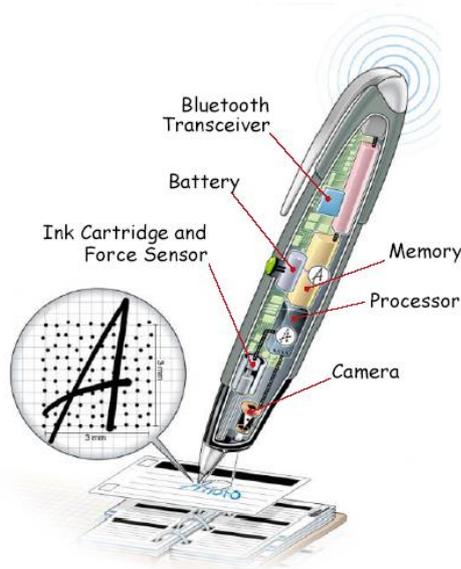
“Elian” gives access to the psychological tests even for those who do not like them. What required several meetings, for several weeks even months, is now given in a few minutes. The graphic process is registered; it can be re-examined at will, even produced to anybody else, for commissions or courts.

“Elian” is fairly cheap at use. The initial cost is small compared with the time saved by the professional. This method is excessively profitable.

\*  
\*      \*

“Elian” is currently based on only Anoto technology. Others are available, but not convenient for clinical practice. The digitizers oblige to fix paper, which prevents from moving it. The “Doppler” DP are not precise enough. The digital tablets are now very different from the usual paper-pencil conditions, but they are improving day by day.

Anoto technology consists in a free pen, i.e. independent of the computer. Its form and its size are comparable with any pen; it can be used by a child as soon as it is enough skillful to hold it. In the same way, it is easy for the ill or old patient. It is so small as it can be kept in the pocket and available at any moment.



The process is very simple: the patient makes its drawing (or writing. At once or later, the pen is placed on his USB connected cradle. The software “Elian” is opened; the drawings are downloaded at once. The battery of the pen is reloaded during this procedure.

“Elian” and the Anoto DP-201 can be used with any computer equipped with Windows<sup>®</sup> and on a Mac with a “Windows<sup>®</sup> virtual machine”. The Logitech Io1 and Nokia DP can be used only on Windows XP<sup>®</sup>.

\*  
\*      \*

The Anoto paper is covered with a myriad of small dots, seen by the eye as a grey color. It has a usual appearance and thus does not interfere with the writer. This paper is specific to our use. It must be provided by the Seldage Company. It is not compatible any other supplier.

The DP’s infrared laser camera automatically takes digital snapshots of the Anoto microdot surface, enabling the pen’s image microprocessor to determine the exact position of the DP. It thereby accurately records what is written or drawn in real time.

The opening of the laser camera is just behind of the mine of ball point pen. **Please do not use a rule which masks it. Do not to look directly at this opening because of the laser beam.**

This microdot surface is generated by a mathematical algorithm. **It cannot be photocopied.**

\*  
\*      \*

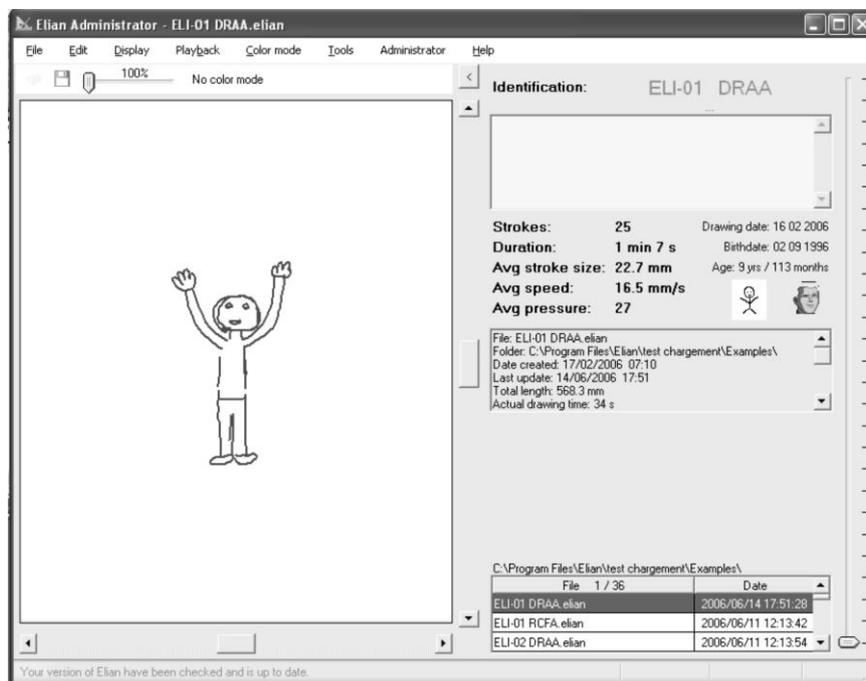
This handbook would facilitate the first steps for the user. Anoto technology is fairly sophisticated. It is necessary to carefully observe the process, in order to be satisfactory.

# The Elian window

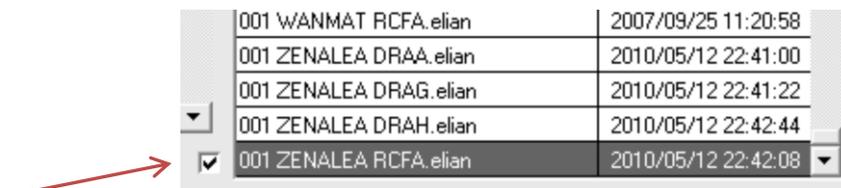
Take a few moments to discover major Elian functions. You will see the others afterwards, according to your specific use.

The current version is only in English (except the literal analysis of Elian Testing Version” which is in French). If the drawing example is not directly posted, click on “Help/Load drawing examples” which will enable you to explore the software. Certain functions are specific to the writing or to some graphic tests (will see we them about them).

The Elian window is composed of two parts. On the left, you see the drawing. On the right, we find several windows. From top to bottom, the comment, the major mean data, a window with detailed information and the repertory with the drawing names.



Clicking on the small box at the left of the repertory windows, you fix a larger indication of the contents, to analyze it more easily. This function is released.

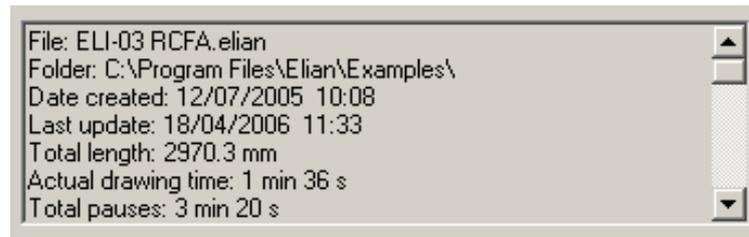


In the mid right part of the screen, you see synthetic information of the drawing, representing the most often used data. Three small logos point out laterality, the type of drawing and the sex of the drawer. You can correct it if false (see below).

<b>Strokes:</b>	<b>25</b>	Drawing date: 16 02 2006
<b>Duration:</b>	<b>1 min 7 s</b>	Birthdate: 02 09 1996
<b>Avg stroke size:</b>	<b>22.7 mm</b>	Age: 9 yrs / 113 months
<b>Avg speed:</b>	<b>16.5 mm/s</b>	
<b>Avg pressure:</b>	<b>27</b>	



Just below, within a window with a pull-down menu, are provided the complementary technical data. These data will be included in the Excel table with the “extract data” operation.

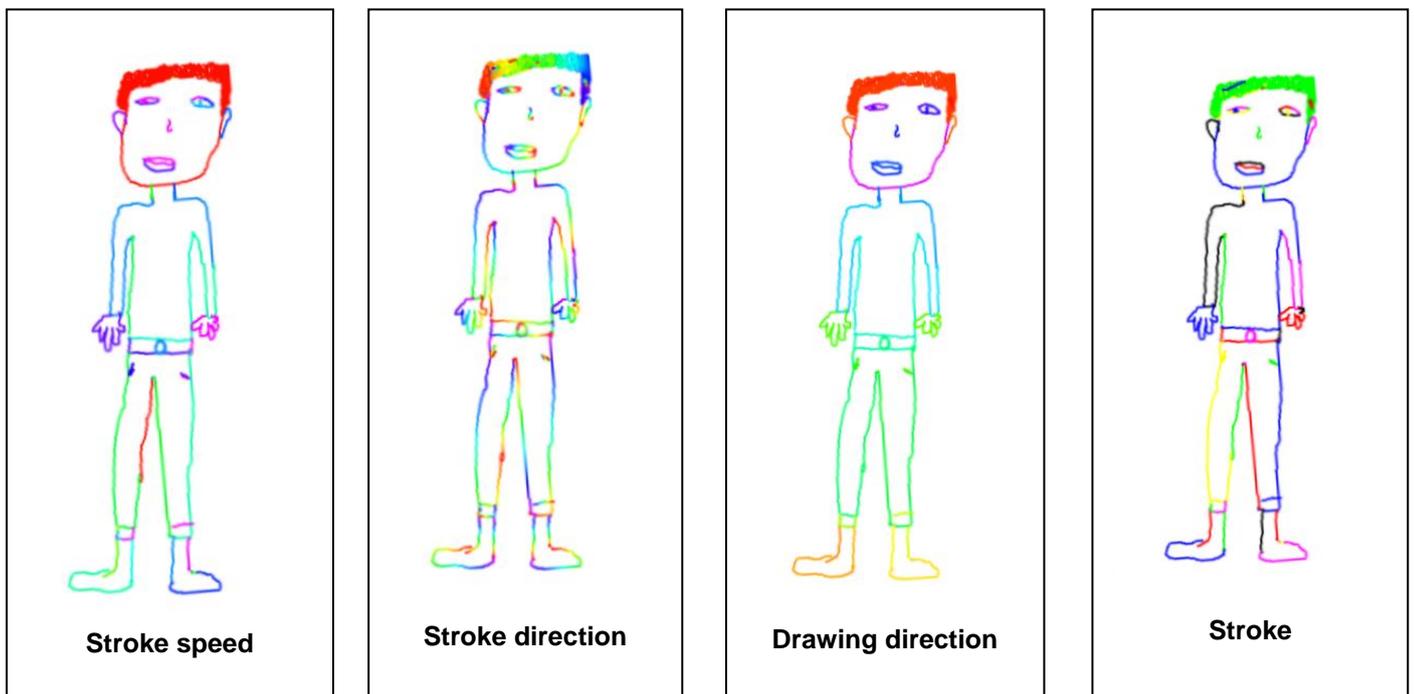


Other functions are available with the menu, and make it possible Elian to offer extra information. We will examine them, firstly “static” visualization then “dynamic” one.

# Static visualization

By typing on the key “C” of the keyboard, various colored modes can be reached:

- \* (0, by default) No color mode
- \* (1) Stroke speed (according the rainbow, slowest purple, fastest in red),
- \* (2) Point speed (not available with the Logitech pen).
- \* (3) Pressure (not very precise with the DP, but relevant with the digitizer).
- \* (4) Stroke direction (as rainbow, beginning in purple, end in red),
- \* (5) Drawing direction (i.e. strokes order: first in purple, last in red),
- \* (6) Strokes, identifying the stroke one of the other (contrasted colors). This function is particularly important in the study of the writing (see below).
- \* (7) Drawing parts (important for the Rey Complex Figure, the Bender Gestalt Test...). Each one will be analyzed independently.



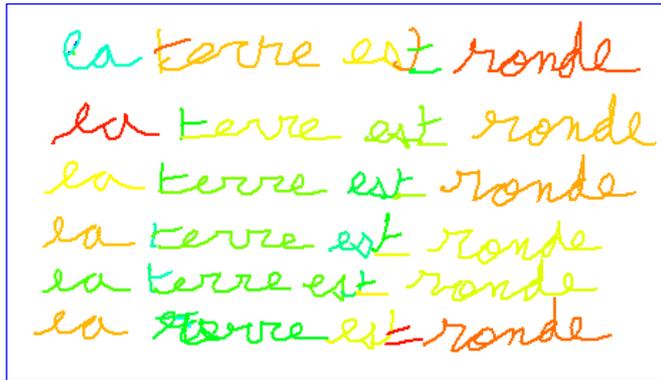
The type of data appears in top and on the left, above the drawing and a small “rainbow” giving the order of the colors.



For “Stroke speed” and “Pressure” two small cursors will appear. The figures indicate the extreme values speeds of the drawing concerned.

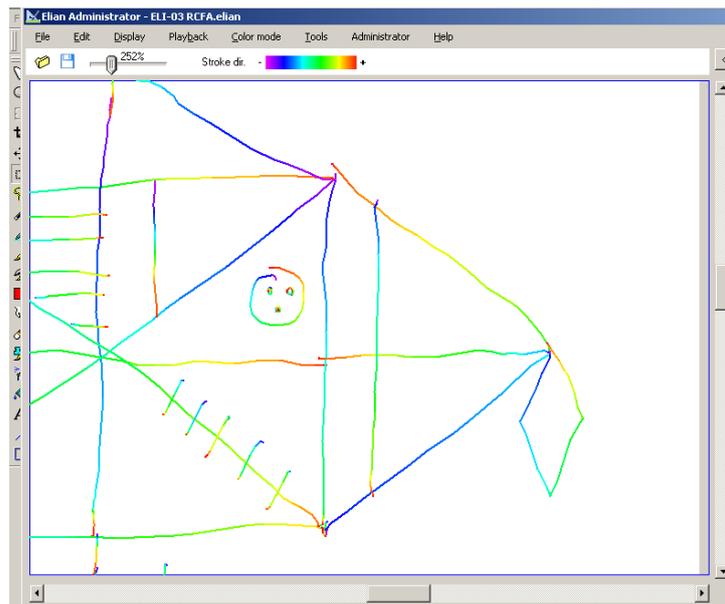


You can vary the sampling of the colors. By lowering the maxima or by increasing the minima, you can examine when a feature exceeds the threshold. It evaluates intermediate speeds, for a specific stroke.



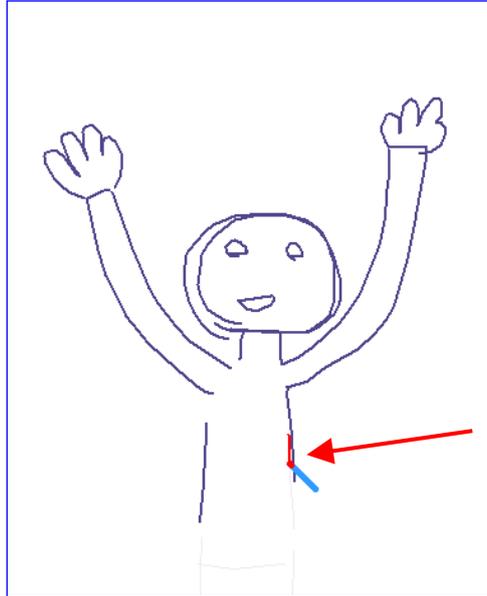
Better to have seen drawing, one can click on “Display/zoom best made” or on the combination of keys: “Ctrl + F”. What is important for the writing, often small; opposite the test of Andre Rey “the ground is round”.

One also can, using the cursor of the zoom, to more enlarge the drawing to examine the details of them. This is important for certain drawings (doubly feature, outlined drawing, writing...), or even for the examination of a feature, like below: the direction of each feature goes from purple to the red.



# Dynamic visualization

Let us examine the drawing process. By typing the letter “p”, the function “playback” gives the course of the drawing. In the mode “No color”, the last feature is in red.



On the right in the middle, during course of a drawing appears a colored window, with the instantaneous data. This information is very useful for research.

<b>TIME</b>	<b>4 min 56 s 039</b>	Drawing: 1 min 35 s 947
<b>STROKE</b>	Contains 27 points (from 1616 to 1642)	
82	Length 45.5 mm Speed 20.1 mm/s	
	Duration 2 s 266 From 04:53:773 to 04:56:039	
	Pause before: 3 s	
<b>POINTS</b>	From (X=1338,Y=1819) to (X=1336,Y=1819)	
1641 to	Length 0.2 mm	
1642		

To stop the “playback” mode, press on the bar of spacing, to restore it press on “Enter”. You can repeat it at will.

You can choose the speed of the process by choosing acceleration X 2, X 5 or X 10 at the “Playback” menu.

With the keyboard, you can move forward or backward in the drawing process:

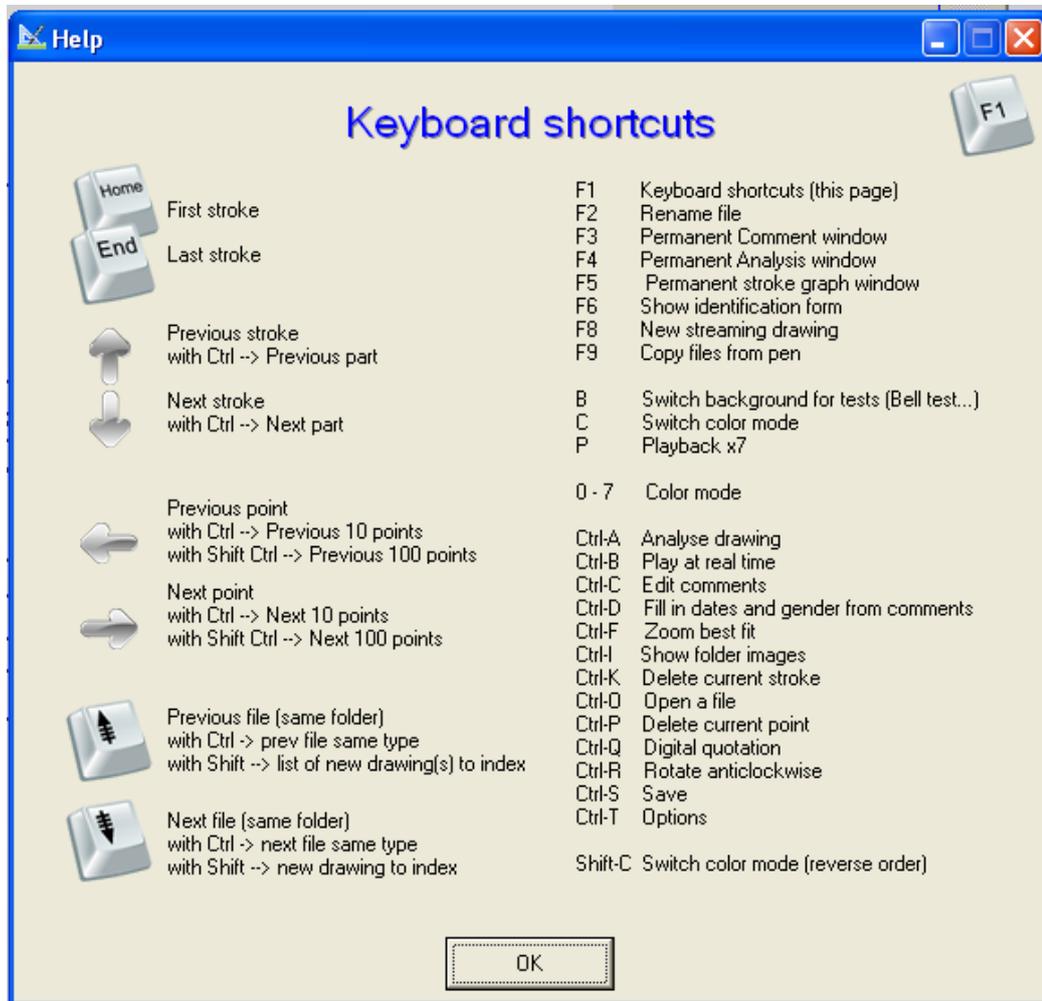
- “home”: beginning of the drawing;
- “end”: its end.
- “↑” once: previous stroke;
- “↑” continuous: the drawing moves backward stroke by stroke,

“↓”: next stroke;  
“↓” continuous: the drawing moves forward stroke by stroke,  
“←” once: previous dot (of digitalization);  
“←” continuous: backward dot by dot,  
“←” and “ctrl”: by 10 points.  
“←” and “shift”: by 100 points.  
“→” once: next dot (of digitalization),  
“→” continuous: the drawing moves forward dot by dot,  
“→” and “ctrl”: by 10 points.  
“→” and “shift”: by 100 points.

# Other functions of Elian

## Other keyboard shortcuts

If you press on “F1” this windows appears. You have all the shortcuts which are presently available:



## To pass from one drawing to the other



First you have to choose the type of order (name or date order, up or down) by clicking on the head of the column (small menu in the bottom right of the Elian window).

“Pgup” (or “⌘”): previous file in the same repertory

“PgDn” (or “⌘”): next file.

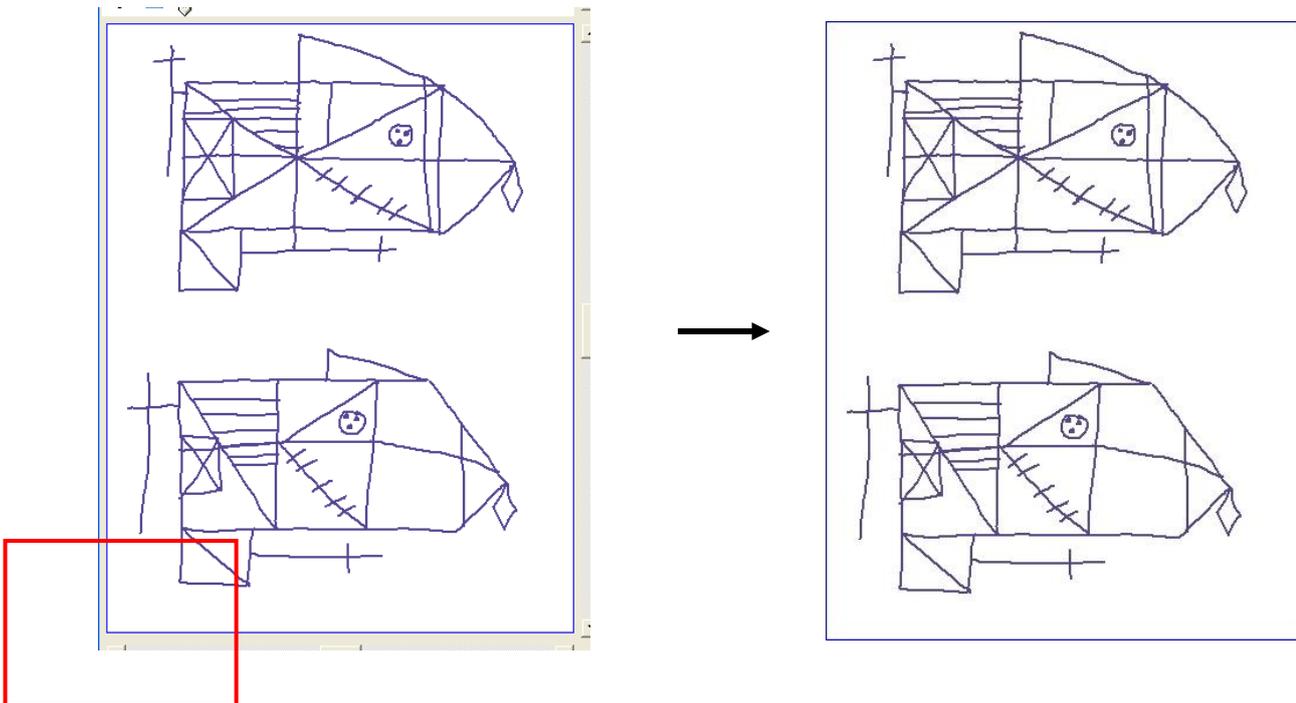
“Ctrl” + “Pgup” (or “⌘”): previous file of the same king (DRAA, RCFA...) in the same repertory

“Ctrl” + “PgDn” (or “⌘”): id. for next file.

### “Image” function

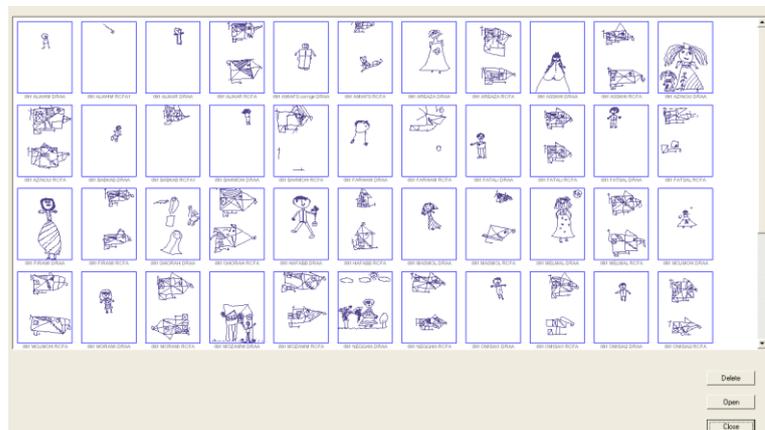
One can print the drawing as an “jpg” image, at any stage of its process. What is seen in the screen will be printed.

You must use the menu  and the mouse to adapt the windows size to avoid gray margins on the side of the image (see below).



### Seek of a document

You can look for a document in a repertory from its image. Click on “files/show folder images”, or the short cut “ctrl+i”.



The whole of the images is posted. It may work in the background.

By defect, all the files will appear. Click then on the menu in bottom and on the left, then on "Refresh".



While clicking on an image with the mouse, one reaches this file. It may work in the background.

### **Loss of a file, recovery**

It can sometimes happen to you to lose a file, if you have deleted it. Or you would like to recover the original file after an unfortunate change

Click on: "File/Explores backup folder".

Click on the name of the file which you seek, and to record it.

In order to avoid the crushing of the previous file by the new one, think of changing name.

### **Sending of files with "ElianSoftware"**

In the framework of cooperation, or if you need our analysis on your files, it is possible to send confidentially them to the Website "ElianSoftware."

You must be connected to Internet.

Choose, as appropriate, one of the following functions:

- "File / Send current drawing to ElianSoftware" to send only open drawing.
- "File / Send drawings to ElianSoftware" to select the drawings of a directory made for this purpose (all drawings will be sent).

Please leave no nominative data in the "commentary".

### **Post the comment in a permanent way**

If you wish to have always the comment when examining the drawing click on "F3" or the function "Display / Show permanent comment window". Then click on the drawing or the comment at will.

When one passes from one drawing to the other, the corresponding comment is posted.

If one wants to make **disappear** the contents from the comment, during an examination of a drawing (to prevent reading from a not authorized person...), click on "Ctrl + F3".

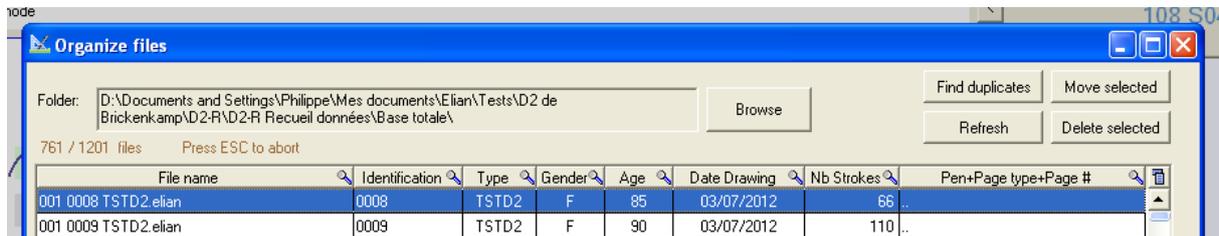
### **Post the automatic analysis in a permanent way (version "Testing")**

The key "F4" or the function "Display/permanent Show analyzes window" post the automatic analysis in a permanent way.

When one passes from one drawing to the other, the corresponding analysis is posted.

## Function “File / Organize files”

This function opens a window showing technical data on the drawing. It is useful to identify errors in files (especially for researchs)



The files can be sorted according to the order of each column.

If necessary, click on “find duplicate” (in top right). You can extract them by clicking on the key “move selected”.

## On-line help

If you note a problem in the software, or an error message, please send an email to “[support@seldage.com](mailto:support@seldage.com)”.

You will discover the other functions of Elian with measurement, during your use of the software.

Let us pass now to the use of the DP.

# Use of the Digital Pen (DP)

Anoto technology is sophisticated in its principle, even if it is easy to use. So it is necessary to make a test before any effective use of Elian.

## Electric charge of the battery

The pen was sold to you charged. But if it waited a long time before being use, the battery charge could be very low. Think of recharging it. The drawing could be irremediably lost.

Connect the cradle (or the pen cap) connected to a USB cable to a running computer. For the Logitech Io1 or Nokia DP, you can also connect the cradle with an electric plug.

If it is completely discharged, the small light (LED) on the pen can remain off and spend time to light on. Withdraw the pen from its cradle (or cap) and replace it on it once or even at several occasions. That should activate it.

The LED is initially red, fixed or twinkling, then green twinkling. When the LED is fixed green, the pen is charged.

You can check the charge while clicking on “PEN/Anoto PEN information” or “PEN/Nokia/Logitech system information”.

The charge must persist several weeks up to several months. But it is to better be careful.

**With a discharged pen, the drawing is irremediably lost.**

The pen is designed to function without recharging for many drawings, in the case of a research in particular.

But please connect it regularly for recharging. It is the best to record the drawings.

## The drawing

**Before any use of the DP, check that it is quite charged. The light (LED) must be lighted on and fixed green during all the drawing record.**

**If the LED is off or red, stop to use the DP and reload it.**

Take an Anoto paper which was provided by us (no other paper will work). Make a drawing and/or a writing (of any kind).

**You will be able to re-use this sheet** as often as you wish (even if it is completely covered by strokes). The laser camera **only reads the microdots**, and never what is written with the DP.

**It is necessary to hold the pen in the good sense, the ballpoint at the top. If not, the drawing will not be registered.**

**The camera lens is located behind the ballpoint. You must never use a rule or anything which could mask it. No drawing could then be recorded.**

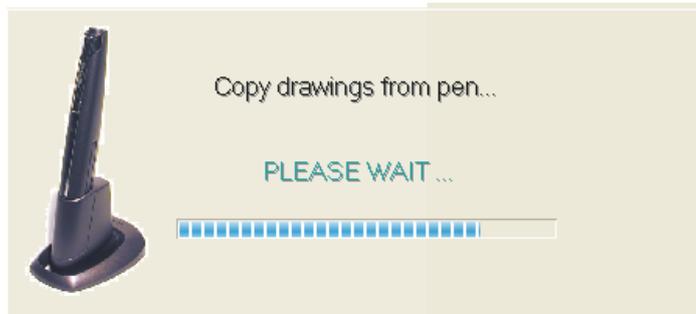
When you finished, connect the DP to the computer.

**Think to record the drawing as soon as possible on the computer.**

A window appears. Click on “OK”.



A small window will open:



Then the page appears, with your drawings.

You can try all Elian functions with it (see above).

If you want to destroy this file, click on key "Del".

Anoto technology is sophisticated. The pen is reliable and solid, but it is subject to breakdown... especially due to imprudence.

The pen is guaranteed one year per standard exchange, but only under correct conditions of use.

# Indexing of a file

If you use the Logitech or Nokia DP, the indexing zone is automatically read.

See the “Handbook of installation” for these pens. But it is often necessary to correct it, confusions are frequent.

With the Anoto DP 201, no reading is done.

We will consider the general case, as if reading was not made or if it needs to be corrected.

## Utility of the indexing

To carry out the automatic analysis of drawings, writing or graphic tests (FCR, d2 of Brickenkamp, BGT...) or if you want to have the adequate screen for it (TMT, Test of the bells...) it is imperative to correctly index the drawing.

First the file has only a provisional identifier. It is visible in top and left.

It is read as: date and the hour (Year/Month/Day/Hour/Minute/Second).

**001 Elian 20110622111521.elian**

Here it is 2011/06/22 with 11:15 and 21 seconds.

## Methods of the indexing

Take your test paper and write your indexing. It must comprise letters and figures up to 8 boxes.

**The same subject must always have the same indexing.** Without that its files could not be analyzed in the same time.

In our example, the subject’s name is Paul Dupont.

We chose the first four letters of the name, followed by those of the first name, that is to say DUPOPAUL.

**If you see several times the same subject**, differentiate the second series by a letter or a number. Here, for example DUPOPAU**2**, or DUPOPAU**B**.

The drawings are recognized by their types (see below). The automatic analysis will be carried out **by gathering all the drawings having the same reference.**

In some cases, in order to preserve the secret of the identity, it can be interesting to use a code. In our case, it could be 856DUPJE, or DUPJE856, or anything else.

(Mind to keep the correspondence between name and code in an independent file).

## Particular case for research

In some cases, the drawings can be hundreds of the thousands. To allow their statistical processing, it is necessary that they can be in the same repertory.

**Some researchers must make twice their indexing, for it was not correct. So please follow such rules.**

In this particular case, we recommend to reserve the first boxes with the classification of the file.

For example, we have a research on 10 schools, having each one 8 classes (3 nursery schools and 5 primary ones), with 4 classes per level. Moreover, we want to differentiate the subjects having such or such parameter. We could have for example:

Put 1: parameter (deficiency/no deficiency, school urban/rural...), from 0 to 9 (use two boxes if above).

Put 2: number of establishment, 0 to 9,

Put 3: school level,

Put 4: number of the class.

Put 5 to 8: identifier of the child.

With our subject named Paul Dupont, we could have 8534DUPA.

If we have in some class a Paul Durand or a Patricia Dupuis. To avoid confusion, we propose to you to identify them by a figure or a letter, as above: 8534PUP1 for the first and 8354DUP2 for the second.

Any other method is possible, but it is necessary to think from the beginning of the work or research.

If you could make several researches with Elian, we propose to use the first box for the research order. For the first one, it could be a "1" in this box.

It is especially important if you would compare all these researches.

If you never think of mixing these files you can use any mode of indexing.

### **How to write the indexing of a paper (or several of the same subject)**

Take your test sheet and write the indexing, as clear as possible, as well as the birth date of the subject (here fictitious). You can also notch the boxes of "choice" (sex, laterality). For the drawing type, see below.

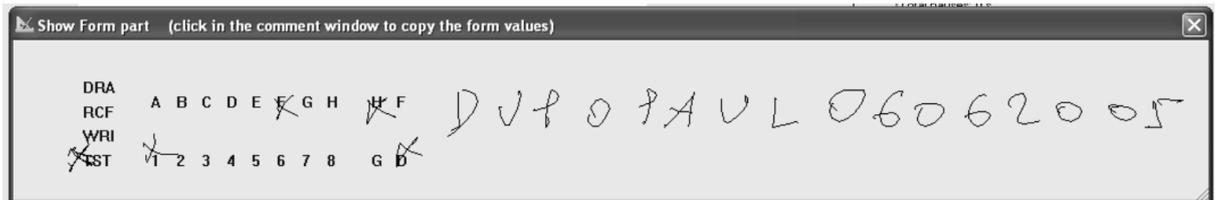


If you want to try the indexing for several sheets, take one or more other sheets. In order not to waste paper, take the sheet upside down and write on the "S" of the name "Seldage" printed on the bottom.

Open Elian then and place the pen on its cradle connected to the computer. Click on "OK" when the message appears (see above).

For this demonstration, I made the operation three times, that is to say four sheets. They open successively.

Click now on the key "F6" to reveal the zone form. It appears as below (the other files only show the small S but no indexing). It is the precise copy of the indexing zone on the paper.



You can move it, if necessary, with the mouse (to make it disappear, click again on “F6” or the red cross in top right).

Now click on the small gray rectangle on top left of the “Elian” page, the place to make a “comment” to the drawing.



Do not touch with the first box named “Creator codes”. Your code is personal; any change will cause communication problems with our services or colleagues.

Write the “indexation” by reproducing the indexing line of your paper.

Write the birthdate now as asked without space. The distribution in boxes will be carried out automatically.

If you need to correct it, go to the incorrect figure and delete the others, the write the good ones.

NB: if you do not know the birth date or if you do not want to write it (for confidentiality reason), put 15 (middle of month) as 6 (middle or year)...

Now indicate the sex and laterality (write or left-handed).

For the type of drawing, write as below, in order to have a correct automatic analysis:

- DRA: Drawing
- DRA-A: Draw-A-Man
- DRA-B:
- DRA-C:
- DRA-D: D10 test of Jean Le Men
- DRA-E: DAM with an Entourage
- DRA-F: Drawing of the tree (when it is alone)
- DRA-G: Test of inventiveness (Charles Mottier)
- DRA-H: Drawing of the House

RCF-A: Rey complex figure (A-type), Copy and memory  
RCF-A-1: Rey complex figure (A-type), Copy alone  
RCF-A-2: Rey complex figure (A-type), Memory alone  
RCF-B: Rey complex figure (B-type), Copy and memory  
RCF-B-1: Rey complex figure (B-type), Copy alone  
RCF-B-2: Rey complex figure (B-type), Memory alone

TST-A-1: TMT test (sheet A)  
TST-A-2: TMT test (sheet B)  
TST-B: Bender Gestalt Test  
TST B-2: Bell Test (Gauthier)  
TST-D d2 test (9<sup>th</sup> version)  
TST-D-2 d2-R test (revision, German database)  
TST-E Test of dotting (L. Vaivre-Douret)  
TST-F-1/2 Test of the simple garlands (left/right hand) (L. Vaivre-Douret)  
TST-G Test of the ladder (L. Vaivre-Douret)  
TST-H Test of O (L. Vaivre-Douret)

WRI: writing test  
WRI-A: Oscar writing test  
WRI-B: “The Earth is round” test (A. Rey)

At the end of the operation, Elian asks:



Click on “Yes” if correct.

Now we have to index next files, for the same subject (as we consider in this test). Open next file (with “PgDn” or “⌘”). Open the “comment” and click on the mention “Copy from last drawing”, as below (in the bottom right of the window).



All the boxes then will fill automatically. You have only to fill the boxes for the drawing types.

If you do not remember the types pass the cursor on the question mark on the right of the windows (see above), a new window will open.

You have to do this operation for the other files of the same child (or adult).

When you have drawings from several children, proceed in the same way.

In case of error, you can correct the data.

To know if a drawing could have been forgotten, click on “maj. + pgup”.



The operation is now finished.

## Modify or correct of a drawing

Now let us see how to manage if it is an error in a drawing record. Take the test drawing you made.

It is important if you wish to remove a stroke or a part of it.

You also have to use this function if you wish to divide a drawing in different part (i.e. a draw-a-man from its entourage, a tree from the house drawn on the same paper, etc.).

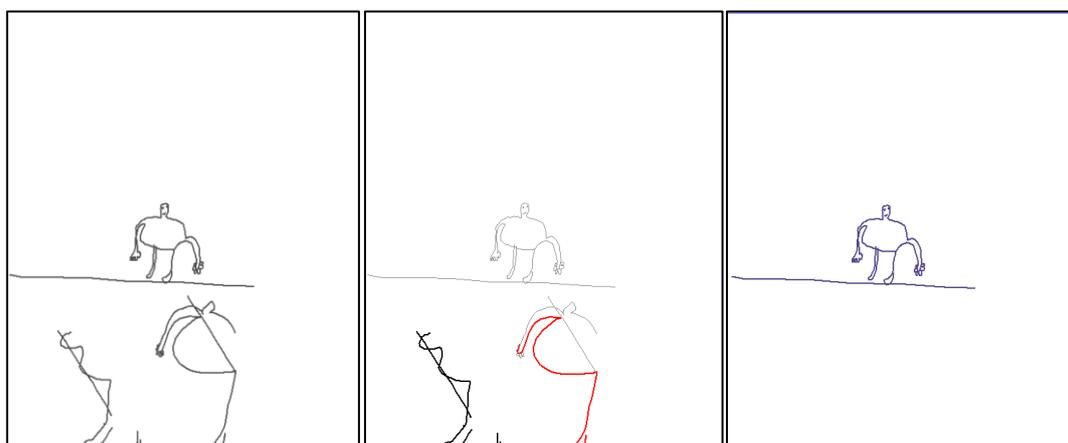
In order to do these operations, you must create a new file by typing on “File / save as...”. You can do it either by changing drawing type or indexing, it depends from your intention.

If you have no use of the “old” file, you can only name it as “original”. For example, the name of our test drawing could be: “DUPOPAUL DRAA.original.elian”.

### Remove a feature/a point

We have, for this example, a drawing where a child made two attempts before success. We would like to only preserve the correct drawing, which is the third. See below the three stages of the operation, on the left the initial drawing, correction then the final drawing.

For the first time, you have to work on a “test” file. For that, give a provisional name to the file you wish modify, using the function “Edite/Save as”, and add (for example) the word “.modified” to the original name. If the result is appropriate to you, you will only remove this mention.



Go at the beginning of the drawing with the key “home” then go to the stroke to remove (or to modify) by the arrows keys (“↓” (next stroke) or “↑” (previous stroke)). The stroke on which you can act appears in red.

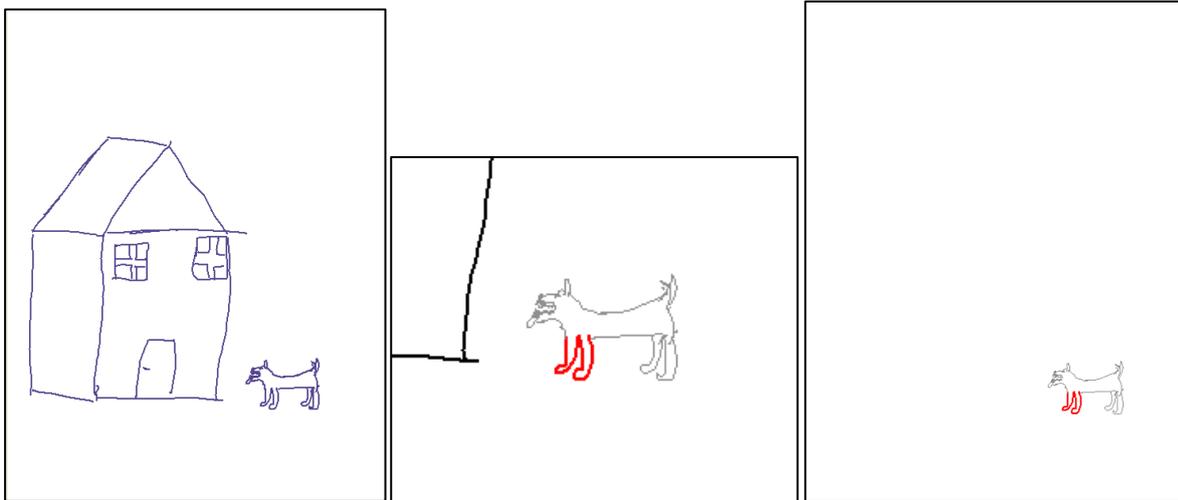
To remove it, click on “ctrl” + “K”. You go further and remove the next stroke in the same way, until you obtain the desired drawing. Record it (“ctrl” + “S”, or “Edit/Save”).

You also can also remove points. Go to the concerned point with the arrows “→” (next point) or “←” (previous point). Click then on “ctrl” + “p” (for *Point*).

If you made an error in the suppression, do not to record the file and to start again the operation. If a complex correction is to do, we recommend to record work as it progress (with “ctrl + S”).

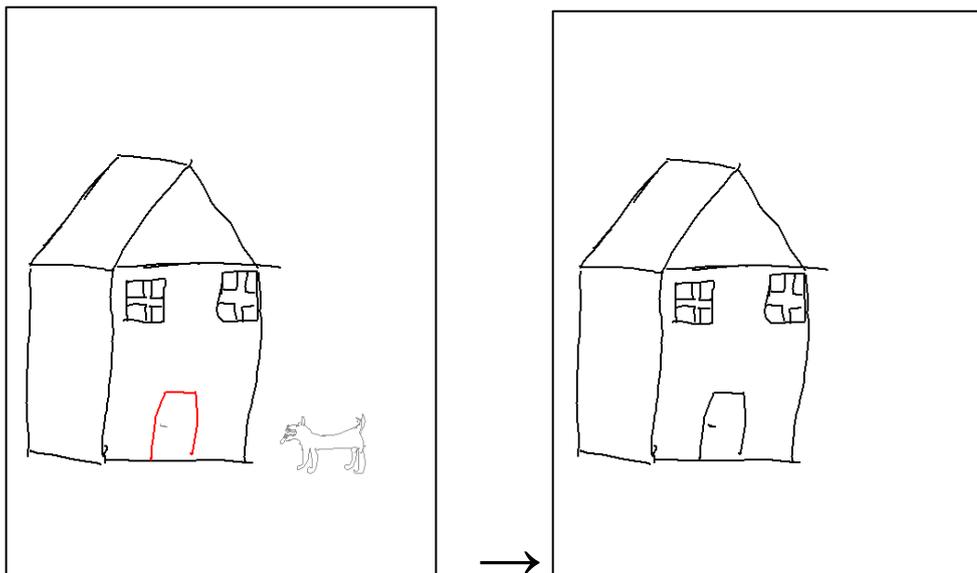
### Separate two drawings

We would separate the drawing of the house (which was drawn first) of the dog, to study them separately. Give a new name to the initial file (add “original” for ex.).



Go to the first feature of the dog with the arrows keys (in red). Click on “Edit/Delete all strokes before current” (the “current stroke” is the first one which you want to preserve). You will obtain the result on the right. Save the new file, for example “DRAC” as this code is free.

To only keep the house, open the original file again, and go to the last stroke of the drawing you would preserve. Click on “Edict/Delete all strokes after current”. Here the red feature is the last which you want to preserve.

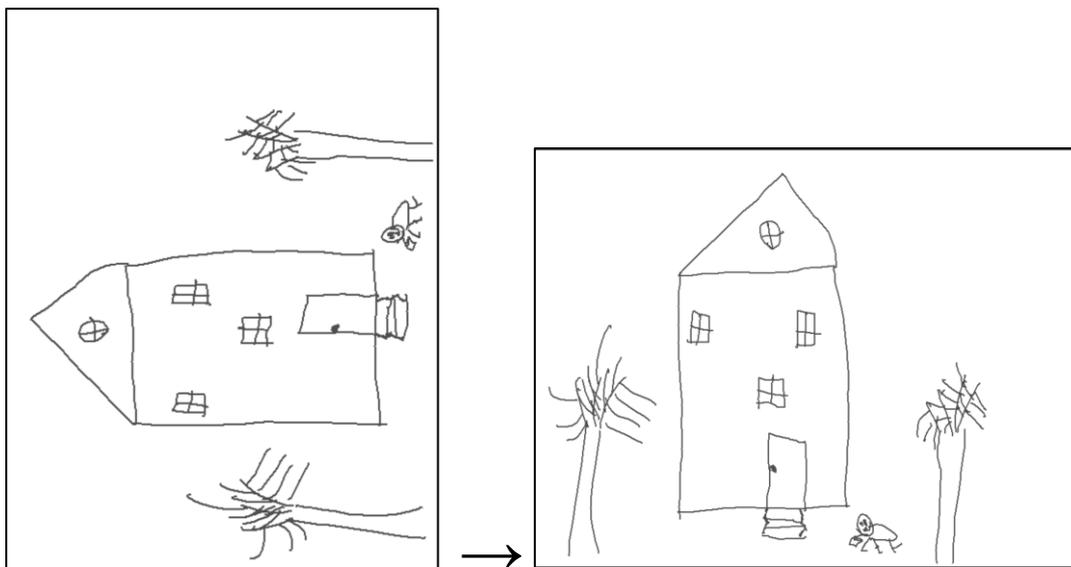


Save the new drawing after the operation, under another name (as DRAH, for “House”);

These functions are interchangeable with the preceding ones (stroke by stroke, point by point). You choose according to that which is most convenient, or the safest.

### Function “Turn”

Here a drawing made in the “landscape”. You would put it in “portrait” mode. Press on the keys “ctrl + R” until obtaining the desired position.



# Eliau and psychological tests<sup>1</sup>

Any type of drawing can be made and recorded with Eliau.

Four classical tests are automatically analyzed in percentiles from the numeric parameters:

- Draw-A-Man (DAM) drawn alone for the automatic analysis,
- Rey's Complex Figure (RCF, A form, the most usual). Eliau provides a Computer aided scoring according to Rey's one, with automatic percentiles.
- Rey's Complex Figure (RCF, B form or Baby),
- the writing test of André Rey ("the Earth is round")

A (double) test profits from an automatic analysis, conform to the manual classical analysis:

- the d2 test of attention from Brickenkamp, 9<sup>th</sup> version (French and Swiss database), and the Revised version (d2R, German database).

The Bender-Gestalt-Test benefits from a Computer Aid Quotation (from the work of Koppitz, 1976). An automatic analysis is available for each subtest (based on the work of Hutt and Lack).

For an original and new test, we have an important database, but not yet with percentiles neither automatic analysis:

- The CM-Test of creativity (Charles Mottier).

Other tests are facilitated because of printed sheets (as for manual use, but on Anoto paper). Eliau visualize the drawing process, giving a precise manual analysis and gives numeric parameters (but no percentiles):

- Trail Making Test, in four sheets (two sample sheets, two for the test itself),
- The Bell Test (Gauthier),
- The new EVAMA Test (Pr Laurence Vaivre-Douret).

At last, you can use blank Anoto sheet of paper, and Eliau allows visualization and gives numeric parameters (but no percentiles):

- The Tree drawing,
- The House drawing,
- The D10 test of Jean Le Men.

To summarize, the blank Anoto sheet or paper is used for the DAM, the RCF (A or B), the house and tree drawings, the D10 Test of Jean Le Men and the CM-Test of creativity. For the other tests, it is necessary to call for printed sheets and methods to "support@seldage.com".

## Examining a child

We recommend starting with the simplest drawings, in order the child will be progressively accustomed with the device. For a child, it would be:

- The DAM on a specific sheet (to be automatically analyzed).
- The drawings of the house, tree and dog (if necessary), on the same sheet or on specific one, at will (they are not automatically analyzed to date),
- The RCF (A or B, according to the age). The two phases of the test must be on the

---

<sup>1</sup> These tests are subject to copyright rules. You must have acquired the authorizations to the holders.

same sheet.

- Or the BGT,

If you ask for too many tests, the child might be tired, just like the old subject. As the numeric parameters are very sensitive, we recommend to only ask for HTP (House-Tree-Person) and RCF for the first meeting. The data issued from these tests will help for choosing complementary tests.

### The Draw-A-Man (DAM)

The request is, according to the age: "Please Draw a Man, the best as you can". **No other mention must be added.** We do not look for evaluating the artistic abilities of a child, but only numeric parameters. The conditions have to be standardized.

You can ask another time, a man according to the usual methods (Goodenough or other), in order to compare the results.

If the child asks of which gender must be its drawing, please answer: "What you wish". To any question out of technical one, you have to say: "Do the best as you can".

It is advised to look at the drawing only in a "distracted" way, not to interfere with the child, which does not prevent from taking notes.

When the file is charged on the computer, you must index it by clicking on the boxes DRA + A.



Elian "color" functions allow an immediate assessment of the design (here the great number of the strokes (sketched drawing suggests not artistic abilities but anxiety). The analysis of the drawing process provides significant information about the child.

A table with the numeric parameters is obtained while typing on the keys "Ctrl" + "A". See below for details.

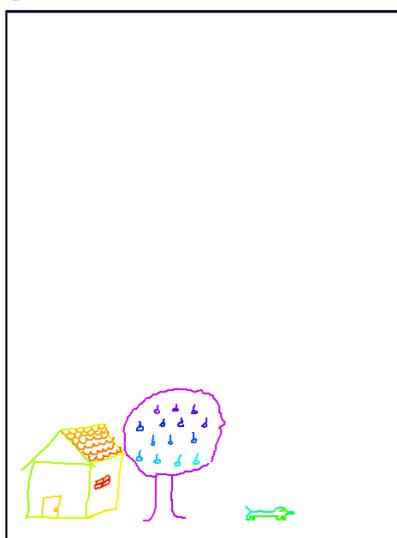
### Drawing of house, tree (and dog)

The drawing of the house and the tree complete the whole named (following Buck) “House-Tree-Person”. The drawing of the dog can be associated with them. **They must be realized on a separate sheet from the DAM**, even if it is very small and leaves much place, because of the automatic analysis carried out by Elian.

These three themes are very useful to assess the numeric data from the DAM.

The numeric parameters are available (Elian “Research” version) with the function “Tools / Extract data”. They are presented as absolute value. No percentile is given for the moment (no pertinent database).

When the file is charged on the computer, you must index it by clicking on the boxes DRA + H (for “house”), if these drawings are all on the same paper, or “F” for “Tree”, if alone, and “C” if the dog is alone.

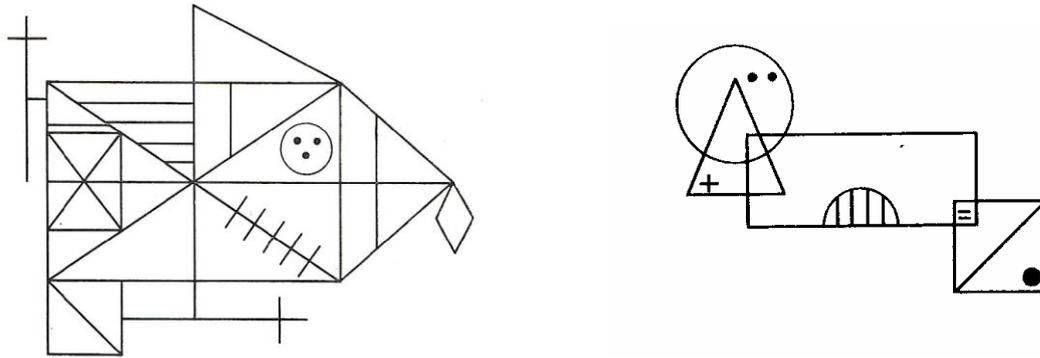


Elian provides a new approach to this test. The drawing size and place are essential. Small dimensions evoke an inhibition, a large one a lack of emotional control. A drawing at the bottom of the sheet often goes with shyness (in the first levels of school).

### The Rey Complex Figures (RCF, A or B)

The Rey Complex Figures (RCF) are done to evaluate child or adult abilities about “symbolic” and memory field. Created to evaluate the cerebral affections and cranial traumatism, it was used by Paul Osterrieth in a developmental way.

NB: in the US and GB, RCF is quoted from the book *Rey Complex Figure Test and Recognition Trial*, from John E. Meyers, and Kelly R. Meyers (PAR Ed.). It gives a slightly different analyze. Our work (only in French at date) named *Figures de Rey, Manuel d’instruction et d’interprétation* (ECPA Ed.) identifies subtypes, which have a developmental significance. An English summary is available on request).



The Figure A (on the left) is composed of geometrical lines without symmetry. The Figure B (on the right) is based on four overlapping geometrical figures. For both, the method is the same one.

Before the test, you have to fold the sheet into two (after having folded the “identification zone” to preserve it from strokes). It allows that the two phases of the test are carried out on the same sheet, the copy in top and the memory restitution in bottom.

Please insert a thick paperboard in the fold to prevent that the drawing prints on the other face, because of the pressure exerted on the paper.

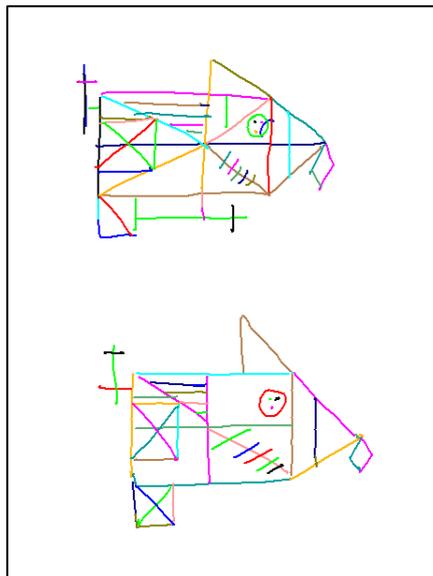
Present the model to the subject, and ask him to recopy it. He should not move the model. Time is free.

When he says he have finished, the model is withdrawn.

The second phase of the test is the reproduction from memory.

André Rey asked to wait three minutes between copy and reproduction. But that appears often too long and. It can easily be reduced without modifying the result. During this interval, it is imperative to say nothing neither to make any significant activity, not to disturb inner memory work.

When the file is charged on the computer, you must index it by clicking on the boxes RCF + A for the RCF-A, or B for the RCF-B. If the subject draw only the copy on the paper, click on “1” (= RCF-A1) and “2” for the memory (= RCF-A2).

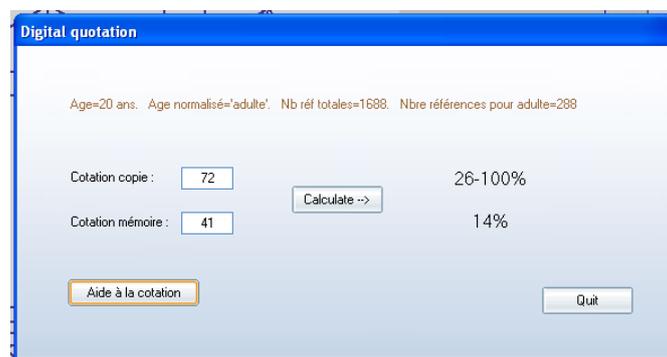


Elian is particularly interesting for RCF as it identifies all the strokes (above function "color / strokes". It gives the drawing process ("Playback" function). Types and sub-types are easily identified. Elian goes further: the RCF measures the strategy. It represents a "standardized conduct" which assesses how the subject handles situations since they pose a problem for him. Dynamics reveals proactive or cautious attitudes, which has value almost in any case...

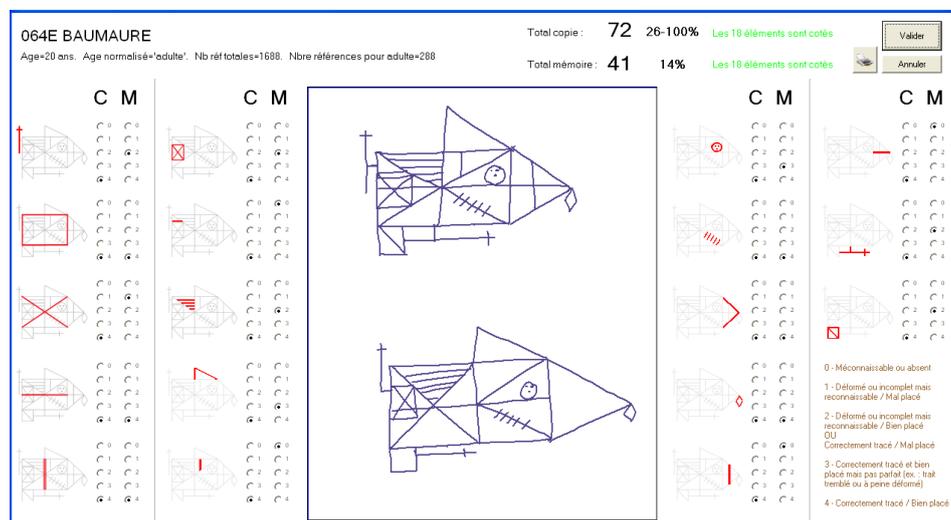
A table with numeric parameters is obtained by typing on the keys "Ctrl" + "A" (see below).

### Computer aided quotation (CAQ) for the Rey's scoring

Elian proposes a CAQ. Type on the keys "ctrl" + "Q", the following window appears. If you manually scored the drawings, please enter the results. The percentile is automatically calculated.



If you click once more on "ctrl" + "Q", the following Aid will appear.



Click on the small box for copy ("C") and memory reproduction ("M"). When it is finished, the total is done, and the percentile calculated.

You can print the result on paper by clicking on the box representing a printer.

### André Rey's Writing Test: "The Earth is round"

You say to the subject:

“We will evaluate the characters of your writing through a short phrase which does not pose any problem of orthography or syntax: “the Earth is round “. You will write each sentence, without point at the end, during one minute and half. I will say to you when to start and stop.”

Shortly before the end of the time, you say: “We soon will finish.”

At the end, you say: “Finish the line and stop.”

Fill the indexing zone on the paper.

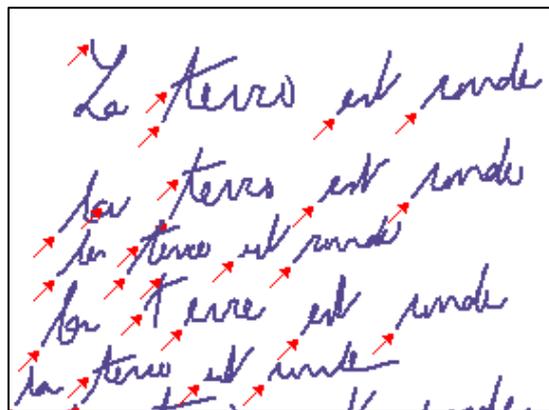
When the file is charged on the computer, you must index it by clicking on the boxes WRI + B.

You can have a table with numeric parameters by typing on the keys “ctrl’ + “A”.

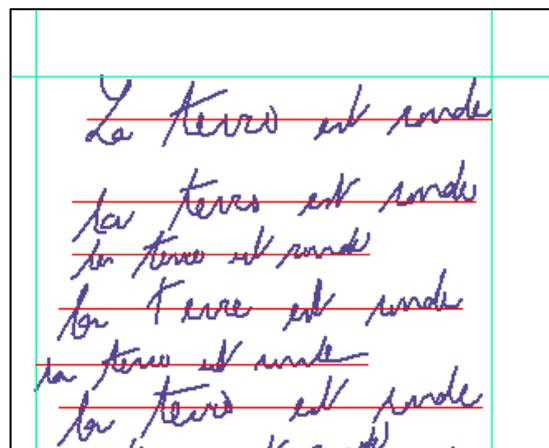
Several specific functions are available for the writing. Now examine some of them.

#### *Display mode*

- “Display/Show arrows at stroke start” create a small red arrow at each beginning of stroke.

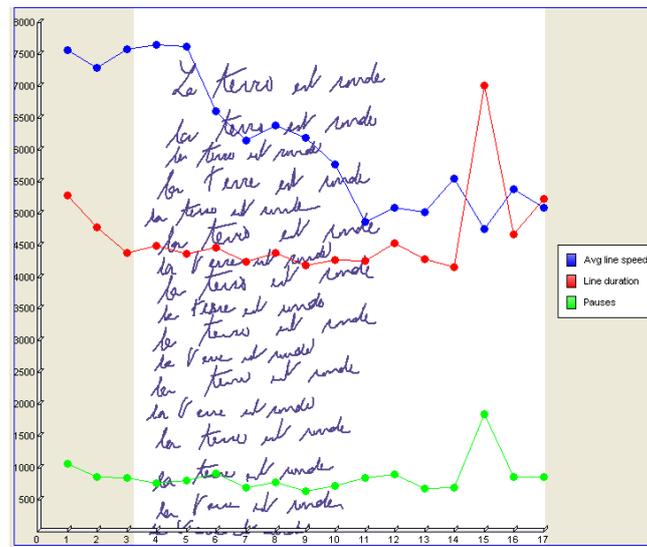


- “Display/Show margins” indicates the margins and the mean position of the lines. These data are included in the numerical analysis.



- “Display/Show graph for WRI/TSTF drawings” gives the line value for speed, the line duration and the pauses. It assesses the dynamics of the writing line after

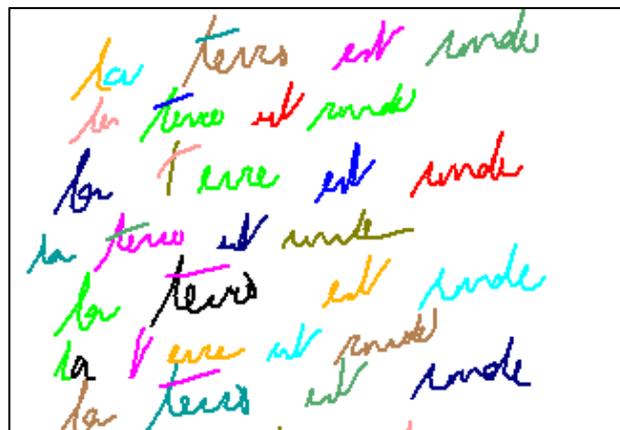
line (their mean are included in the numeric parameters). It is very significant for the pathological drawings.



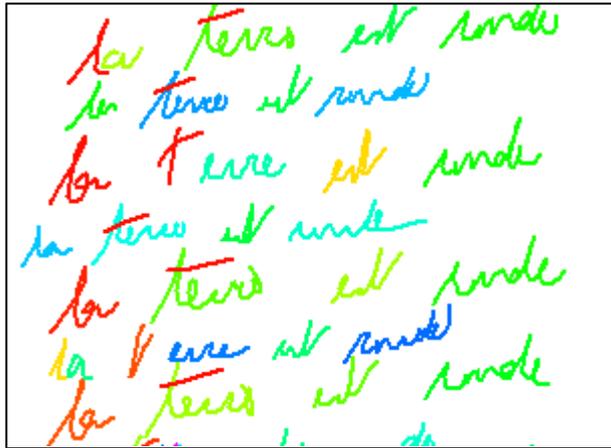
### Color modes

They are obtained by typing on the key “C”

- “Color mode / strokes” shows if the word is made by a stroke or several. Here is a “tied” way of writing (opposite to “script” one). Tied writing allows great speed (here at 100 %).

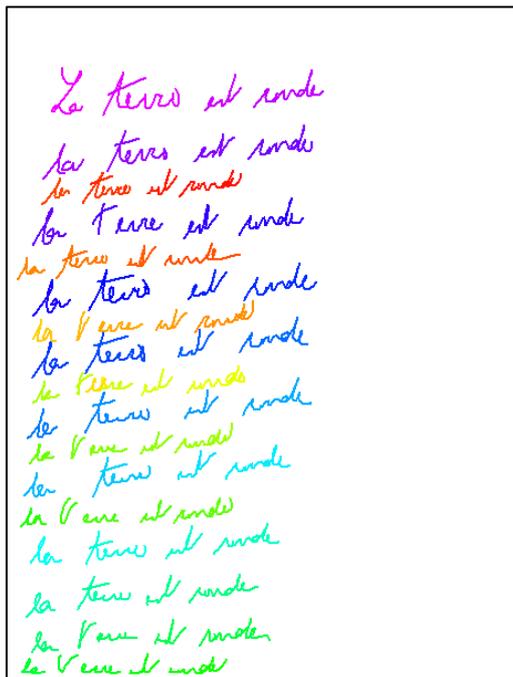


- “Color mode/stroke speed” locates the fastest features (in red) and slowest (in dark blue). While varying the cursors one can analyze



- "Color mode/Drawing direction" detects anomalies of the layout. This man had reached the bottom of the page and had inserted the following lines between those already written (line order purple, blue, green, yellow, orange, red).

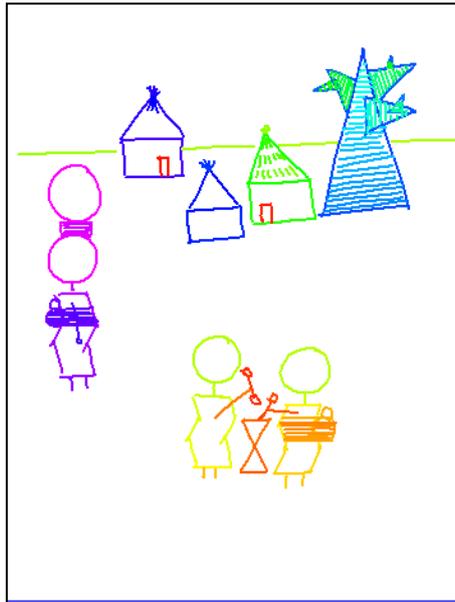
If we return to the "speed" functions above, we see that the inserted lines were written more slowly (in blue) than others.



Thus graphology becomes an exact science. Expression as "written quickly" is objectively analyzed.

### CM-test of creativity

It is a question of using four geometrical figures (rectangle, triangle, round, double lengthened bar) to produce a drawing of imagination.



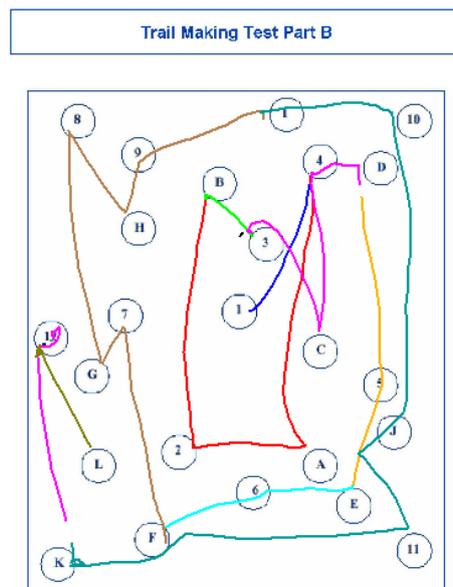
This test is applicable in the teenage and the adult, but is not relevant before the age of 16 (procedure on request).

When the file is charged on the computer, you must index it by clicking on the boxes DRA + G. Numeric parameters are available, but no form analysis is proposed as yet.

This test is a bit marked by graphic skills, but is very useful for identify rigid personalities or pre-psychotic.

### Trail Making Test

Elian automates this classic test. You need to have printed A4 paper: four sheets i.e. two "sample" and two "test", "A" et "B".



When the file is charged on the computer, you must index it by clicking on the boxes TST, A and 1 for the sheet "A" and 2 for the sheet "B". A wallpaper appears and allows to evaluate the quality of the test.

Elian automatically gives the usual parameters for the tests and brings original information. It gives details on the strokes (many features, place of the stops). Numeric parameters complete this new analysis. But there is no automatic analysis at time.

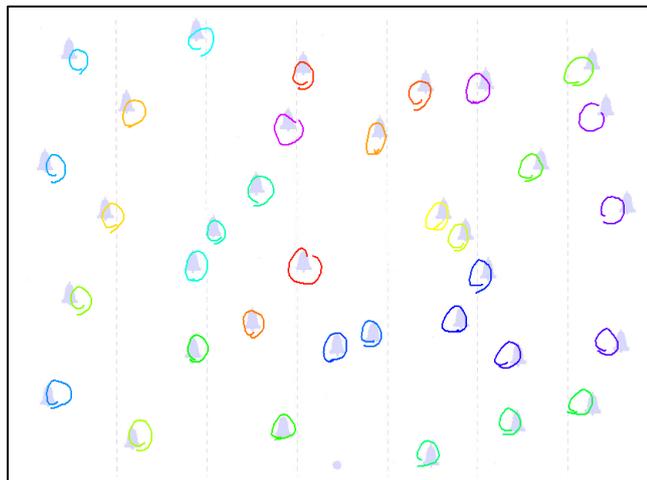
### **Bells Test (Gauthier)**

This test evaluates the "unilateral spatial neglect". Forgetting bells and spatial distribution of bells omitted assesses the severity of the disorder and its laterality. For children, it gives the strategy of drawing, ordered or disordered.

The subject has to surround all the 35 bells in 7 columns of 5, hidden in various distractors.

When the file is charged on the computer, you must index it by clicking on the boxes TST, B and 2. A wallpaper appears.

If one types on the key "B" one then sees alternatively posting the initial drawing (in green) and the sheet of result (in blue, comprising only the bells).



This wallpaper immediately shows the not surrounded bells and the stroke order, which is specified by the "Playback" function. But there is no automatic analysis at time.

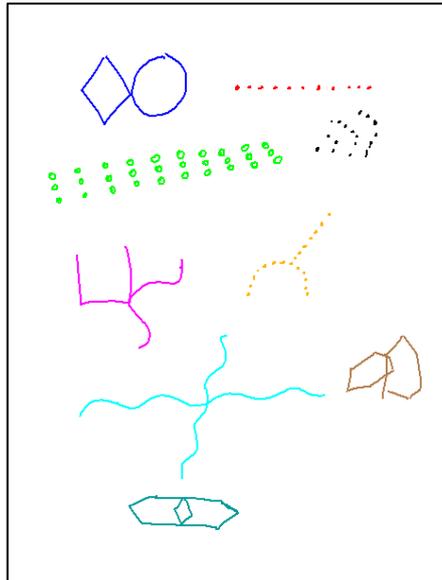
The printed sheets are provided on request.

### **The Bender-Gestalt Test (BGT)**

*Due to copyright BGT is only available for research, not for professional use (information on request).*

*Computer Aided Scoring (according to Koppitz, 1976)*

Koppitz gives a developmental analysis for the child from the age of 5 to 11. Hutt and presently Lacks propose a psychopathological approach. Elian provides both. But copyright rules limit the use of these analyzes to research applications, as yet.



When the file is charged on the computer, you must index it by clicking on the boxes TST + B. Elian identifies different the subtests then in an automatic way; those are then specified with colors (one can correct the errors manually).

A computer aided scoring is proposed. Click on « ctrl » + « Q » and the Koppitz scoring appears.

Bender quotation

Total score = 6  
Percentile: 60%

Fig. A  1a. Distortion of shape: Circle or square or both are excessively misshapen  
 1b. Disproportion between size of circle and square: area of one is at least twice as large as area of the other  
 2. Rotation of total figure or part of it by 45° or more  
 3. Failure to join circle and square; circle and adjacent corner of square more than 1/8 in. apart; this applies also to overlap

Fig. 1  4. Five or more dots converted into circles. Circle is defined as an open space surrounded totally or almost completely by a line  
 5. Rotation of figure by 45° or more  
 6. More than 15 dots in a row

Fig. 2  7. Middle row of circles rotated by 45° or more  
 8. One or two rows of circles omitted; row of dots in Fig. 1 used as third row for Fig. 2; four or more circles in the majority of columns; row of circles added; Substitution of dots or dashes for circles is not scored  
 9. More than 14 columns of circles in a row

Fig. 3  10. Five or more dots converted into circles. Circle is defined as an open space surrounded entirely or almost completely by a line; enlarged dots or partially filled circles, dashes, and curves are not scored. In case of doubt do not score  
 11. Rotation of long axis of design by 45° or more  
 12a. Shape of design lost; failure to increase the number of dots on each succeeding row; shape not recognizable or reversed; completion of dots; single row of dots; do not score incorrect number of dots or extra or missing row of dots  
 12b. Continuous line, either instead of or in addition to rows of dots

Fig. 4  13. Rotation of whole figure or part of it by 45° or more  
 14. Curve and adjacent corner of box more than 1/8 in. apart; this applies also to overlap; curve adheres to one whole side of box

Fig. 5  15. Distortion: Five or more dots converted into circles. Circle is defined as an open space surrounded totally or almost entirely by a line  
 16. Rotation of whole figure or part of it by 45° or more  
 17a. Shape of design lost; conglomeration of dots; straight line or circle of dots instead of arch; extension cuts through arch; do not score square or angle instead of arch  
 17b. Continuous line instead of dots either on arch or extension or both

Fig. 6  18a. Distortion of shape: three or more distinct angles or points instead of curves; in case of doubt do not score  
 18b. Straight lines; less than two complete sinusoidal curves or no curves at all in one or both lines  
 19. Two lines crossing not at all or at extreme end of one or both lines or less than one complete sinusoidal curve from end of line; two interwoven lines  
 20. Six or more complete sinusoidal curves in either direction

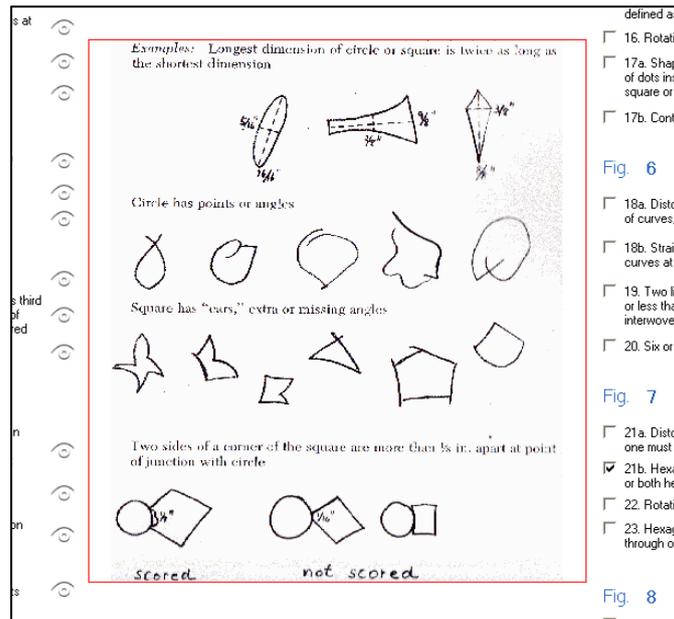
Fig. 7  21a. Distortion: Disproportion between size of two hexagons; area of one must be at least twice as large as area of other  
 21b. Hexagons excessively misshapen; extra or missing angle on one or both hexagons; "near" or curves for angles  
 22. Rotation of whole figure or part of it  
 23. Hexagons do not overlap excessively; one hexagon penetrates through other one

Fig. 8  24. Distortion of shape: hexagon and/or diamond excessively misshapen; extra or missing angles; diamonds omitted  
 25. Rotation of figure by 45° or more; turning of paper in order to make most economical use of space and drawing figure in rotated position in relation to the other figures is not scored, but procedure should be noted on the protocol

Close

The moving the cursor on the scoring make concerned subtest appear in red.

A help is provided by putting the cursor on the “eye” corresponding to each item. The corresponding note (reproduced from Koppitz, 1976) appears then, as below.



As the boxes are filled, the score is automatically calculated, as well as the percentile (from Koppitz).

### Numerical parameters extraction

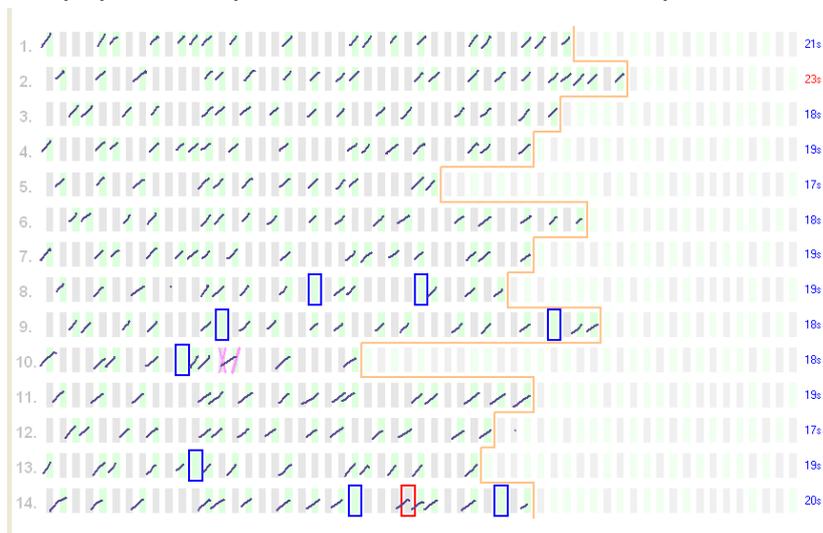
When you click on "Tools/Extract data", you obtain a table with a set of 10 sequences of parameters (only in absolute value), in the following order:

- for the whole drawing, followed by the Koppitz's scoring (if made) and of its percentile per age,
- for each subtest, (A, then from 1 to 8) followed by the sum of the items which were scored.

### Test of attention d2 of Brickenkamp

Rolf Brickenkamp developed the most used test of attention. Hogrefe Company asks us to automatize the test. Two versions are available, the 9<sup>th</sup> (French database) and the revised last version (German database).

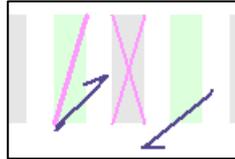
Printed Anoto papers and procedure are available on request.



When the file is charged on the computer, you must index it by clicking on the boxes TST and D for “9<sup>th</sup> version” and D + 2 for the “revised version”.

The wallpaper immediately gives the quality of work. Green cases show target objects (d with 2 dots) and grey cases the distractors. Elian emphasizes the errors (blue for omission, red for confusion); an orange line joins the last notched boxes.

NB: If the software had not correctly scored, you can click on the box, the correction will appear as a pink stroke (see below). An undue error is then marked with a pink cross. To return to initial quotation, click again on the box.



If the strokes do not appears in the boxes, click on “ctrl + maj. + D”, the adjustment will be automatically carried out.

### Analyzes Test (version 9)

The scoring is instantly obtained while typing on the keys “ctrl” + “A” (results are manually calculated in about half an hour).

D2 Test Analysis				
	NB	%	RP (Q)	NS
GZ (rythme)	510	-	69.2 (Q3)	105
F (soin)	9	1.76%	<90 (Q4)	-
GZ - F (perf. globale)	501	-	75.8 (Q4)	107
KL (concentration)	206	-	75.8 (Q4)	107
SB (variation)	20	-	<25 (Q1)	-
F2 = 1	Répartition des erreurs		0	0
			1	Syindr: Ü

Table utilisée = Table 2 (moins de 25 ans)  
 GZ = 510 (40+44+39+37+30+41+37+35+42+24+37+34+33+37)  
 F = 9 (F1=8 omissions F2=1 confusions)  
 F-Vert = 0 - 0 - 1 (lines 1 to 4, 5 to 10, 11 to 14) F2 only  
 F-Vert = 0 - 5 - 4 (lines 1 to 4, 5 to 10, 11 to 14) F1+F2  
 KL = 206 (18+20+16+16+12+17+16+12+16+9+15+14+13+12)  
 SB = 20 (44-24)

You find the usual disposition (from Q1e for very weak to Q4e, the best); in bottom, the details of calculations. For interpretation, see the test Handbook.

### Analyzes revised version

D2R Test Analysis				
	CCT	EO	EC	CC
Grille 1	52	0	0	52
Grille 2	45	0	0	45
Grille 3	42	5	0	37
Grille 4	43	1	0	42
E%	3.3%			
ΣΣ	182	6	0	176
SW	109	102	---	104

CC : Indice de performance de concentration  
 CCT : Caractères cibles traités  
 E% : Indice de performance qualitative  
 EO : Indice d'erreurs d'omission  
 EC : Indice d'erreurs de confusion

CCT = (18) 20 16 16 12 17 16 14 18 10 15 14 14 (15)  
 EO = (0) 0 0 0 0 0 2 2 1 0 0 1 (2)  
 EC = (0) 0 0 0 0 0 0 0 0 0 0 (1)

Age : 23 ans  
 Tranche d'âge utilisée : 20-39 ans

If you choose this version (by TST+D+2) Elian gives the results according to the Handbook.

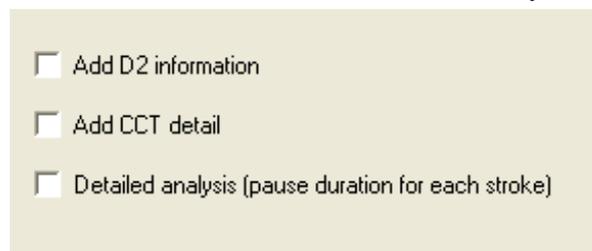
### *Alternative analysis*

By clicking on “ctrl + A”, Elian analyses the work according the version of the drawing.

By clicking on "shift + ctrl + A" you choose the alternate scoring (d2 design with D2R, or vice versa). This can be useful for comparison.

### *Version Testing and Expert*

Out of classical scoring, you can obtain an Excel file with the analysis for several files. Click on the menu “Tool/Extract dated from D2R” (for both versions). You can choose the types of data you need. For some research, we add a new item, the time between two successive strokes. It is useful to identify hesitations.



This table gives the analysis according to the two modes, which allows comparisons.

### **Test EVAMA (Pr Laurence Vaivre-Douret)**

This test is available only for the Anoto DP (201 and 301) which measure instantaneous speed.

It identifies the laterality disorders (hand dominance) as well as psychomotor difficulties (dyspraxia, etc.).

The methods and the printed sheets will be provided on request (for research applications at time).

### **Other tests**

You can develop your own test with Elian and print a document on the Anoto paper (a model to be followed or copy).

**But it must be printed with red color out of the black, not to trouble the pen work.**

# Functions of specific versions

All Elian versions offer drawing visualization and main numerical data. Versions add additional functions:

- “Research” offers data extraction in a table file,
- “Testing” gives an automatic analysis of the DAM, the RCF (A or B), the Writing test of Rey, the Test of Attention d2 of Brickenkamp (if licenses are acquired).
- “Expert” combines the previous functions and gives files with percentiles data.

## Automated analyze (“Testing” or “Expert” version)

	DAM 296 ref. for 10 yrs		RCF C 223 ref. for 10 yrs		RCF M 223 ref. for 10 yrs	
Nb of strokes	19	5 %	44	5 %	39	39 %
Duration (sec)	28	0 %	119	1 %	116	18 %
Total pauses (sec)	11	0 %	45	1 %	58	15 %
Total length (mm)	307	0 %	1220	7 %	955	19 %
Avg stroke length (mm)	16	23 %	28	44 %	24	14 %
Avg speed (mm/s)	18	46 %	16	56 %	17	24 %
Max speed (mm/s)	24	9 %	39	41 %	46	36 %
Drawing width (mm)	21	2 %	104	18 %	81	7 %
Drawing height	35	0 %	73	5 %	74	19 %
Left margin (mm)	74	74 %	27	33 %	22	36 %
Right margin (mm)	99	78 %	63	79 %	91	93 %
Top margin (mm)	172	94 %	29	72 %	143	7 %
Bottom margin (mm)	28	18 %	133	4 %	18	18 %

Présentation  
Vu dans le cadre de la psychothérapie de la mère, qui avoue une relation très fusionnelle avec lui.  
Fratrie de 4, un garçon de 15 ans (QI = 145), celui-ci QI = 140 , puis deux jumelles de 10 ans (également vues : ADA et

This table is obtained in two ways:

- clicking on “tools/analyzes” or
- Keys “Ctrl + A”

It offers instantaneously a simultaneous analysis of two drawings:

- DAM or the Writing test of André Rey, (left two columns, absolute values and percentiles)
- RCF (A or B), two columns for copy (center), two for memory (right).

The size of the database (per age) is shown (on top)

The comment can be added (at the bottom).

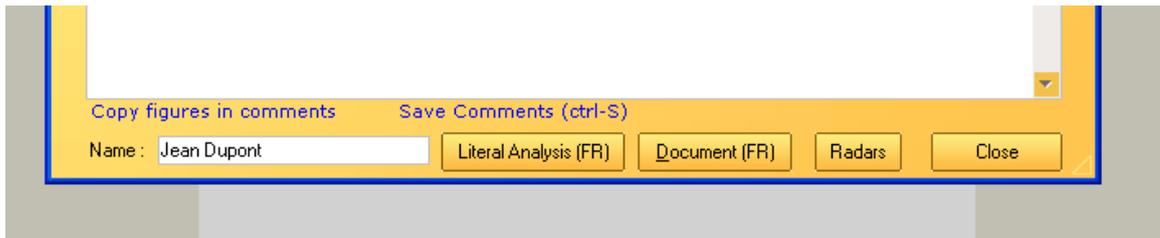
In red, “abnormal” values for the parameter:

- < 10 %: rare; < 5 %: very rare; < 2 %: exceptional
- > 90 %: rare; > 95 %: very rare; > 98 %: exceptional

In black the others (between 11 and 89 %).

N.B.: some values are linked; a very small drawing goes with low speeds, etc.

At the bottom right of the table, you find three buttons.



They give:

- a literal analysis,
- a printed sheet of results.
- a “radars” presentation of the data.

### “Literal” analysis

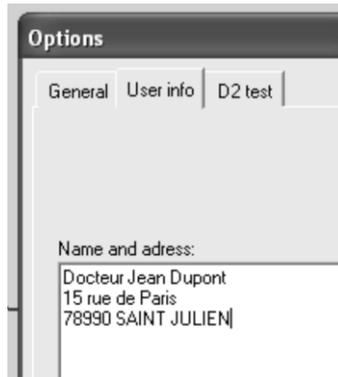
This analysis (English version is in course) details the percentile analyze for each parameter, and their literal interpretation through an explicit “rule base”. A button allows exporting it to the rtf format.



### Printed sheet of results

This document reproduces the table and a small image of the drawings used. It can be used to complete a medical file...

You must have previously filled your personal information by clicking on the menu: “Tool/options/general”.



Docteur Philippe Walton  
Psychiatre-Psychologue  
12 rue de Versailles  
78470 SAINT REMY LES CHEVREUSE  
01 30 85 41 00  
06 12 89 85 20

**Résultat du logiciel d'analyse automatique du tracé ELIAN**

Dossier : ZENALEA  
Date de l'examen : 03/05/2010

Date de naissance : 02/10/2000  
Age : 10 ans (116 mois)  
Sexe : F

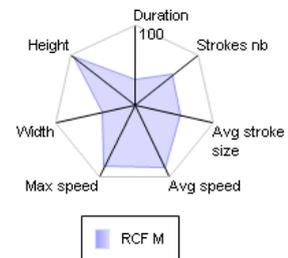
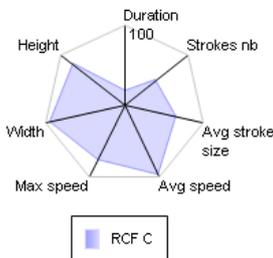
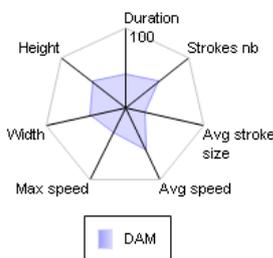
**Madame, Mademoiselle, Monsieur,**  
Voici les résultats obtenus lors de l'épreuve que vous (ou votre enfant) avez passée, associant la figure complexe de Rey (A ou E) à un dessin de personnage ou à l'écriture. Ces chiffres illustrent les caractéristiques dynamiques de ces tracés. Ils ont été comparés à une population de sujets d'âge similaire, en terme de percentiles (rang pourcentage).  
Seuls les chiffres en rouge sont pris en compte dans l'analyse automatique.  
Ces résultats doivent être interprétés avec prudence, et n'ont de valeur que pour la date de l'examen. Si vous avez des questions à poser ou des précisions à demander, n'hésitez pas à le faire.

Caractéristique	BOH Valeur	BOH Rang %	FRC Valeur	FRC Rang %	FCM Valeur	FCM Rang %
Nombre de références pour 10 ans			236		223	223
Nombre de traits	17	3%	35	0%	30	19%
Duration du dessin (sec)	36	1%	110	0%	66	4%
Total des passes (sec)	15	3%	95	3%	34	5%
Longueur totale (mm)	315	1%	1474	30%	1219	40%
Longueur moy du trait (mm)	18	35%	42	97%	41	81%
Vitesse moyenne (mm/s)	15	31%	27	96%	38	95%
Vitesse maximale (mm/s)	23	8%	64	80%	74	89%
Largeur dessin (mm)	23	3%	117	32%	142	95%
Hauteur dessin (mm)	48	3%	90	32%	75	23%

BOH: dessin de perso image; WRB: écriture 'la lettre est ronde'; FRC: test de la Figure Complexe de Rey (C, copie, M, mémorise); Rang % = valeur obtenue au sein de la population de références

Copyright (c) 2005-2010 Ekan Software / Saldage

## Radars



These charts might be copied in a standard document word processing.

## Comment

At the bottom left corner of the analysis table, you find a link. It allows introducing in the comment the absolute values and row-percentages of the parameters.



It can be saved by the other ling (above in the center).

## Extraction of the numeric parameters ("Research" or "Expert" version)

Use the menu "Tools/Extract data" and complete the window which appears.

You obtain a data table as below.

	A	B	C	D	E	F	G	H	I	J	K	L
1	Creator code	File name	Drawing type	Drawing date	Birthdate	Age (years)	Age (months)	Gender (M/F)	Nb of strokes	Duration (s)	Actual drawn	Total pauses
2	0	0001 DUSMA DRAA		08/12/2005	06/05/1999	7	79	M	52	165	88	77
3	0	0001 DUSMA DRAB		08/12/2005	06/05/1999	7	79	M	72	254	114	140
4	0	0001 DUSMA DRAE		08/12/2005	06/05/1999	7	79	M	20	136	63	73
5	0	0001 DUSMA DRAH		08/12/2005	06/05/1999	7	79	M	34	128	62	66
6	1	001 2111ALD DRAE		04/12/1992	28/12/1986	6	71	M	129	542	260	281
7	1	001 2111ALN DRAA		27/11/1992	19/10/1986	6	73	M	12	38	30	8
8	1	001 2111ARF DRAA		27/11/1992	20/05/1986	7	78	M	17	94	61	34
9	1	001 2111AUC DRAA		27/11/1992	10/03/1986	7	81	M	16	77	41	36
10	1	001 2111AUF DRAA		27/11/1992	19/10/1986	6	73	M	12	16	8	9
11	1	001 2111CHC DRAA		27/11/1992	03/09/1986	6	75	M	51	131	76	55
12	1	001 2111ELB DRAA		04/12/1992	20/06/1986	7	78	M	30	81	41	40
13	1	001 2111EM5 DRAA		27/11/1992	26/02/1986	7	81	M	9	18	12	6
14	1	001 2111FAL DRAA		27/11/1992	26/05/1985	8	90	M	13	72	32	40
15	1	001 2111JEM DRAA		27/11/1992	17/09/1985	7	86	M	15	62	36	27
16	1	001 2111JES DRAA		04/12/1992	17/01/1986	7	83	M	45	237	132	105
17	1	001 2111JOV DRAA		27/11/1992	20/01/1986	7	82	M	22	67	30	37
18	1	001 2111JUP DRAA		27/11/1992	12/09/1986	6	75	M	20	87	46	41
19	1	001 2111LIC DRAA		27/11/1992	01/05/1986	7	79	M	15	116	63	53
20	1	001 2111MAL DRAA		27/11/1992	22/02/1986	7	81	M	67	107	57	50
21	1	001 2111MIM DRAA		27/11/1992	22/02/1986	7	81	M	27	152	100	52
22	1	001 2111MOI DRAA		04/12/1992	21/11/1986	6	72	M	27	76	39	43
23	1	001 2111MOI DRAA		27/11/1992	18/03/1986	7	80	M	65	124	62	63
24	1	001 2111TAA DRAA		27/11/1992	09/10/1986	6	74	M	25	60	32	28
25	1	001 2111THT DRAA		27/11/1992	29/01/1986	7	82	M	14	39	26	12
26	1	001 2111VIP DRAA		15/11/1992	15/07/1986	6	76	M	17	40	20	20
27	1	001 2111YAT DRAA		27/11/1992	28/11/1986	6	72	M	28	94	47	47
28	1	001 2141AUL DRAA		04/12/1992	21/09/1982	10	122	M	58	310	116	194
29	1	001 2141AUN DRAA		04/12/1992	15/03/1983	10	117	F	37	101	63	37
30	1	001 2141CAT DRAA		04/12/1992	22/09/1983	9	110	M	45	93	52	41

The columns give the identification of the drawing and several numeric parameters (duration, dimensions, speeds, margin, etc.) which have psychological implications.

The RCF two parts (copy, memory) are independently analyzed.

The BGT nine subtests are also analyzed and Lacks-Hutt data are given (if authorized).

For the test of writing, specific parameters are added,

**Important: you must record the table in your format (i.e. xls for Excel) as it is firstly in .txt format. If not, you may have troubles to reopen it.**

### Extraction of percentile data ("Expert" version)

This version gives tables of parameter values converted in percentiles. It concerns the most commonly used parameters for psychological evaluation. Other can be obtained at request.

These percentiles are calculated according to the age, from databases collected in Paris (children) and Geneva (young adults).

Other databases are in course (i.e. for Maghreb)

	A	B	C	D	E	F	G	H	I
1	File name	Drawing date	Birthdate	Age (years)	Age (months)	Gender (M/F)	Strokes	Duration (se)	Length (mm)
2	001 AUDCHL RCFB.elian	27/11/2007	30/01/2004	3	46	F	50%	33%	50%
3	001 CHALOU RCFB origina	09/02/2007	17/03/2001	5	71	M	11%	18%	2%
4	001 DELEALBA RCFB.elian	22/06/2012	15/09/2006	5	69	M	74%	56%	64%
5	001 DEMICAR RCFB.elian	04/09/2006	20/12/1995	10	128	F	13%	2%	96%
6	001 DOPADR RCFB.elian	19/12/2005	13/05/2001	4	55	M	56%	8%	72%
7	001 DREAMATH RCFB.elia	07/12/2011	09/12/2004	7	84	M	85%	35%	78%
8	001 DUSMAT RCFB1.elian	08/12/2005	06/05/1999	6	79	M	22%	80%	98%
9	001 FIGBTEJA RCFB.elian	25/10/2009	09/09/1989	20	242	F	76%	2%	89%

## Conclusion

Elian gives an entirely new approach of the drawing, writing and graphic tests. You have a direct access to the dynamics.

Elian is constantly changing. Be sure to regularly load the latest version. We work to correlate these results with other tests to better assess the meaning and the clinical value of the parameters.

Month after month we enrich the test which are Elian compatibles. We do our possible to acquire copyright accords in order to facilitate its use.

If you know of a test that could be automated with the Digital Pen, tell us. If you use or have created a graphic test, and as you note the relevance, let us know. We will see if it can be automated and you will be associated to its development.

We hope that Elian will give you whole satisfaction. Please send us your remarks; we would satisfy them as soon as possible. Your experience will enlarge the competence of all clinicians.

So Elian can be the finest way of a sincere exchange with the patient.

# Contents

Forewords .....	2
The Elian window .....	4
Static visualization .....	6
Dynamic visualization.....	8
Other functions of Elian .....	10
Use of the Digital Pen (DP) .....	14
Indexing of a file .....	16
Modify or correct of a drawing .....	21
Elian and psychological tests.....	24
Functions of specific versions.....	38
Conclusion .....	43
Contents .....	44