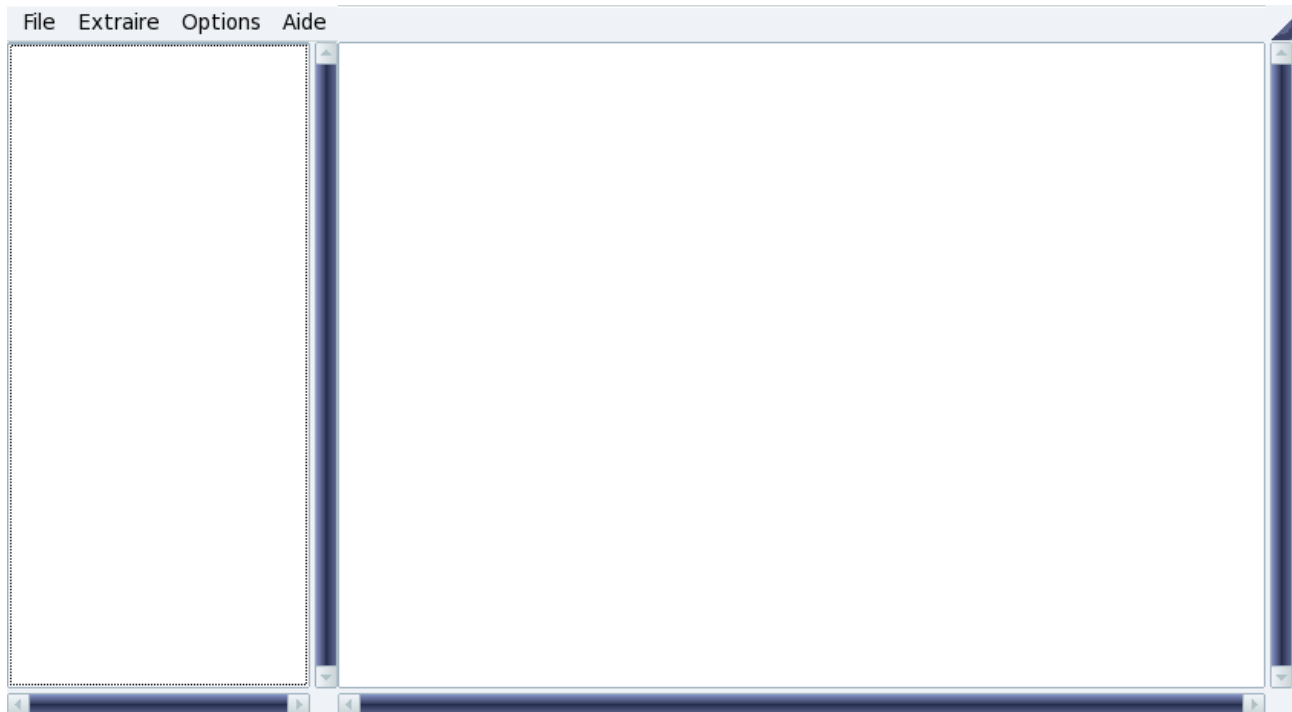AWSEDIT Utility by Mustapha Oldache

==Follow instruction in the INSTALL file to compile and install awsedit.==
Then at the prompt, type:
$awsedit
This leads you to:

==Structure of the menu==

File:

1. open an aws tape file (Ctrl-O)
2. Find string or hexadecimals in aws file (Ctrl-F)
3. quit (Ctrl-Q)
4. settings (Ctrl-S)

Extraire (extract)

1. switch to Convesion mode (this will be explained later)
2. load or save configuration file (this will be explained later)
3. set the data type (this will be explained later)
4. record data

Options

1. EBCDIC data expected
2. ASCII data expected

Aide (help)   Some useful informations.

==Warning :==

Most comments and legends in Awsedit are in french because this program was intended for Algeria where people master this language.
So when I started to write awsedit in 2007 I never thought that one day I would have to put it on the net. This has been possible thanks to github.
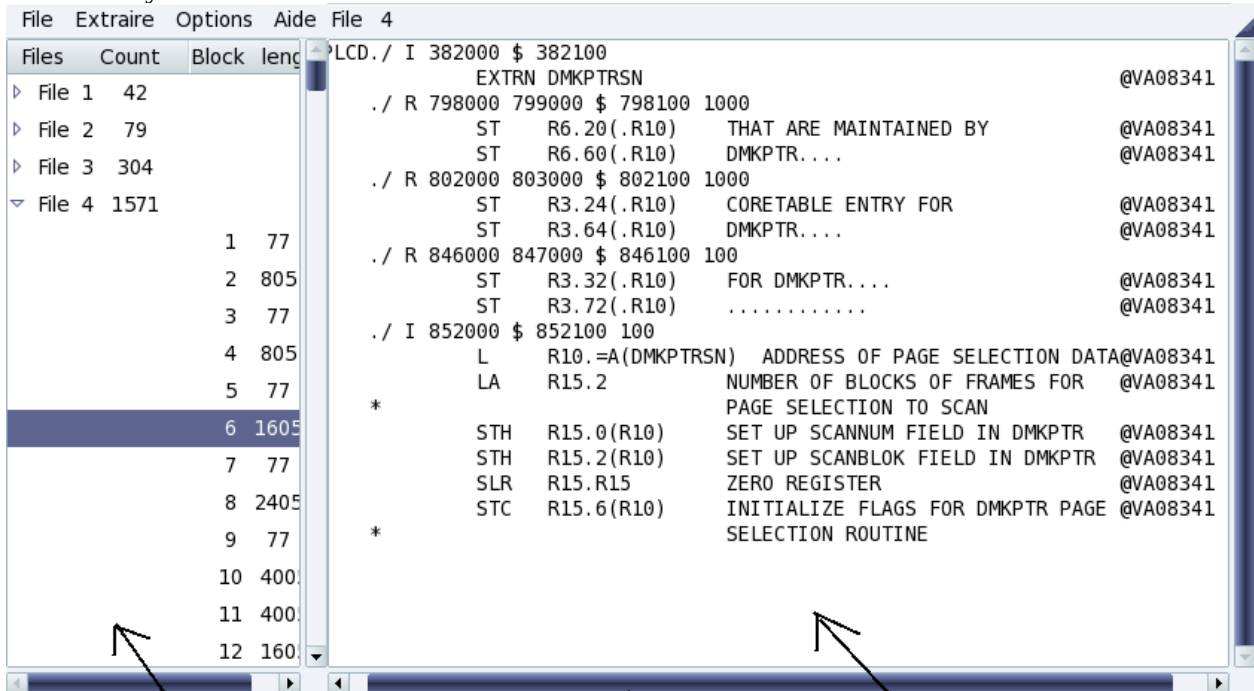
Awsedit accepts only one argument: the AWS file name.
At the prompt, type:

$awsedit tape/ptf-616.aws

This leads you to:

This pane lists files and blocks within them.

This pane displays content of a block

In general, blocks contain logical records with a fixed or vaiable length. In case of source or executable programs, records are usualy 80 bytes length. Thus in awsedit the default record length is set to 80. To modify or adjust it do: **File → Settings**

As an example, just modify the record length to 16.

The right pane becomes:
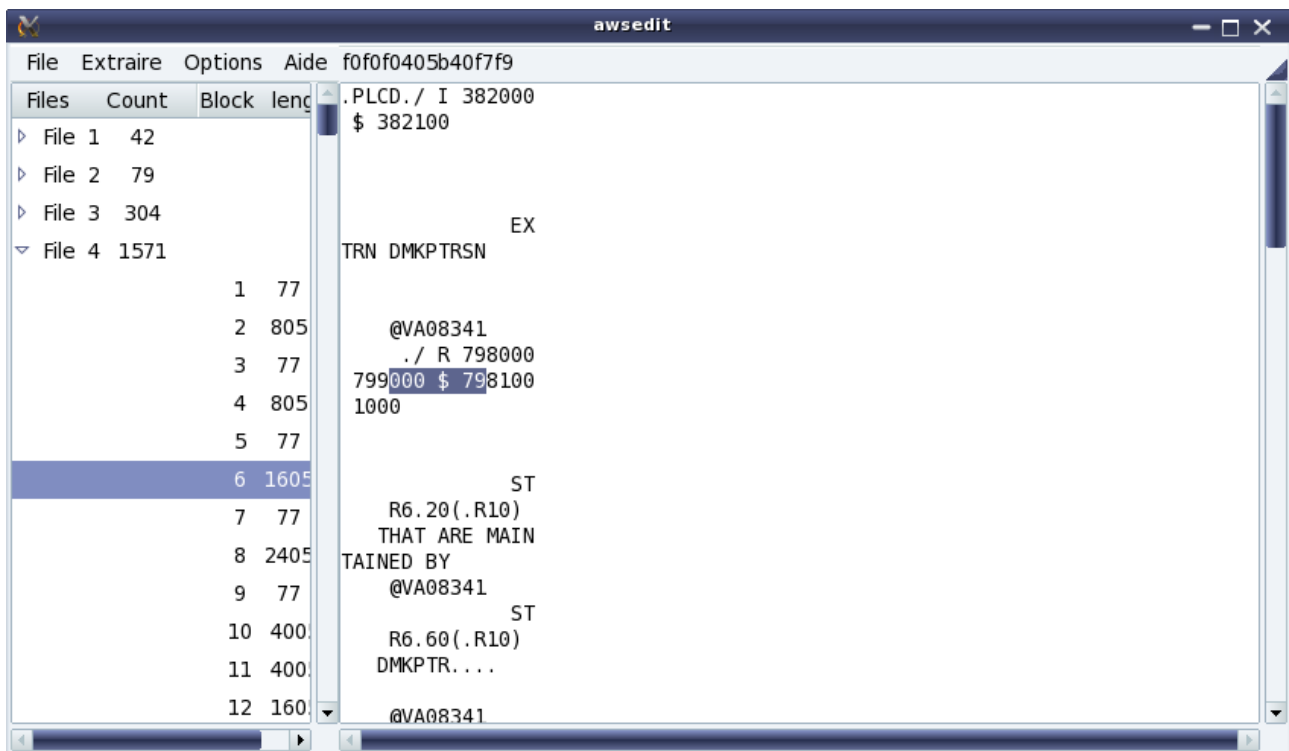
<mark>About the right pane:</mark>
Of course, only bytes that have graphical representation are shown. All the others are replaced by a dot. Nevertheless, It is possible to view their corresponding hexadecimals by highlighting a field then pressing the right button of the mouse.The hexadecimals are displayed on the status bar above.
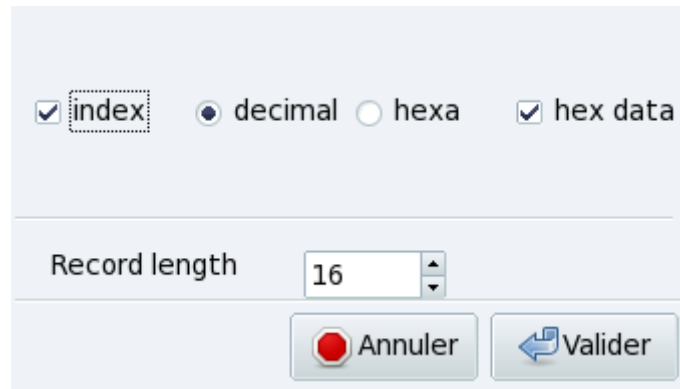
<mark>The width of the right pane.</mark>
I introduced a limit to the width of the right pane to 4750 bytes length because beyond characters will not be visible. I never mind about that, but if this limit is a constraint I can remedy it.
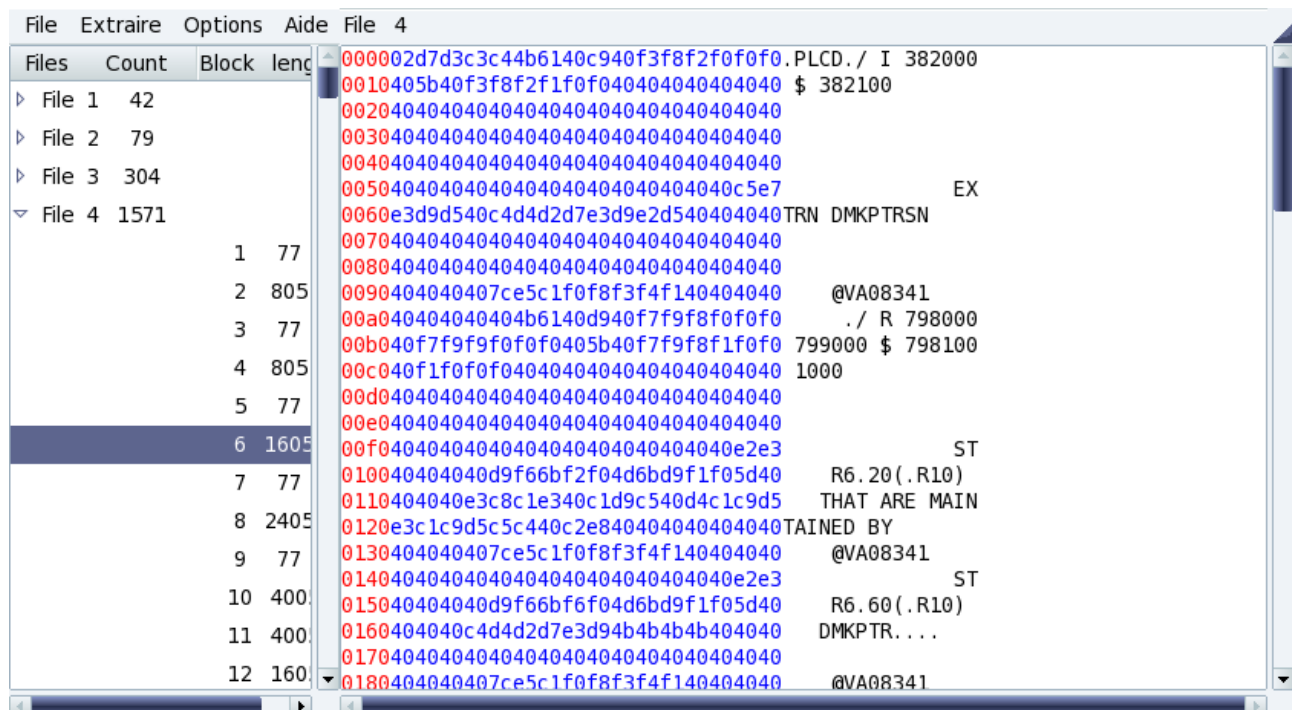
It is possible to display a permanent hexadecimal array and (or) index by doing:

File → Settings

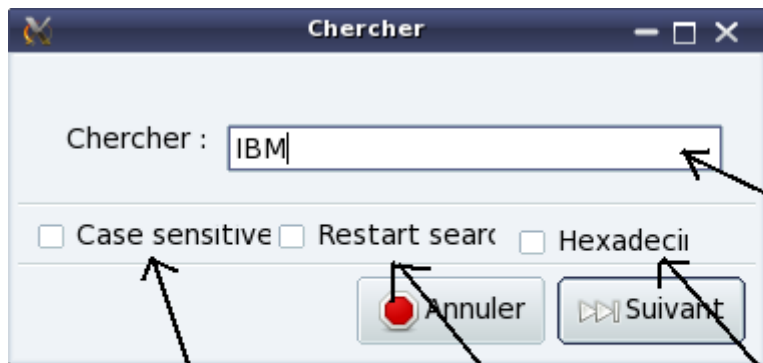then checking the following boxes

This leads you to:

The index is colored in red and the hexadecimal array is colored in blue.

In both cases, even with the index and (or) hexadecimal arrays, you can do a search:

File → Rechercher(Find) or Ctrl-F

The following dialog box will be displayed:
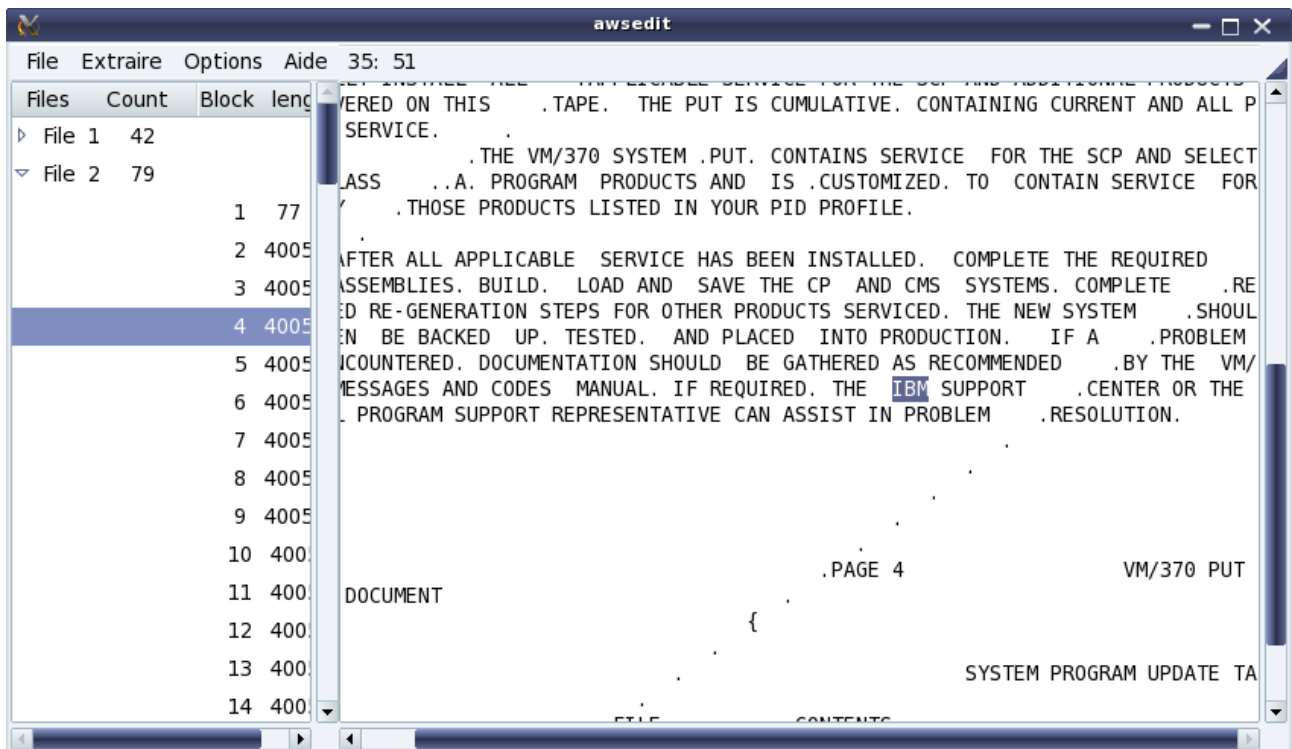

The string you search
(no regular expressions)

check this box if your string
is in hexadecimals

check this box for case sensitive   check this box to restart the search

If you search for string «IBM» or its equivalent hexadecimals «c9c2d4» in EBCDIC , in either case you will get:

or the following:
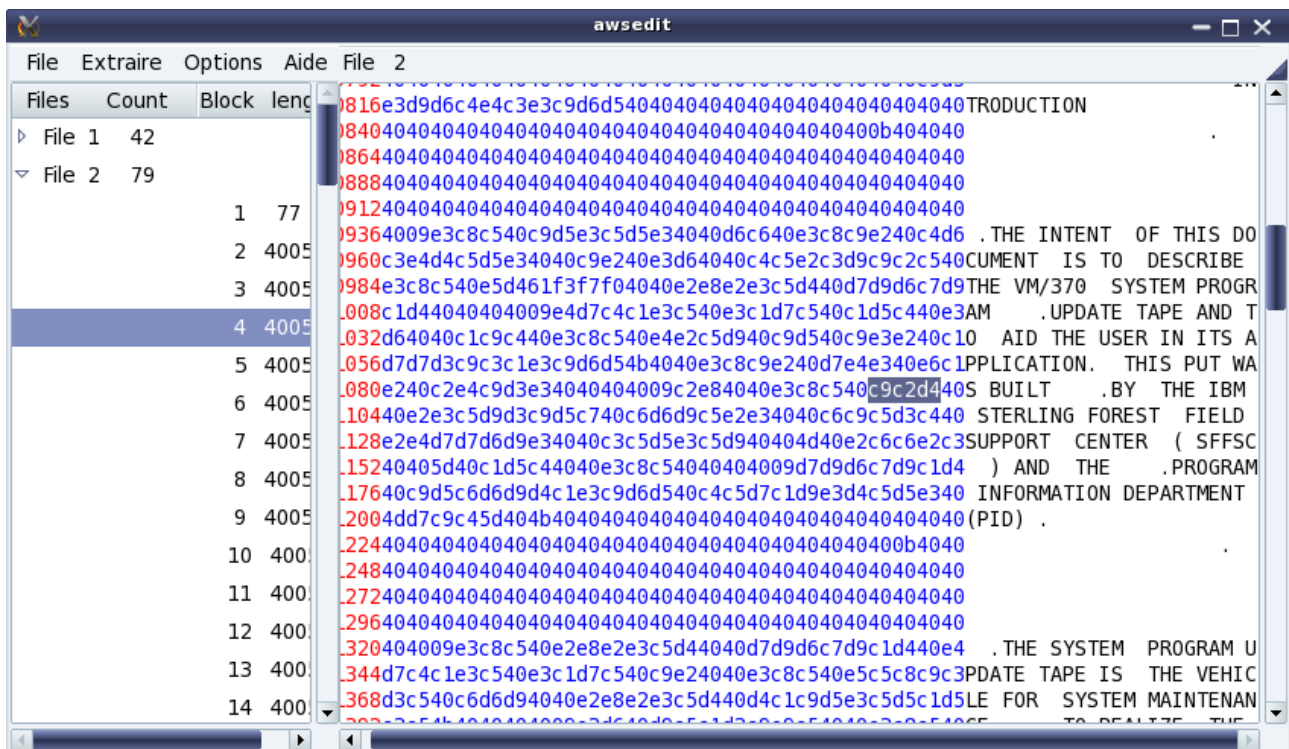
Result of the search when both the index and hexadecimal boxes are checked in the settings dialog box.

Extracting data.
Select a file or a group of files with arrow keys or the mouse:

When you are at File level, only the first block of the selected file is displayed. To view the entire file you must expand it.

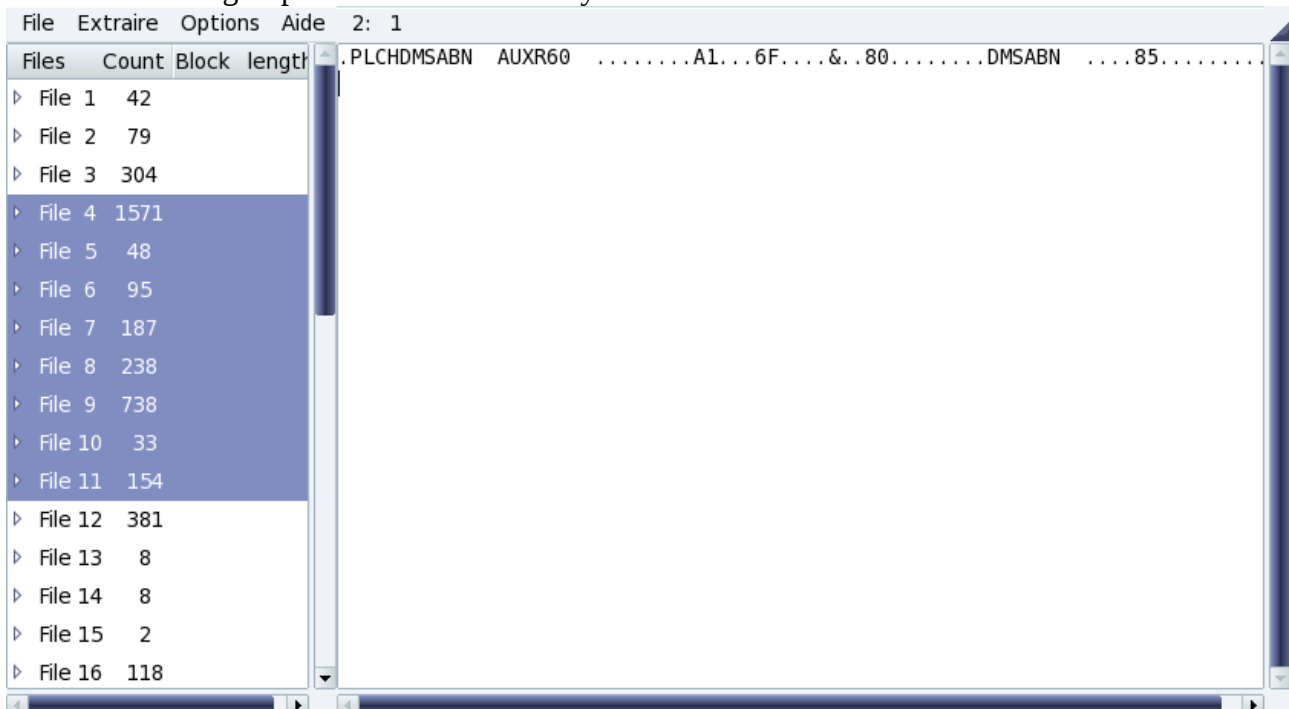or a block or group of blocks:
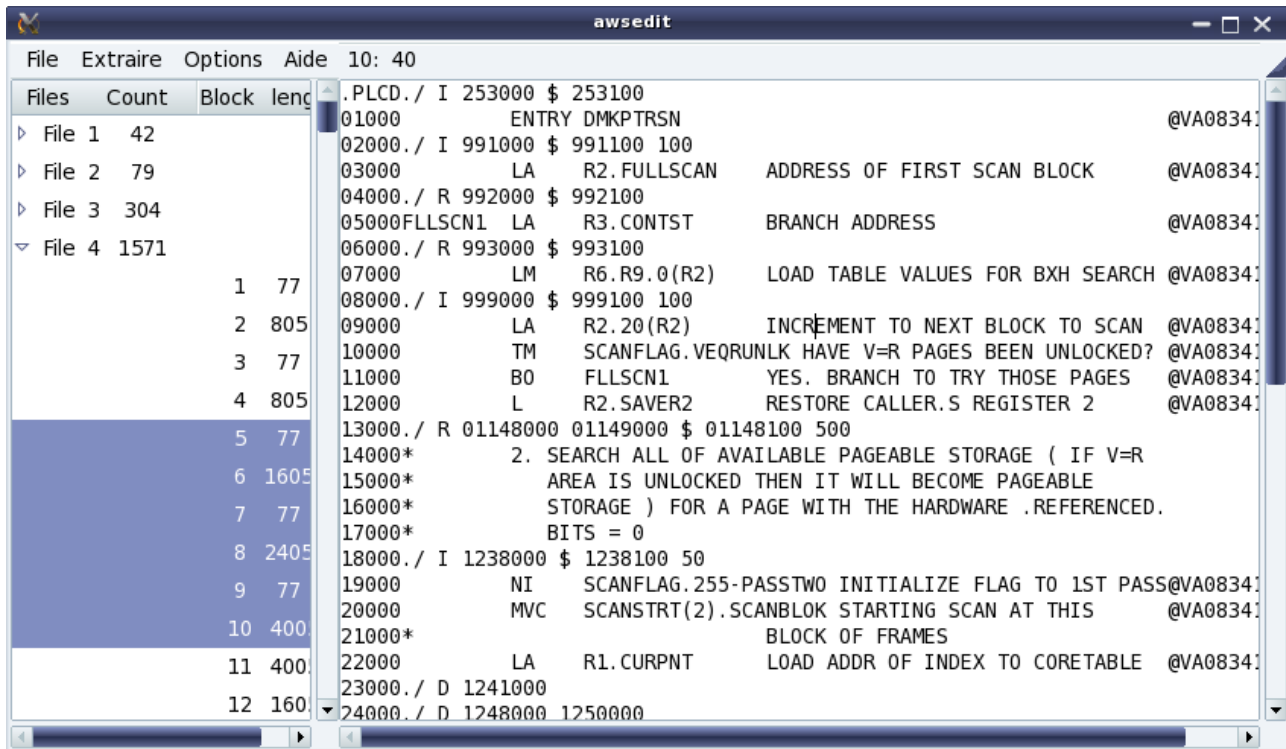
Then activate menu: **Extraire (Extract) → Enregistrer (record)**

The following dialog box is displayed.

While not recommended, before recording, It is possible to modify the sequence of the selected files or blocks.

Warning:
Records of DOS files end with two bytes (x'OD' x'OA') while those of UNIX files end with only one byte (x'OA').

Very Important!

The Awsedit's paradigm is «**what you see is what you get**».This means that in both cases, either in EBCDIC or ASCII, you will never get raw data: What is displayed is what is recorded !

Nevertheless, and only in case when EBCDIC option is set, it is possible to select some fields to be translated from raw to ASCII while data is extracted. These fields must be either in packed decimal fomat or zoned decimal format. And this is allowed only for data files that contain sequential fixed length blocked records.

As an example, lets display the content of a data file on tape that contains sequential fixed blocked records with some fields in zoned and packed decimal format.

File 3 is composed of blocks that are 5000 bytes length. Within them records are blocked by 10. Thus setting the record length to 500.

Notice

In the right pane some fields are unreadable because they are in packed decimal format and therefore they don't correspond to graphical EBCDIC characters. So they are replaced by a dot.

Definitions

The zoned decimal format and the packed decimal format are commonly used in COBOL to define numbers and correspond to PIC S9(7)V99 for zoned decimal and to PIC S9(7)V99 comp-3 for packed decimal. To understand decimal numbers refer to IBM documentation:
Entreprise System Architecture/ 390 Principles of Operation (Chapter 8. Decimal Instructions).

Selecting fields

Before selecting fields to translate you have to choose a block within a file then enter Conversion mode by going to menu: **Extraire (extract) → Conversion. Result: the left pane will be frozen.**
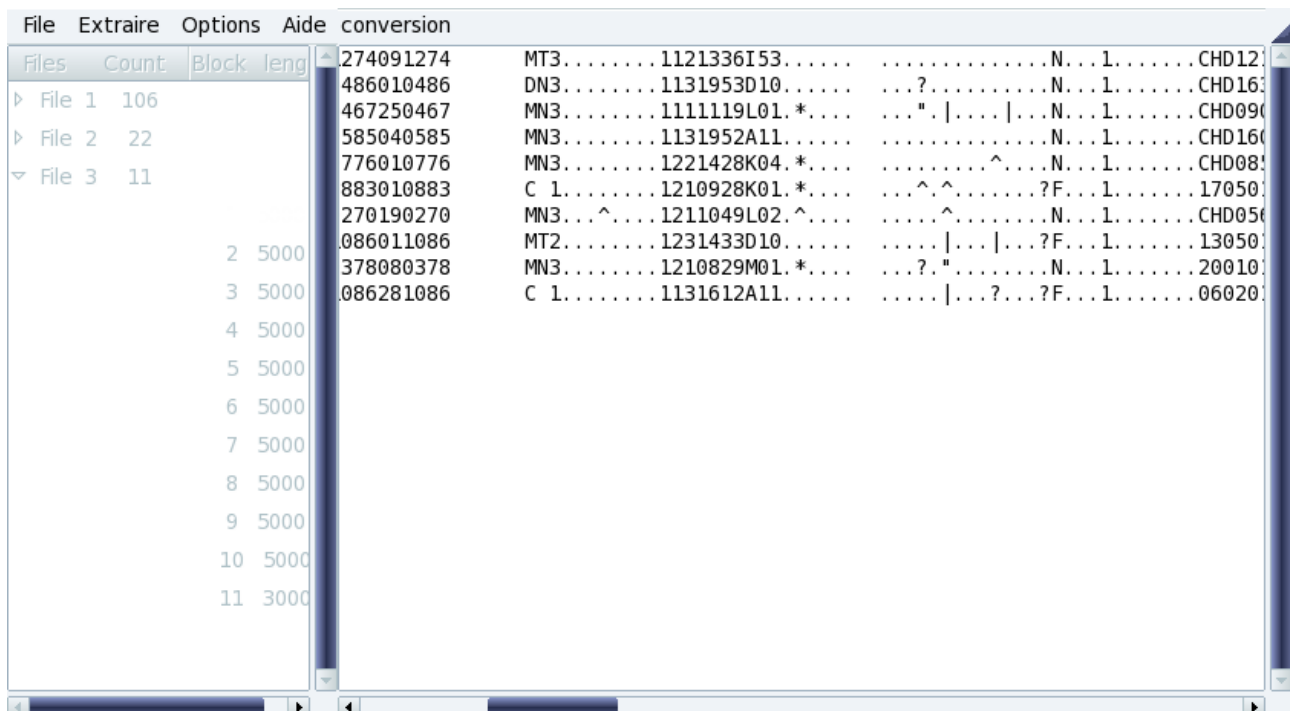
Once in the conversion mode, if you press the right button of the mouse a popup menu appears.

The small popup menu contains four entries:

1. **Packed decimal**
2. **Zoned   decimal**
3. **Suppress field**
4. **Annul**

About the popup menu.

If you have not already highlighted a field all the entries in the popup menu are grayed. But once you highlight a field and press the right button of the mouse, the first three entries become visible.

The Annul entry will be visble after you have selected at least one field. It lets you remove the last selected one.

The Suppress field entry lets you select fields to be bypassed when data is extracted.

Lets select some fields:
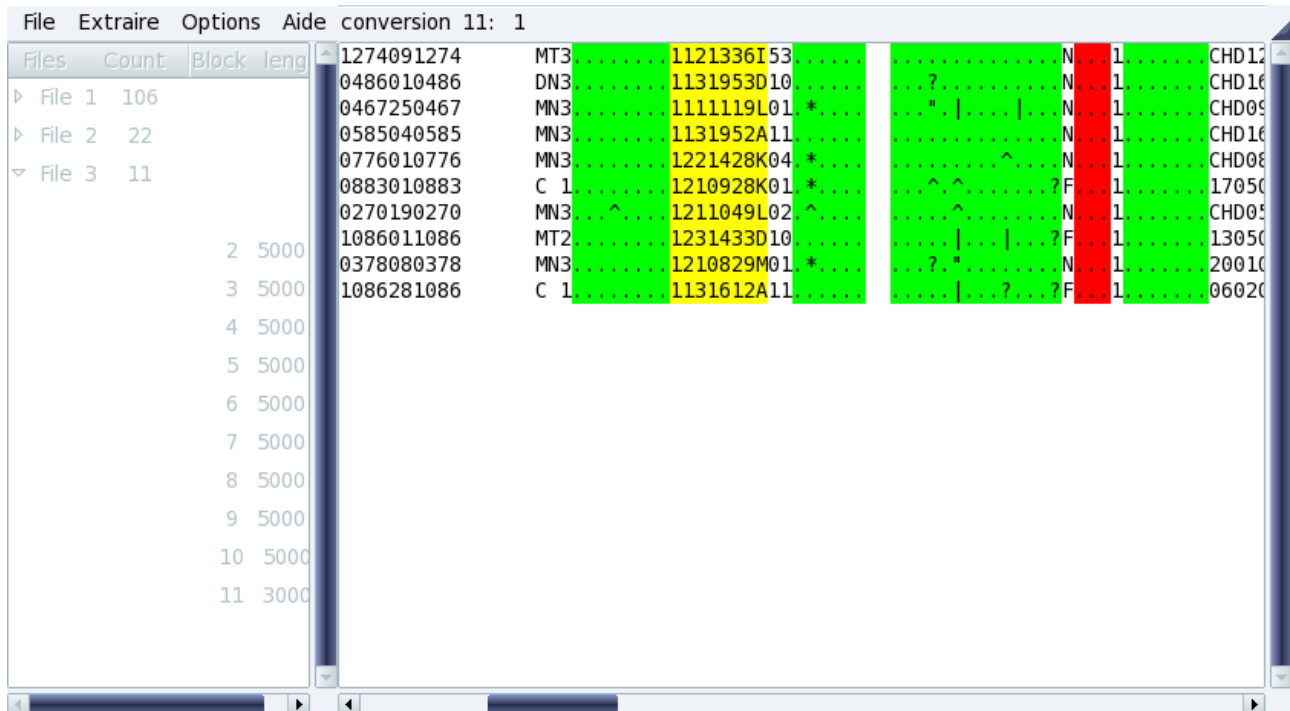
The packed fields are in `green`, the Zoned field is in `yellow` and the suppress field is in `red`.

`To be fast, you can gather several contiguous numbers that are either zoned or packed in the same field.`

Before extracting data you must choose how the Zoned and Packed fields will be converted. So go to menu : **Extraire (Extract) → Type   ->**

1. **TRAILING SEPARATE**
2. **IBM MScobol**

`IBM MScobol` is the default. `TRAILING SEPARATE` is an alternate format.
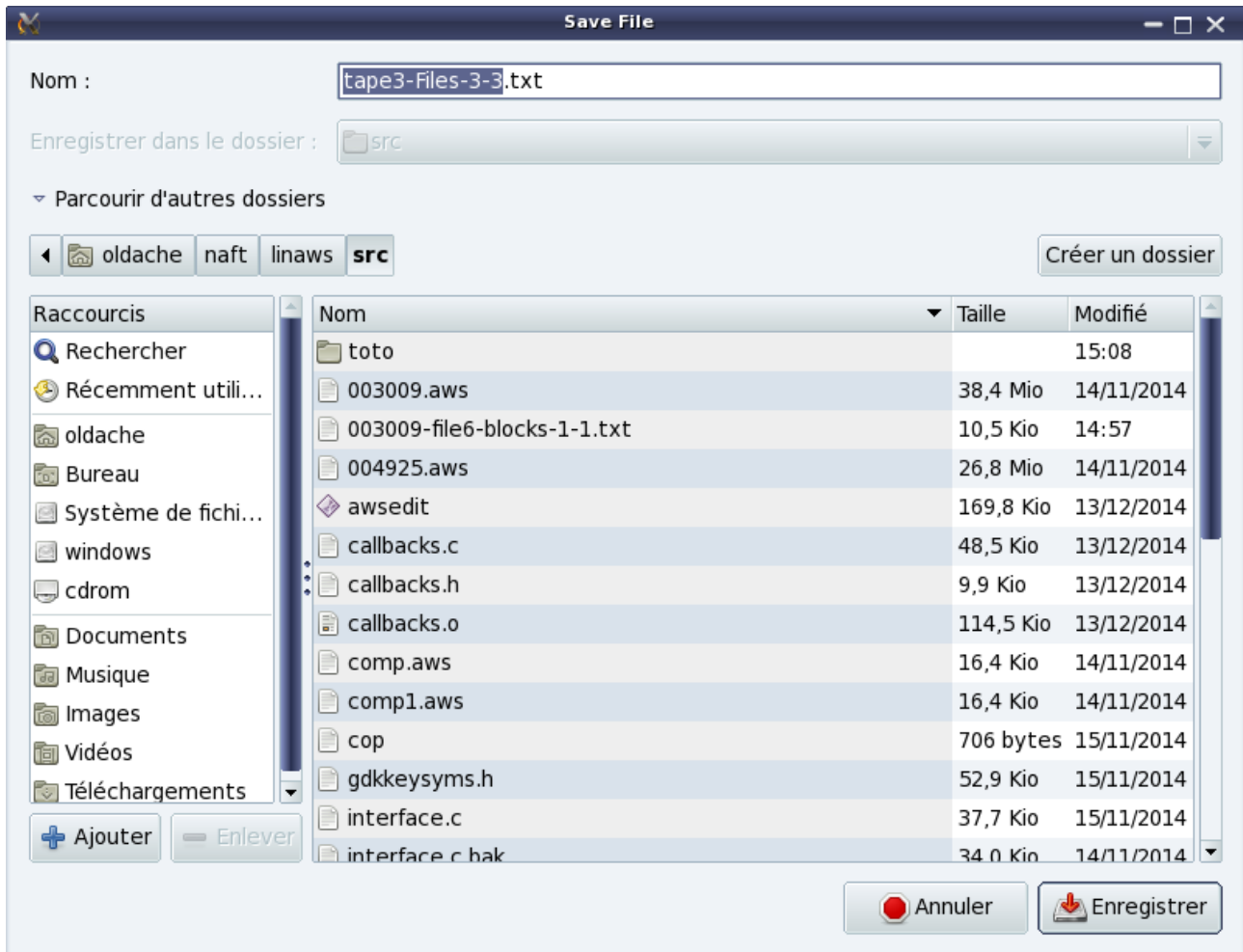
TRAILING SEPARATE is accepted by most COBOL compilers like MicroFocus and NetCobol.

IBM MScobol is not an official format name. I call it this way because it is the format which people have obtained when they migrated from Mainframe to PC.

To extract data go to menu **Extract → record(Enregistrer)**

As you see, Awsedit suggest you a name. This is helpful if you are extracting files after files, or blocks after blocks, and you want some names that could be meaningful.

After extracting data, you will get a file that looks like this :

```
74091274      MT300100100{00{1121336I5309{000000    0000000210000133004 89N1000000{0000{CHD121TL
86010486      DN300100100{00{1131953D1018{000000    0010060180000191010 93N1000000{0000{CHD163FE
67250467      MN300100000{00{1111119L0105E000000    0120070240000124001 92N1000000{0000{CHD090SG
85040585      MN300000200{00{1131952A1120{000000    0000004100000192011 93N1000000{0000{CHD160FR
76010776      MN300{00200{00{1221428K0406E000000    0020002000001520019 2N1000000{0000{CHD085SG
83010883      C 100{00{00{1210928K0106E000000        0010050050000092001 86F1000000{0000{17050106
70190270      MN300100500{00{1211049L02055000000     0000002500001210019 2N1000000{0000{CHD056SG
86011086      MT200{00{00{1231433D1018{000000        0010010040000143010 86F1000000{0000{13050120
78080378      MN300200200{00{1210829M0104E000000     0010060170000102001 92N1000000{0000{20010104
86281086      C 100{00{00{1131612A1120{000000        0000000040000161010 86F1000000{0000{06020105
86101186      MT200{00{00{1221228K0406E002004        0060050080000131001 92N1000000{0000{17050108
86181086      MT200{00{00{1131842A1120{000000        0000000090000192011 93N1000000{0000{CHD160FR
79030379      MN200000000{00{1221319L0205E014008     0010080130020131001 85N1000000{0000{18010710
76271276      MN200100{00{00{1211229L02055000000     0000001900001220019 2N1000000{0000{CHD168SG
77241077      MN200{00{00{1132052A1420{000000        0050000160000205003 85N213167000000{HEZ050ACI
67130967      MN300100000{00{1232043D0918{********    ********006005020400385N210408000000{HEY0!
87150687      MT200{00{00{1221116I5309{000000        0120000080000131001 92N1000000{0000{17050108
88081088      D 100{00{00{1131425H6211{000000        0120090040000153006 89F1000000{0000{CHD020SG
76180676      MN300100400{00{1110939L0205E000000     0030060190000111001 92N1000000{0000{CHD094SG
88101288      C 100{00{00{1131633E0616E000000        0030040040000163012 88F1000000{0000{CHD170FI
89070189      MN200{00{00{1121226I3809{006001        0002003004000122001 89F1000000{0000{06020101
89180289      MT200{00{00{1131435H4911{000000        0060000040000143002 8011000000{0000{110123ACI
89250289      V 300100100{00{1110619M0104E000000     0000000006000061001 92N1000000{0000{CHD163SG
89130389      C 100{00{00{1131522C1418E000000        0000000060000161011 93N1000000{0000{CHD162FR
```
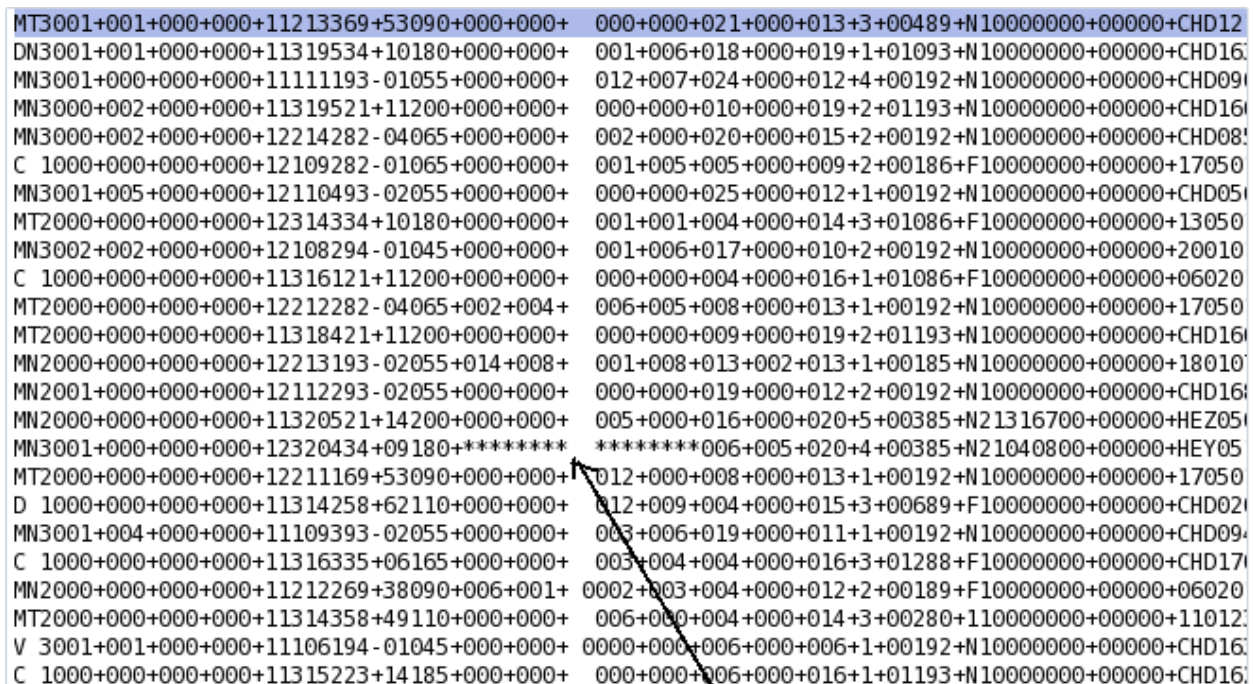
Some History.

I will not enter in details about this extracted file : It is the one that people have obtained when they transfered data files from Mainframe to PC by means of IBM PC3270 card or HP IRMA card that emulate 3270 terminals. Files in this format are accepted by MSCobol and MicroFocus.

Notice that MSCobol is the ancestor of MocroFocus.

The other way.

Now lets try the second fomat. Go to menu : **Type → TRAILING SEPARATE**
                                          Then   **Extract → record (Enregistrer)**

```
MT3001+001+000+000+11213369+53090+000+000+   000+000+021+000+013+3+00489+N10000000+00000+CHD12
DN3001+001+000+000+11319534+10180+000+000+   001+006+018+000+019+1+01093+N10000000+00000+CHD16
MN3001+000+000+000+11111193-01055+000+000+   012+007+024+000+012+4+00192+N10000000+00000+CHD09
MN3000+002+000+000+11319521+11200+000+000+   000+000+010+000+019+2+01193+N10000000+00000+CHD16
MN3000+002+000+000+12214282-04065+000+000+   002+000+020+000+015+2+00192+N10000000+00000+CHD08
C 1000+000+000+000+12109282-01065+000+000+   001+005+005+000+009+2+00186+F10000000+00000+17050
MN3001+005+000+000+12110493-02055+000+000+   000+000+025+000+012+1+00192+N10000000+00000+CHD05
MT2000+000+000+000+12314334+10180+000+000+   001+001+004+000+014+3+01086+F10000000+00000+13050
MN3002+002+000+000+12108294-01045+000+000+   001+006+017+000+010+2+00192+N10000000+00000+20010
C 1000+000+000+000+11316121+11200+000+000+   000+000+004+000+016+1+01086+F10000000+00000+06020
MT2000+000+000+000+12212282-04065+002+004+   006+005+008+000+013+1+00192+N10000000+00000+17050
MT2000+000+000+000+11318421+11200+000+000+   000+000+009+000+019+2+01193+N10000000+00000+CHD16
MN2000+000+000+000+12213193-02055+014+008+   001+008+013+002+013+1+00185+N10000000+00000+18010
MN2001+000+000+000+12112293-02055+000+000+   000+000+019+000+012+2+00192+N10000000+00000+CHD16
MN2000+000+000+000+11320521+14200+000+000+   005+000+016+000+020+5+00385+N21316700+00000+HEZ05
MN3001+000+000+000+12320434+09180+********   ********006+005+020+4+00385+N21040800+00000+HEY05
MT2000+000+000+000+12211169+53090+000+000+   012+000+008+000+013+1+00192+N10000000+00000+17050
D 1000+000+000+000+11314258+62110+000+000+   012+009+004+000+015+3+00689+F10000000+00000+CHD02
MN3001+004+000+000+11109393-02055+000+000+   003+006+019+000+011+1+00192+N10000000+00000+CHD09
C 1000+000+000+000+11316335+06165+000+000+   003+004+004+000+016+3+01288+F10000000+00000+CHD17
MN2000+000+000+000+11212269+38090+006+001+   0002+003+004+000+012+2+00189+F10000000+00000+06020
MT2000+000+000+000+11314358+49110+000+000+   006+000+004+000+014+3+00280+110000000+00000+11012
V 3001+001+000+000+11106194-01045+000+000+   0000+000+006+000+006+1+00192+N10000000+00000+CHD16
C 1000+000+000+000+11315223+14185+000+000+   000+000+006+000+016+1+01193+N10000000+00000+CHD16
```

==stars are printed in place of wrong numbers.==

Notice.

The TRAILING SEPARATE is more explicite : the signe appears in clear at the right of a number.

Last but not least.

Selecting fields to be translated may be fastidious and repetitive. Fortunaly this can be done only once a time for a kind of file because it is possible to save the work to a configuration file to be reloaded later.

While in conversion mode, save the description: **Extract → Description → Save**

To quit the conversion mode go to menu : **Extract → Conversion**

Later, reload the description : **Extract → Description → Load**