

Data format FORMAT_IDEAS

Summarized:

Data structure FORMAT_IDEAS here is described . This SD is used during execution of the command LIRE_RESU , it makes it possible to locate and extract from the universal file "unv" D ` IDEAS , the results desired by the user.

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1 General information

the user defined in command LIRE_RESU information (TYPE_RESU, NOM_CHAMP, INST,...) which characterizes result that it wishes to extract from the universal file D "IDEAS . This information is not exploitable directly, it is necessary to convert them with the format of the "universal" file.

Data structure FORMAT_IDEAS contains all the search criteria to the "universal" format, allowing D" to extract the results desired by the user. If the user does not specify in syntax of the command LIRE_RESU , the key word factor FORMAT_IDEAS , data structure FORMAT_IDEAS are initialized by default [U4.26.03]. In the contrary case, the user defines his own search criteria.

2 Tree structure

```
FORMAT_IDEAS (K16) :: = record
  ♦ ".FID_NOM":   OJB   S   V   K16   Long = nbnoch
  ♦ ".FID_NUM":   OJB   S   V   I     Long = nbnoch
  ♦ ".FID_PAR":   OJB   S   V   I     Long = nbnoch*800
  ♦ ".FID_LOC":   OJB   S   V   I     Long = nbnoch*10
  ♦ ".FID_CMP":   OJB   S   V   K8    Length = nbnoch*1000
  ♦ ".FID_NBC":   OJB   S   V   I     Long = nbnoch
```

3 Contained Convention

objects : nbnoch = many fields to read

3.1 ".FID_NOM" : S V K16

This object contains the name of fields to read.

For $i=1$, nbnoch

→ v (I) : name of I^{ème} field to read

ex : "DEPL", "QUICKLY", ..., "SIEF_ELNO "

3.2 ".FID_NUM" : S V I

This object contains for each one of fields to read the number of the associated dataset.

For $i=1$, nbnoch

→ v (I) : number of the dataset associated with I^{ème} field to read

ex : 55, 57, 2414

3.3 “.FID_PAR”: S V I

This object contains for each fields to read characteristic of the heading of the required dataset. This heading is composed to the maximum of 20 “records” made up of 40 “fields” each one.

V (1)	1st field of record 1 of field 1
...	
V (48)	8th field of record 2 of field 1
...	
V (800)	40ème field of record 20 of field 1
...	
V (6401)	1st field of record 1 of field 9
...	
V (7200)	40ème field of record 20 of field 9
...	
v ((ich-1) *800+ (irec-1) *40+ifield)	value associated with the field ich located at the record irec and for the field ifield

3.4 “.FID_LOC”: S V I

This object contains for each field, 5 couples of whole values making it possible to locate inside the dataset, the sequence number, time, the frequency... the first value indicates the n° of the record where information is stored and the second value indicates its position.

v (1)	= N° of the record	Sequence number	
v (2)	= Position		
v (3)	= N° of the record	Urgent	Field n°1
v (4)	= Position		
v (5)	= N° of the record	Frequency	
v (6)	= Position		
v (7)	= N° of the record	Nume_mode	
v (8)	= Position		
v (9)	= N° of the record	Mass_gene	
v (10)	= Position		
v (11)	= N° of the record	Sequence number	
v (13)	= Position		
v (13)	= N° of the record	Urgent	Field n°2
v (14)	= Position		
...			

Figure 4-b: Dataset 57 (example)

-1						Partie A	
57 4VALEURS AUX NOEUDS DES ELEMENTS							
Record 1 →	ASTER 3.05.30 CONCEPT 0 CALCULE LE - CHAMP PAR ELEMENT AUX ...						
Record 2 →	CHAMP PAR ELEMENT AUX NOEUDS DE NOM SYMBOLIQUE VARI_ELNO_ELGA - ...						
Record 3 →	ASTER 3.05.30 CONCEPT 0 CALCULE LE 29/12/95 A 09:56:55 DE TYPE ...						
Record 4 →	CHAMP PAR ELEMENT AUX NOEUDS DE NOM SYMBOLIQUE VARI_ELNO_ELGA						
Record 5 →							
Record 6 →	1	4	3	0	2	6	
Record 7 →	2	1	1	1			
Record 8 →	0.15000E+02						
						Partie B	
	1	1	0	6	4 MAILLE MA2		
	2.07919E-05	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.	

	2.07919E-05	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.	

	-1						

Figure 4-c: Dataset 2414 (example)

-1								Partie A
2414								
Record 1 →	1							
Record 2 →	B.C. 1, TEMPERATURE_1, LOAD SET 1							
Record 3 →	1							
Record 4 →	/users/lebonv/SGI/Code_Aster/TPLS100B/tp1r100_coque.mf1							
Record 5 →	MODEL_SOLUTION_SOLVE							
Record 6 →	LOAD SET 1							
Record 7 →	Analysis time was 06-Jan-99 11:11:25							
Record 8 →	NONE							
Record 9 →	2	1	1	5	2	1		
Record 10 →	-10	0	1	1	1	0	0	
Record 11 →	2	0						
Record 12 →	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.	
Record 13 →	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.	
								Partie B
	1							
	-6.10352E-06							

	205							
	-6.10352E-06							

	-1							

5 Default values

the default values stored in data structure `FORMAT_IDEAS` are presented in the document of use [U2.26.03].

6 Examples

In this paragraph, we present two examples:

- Example a: use of the search criteria by default to read the results,
- Example b: use of the search criteria user to read the results.

For each one of these examples we give of the command syntax `LIRE_RESU` as well as the contents of data structure `FORMAT_IDEAS`.

Example a: search criteria per default

- Syntax of the command `LIRE_RESU`

```
INIT = LIRE_RESU (MAILLAGE = m,  
                  UNITE     = 19 ,  
                  FORMAT    = "IDEAS",  
                  TYPE_RESU = "EVOL_NOLI",  
                  NOM_CHAM  = ("DEPL"),  
                  INST      = 15. ,  
                  )
```

- Contained SD `FORMAT_IDEAS` (default value)

FORMAT_IDEAS	(1)	(2)	(3)	(4)	(5)	(6)
. "FID_NOM "	DEPL					
. "FID_NUM "	55					
. "FID_PAR " (1)	9999	9999	9999	9999	9999	9999
(2)	9999	9999	9999	9999	9999	9999
(3)	9999	9999	9999	9999	9999	9999
(4)	9999	9999	9999	9999	9999	9999
(5)	9999	9999	9999	9999	9999	9999
(6)	1	4	3	8	2	6
(7)	9999	9999	9999	9999	9999	9999
...						
(13)	9999	9999	9999	9999	9999	9999
...						
(40)						
...						
".FID_LOC "	7	4	8	1	9999	9999
".FID_CMP "	"DX"	"DY"	"DZ"	"DRX"	"DRY"	"DRZ"

At the time of the search of the dataset, number 9999 is a joker allowing D" to be unaware of the value read in L" makes dizzy.

Example b: search criteria defined by the user.

- Syntax of the command LIRE_RESU

```
INIT = LIRE_RESU ( MODELE=           Mo ,
                  UNITE=           19,
                  FORMAT=          "IDEAS",
                  TYPE_RESU=       "EVOL_NOLI",
                  NOM_CHAM=        ("15") ,
                  INST=            15. ,
                  FORMAT_IDEAS= _F (
                    NOM_CHAM=      "DEPL",
                    NUME_DATASET=  55,
                    RECORD_6=      (3,1,9999,4,2,3) ,
                    POSI_ORDRE=    (8,4) ,
                    POSI_INST=     (7,9999) ,
                    CMP=           ("DX", "DY", "DZ") ,
                                     )
                                     )
```

- Contained SD FORMAT_IDEAS (default values)

FORMAT_IDEAS	(1)	(2)	(3)	(4)	(5)	(6)
. "FID_NOM "	DEPL					
. "FID_NUM "	55					
. 'FID_PAR `	9999	9999	9999	9999	9999	9999
(1)	9999	9999	9999	9999	9999	9999
(2)	9999	9999	9999	9999	9999	9999
(3)	9999	9999	9999	9999	9999	9999
(4)	9999	9999	9999	9999	9999	9999
(5)	9999	9999	9999	9999	9999	9999
(6)	3	1	9999	4	2	3
(7)	9999	9999	9999	9999	9999	9999
...						
(13)	9999	9999	9999	9999	9999	9999
...						
(40)						
...						
".FID_LOC "	8	4	7	1	9999	9999
".FID_CMP "	"DX"	"DY"	"DZ"	"XXX "	"XXX "	"XXX "