

Data format sd_modele_gene

Summarized:

Contents

1 General information.....	3
2 Tree structure from Data format.....	the 3
3 Contents of the JEVEUX objects.....	3.3.1
General information.....	3.3.2
Object .MODG.DESC.....	3.3.3
Object .MODG.LIDF.....	3.3.4
Object .MODG.LIPR.....	4.3.5
Object .MODG.LIMA.....	5.3.6
Object .MODG.SSME.....	5.3.7
Object .MODG.SSNO.....	5.3.8
Object .MODG.SSOR.....	5.3.9
Object .MODG.SSTR.....	5

1 General information

the data structure sd_modele_gene store the data relative to a total structure created from a dynamic substructuring.

This data structure is currently created by only command DEFI_MODELE_GENE. This is why, one will use sometimes the language of this command to describe produced data structure.

2 Tree structure of Data format

the sd_modele_gene (K14)

```
(O)  ".MODG.DESC"      :   OJB  S   V   I       long=3
(O)  ".MODG.LIDF"      :   OJB  XD  V   K8      NU  ()
(O)  ".MODG.LIPR"      :   OJB  S   V   I
(O)  ".MODG.LIMA"      :   OJB  XD  V   R       NU  ()
(O)  ".MODG.SSME"      :   OJB  XC  V   K8      NU  ()
(O)  ".MODG.SSNO"      :   OJB  S   N   K8
(O)  ".MODG.SSOR"      :   OJB  XC  V   R       NU  ()
(O)  ".MODG.SSTR"      :   OJB  XC  V   R       NU  ()
```

3 Contained General information

3.1 JEVEUX objects

a sd_modele_gene is made of under structures (key word SOUS_STRUC). Each under structure is obtained by translation/rotation of a sd_macr_elem_dyna. Recall: to each sd_macr_elem_dyna is attached one (and only one) sd_base_modale.

These under structures "are bonded" (key word factor LIAISON). Each connection resticks 2 pennies structures via 2 interfaces belonging each one to under structure.

One will call nb_struc the number of under structures of the sd_modele_gene.

One will call nb_liaison the number of connections of the sd_modele_gene.

3.2 Object .MODG.DESC

".MODG.DESC" : S V I LONG=3

V (1)	many integers coded necessary for quantity DEPL_R
V (2)	number of components maximum for quantity DEPL_R
V (3)	number of quantity DEPL_R

3.3 Object .MODG.LIDF

"MODG.LIDF" : XD V K8 NB_OBJ=nb_liaison

the size of each object is of 5

V (1)	name of the substructure 1
V (2)	name of interface 1
V (3)	name of the substructure 2
V (4)	name of the interface 2
V (5)	regrouping of the nodes ("YES" or "NON "). "YES" wants to say that the nodes of the 2 interfaces are not well aligned between them and qu" it should have been reordered.

3.4 Object .MODG.LIPR

".MODG.LIPR" : S V I LONG=9*nb_liaison

This object is used to describe the dimension of the matrixes of connection. The contents of the matrixes of connection are explained in the documents [R4.06.02] and [R4.06.03]

For each connection, there are 3 matrixes of connection: for each interface and one of Lagrange-Lagrange type. There is thus in all $3 \cdot \text{nb_liaison}$ matrixes of connection.

These matrixes are stored in object .MODG.LIMA. They are numbered naturally: connection after connection, 3 matrixes per connection: interface 1, interface 2 and Lagrange-Lagrange.

For I varying of 1 with nb_liaison, one has

Is:

- nb_col1: many modes in modal base associated with under structure 1
- nb_col2: many modes in modal base associated with under structure 2

V (i-1))	(1+9*	many lines of the first matrix of connection
V (i-1))	(2+9*	many columns of the first matrix of connection (nb_col1)
V (i-1))	(3+9*	1+3* (i-1) (number of the matrix of connection)
V (i-1))	(4+9*	many lines of the second matrix of connection
V (i-1))	(5+9*	many columns of the second matrix of connection (nb_col2)
V (i-1))	(6+9*	2+3* (i-1) (number of the matrix of connection)

V (i-1)	(7+9*	many lines of the matrix of Lagrange-Lagrange of connection
V (i-1)	(8+9*	many columns of the matrix of Lagrange-Lagrange of connection
V (i-1)	(9+9*	3+3* (i-1) (number of the matrix of connection)

3.5 Object .MODG.LIMA

``.MODG.LIMA`` : XD V R NB_OBJ=3*nb_liaison

This object contains the values of the various matrixes of connection. The size of each matrix of connection is described in object .MODG.LIPR. These matrixes are rectangular "full".

That is to say V3i , V3i+1 , V3i+2 respectively 3rd, (3i+1)^{ème}, (and (3i+2))^{ème} objects of the collection.

V3i (J)	jième value of the first matrix of connection I
V3i+1 (J)	jième value of the second matrix of connection I
V3i+2 (J)	jième value of the matrix of Lagrange of connection I

3.6 Object .MODG.SSME

``.MODG.SSME``: XC V K8 NB_OBJ=nb_struc

For each under structure, the size of the object is of 1.

V (1)	name of the sd_macr_elem_dyna associated with substructure.
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3.7 Object .MODG.SSNO

``.MODG.SSNO``: S N K8 Pointer

LONG=nb_struc of names making the correspondence number of the substructure ↔ name of the substructure

3.8 Object .MODG.SSOR

``.MODG.SSOR``: XC V R NB_OBJ =nb_struc

the size of each object is 3

V (1)	first nautical angle to pass from the directional sense of the model having given birth to the macro-element with that of the substructure.
V (2)	second nautical angle
V (3)	third nautical angle

3.9 Object .MODG.SSTR

``.MODG.SSTR``: XC V R NB_OBJ =nb_struc

Warning : The translation process used on this website is a "Machine Translation". It may be imprecise and inaccurate in whole or in part and is provided as a convenience.

the size of each object is 3

∇ (1)	first component of the translation making it possible substructure to build a news starting from the model which has given rise to the macro-element, by applying an overall translation
∇ (2)	second component of the translation
∇ (3)	third component of the translation