

Structure of data list_inst

Summary:

Lhas structure of data list_inst gather the related information with the temporal discretization of a calculation.

The structure of data list_inst is produced by the order DEFI_LIST_INST.

Contents

1 Lhas Structure of Données in a few words.....	3
2 Tree structures.....	3
3 Contents of objects JEVEUX.....	3
3.1 Objects concerning the management of the list of moments.....	3
3.2 Objects concerning the management of the failures.....	4
3.3 Objects concerning the management of the adaptation.....	5

1 Lhas Structure of Données in a few words

The structure of data `list_inst` contains the relative information with the management of the list of moments: list of moments of calculation, procedures in the event of failure of calculation (undercutting...), method of calculating of the automatic step of time. This structure of data is produced by the order `DEFI_LIST_INST`.

2 Tree structures

`list_inst (K8)::=record`

(O)	<code>`.LISTE.DITR'</code>	OJB	S	V	R8
(O)	<code>`.LISTE.INFOR'</code>	OJB	S	V	R8
(O)	<code>`.ECHE.EVENR'</code>	OJB	S	V	R8
(O)	<code>`.ECHE.EVENK'</code>	OJB	S	V	K16
(O)	<code>`.ECHE.SUBDR'</code>	OJB	S	V	R8
(F)	<code>`.ADAP.EVENR'</code>	OJB	S	V	R8
(F)	<code>`.ADAP.EVENK'</code>	OJB	S	V	K16
(F)	<code>`.ADAP.TPLUR'</code>	OJB	S	V	R8
(F)	<code>`.ADAP.TPLUK'</code>	OJB	S	V	K16

3 Contents of objects JEVEUX

3.1 Objects concerning the management of the list of moments

(O) ``.LISTE.DITR'` : OJB S V R8 LONG=NBINST

List of the moments of calculation.

(O) ``.LISTE.INFOR'` : OJB S V R8 LONG=11

Vector of realities length 11 who contains information on the management of the list of moments.

V (1) – Contenu of the keyword `METHOD` of `DEFI_LIST_INST/DEFI_LISTE`

=1 if `METHODE=' MANUEL'`

=2 if `METHODE=' AUTO'`

V (2) – Contenu keyword `PAS_MINI` of `DEFI_LIST_INST/DEFI_LISTE`

If `PAS_MINI` is not informed, V (2) is worth `R8PREM`, or a particular value for method `IMPL-EX`.

V (3) – Contenu of the keyword `PAS_MAXI` of `DEFI_LIST_INST/DEFI_LISTE`

If `PAS_MAXI` is not informed, V (3) is worth $t_{fin} - t_{ini}$ where t_{fin} and t_{ini} are the last and first values of the object `.LISTE.DITR`

V (4) – Contenu of the keyword `NB_PAS_MAXI` of `DEFI_LIST_INST/DEFI_LISTE`

If `NB_PAS_MAXI` is not informed, V (4) is worth `NB_PAS_MAXI / PAS_MINI`

V (5) – Cthe smallest step of time of the list ontient `.LISTE.DITR`

V (6) – Valor the preceding one of the increment of time (for management `CAR` list of moments)

V (7) – So at least an action of cutting was defined

V (8) – NRshade of moments of the list of moments `NBINST`

V (9) – NRshade of causes of failures `NECHEC`

V (10) – NRshade of methods of automatic adaptation of the step of time `NADAPT`

V (11) – So at least an action of reactualization of the preconditionnor was defined

3.2 Objects concerning the management of the failures

(O) `\.ECHE.EVENR` : OJB S V R8 LONG=6*NFAILURE

Vector of realities length 6 X NFAILURE, where NFAILURE is the number of causes of failure. It contains information on the management of the causes of failures

For each cause of failures:

V (1) – NROm of the cause of failure – EVENT

- =0 for 'WANDER '
- =1 for 'DELTA_GRANDEUR'
- =2 for 'COLLISION'
- =3 for 'INTERPENETRATION '
- =4 for 'DIVE_RESI '
- =5 for 'INSTABILITY '

V (2) – NROm of L'action to be realized – ACTION

- =0 for 'STOP '
- =1 for 'CUTTING '
- =2 for 'ITER_SUPPL '
- =3 for 'AUTRE_PILOTAGE '
- = 4 for 'ADAPT_COEF_PENA '
- = 5 for 'CONTINUOUS '

V (3) – Drapeau if the event is started. Is useful in the algorithm.

- =0 for EVENT not started
- =1 for EVENT started

V (4) – NRone used

V (5) – Valor of reference VALE_REF for 'DELTA_GRANDEUR'

V (6) – Valor of maximum interpenetration PENE_MAXI

(O) `\.ECHE.EVENK` : OJB S V K16 LONG=3*NFAILURE

Vector of character strings length 3 X NFAILURE, where NFAILURE is the number of causes of failure. It contains information on the management of the causes of failures

For each cause of failures:

V (1) – NROm of the field NOM_CHAM for 'DELTA_GRANDEUR'

V (2) – NROm of the component NOM_CMP for 'DELTA_GRANDEUR'

V (3) – Critère of comparison CRIT_COMP for 'DELTA_GRANDEUR'

WP, GE, LT, IT

(O) `\.ECHE.SUBDR` : OJB S V R8 LONG=10*NFAILURE

Vector of realities length 10 X NFAILURE, where NFAILURE is the number of causes of failure. It contains information on the management of the action in the event of failure

For each cause of failures:

V (1) – Méthode of under-cutting of the step of time

- =0 for 'NO'
- =1 for 'HANDBOOK '
- =2 for 'CAR '

V (2) – Value of 'SUBD_PAS'

V (3) – Value of 'SUBD_PAS_MINI'

V (4) – Value of 'SUBD_NIVEAU'

V (5) – Value of 'SUBD_INST '

V (6) – Value of 'SUBD_DUREE '

V (7) – Value of 'PCENT_ITER_PLUS '

V (8) – Value of 'COEF_MAXIMUM '

- V (9) – Value of `SUBD_RATIO`
- V (10) – Value of `SUBD_METHODE_AUTO`
 - =1 for `COLLISION`
 - =2 for `EXTRAPOLATE`

3.3 Objects concerning the management of the adaptation

(F) `.ADAP.EVENR` : OJB S V R8 LONG=6*NADAPT

Vector of realities length $6 \times \text{NADAPT}$, where NADAPT is the number of causes of adaptation. It contains information on the management of the causes of adaptation of the step of following times.

For each cause of adaptation:

- V (1) – NRom of the cause of adaptation (event)
 - =0 for `NO`
 - =1 for `TOUT_INST`
 - =2 for `THRESHOLD` without formula
 - =3 for `THRESHOLD` with formula

V (2) – Value of `NB_INCR_SEUIL`

V (3) – Value of `NOM_PARA`

- =1 for `ITER_NEWTON`

V (4) – Value of `CRIT_COMP`

- =1 for `LT`
- =2 for `WP`
- =3 for `IT`
- =4 for `GE`

V (5) – Value of value of reference `VALE`

V (6) – NRshade of time where calculation was a success (without release of one event)

(F) `.ADAP.EVENK` : OJB S V K16 LONG= NADAPT

Vector of realities length NADAPT , where NADAPT is the number of causes of adaptation. It contains information on the management of the causes of adaptation of the step of following times.

For each cause of adaptation:

- V (1) – NRom of the formula for `THRESHOLD` with formula

(F) `.ADAP.TPLUR` : OJB S V R8 LONG=6*NADAPT

Vector of realities length $6 \times \text{NADAPT}$, where NADAPT is the number of causes of adaptation. It contains information on the calculation of the step of next time

For each cause of adaptation:

- V (1) – Méthode of calculation of the step of next time
 - =1 for `FIXES`
 - =2 for `DELTA_Grandeur`
 - =3 for `ITER_NEWTON`
 - =4 for `FORMULA`
 - =5 for `IMPLEX`

V (2) – Value of `PCENT_AUGM` if method `FIXES`

V (3) – Value of `VALE_REF` if method `DELTA_Grandeur`

V (4) – Not used

V (5) – Value `NB_ITER_NEWTON_REF`

V (6) – Not used

(F) `.ADAP.TPLUK` : OJB S V K16 LONG=4*NADAPT

Vector of realities length $4 \times \text{NADAPT}$, where NADAPT is the number of causes of adaptation. It contains information on the calculation of the step of next time

For each cause of adaptation:

V (1) – Not used

V (3) – Value keyword 'NOM_CHAM'

V (3) – Value keyword 'NOM_CMP'

V (4) – Not used