

Release Notes LaGriT version of Spring 2002

A summary of the major changes found in this release are listed below. A complete list of changes is included at the end of this document. Refer to the user's manual for a complete description of the new, enhanced and revised commands.

New Commands:

stack	stack/fill stack/reorder read tri or quad surfaces combine into one cmo and fill with prisms or hexes
mode	mode/discrete /surface_cmo/tolldamage - all refinement smoothing operations on this surface must result in nodes that are members of surface_cmo mode/recon /[delaunay geometry adaption] choose reconnection mode - delaunay flip to restore delaunay, geometry will flip to create 'plump' elements, adaption will flip to reduce solution error mode/adaption_field /field_name/scale_factor/4d_refine_length/4d_merge_length/4d_damage/percent_to_refine/error_cut_off_refine - if this mode is on adaptive massage will be in effect
sethessian	sethessian/user make the 2 nd derivative matrix from the routine supplied by the user sethessian/erradpt make the 2 nd derivative matrix from the user supplied edge errors sethessian/field_name /[algorithm choice] make the 2 nd derivative matrix base on the supplied field and algorithm (default is the mega algorithm)
loop	loop/do variable lp_start lp_stop lp_stride loop_end / lagrit_command loop/foreach variable item1 item2 ... itemN loop_end / lagrit_command Examples of syntax are: loop foreach MO cmo1 cmo2 cmo3 loop_end & cmo / delete / MO loop do NX 2 3 1 loop_end & loop do NY 4 5 1 loop_end & loop do NZ 6 7 1 loop_end & loop foreach X0 0 5.5 10.2345678 loop_end & createpts/xyz/NX,NY,NZ/X0 0. 0. / 100. 100. 100. loop foreach FILE file1 file2 file3 loop_end & loop foreach CMO cmo1 cmo2 cmo3 loop_end & infile lagrit.input_control_file loops may be max 10 deep, max 250 tokens in the /foreach/ mode. Implementation involves a define and a dotask issued for each loop command

Enhanced Commands:

refine allow **eltset**,**get**,**eltsetname** wherever **pset** **get** **psetname** was previously allowed.

math
math/sum
math/integrate

Bugs:

08/07/01	closed_surfaces	fix undefined variable
11/06/01	damp_pt_by_value,	put mega3d_nosb, getiedge polyfun_nosb.f corrected the problem involving the nondistinction of differently colored but coincident edges
12/06/01	hextotet_hybrid	add error checking, avoid cmo_interpolate bug
12/17/01	refine_tet_add	get correct cmo name
11/09/01	interesect_elements	fix incorrect declaration
07/28/01	lower_d_lg	fixed test for increasing attribute space
12/17/01	refine_nosb	fix errors in faceedge and tetedge options
12/20/01	cmo_addatt_nosb	fix type declarations
01/16/02	mergepts_simplex	use epsilon for inversion tests
03/21/02	rz	fix line mode
03/22/02	dump_geometries_lg_nosb, geometry_release_lg, read_geometries_lg_nosb	allow for mesh object with no geometry
03/25/02	refine_edge_2d	reset ipointj at end
03/25/02	control_command_lg	reuse space if names are reused in define commands

Code Changes:

12/06/01	eset_nosb	Fixed multiple calls to eltset so that it behaves like pset(i.e. contents of a named eltset reset at each call)
12/06/01	cmo_set_mesh_type	add error checking
08/28/01	cmo_addatt	allow permanent or temporary persistence
11/28/01	cmo_copyatt	allow element attributes to be copied to nodes that are element vertices
07/27/01	cmo_set_mesh_type	changed subroutine name from cmo_mesh_type
07/27/01	cmo_status	added 'brief' option
12/04/01	cmo_interpolate	add error checking
11/26/01	unpackpc	simplify the logic
07/15/01	freemove	pass in info that determines move
11/06/01	getiedge	distinguish between coincident but different material edges
11/28/01	intrap_gtg	add tiemat option
07/27/01	isosurface	set edges_per_element
01/07/02	sethessian, damp_pt_by_value, evaluate_sobolevnorm,hess3d ,interpolate_hessian-	use sethessian
01/07/02	cel_chain, refine_spawn_lg, refine_coupling_coef,popcones_lg, csl, cer-chain, cel, popcomponents_lg	use return flag from refine_edge_add_tet to terminate iterations if refine does nothing
01/08/02	flip2to3b_nosb, flip2to3, hmemadjb_nosb	remove warning message
01/08/02	connect_nosb	spelling error
01/01/02	math_sum, math_integrate	new options
01/14/02	rotatleln_nosb, rotatept_nosb	rotate only coordinates - skip other attributes
01/30/02	table_element	clean-up
03/31/02	distance_to_sheet, testdamage, edgefun_lg point_to_plane freemove_nosb, mega3d_inner_loop, mega3d_nosb, massage, refine_edge_add, sgd, cee_chain, polyfun_nosb, adg3d, mode_lg, msgtty_nosb	changes for adaptive massage and for discrete mode
02/06/02	perturb_lg	fix calling sequence
02/25/02	recon2_nosb	fix debug output
03/05/02	quadxyz,quadxy, read_sheetij	format changes
03/07/02	extract_surfmesh	better error checking

03/21/02 partition,refine_edge_3d, addmesh_amr, voronoi_stor, grid_to_grid, addmesh_overlap, addmesh_merge pull
routines out of temp.f

04/08/02 pset better setting of epsilons for geom. option