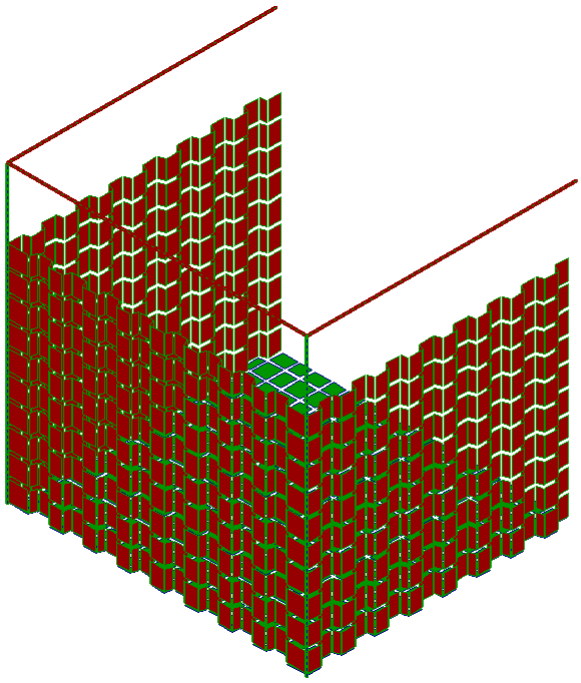
Comparison between Sargon (V8.50), NXNASTRAN and NEiNASTRAN – NORMAL MODES			
TEST 50	VALIDATION, CROSS CHECKS, RELIABILITY, BENCHMARK	Marco Croci	15/04/2008



	Sargon (Clever)	NXNASTRAN	% errNX	NEiNASTRAN	% errNE
Model Name	tes50.WSR	tes50000.dat		tes50.NAS	
Output file	tes50.CEN	tes50000.f06		tes50.OUT	
Q1	-2,015E+00	-2,016E+00	-0,041	-2,016E+00	-0,029
Q2	-1,376E+01	-1,377E+01	-0,068	-1,377E+01	-0,065
Q3	5,038E+01	5,027E+01	0,214	5,046E+01	-0,165
Q4	3,989E+01	3,995E+01	-0,161	4,126E+01	-3,332
Q5	-1,491E+05	-1,489E+05	0,131	-1,486E+05	0,333

Compared Values:

Q1 = Load Set 1 – Node 1001 – Dy
Q2 = Load Set 1 – Node 187 – Dy
Q3 = Load Set 1 – Node 173 on plate-shell element 152 – Von Mises stress
Q4 = Load Set 1 – Beam element 25 – Shear Tz (End2)
Q5 = Load Set 1 – Node 622 – Constraint moment My

Translations: [mm] Forces: [N] Moments [Nmm]
% errNX = (Sargon – NX) / NX * 100; % errNE = (Sargon – NE) / NE * 100
NXNASTRAN and NEiNASTRAN values are rounded up to 4 significant digits; in some cases sign of moment value is changed in order to use the same Sargon rule.

Model data

Degrees of freedom = 7080
Plate-shell elements = 1249
Beam elements = 25