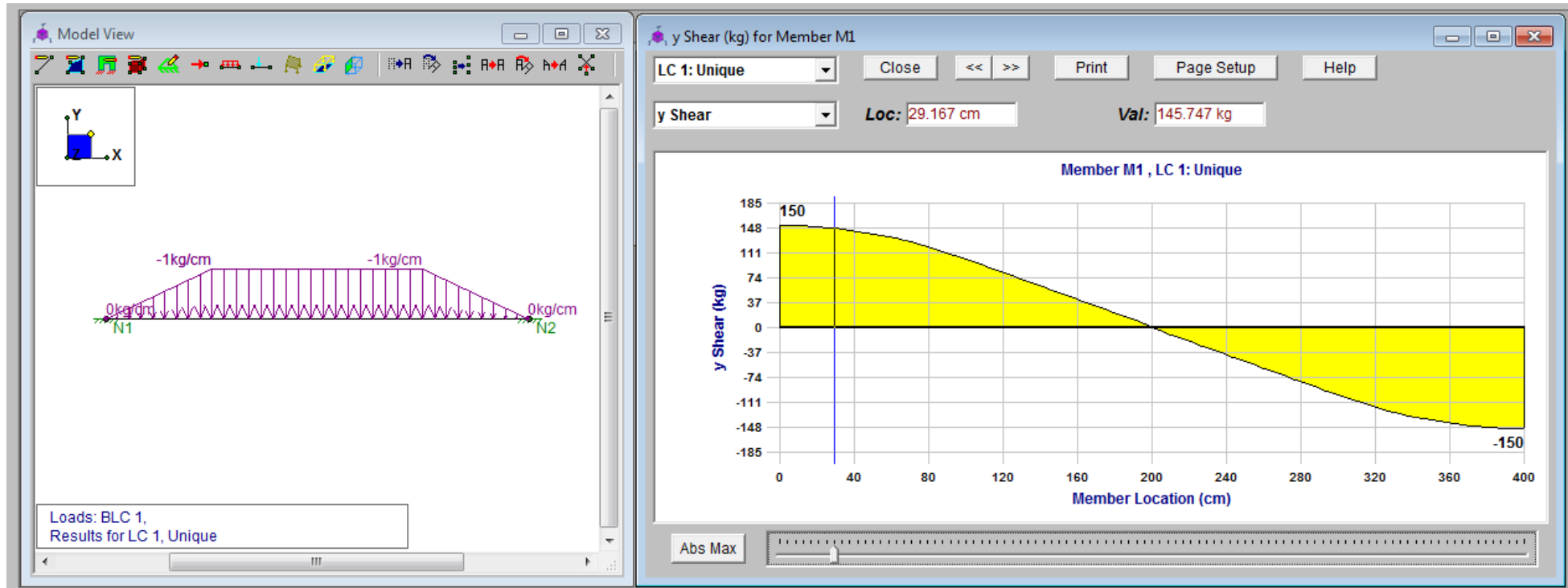
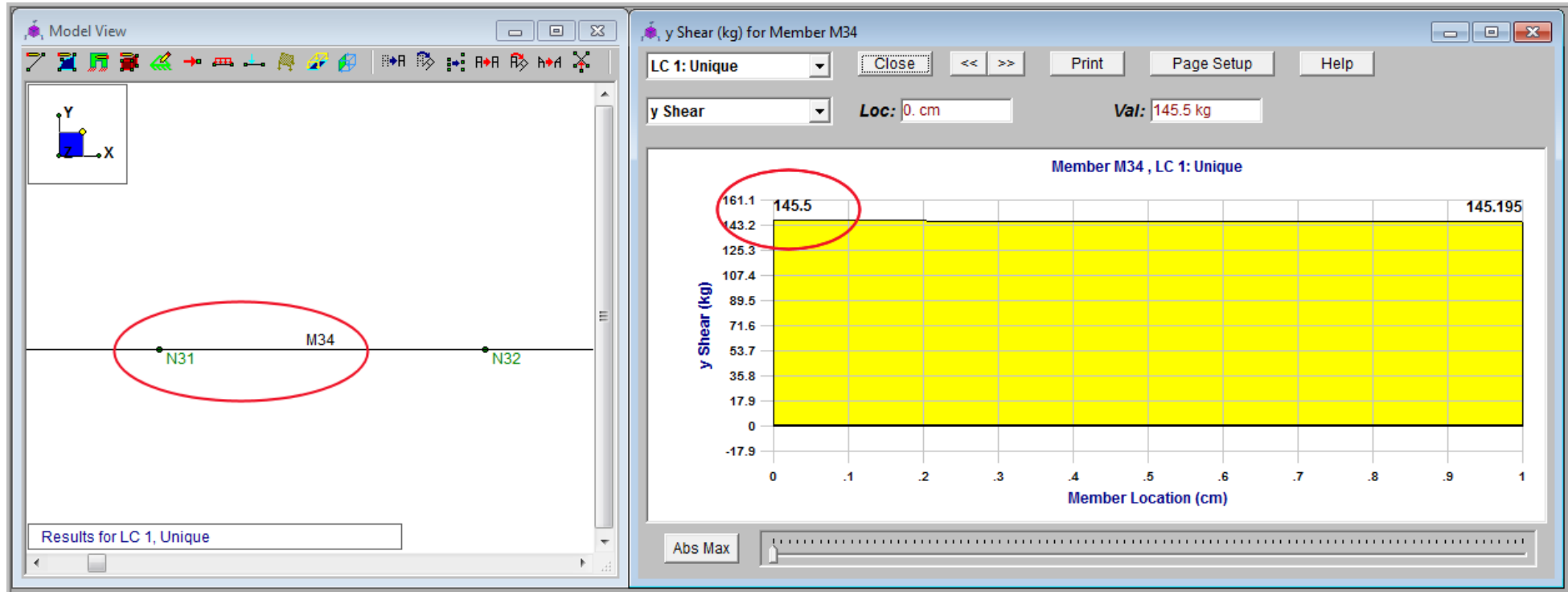


Symmetrical Trapezoidal Load on fixed ends beam example, RISA 3D, 1 weightless segment
Shear taken into account.



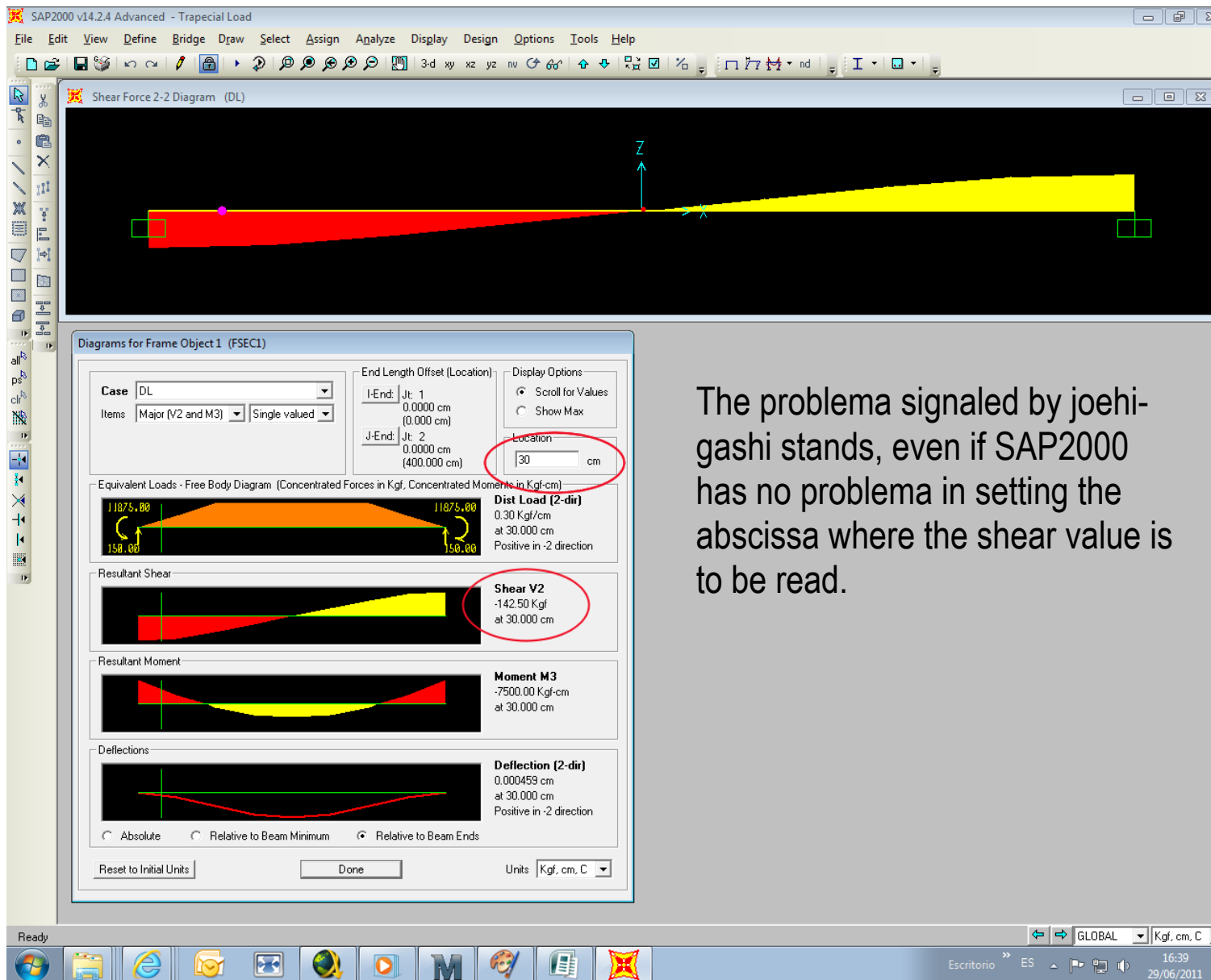
In this case RISA 3D simply seems unable to point to the exact abscissa, (the step for the hairline dial in the graphics seems too big and non modular to our investigated point) so the exact shear at 30 cm is not directly readable. I try to overcome the issue by setting the number of inner points in the beam but It seems unable to set a number proper for a 30/400 point be directly readable.

Symmetrical Trapezial Load on fixed ends beam example, RISA 3D, 400 weightless segments
Shear taken into account.



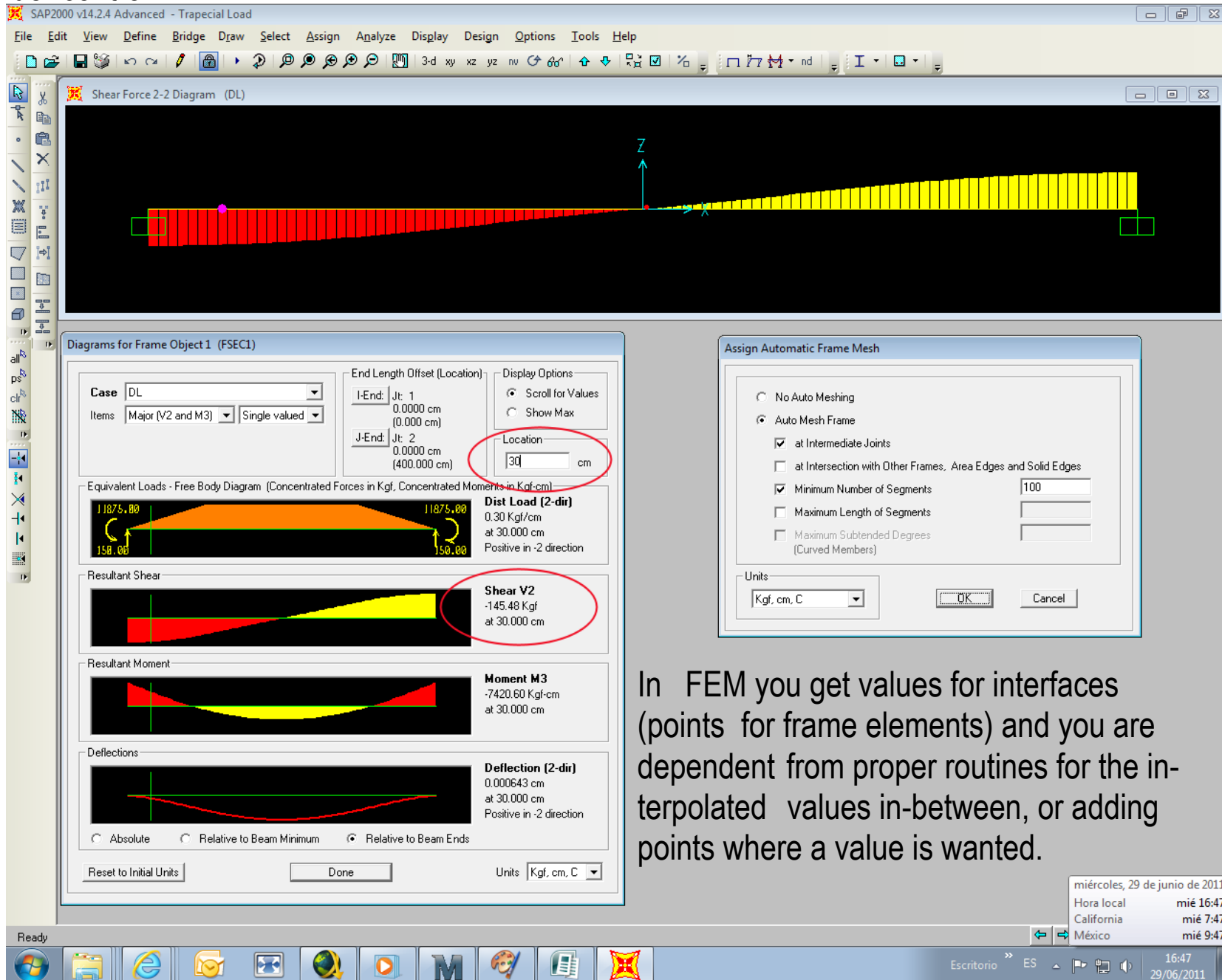
Same case as before, just subdivided. By just placing a joint where we want the “exact” value of the shear determined (30 cms abscissa, node 31) we are in conditions of making an exact read of the shear value, showing to be coincident with the manual evaluation, and proving that even at this thorough subdivision producing very short segments, to take into account shear in the elements is unable to force out the value of what required by the symmetry of the loads and element.

Same Symmetrical Trapezoidal Load on fixed ends beam example, SAP2000, 1 weightless segment
Shear taken into account.

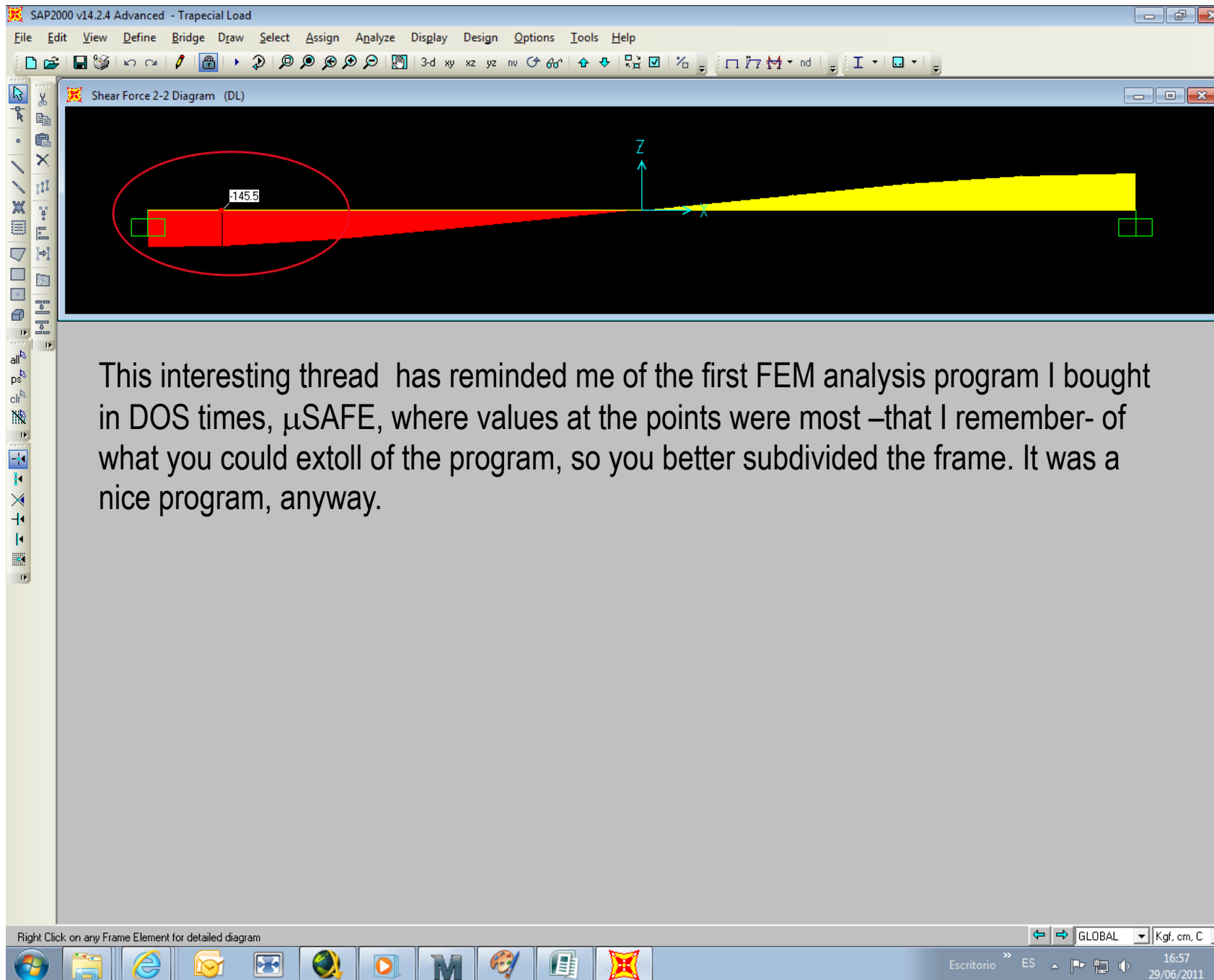


The problema signaled by joehi-gashi stands, even if SAP2000 has no problema in setting the abscissa where the shear value is to be read.

This composite image shows how Assign Frame Automatic Frame Mesh to 100 segments brings the issue under control



SAP2000 is perfectly able to show as well the exact value by just adding a subdivision where the exact value is required, here drawn from right mouse click at the point



This interesting thread has reminded me of the first FEM analysis program I bought in DOS times, μ SAFE, where values at the points were most –that I remember- of what you could extoll of the program, so you better subdivided the frame. It was a nice program, anyway.