

New Variables:

```
bodyMarkerForce(3*numMarker),  
double bodyMarkerVel(3*numMarker),  
double bodyNormalVectorCW(3*numMarker), // the unit normal clockwise vector of the marker face
```

```
int MarkerInterpolateIndex (6*numMarker),  
double MarkerInterpolateRatio(6*numMarker),  
    // the interpolation is implemented by the formula below  
    =Array[Index]*Ratio+Array[Index+1]*(1.0-Ration)  
double MarkerPressure(2*numMarker),  
double MarkerInterpolateVelocity(6*numMarker),
```

Initiate MarkerInterpolateIndex (3*numMarker) & MarkerInterpolateRatio(3*numMarker) in
vega_FEM_initiate.

```
Move_boundary()  
    // DO i=1,nPtsBodyMarker(iBody)  
    // xBodyMarker(iBody,i) = xBodyMarker(iBody,i) + dt*uBodyMarker(iBody,i)  
    Compute_marker_vel  
    Read_marker_vel  
    Vega_vel_update //finished
```

N-S solver

drag_lift_solid

bodyMarkerForce[] is calculated.

vega_deformation_c_(bodyMarkerForce[],bodyMarkerVel[]);

vega_markerVel_convergenceCheck //finished

if not, go to N-S solver

if Yes, vega_reNewBodyPosition_c() , and go to move_boundary(),