

# FENET – multi-physics theme update

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- **Developments over time**
  - What is multi-physics?
  - Strategies for multi-physics modelling
  - Hands-on experience workshops

# This weeks programme

**Invited a number of 'multi-physics' vendors to run a workshop**

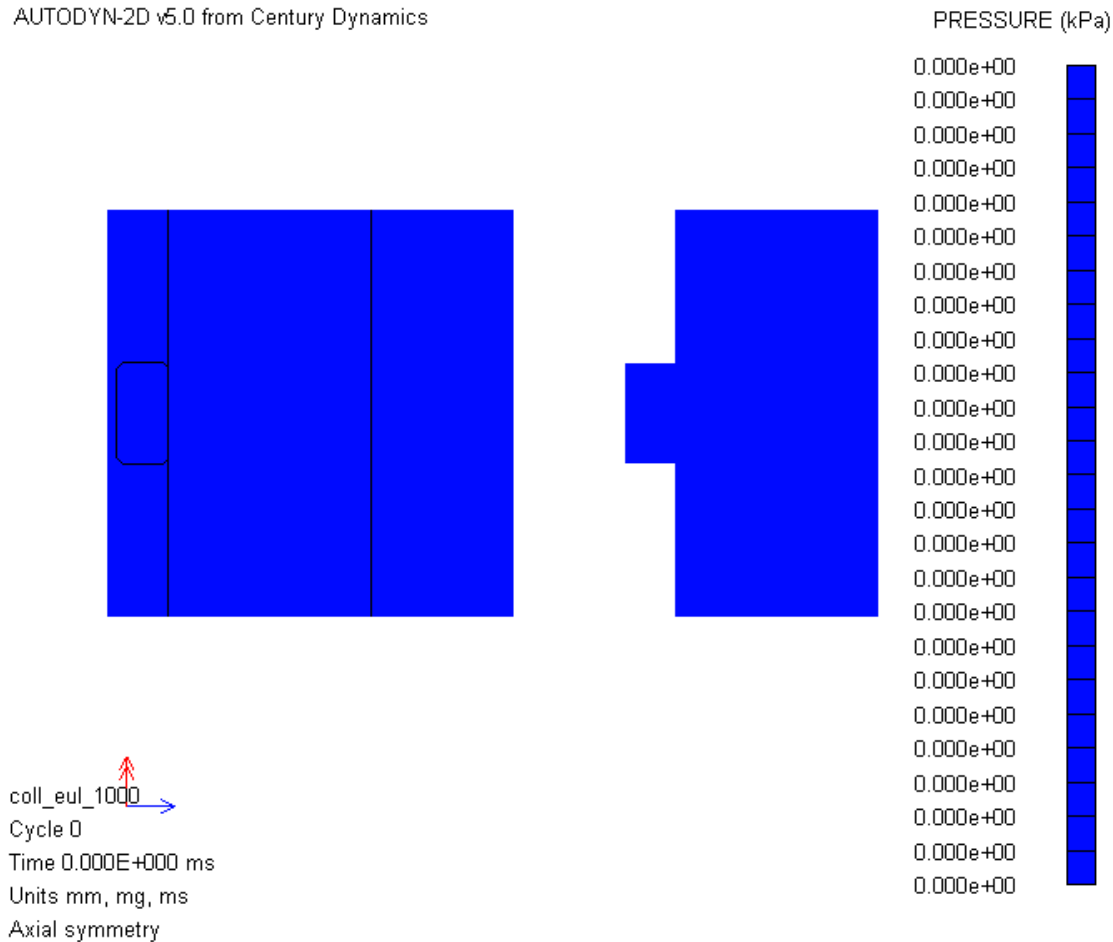
## **Response – Century Dynamics**

- AUTODYN
- Fluid-structure interaction
- Range of techniques with mixtures of FE, FV and SPH techniques
- CD multi-physics focuses upon extreme short term or shock events

- **Workshop essentially run twice**
  - Typically 10 people per workshop
  - Essentially focussed upon setting up an impact problem using both a Lagrangian (FE – displacement) and an Eulerian (FV – velocity) based approaches
  - Well organised and run by Richard Clegg ably supported by Colin Hayhurst

# The exercise

AUTODYN-2D v5.0 from Century Dynamics



Exercise completed by a very proud Chris Rogers and Mark Cross



# The immediate future

- **Next workshop in February 2005:**
  - ‘structural response to impact, fire and explosion’**
- **Also plan some kind of round up on the progress made on multi-physics from a commercially supported perspective**
- **Summary of the usable state-of-the-art at the final meeting in May**

# Longer term future

- **I am to cease being a PVC at Greenwich.**
- **My group moving to University of Wales – Swansea, where I will focus upon research**
- **Re-launch the concept of a network of excellence in engineering analysis:**
  - Broader objectives than FENET
  - Includes explicitly all the continuum analysis communities
  - Include research and development
  - Promote collaborative working
  - Arrange extended visits by PhD students between countries and have base in analysis companies, not necessarily universities
  - Continue the workshop meeting structure but re-focus to re-invigorate with emerging issues in a more flexible fashion
  - Attempt to cross the industry developer – industry user - academia bridge more effectively

**I WILL BE IN CONTACT WITH YOU ALL ABOUT YOUR INTEREST AND PARTICIPATION**