Overset Mesh - Overset Method

Enables simulation of moving objects with complex movements and/or rigid-body collision with walls - by overlapping multiple mesh regions

What is Overset Mesh?

Simulates one analysis space by oversetting multiple computational grid (mesh) regions. Requires users to create a domain and mesh that surrounds a moving object separately from the other domain. A moving condition can be applied to each moving region.

Application 1: Slave Region Can be Replaced Arbitrarily to Compare Multiple Cases

- Heat sink

Mesh created per part

Analysis model can be modified just by moving a part or by replacing it and merging it back to the master region

Application 2: Multiple Rotating Regions Overlapping One Another

- Mixer
- Gears

Application 3: Moving Object with Contact

- Open-close Valve

The overset method helps execute the analysis that requires a complex movement or contact of objects, which cannot be simulated with a single mesh.

Other Applications
- Ball valve
- Rotation of scroll pump
- Piston movement
- Open/close motion of flaps, etc.

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Software Cradle