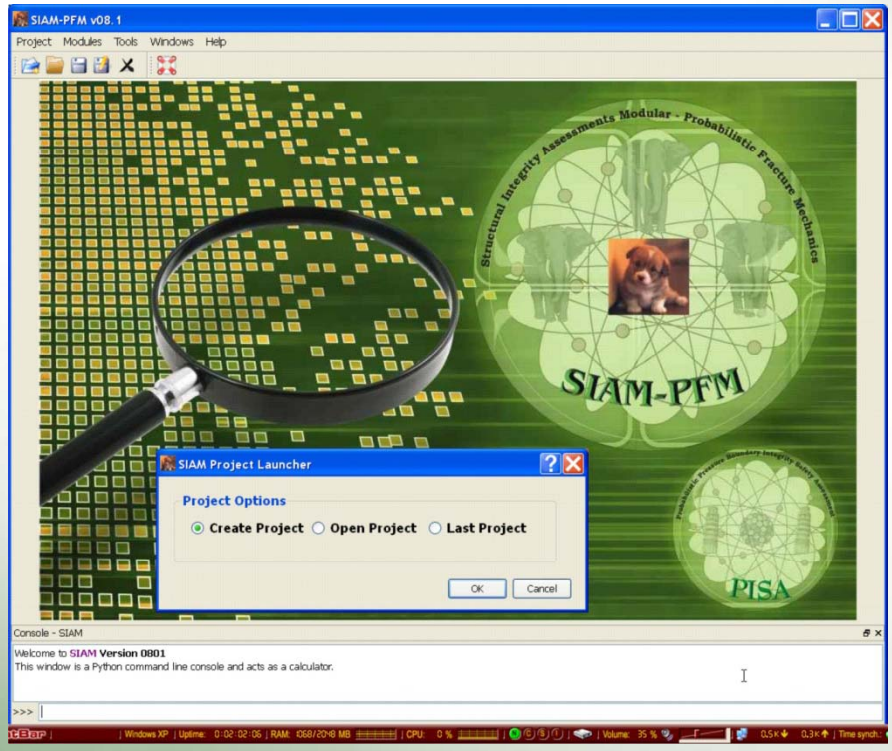
Development of the SIAM-PFM* Problem Solving Environment for Structural Integrity Assessments

Modeling and Simulation Group

Computational Sciences & Engineering Division



***Structural Integrity Assessments Modular – Probabilistic Fracture Mechanics**

Problem Statement:

- **The U.S. Nuclear Regulatory Commission (NRC) requires leading-edge technical support to ensure the safety & reliability of pressurized components in U.S. nuclear power plants (NPP).**

Technical Approach:

- **Through its support of the Probabilistic Pressure Boundary Integrity Safety Assessment (PISA) Program, CSED is engaged in the development of a new Problem Solving Environment called SIAM-PFM* that addresses a wide range of problem classes in the area of nuclear power plant safety and reliability in a systematic and consistent way using modern principles of probabilistic risk assessment.**

Benefit:

- **CSED research results will make a critical contribution to the ability of regulators to assess the long-term safety of NPPs.**

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