

## MEMS-ONE Project Data:Development of the Framework Software

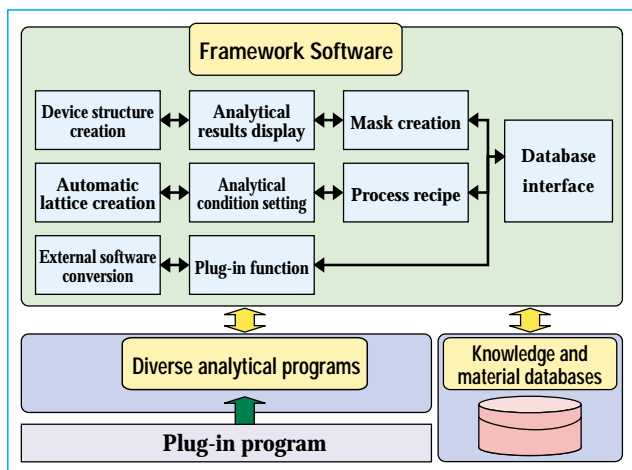
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### 1. Development Objectives

Nihon Unisys Excelutions is researching and developing framework software designed to implement integrated management of the MEMS Open Network Engineering System of Design Tools (MEMS-ONE). This framework software will have sophisticated functional integration with diverse analytical software and will establish an organic link with the knowledge database and material and process database.

### 2. State of Development

The framework, detailed in the following diagram, primarily functions to form device structures, create masks, set analytical conditions, display analytical results, set process recipes, automatically create lattices, convert data using external software, implement plug-ins, and interface with databases.



Functions in the framework for MEMS-ONE

The function for device structure formation includes a 3D modeling function. The function for mask creation includes a CAD function for creating mask layout data. The function for setting analytical conditions can set conditions for many diverse analytical programs. The function for displaying analytical results includes a function for visualizing analytical data. The process recipes include a function for combining processes in multiprocessing and a function for setting and modifying process conditions. The function for automatic lattice creation has a function for creating mesh data required for analytical programs employing the finite element method. The external software converter has a function for converting commercial CAD data and analytical data. The plug-in function has an open parts and data

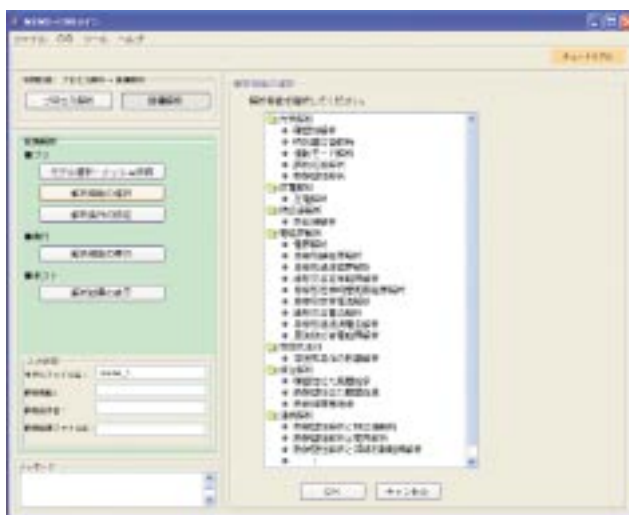
format so that the user's software can be incorporated into the present system. The database interface has a function for facilitating interface with the knowledge database and the material and process database.

Development of the MEMS-ONE project was begun last year with a target release date set for the end of 2006. We have begun development work on the program this year based on the studies implemented last year on specifications for the framework functions.

Below we present a draft of screen images for the MEMS-ONE framework functions (not the final version).



MEMS-ONE start-up screen



Selection window for the mechanical analysis program

Since the framework functions are responsible for the main interface with the user, we strove to create a user-friendly GUI simple enough for novices to use. Our goal is to complete the development early enough that the developmental results can be actively promoted at the Micromachine Exhibition and the like.