Abstract: We studied how to achieve successful implementation of massive research and development projects requiring collaboration among industries, universities and government-supported research institute. We have set up an engineering process innovation model to be deemed most adequately for all practical purposes, relying on the theoretical studies on the merits and analysis of the effect of the information system based
on Milestone Management, Work Breakdown Structures and Web, which is known to be effective for research project (schedule) management and the objective management, and implemented a real-world web-based project objective management system. After a review of various R & D Project Schedule Management methods, we found that this information system was very compatible with project objective management.

This project objective management information system carries out research and development projects effectively and efficiently, getting together in cyber-space and sharing information, and has been equipped with an Early Warning Subsystem to allow for pre-analysis and timely response to potential problems arising from the course of the project.

The system also contains an Executive Information System that in real time, automatically provides the management information required by managers with the rate of project progress (achievement, fulfillment and delay).

Lastly, actual progress can be cross-checked through both on-line objective management on the web-based information system and design review meeting held on site, to improve the efficiency and validity of the information system.

Moreover, overall effect was analyzed through questionnaires on how well the system and generated information meet requirements and on the ultimate impact of the system upon objective management and communication.

The questionnaire on the system effect revealed that the information system was useful to objective management and communication, and that the quality of the system was more than acceptable as well.

Key words: Cooperation R & D of Industries, Universities and government–supported research institute, National R&D, Management by Objectives, Project Objective Management System, Project Information System, Milestone Management, Work Breakdown Structure, Communication, R & D Project Schedule Management, Effect analysis