2

Cost Estimation System for Public Works Projects

Development and operation of the cost estimation system by the Ministry of Land, Infrastructure, and Transport

JACIC is involved in the Ministry of Land, Infrastructure, and Transport (MLIT) of a new cost estimation system to keep pace with progress in civil engineering and information technology, globalization, and change in contemporary infrastructure.

This new system has been in operation by the Ministry of Land, Infrastructure, and Transport since fiscal 1996 with full-scale operational support from JACIC.

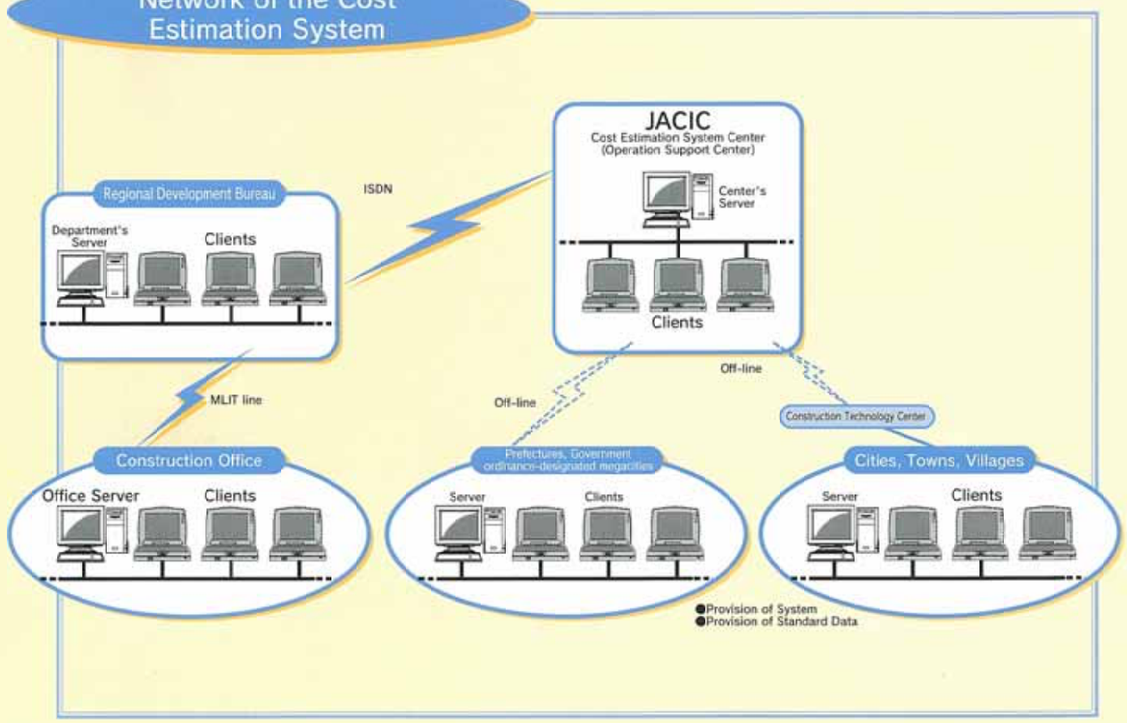
We will continue to develop cost estimation systems for emerging project categories, to improve existing systems, and to develop support systems.

Development and provision of standardized cost estimation systems for local government authorities

JACIC has been engaged in the development of standardized cost estimation systems for local government on the basis of the MLIT system. The system allows quick updates to accommodate changes in MLIT regulations and standards. Also, since October 1997, has provided local governments with a new cost estimation system incorporating MLIT's new classification standards of construction works and general purpose standard data.*

For cities, towns, and villages, the JACIC provides support for the introduction, operation, and maintenance of the New Cost Estimation System for Regional Governments that is provided through a communal use contract with the Construction Technology Center or by other means.

Network of the Cost Estimation System



Cost estimation Systems Research and Development

To streamline cost estimation tasks for greater efficiency, JACIC is conducting research and development for various subsystems as well as the utilization of the construction CALS/EC systems to cost estimation as well as other issues.

Studies for More Sophisticated Technical Management

Studies are under way for systems to efficiently manage numerous documents and data used in the construction process for the planning, execution and operation stage of public works projects. In these systems the documents and information will be converted to an electronic format.

■ Features of the New Cost Estimation System for Public Works Projects

① Systematic classification of construction projects by type

- The advantage of systematic classification by type for construction projects is the comparability of similar estimation results obtained in different estimates/expertises.

② Improved ease of operation

- Interactive serial processing is achieved due to the use of a distributed processing system(client server system).
- The check mechanism gives warnings about potential errors in inputted/outputted data.
- The help function gives the user ready access to the cost estimation standards.

③ Standardization of Estimation Data

- The format for data such as construction benchmark tables given in standard estimation bills is standardized based upon the type classification of construction works.
- This permits quick data updates in accordance with revisions in estimation standards.

④ Compilation of Cost Estimation Data for Ready Use

- The configuration of a database of cost estimation results provides a valuable tool for:
  rough cost estimates;
  determining preset unit prices for checking; and
  retrieval of precedents of analogous cost estimation cases.

＊Standard data

The contents are the standards and other relevant items adopted in the new cost estimation system for civil works which was formulated by the Ministry of Land, Infrastructure, and Transport. The magnetic media was completed by the JACIC by converting into a data format having a general-purpose applicability so that it can be made widely available to local governments.

■ Features of the Cost Estimation System for Local Governments

- Based on the new cost estimation system proposed by the MLIT
- User-government specific functions can be added.
- Applicable project types

①General construction projects (related to rivers, coasts, roads, sediment control, etc.)②parks③sewerage systems④port facilities ⑤fishery⑥fishing ports⑦erosion control ⑧forest trails⑨industrial effluent⑩water supply systems⑪outsourcing