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MANAGING NETWORK INFORMATION. RESEARCH PROJECT ADVISOR:  
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In this research, the DBS-MNI model is proposed as a managing and supervising model on the Packet Switching Private Data Network (PSPDN). Analysis was done on the functional requirements of INS staff and the data requirement of the so-called Network Information on PSPDN. This model uses RDBMS as a major tool to store, manage and process all network information in order to bring efficiency to INS staff and PSPDN. The main differences between DBS-MNI and general Network Management System (NMS) Software are the diversity of functionality to support INS staff's tasks and the low implementation cost of DBS-MNI system compared to the cost of other NMS software.

Based on the DBS-MNI managing model, the authorization of INS staff is classified into four groups:

- 1) Implementation staff - INS staff who are responsible for installing node equipment and monitoring the efficiency of installed node equipment. To support this responsibility, DBS-MNI provides the Configuration Task and Statistic Monitoring Task.
- 2) Operation staff - INS staff who are responsible for monitoring and solving any problems which occur on PSPDN. However, if the operation staff cannot solve the problem, they may refer the problem to other INS staff member. To support this responsibility, DBS-MNI offers the Fault Monitoring Task and Trouble Ticket Task.
- 3) Maintenance staff - INS staff who are responsible for maintaining the working condition of all equipment on PSPDN. For this group, DBS-MNI provides Inventory Task to support their responsibility.
- 4) Network manager - INS staff who supervise operation of the other three groups and collect network information for reporting. These reports are used for planning and designing the network to support data traffic growth in the future. Network manager has full authorization in DBS-MNI. In addition, DBS-MNI provides Reporting Task to support network manager.

After using the technical analysis based on top-down approach, the complete data requirement analysis was done and the conceptual design was obtained. Then, this concept was implemented as a prototype. In the experiment, the prototype performed satisfactorily in terms of accuracy, ease of use and efficiency in INS staff tasks. A full-scale implementation of this system prototype is the next step, which could lead to a reduction in NMS software acquisition cost for the organization.