

DEPARTMENT OF INFORMATION TECHNOLOGY

ITD consists of the Systems Technology Section and the Library and Archives Section, both of which are engaged in support activities for RERF's research. The Systems Technology Section is responsible for the maintenance of computer/network environments and the protection and management of our extensive and complex set of electronic research databases. The Library and Archives Section is responsible for organizing and providing access to scientific articles and historical documents.

The Systems Technology Section has been engaged in the maintenance of network and hardware environments, including personal computers, the construction of a variety of databases for analysis (epidemiological research database, resource management database, Adult Health Study (AHS) database, etc.) and the development of relevant application software. These databases are managed in a technologically advanced manner that allows RERF's researchers to more effectively and rapidly access and retrieve essential archives for personal and collaborative purposes. With the aim of helping research scientists understand those databases with a complex structure, the section has also been involved in such research-support activities as the creation of a data dictionary and a document management database. Among the section's recent focuses are the prevention of illegal attack into the RERF network and infections with computer viruses, and the addition of new functions for personal information management at RERF in line with implementation of the Personal Information Protection Law.

The Library and Archives Section is composed of the Library and the Archives Units; the former handles the procedures for purchase and storage of scientific journals, management and preservation of books, and handling of requests from RERF's research scientists for copying papers. The recent rapid growth in demands for such services has moderately impacted ITD's operations. Loss of personnel represents an area of concern due to retirements that have affected or will affect the Library Unit and the Archives/Publications Unit. Meanwhile, the number of orders for ABCC/RERF-related historical materials from outside RERF is on the rise.

ITD participates in a variety of collaborative projects with outside research organizations: we have already embarked on research collaborations with the Bioinformatics, Human Genome Center of the Lawrence Livermore National Laboratory (LLNL). LLNL provides input to us with regard to the development of the large genomic systems. Among ITD's research and collaborative activities are participation in the WHO Radiation Emergency Medical Preparedness and Network (REMPAN); cooperation in research at Hiroshima University, one of western Japan's tertiary medical institutes for the radiation exposed; creation of an epidemiological research database devoted to the MEXT Grant-in-Aid for Scientific Research project on low-dose radiation effects from nuclear tests conducted in Semipalatinsk, Republic of Kazakhstan by the former Soviet Union; and joining the SEMI-NUC project (prospective cohort study of residents near the Semipalatinsk nuclear test site – feasibility assessment) by the International Agency for Research on Cancer (IARC) as member of the external advisory board.

FY2015 Departmental Achievements

1. Improvement of the security environment.
We have introduced a new security system (packet filtering system) to strictly check the network traffic this year. The new security system can detect almost all kinds of illicit inbound and outbound traffic and cut it off. This helps curb both outside cyber-attacks and internal data leaks.
2. Migration of various servers onto one virtual server.
Many servers with various Operation Systems (UNIX, Linux, Windows, etc.) are functioning in the server room, which makes it more difficult to manage. The virtual server can let various Operation Systems work simultaneously on it. This reduces the load of managing many servers, though it also requires additional technical sophistication.
3. Development of the new bio-sample database.
By introducing of the robot freezer system into RERF, we had to develop a new bio-sample database system and support its application. The new bio-sample databases which are managed by three groups, the Clinical Studies, the Molecular Biosciences department, and the Bio-sample Center.
4. Migration of the inventory system to the multi-functional inventory system.
The Library unit had used the old inventory system since October in 1996. The Library unit introduced the multi-functional inventory system instead of the old inventory system so that RERF researchers can refer to journals in various ways using this new inventory system.