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 The Library and Archives Section is responsible for organizing and providing access to scientific articles and historical documents.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.

DEPARTMENT OF INFORMATION TECHNOLOGY

FY2016 Departmental Achievements

1. Improvement of the bandwidth of the Internet line.

    Because of the increase of the use of the TV conference and the amount of the remote backup of data, we negotiated with the network company and could increase the bandwidth of the Internet from 100 Mbps to 200 Mbps with same cost.

2. Starting of the mass storage system for the virtual slide of the Pathology Section.

    The Pathology Section of the Epidemiology Department has started digitalization of pathological slides using a virtual slide system for preservation. The system requires a large capacity of storage. The estimated capacity for virtualization in Hiroshima was up to 1.5 Peta-byte. We purchased two mass data-storage units (100 Tera-byte x 2) for the system this year, and are planning to purchase other mass data-storage units on an as-needed basis.

3. Setting up the new power management system in Nagasaki Laboratory.

    Since the power equipment (UPS) in Nagasaki Laboratory became too old, we replaced it. At the same time, we set up the new power management system so that the system in Nagasaki shutdowns automatically in case of the long electronic power outage, and we can shutdown/restart the servers in Nagasaki remotely.

4. ABCC/RERF History Forum and continuous work.

    We had two ABCC/RERF History Forums this year, inviting Dr. Tamagaki (medical doctor of the Genetics Department) and Mr. Nishimura (social worker of the Clinical Studies Department). The Library unit and Archives unit continues the inventory work for OPAC (Online Public Access Catalog), and the management of journal publications.