

# 12. Division of Information and Communication Systems

NIFS handles a large amount of information, including experimental data. As a center of excellence in fusion science, NIFS is in a position to exchange information both domestically and internationally and is required to make open and protect such information. The Division of Information and Communication Systems (ICS) works to promote open science and network security by centralizing the development and operation of information and communication systems. Open science is an initiative that aims to “create new knowledge that transcends fields”, “ensure transparency in research”, and “return the results of studies to society” by making research data and results widely available. And it is becoming an important international trend. NIFS also provides open access to research data and results to researchers worldwide and to the public. Internet communication systems for handling various types of information are increasingly important to support open science. We are working on network security to ensure the safe and appropriate handling of information.

The Department of Information and Communication System (ICS) was founded in 2014 to efficiently develop and maintain the information and network systems of NIFS. All information system professionals in NIFS belong to the ICS. There is one office and three groups corresponding to the job classifications in NIFS. The Information Security Office, established in 2020, is responsible for the overall management and coordination of the work related to information security in the Institute. Members of the Information Security Office are also members of the Computer Security Incident Response Team, NIFS-CSIRT, and when an information security incident occurs, they cooperate with the institutional CISO, information system administrators, and information security managers to respond to the incident. The NIFS-CSIRT is also a member of the NINS-CSIRT, the CSIRT of the

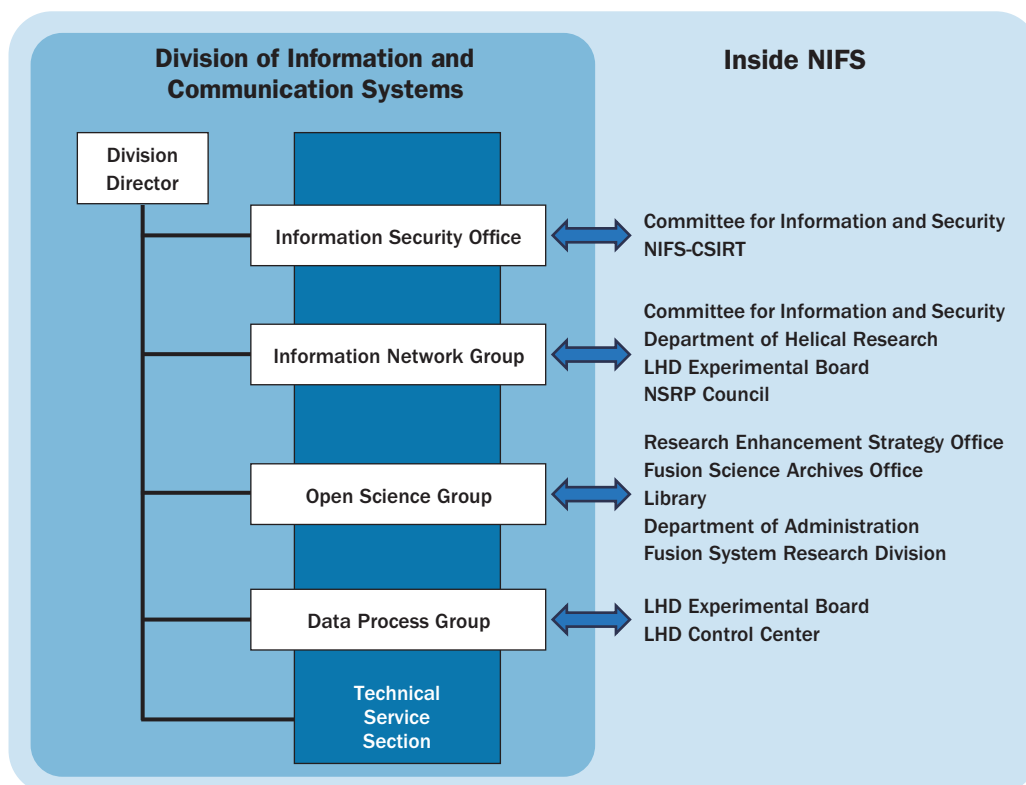


Fig. 1 Structure of Division for Information and Communication Systems.

---

National Institutes of Natural Sciences, and shares information with them in normal times. The Information Network Group operates and maintains the information network and related services, such as the e-mail system, in accordance with the Information Security Policy and Information Security Guidelines, and implements incident prevention measures. The Open Science Group, established in 2021, develops, operates, and maintains analytical information systems, atomic and molecular data systems, and various information systems that serve as the foundation of the Institute, and makes experimental and analytical data and atomic and molecular data available to the public. The Data Processing Group, established in 2021, develops, operates, and maintains the experimental information and data collection system.

The ICS works as follows: a request for the maintenance, improvement, and development of the information and communication system is submitted to the ICS by each section of the Institute. All requests are prioritized by a core member of the Technical Services Section of the ISC in consultation with the respective group leaders, and a team of practitioners is assigned to handle the request. Since all the experts belong to the Technical Service Section of the ICS, each group leader asks the section leader to allocate the necessary number of experts for a prescribed period to complete the task. Monthly leader meetings are held to review the progress of each group and the status of handling requests submitted to the ISC. Issues related to each group and the ISC as a whole are also discussed and coordinated with the appropriate organizations as necessary.

In NIFS, three research projects extend across the research divisions. It can be said that the ICS is another “project” which lies across all the divisions in the institute to keep the information and communication systems stable, secure, and up to date.

(T. Yamamoto)