

13. Division of Information and Communication Systems

NIFS handles a great deal 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 open and protect such information. The Division of Information and Communication Systems (ICS) works on open science and network security by centralizing the development and operation of the information and communication systems. Open science is an initiative that aims “to create new knowledge that transcends fields”, “to ensure transparency in research”, and “to return the results of the studies to society” by widely open research data and results. And it is becoming a major international trend. NIFS also provides open access to research data and results to researchers worldwide and 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 in order to develop and maintain the information and network systems of NIFS efficiently. All the information system experts in NIFS belong to the ICS. There are one office and four TASK groups which correspond to the job classifications in NIFS. The Information Security Office, established in 2020, oversees the overall information security of the institute. The Network Operation task group manages and maintains the communication systems in NIFS, such

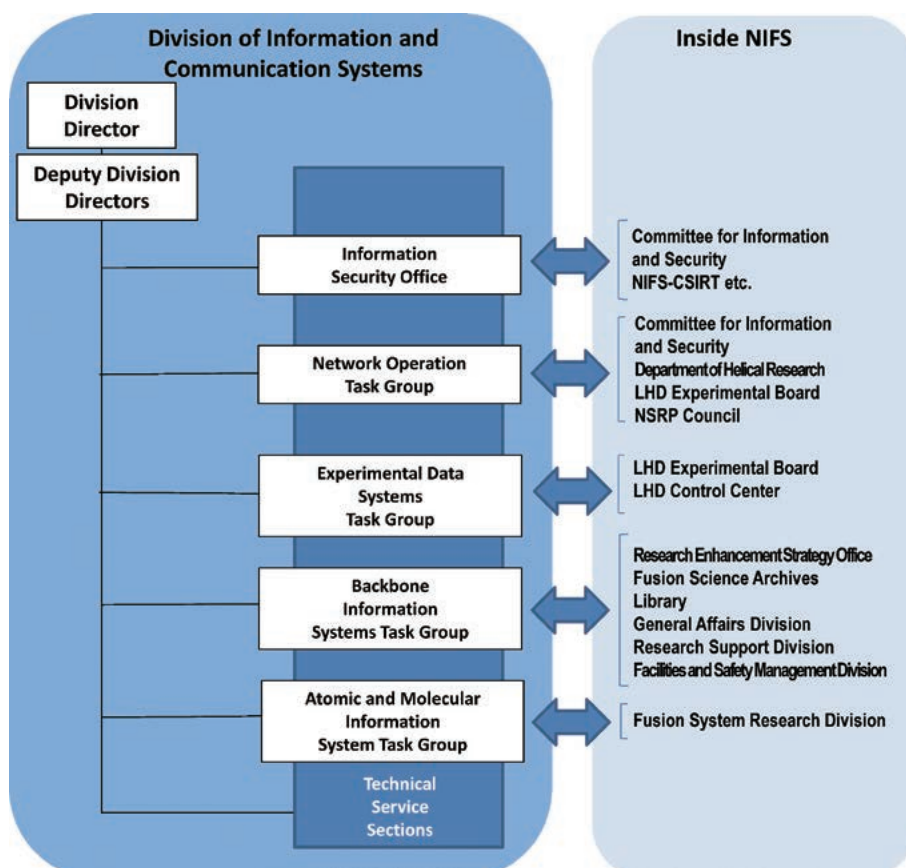


Fig. 1 Structure of Division for Information and Communication Systems.

as the E-mail system including security issues. The Experimental Data System task group performs operation and development of data acquisition systems for the LHD experiment. The Backbone Information Systems task group, which was created by merging the Institutional Information Task Group and Integrated ID management and Authentication System task group in 2021, carries out the maintenance and development of the management systems for collaboration research and its output. The Atomic and Molecule Database task group maintains the atom and molecule database which is open to researchers around the world.

The ICS works as follows: the request for the maintenance, improvement, and development of the information and communication system from each section is submitted to the ICS. The deputy division directors of ICS check all the requests, establish the priority among them, and assign them to the appropriate Task Group. Because all the experts belong to the Technical Service Section of ICS, each Task Group Leader asks the Section Leader to allot the required number of experts for a prescribed period to finish the job.

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 for keeping the information and communication systems stable, secure, and up to date.

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