7. Collaboration Using SINET4

SNET is the network for the collaboration research built on SINET4 with L2/L3VPN service. SINET4 is the national-wide academic network operated by National Institute of Informatics (NII). SNET directly connects the universities, research institutes and NIFS. NIFS has been operating SNET with the category of "LHD experiment remote participation" since March 2002. The categories of "Remote use of supercomputer system" and "Bilateral collaboration", which is formerly called "All Japan ST research program", were added to SNET in FY 2005.[1-4] The facilities of "Bilateral collaboration" are Kyushu Univ.'s spherical tokamak experiment equipment (QUEST) at Kyushu Univ., GAMMA-10 at Tsukuba Univ. and High Density Plasma Experiment-I (HYPER-I) at NIFS. The number of sites is steadily increased: 24 sites participate to the SNET as shown in Fig. 1.

The categories and remote sites connected by L3VPN are as follows: (1) *LHD experiment remote participation*: Tohoku Univ., JAEA, Univ. of Tokyo (Hongo and Kashiwa campus), Tokyo Institute of Technology, Nagoya Univ., Kyoto Univ. (Yoshida and Uji campus), Kyoto Institute of Technology, Hiroshima Univ. and Kyushu Univ.; (2) *Remote use of supercomputer system*: JAEA, Nagoya Univ., Kyoto Univ. (Yoshida and Uji campus) and Kyushu Univ., (3) *Bilateral collaboration*: Tsukuba Univ. and Hiroshima Univ.
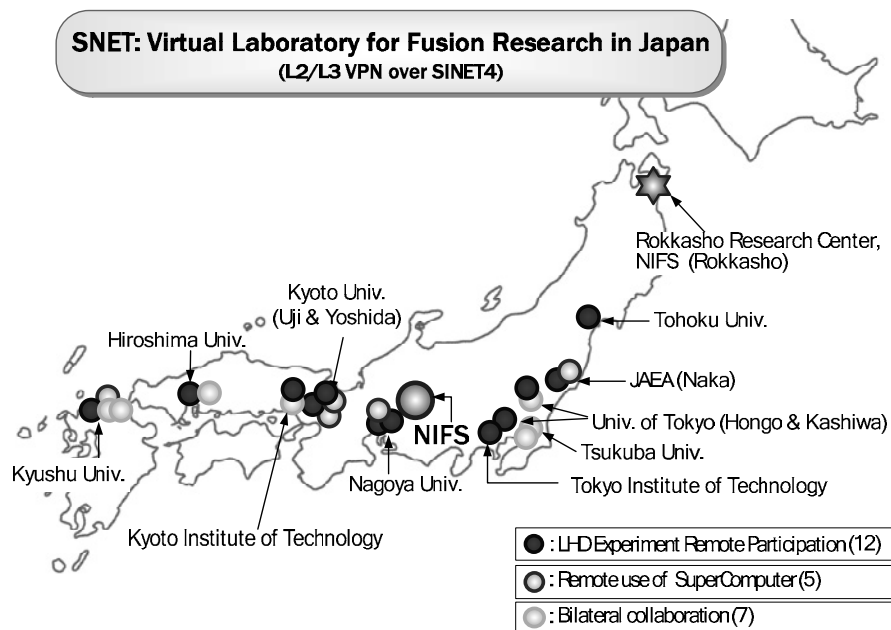
The categories and remote sites connected by L2VPN are as follows: *Bilateral collaboration*: Univ. of Tokyo (Kashiwa campus), Kyoto Institute of Technology and Kyushu Univ.; *Muticast*: Kyushu Univ., *Hyper-I*: Kyushu Univ.

The new trial service produced by NII has been started between Kyushu Univ. and NIFS. The server which is connected to L2VPN is located in NII and the user can use the desktop environment with their own PC anywhere on the network. The main technique is the desktop as a service, DaaS. To accept the enough member of this trial service, the subnet mask of the L2VPN has been changed from /26 to /24.

One of the laboratories in Nagoya Univ. was moved to other building and SNET has supported continuously as a part of the *Remote use of supercomputer system.*

1) Yamamoto, T., et al., Ann. Rep. NIFS (2007-2008) 389.
2) Yamamoto, T., et al., Ann. Rep. NIFS (2008-2009) 333
3) Yamamoto, T., et al., Ann. Rep. NIFS (2009-2010) 367
4) Yamamoto, T., et al., Ann. Rep. NIFS (2010-2011) 461

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Fig.1　Connection map of SNET