

## The Japanese Data Link

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NMFECC has been receiving many requests from people interested in using the data link between the Institute of Plasma Physics in Nagoya, Japan and NMFECC. This article is intended to answer some of the questions that have been raised.

### Can Any NMFECC User Use the Link?

Use of the link is expensive and therefore limited. Mechanisms are in place to prevent unauthorized access to the link. Users must receive specific authorization before they will be allowed access via the link.

### How Expensive Is It?

The data link is charged on a usage basis. Your friends and colleagues at NMFECC receive a monthly bill for *real* dollars for the usage. Usage is charged for connect time and data traffic. As an example, using current tariffs and some amount of guessing, we estimate that a megabyte file will cost about \$250 to ship to Japan. Interactive sessions are more reasonable, but since considerable bills could be generated by casual users, the number of authorized users for the link is currently tightly controlled.

### What It Doesn't Do

It is perhaps easiest to clarify the role of the data link by specifying what it does not do:

The data link is *not* intended to be a general-purpose gateway between the two computer centers and associated networks. It is provided as a means for enhancing collaboration between Japanese and U.S. fusion researchers working on authorized joint projects requiring computation or data analysis.

The data link is only a data communications link—there is no translation or interpretation of operating system commands. You must be familiar with the Japanese Computer Center operating system and user services to use it, and you must have a user number and account on that computer system. Similarly, users in Japan accessing any MFEnet host via the data link must be acquainted with, and a user on, the U.S. host.

The Japanese host computer has a new electronic mail system. There is *no* interface between that mail system and the MFEnet mail system. A user in Japan must log on to the designated MFEnet host to receive or send mail within the NMFECC mail system, similarly for users in the U.S. using the Japanese mail system.

### OK, What Does It Do?

Basically, the data link supports interactive terminal sessions and file transport.

The computer center at Nagoya currently includes a Fujitsu M-200 general-purpose processor with an attached VP-100 supercomputer for batch processing. Access to other sites in Japan is not provided.

An authorized user anywhere on the MFEnet may log on to the Japanese M-200 by first

completing a log-on procedure with the gateway for authorization verification and accounting purposes. The user's terminal is then connected to the M-200 and log-on to the Japanese computer must be completed. After that, interaction proceeds as usual.

File transport is completed using the Japanese computer as the destination site in a normal NETOUT session. The user's user number and password must also be specified so that the gateway can verify that the user is authorized before the file transport will be allowed.

Users in Japan who wish to log on to or use file transport to or from any MFEnet host have essentially identical capabilities.

### **Link User Authorization Procedure**

Link usage is tied to joint computational projects under the U.S.-Japan fusion cooperation agreement. Joint work could involve code development or use, experimental data analysis, or theoretical modeling. If the proposed project is covered by a joint planning committee or the Joint Institute for Fusion Theory (JIFT), the proposal should be made to that committee. Proposals that do not fit any of these committees will be considered for the Personnel Exchange category and should be submitted directly to the Ad Hoc Committee for Data Linkage Tests. Co-chairmen of this committee are Dave Nelson, Office of Fusion Energy, DOE, and Hideo Ikegami, Institute of Plasma Physics, University of Nagoya.

Researchers who are collaborating on *selected* joint computational projects will normally receive authorization and a "budget" for link use. Requirements for receiving such authorization are detailed in the "Procedures for MFENET-IPPJNET Data Link Test" that has been prepared by the Ad Hoc Committee for Data Linkage Tests.

### **I'm Authorized, Now What?**

If you meet the above criteria, NMFEECC will enable your user number for access after we receive notification of authorization. You may start usage immediately, assuming you are a user of the Nagoya computer.

A manual is being prepared to help users get started with the data link. A draft version will be made available shortly through DOCUMENT.