National Radio Astronomy Observatory

Charlottesville, Virginia

May 5, 1982

To: R. Burns

From: A. Shalloway

COG Memo No. 25

Subject: NRAO Data Communications

A. With reference to your draft of April 4, 1982, the following is
    the plan of dial-in communications we have here in Charlottesville.
    It is all installed and operating except for one triple modem and
    one 4800 synchronous modem as noted in the table. The triple
    modem is on order now (or will shortly be on order). The synchronous
    modem order is being held until we get a better feel for the time
    requirements. If possible, we would like to wait until Racal-Vadic
    has their modem on the market, in the fourth quarter of 1982, as
    it would fit into our standard modem chassis. If the requirement
    cannot wait until the fourth quarter, we will have to select
    another manufacturer; however, you indicated that the party who
    wants to use the VAX at 4800 bps could loan us a modem - so, maybe
    arrangements should be made by you for that loan.

NRAO Telephone Extension	Computer	Originate/ Answer	Vadic/ Bell Compatible	Bps	Sync./ Asyn.	Duplex
304	VAX	Ans.	Bell	300	Asyn.	Full***
305	VAX	Ans.	Vadic	1200	Asyn.	Full
306	VAX	Orig/Ans.	Vadic/ Bell	1200	Asyn.	Full*
307	VAX	Orig/Ans.	Bell	4800	Sync.	Half**
303	IBM	Ans.	Bell	300	Asyn.	Full
300	IBM	Ans.	Vadic	1200	Asyn.	Full
301	IBM	Orig/Ans.	Vadic/ Bell	1200	Asyn.	Full*

*Originate/Answer modem will presently only answer. As soon as
    we have worked out the technology, we will have
    originate capability.

**Available by fourth quarter of 1982 at the latest.

***VAX diagnostics will use this modem when required. The switch-
    over will be manual. IBM uses its own modem on a phone in
    Arnold's room.

B. Since no notes or results have been forthcoming from a teleconference
meeting (between Charlottesville and VLA) to standardize on trans-
mission formats, I am listing in the table below what I understood was
the direction we would strive to reach. This direction is important
for both the statistical multiplexers of our Data Communications
Network and for notification to all outside users who wish to dial
into our modems. As soon as you verify them, I would like to write
a NRAO Technical Data sheet for distribution to the users.

PARAMETER	VALUE OF PARAMETER
1. Bits per character	
Start Bit	1
Data Bit	7
Parity Bit	1
Stop Bit	1
2. Parity Enable	Enabled
3. Parity Sense	Even
4. Copy Mode	Remote copy with echo from host
5. Transmission Mode	Character
6. Line Terminator	CR CR will be echoed by the host, followed by a LF from the host
7. XON/XOFF	Supported

As I understand it, the IBM cannot support items 4 and 7. Therefore,
these will never be strived for on the IBM.

cc: H. Hvatum
     G. Runion