Barker

MEMORANDUM

To: IMP Guys

From: Bob

Subject: Trip Report IG #5

Date: December 14, 1972

While attending the IEEE workshop on "Disrupted Computing" on Friday 8 December '72, I met with some of Dave Farber's DCS group.

They are building a data ring system where participating computers interface to the ring and read and write data circulating (one way) on the ring. The initial configuration will consist of 3 Sue machines on a small ring. Each Sue is connected to the ring with a Ring Interface built out of TTL. The estimated cost of the 3 ring interfaces plus related Sue interfaces is about $2700. The use of the term SUE refers here to a console, power supply, 1 processor, and 8k of memory.

Messages circulate the ring at about 3 MHZ. A message consists of a header, data, and some trailing control bits. After completing putting a message on the ring, a processor appends a "Pass Control" message to the ring. Any other processor can pick up this "Pass Control" and replace it with the header of a new messages.

The prototype system will have a Varian 620I interfaced to one of the Sues, and some terminals to another one of the Sues. Eventually a "terminal Ring Interface" will be specified to perform a function similar to the TIP. The expected time scale is for a single sue with "Ring Interface" by 1 Jan., and 3 Sues by 1 Feb. This schedule is probably optimistic by several months.

I brought back some of their software for writing Sue code. They have a PDP-10 10/50 system on which they can run a TREE-META compilier (the 'compilier-compilier', most recently from Stanford). They had developed a "Machine Oriented Language - MOL" for a Varian 620/I and have modified it to produce Sue code - that is produce Sue assembly language source. Hearing this, one of the Tenex guys there with me non-committally volunteered to adapt an existing

Tenex assembler to assemble Sue code - result Tenex Sue compilier. Documentation is available from me if you are interested.

The workshop consisted of several people presenting their projects and occasionally relating them to distributed computing.

Tom O'Sullivan mentioned Raytheon's continued interest in Computer Aided Instruction, via the ARPA net.

Tom Prosson of IBM Canada said a few words about:

- The trans Canada Computer Net - TCCN
- The Canyanet, part of which is the Metanet being developed by the Council of Ontario Universities, an ARPA like net, but essentially transparent to the Hosts - (e.g. NCP in the IMP) - with all new terminals connecting to the nodes, not the Hosts.
- The IBM net consisting of a 360/65 at the Data Center in Toranto, submitting batched CMS jobs to a 360/67 in Ottawa
- The National banks net consisting of many terminals on loops from a central computer(s).

Pete Lykos of NSF, National Science Network, spoke in general terms about their project.

Bert Hertzog said a few words on the state of the MERIT net.

Somebody from the U of I, Chicago Circle campus, talked about their goal of developing "Speakeasy" into a network wide language.

Somebody from Stonybrook, N.Y., talked about their operating system based on network goals (see their paper from Brooklyn Poly conference, if you are interested)

And finally, Phil Enslow, from OTP talked about what the FCC thought was regulated and what was not, and how the ARPA net didn't fit in their picture of the world. He also mentioned that, in his opinion, the one thing that would make ATT most unhappy was transmitting voice over the ARPA net.

BB/ph