


NIO/W

21 September 1983

NOTE FOR: Director of Central Intelligence
FROM : David Y. McManis
NIO/Warning
SUBJECT : Super Computer Conference

The attached editorial from Computerworld is one of the first significant public manifestations of the recent Super Computer Conference jointly sponsored by NSA and the Los Alamos National Laboratory. It apparently was very successful and represents significant movement in an important area. Unless someone else is providing you details, I would be pleased to get from NSA a rundown on the results of the Conference. Alternately, you may wish to have NSA's Chief Scientist come down and brief you.


D. Y. McManis

Attachment:
As stated

Yes, written brief _____

Chief Scientist brief _____

See me _____

cc: Executive Director

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LECHT ON SCIENCE /Charles P. Lecht

'The Federation': Year One

I say three cheers for our National Security Agency (NSA) and Los Alamos National Laboratory (LANL) for their joint sponsorship of a conference on the frontiers of supercomputing (Los Alamos, N.M., Aug. 15-19, 1983). Given today's micro mania, some people may not even be aware that there are such things as supercomputers, while others may simply have concluded that the only "super" thing about supercomputers is their cost: \$5 million to \$10 million dollars each. The NSA/LANL event confirmed both their existence and our continuing need for yet larger machines than the mere 20 millions of floating point operations per second (1M Flops) jobbies currently available.

To help orient you microphiliacs, the aforementioned 20M Flops giant is roughly the equivalent of 40,000 IBM Personal Computers. The machines now under development are 20G Flops titans — 40 million Personal Computers — and they, too, will eventually prove too small; for with each improvement in speed, the results achieved suggest new computational domains of such enormous promise that we are compelled, if only by our irrepressible curiosity, to explore them. Supercomputers, like spaceships, can return incredible benefits to the quality of our lives.

The spirit of the NSA/LANL meeting was exemplary both for its candor and deeply compelling sense of shared purpose. Also notable was the technical (and political) level of

This is the first of a three-part series on supercomputer development in the U.S.

discourse, reflecting great credit on the leaders of both organizations, as, indeed, it did on the extraordinary cross section of individuals gathered there.

Those in Attendance

Brought together in one room for five days were about 150 scientists, businessmen, military leaders, high-level civilian officials from the U.S. Department of Defense, university professors and selected, influential members of the press, each with a point of view and the means and will to give it voice. Characterized as it was by the remarkable give-and-take emanating from these, the most exalted ranks of our government and industrial leadership, the conference managed to make history of the most intensely practical, immediate sort, even while taking place in an environment that is to contemporary technological cosmology what the empyrean doubtless was to medieval philosophers: the very highest of the spheres. To attend, one had to set his clock forward.

Bracketed by the keynote address of Adm. Bobby Inman, new president of Microelectronics and Computer Technology Corp., and the locknote speech of Gen. L.D. Faurer, NSA's director, was a program that

allowed next to nothing of leisure time (and in that company, who would have wanted anything but the exhilaration of work?). NSA's Chief Scientist K.H. Speierman opened and closed the working conference sessions with such dignity and competence that we can understand why the post he now occupies with such distinction lay vacant from the agency's inception until the moment he could be appointed to fill it. As to the substance of the meetings, it should suffice to name but a few of the speakers to afford some knowledge of its quality: There were addresses by William C. Norris, chairman of Control Data Corp.; John Rollwagen, president of Cray Research Corp.; R.D. DeLauer, undersecretary of defense for research and engineering; Dr. Sidney Fernbach, chairman of the Institute of Electrical and Electronics Engineers Committee on Supercomputers; Dr. R.H. Ewald, computer division leader, LANL; Dr. Nicholas Metropolis, senior fellow, LANL; Robert Cooper, director of Defense Advanced Research Project Agency; Dr. K.G. Wilson, Nobel laureate and professor, Cornell University; and many others outstanding in their respective fields. Without such convocations as this one, it is saying little enough to observe that the transfer of the special knowledge of these very special people would be significantly set back.

Call me a techno-romantic, a sci-fi nut, but I found myself thinking that, by Jupiter, there I was, attend-

ing the first meeting of "The Federation," as it would instantly be recognized by "trekkies" everywhere. Set in that scientific vortex, the nuclear fountainhead of Los Alamos, housed within the walls of the J. Robert Oppenheimer Study Center (the Library of Alexandria redivivus), attended by persons dedicated to the advancement of science and the quality of life through supercomputer development — could one fail to feel oneself in the company of those who would blaze a trail to the stars?

Readers may be surprised at the absence here of critical comments on the conference, but not, I hope, inordinately. I did not want to obscure or dilute my message of congratulations to the government agencies that had the insight to convene a meeting on so critical an issue and the wisdom to act now, before it is indeed too late.

The day-to-day events of the conference have been sparsely reported, if at all. Strangely, almost no major nontrade newspapers or magazines covered it, while the ones that did contented themselves with sensationalized rehashings of official press releases.

This might, conceivably, lead one to believe that little of consequence actually took place, aside from the extraordinariness of the gathering itself. Nothing could be further from the truth.

Lecht is chairman of Lecht Sciences, Inc., a New York-based think tank specializing in computer and communications technologies.