



# CRAY CHIPS<sup>®</sup>

1988  
FEBRUARY  
11

A weekly newsletter for employees of Cray Research, Inc.

## WHY Y?

The assumption is, because it's the next "unknown." However, on the first sight of our new supercomputer, one discovers it is a "Y!" This is not a leftover Christmas angel--it's a bird's-eye view of the CRAY Y-MP system.

Les Davis says it was not deliberately made to look like a Y. It was coincidental in the way the parts ended up being put together. The modules, 12 by 20 inches in size, are in a rectangular chassis about 72 inches tall by 80 inches long, and narrow enough to go through an ordinary door. Behind the modules are the wiring and then the power supplies. Fluorinert, rather than Freon, is used to cool the CRAY Y-MP.

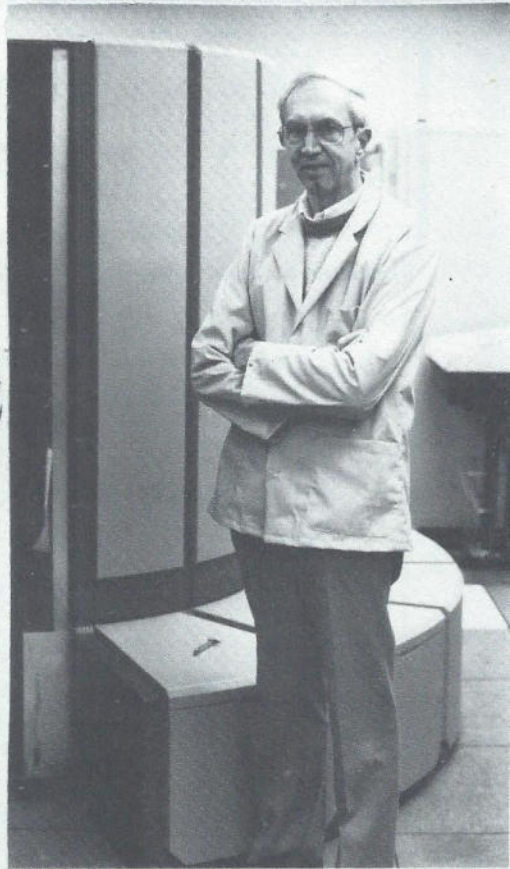
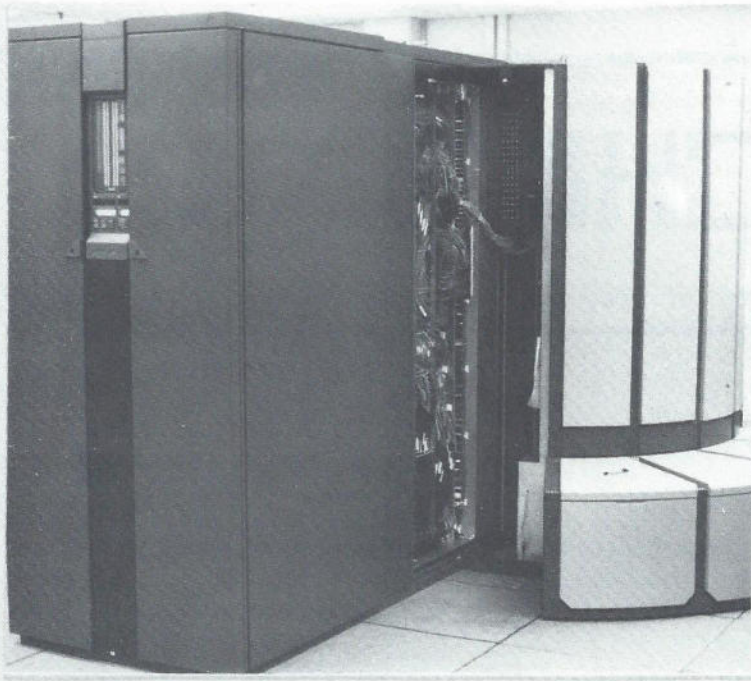
There are only forty modules, 8 CPU and 32 memory, built of silicon bipolar ECL circuits. Comprising eight processors and 32 million words of memory, the actual "computer" takes up only a third of the leg of the "Y." The I/O Subsystem and the SSD are in four columns each in traditional CRAY-1 style, accessing the mainframe by very short wires. These were the deciding factors in the design.

Comparisons: There are 2500-gate arrays in the CRAY Y-MP; 16-gate arrays in the CRAY-2 and CRAY X-MP; 2 gates in the CRAY-1. One CPU module and one memory module of the CRAY Y-MP are equivalent to the first CRAY-1 system. The CRAY Y-MP has three times the computing power and twice the memory size of our largest CRAY X-MP system.

The CRAY Y-MP, like the CRAY X-MP, is the brainchild of many talented Cray Research employees. Les notes the tremendous contributions of people like Al Schiffleger, Ram Gupta, and other leaders. He emphasizes that these leaders could not have done what they have done without the help of their teams of creative co-workers. It is impossible to list the names of all the dedicated Cray Research employees who are or have been involved in this enterprise which has culminated in the production of the CRAY Y-MP supercomputer. From design to checkout each one was necessary and important to the final goal which has now been achieved.

Oh, the prototype is a good-looking model in blue and taupe.





Some of the guys  
checking out the  
Y-MP during the  
Christmas break

