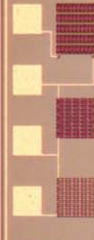
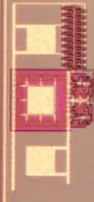




MPC79AH

DESIGNED BY
KEROX PARC/SSL
AT THE UNIVERSITY OF CALIFORNIA
SAN DIEGO, CALIF. 92161
FOR THE QUALITY ASSURANCE
DIVISION OF HEWLETT-PACKARD



MPC79:

The demonstration of a prototype 14000-gate, fast-turnaround, VLSI Implementation System

During the fall of 1979, the LSI Systems Area of Xerox PARC/SSL conducted the demonstration operation of a prototype information management system, designed by Alan Bell and Martin Newell, for enabling the remote-entry, fast-turnaround implementation of large numbers of VLSI system designs. The user community for this demonstration was composed of EE/CS students taking courses in VLSI design at a number of universities, and university faculty and research staff members undertaking research prototype designs. MPC79 contains 35 designs submitted by ~100 designers from many different universities.

The purposes of this effort were (i) to support the new university VLSI design courses by providing the implementation of student-project designs, (ii) to demonstrate the feasibility and general capabilities of such VLSI implementation systems to a wide technical community, and (iii) to refine our ideas about how to architect, design, and operate such systems by running a major operational test of a prototype system.

Several other organizations collaborated with us in conducting this demonstration: Data Communications (electronic messages and design file transfers) were supported by use of the APPANET; Maskmaking was done by Micro Mask, Inc., using an electron-beam mask-making system; Wafer fabrication was done by Hewlett-Packard's Integrated Circuit Processing Laboratory.

The VLSI design techniques used in the university courses are described in the textbook *Introduction to VLSI Systems*, by C.Mead and L.Conway, Addison-Wesley Publishing Co., 1980.

The background and context of the MPC79 effort, the structure of the MPC79 system, and the final results of the effort will be described in a Xerox PARC/SSL Report by L.Conway, A.Bell, and M.Newell entitled *The Implementation of VLSI Systems*.

The MPC79 Organizers:

Lynn Conway, Alan Bell, Martin Newell, Richard Lyon
LSI Systems Area, Xerox PARC/SSL
4 December 1979

MPC79 Flow chart:

