

PACKAGE ID - 000814X309000 XDELAY

KWIC TITLE - FPGA ROM Code for Very Large FIFO Control

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LIMITATION CODE -COPY **AUDIENCE CODE** - LIM

COMPLETION DATE - 10/12/1992 **PUBLICATION DATE** - 01/01/1994

DESCRIPTION - The code is used to program a Field Programmable Gate Array (FPGA) controls a 4 megabit FIFO so that a set delay from input to output is maintained. The FPGA is also capable of inserting errors into the data flow in a controlled manner.

PACKAGE CONTENTS - Media Directory; Software Abstract; User Schematics;
Media Includes Source Code, Executable Module;

SOURCE CODE INCLUDED? - Yes

MEDIA QUANTITY - 1 CD Rom

METHOD OF SOLUTION - The program uses a cyclical method for inputting the desired delay. The fifo is initiated and data is inserted in the fifo. When the timer expires the fifo output becomes active and data is passed on. As data continues to arrive and depart in this manner a set amount of delay is injected between the incoming and outgoing data.

COMPUTER - XILINX 3090

OPERATING SYSTEMS - The program was produced using DAZIX's ACE tool. It was transposed into ROM code by XILINX.XACT 3.0

PROGRAMMING LANGUAGES - MCS86 ROM code and XILINX's configuration language.

SOFTWARE LIMITATIONS - The input delay is only capable of delineation of input clock by multiplied by 16.

SOURCE CODE AVAILABLE (Y/N) - Y

UNIQUE FEATURES - This program is capable of transforming a RAM memory in to a large FIFO in a real time.

OTHER PROG/OPER SYS INFO - .drw=drawing page, .xnf=Xilinx Netlist file,
.dly=Internal delay, .cst=Pin constants, .bit=Configuration File,
.mcs=Prom file

HARDWARE REQS - Xilinx3090, 4 Megabits of RAM memory, PROM, Prom burner

TIME REQUIREMENTS - Once configured the program runs continuously.

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ENERGY SCIENCE & TECHNOLOGY SOFTWARE CENTER
SOFTWARE ABSTRACT

PAGE 2
DATE 03/13/2002

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REFERENCES - Informal documentation

ABSTRACT STATUS - Submitted 4/13/95. Released AS-IS 6/26/95.

SUBJECT CLASS CODE - M

KEYWORDS -

COMPUTER PROGRAM DOCUMENTATION
X CODES
MEMORY MANAGEMENT
COMPUTER NETWORKS
DATA TRANSMISSION

EDB SUBJECT CATEGORIES -
990200 990301

SPONSOR - DOE/DP

PACKAGE TYPE - AS - IS