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RE: 4Q84 Atari XL Product Plan

1.0 OVERVIEW

The XL product line provides Atari Corp. with a low cost, entry level computer product line. To attain the sharpest possible focus on this goal the product strategy for the XL line has been redefined. The XL line now consists of four 64K computers with each new machine representing a step forward in cost reduction.

The XL line will continue to rely on the 1050-type disk drive; however, we will mount a cost reduction effort on the 1050 to increase its performance and reduce its cost.

The following table indicates the design approach and the schedule requirements for these computers.

Computer	LSI Complement	Ready for Production
800XL	SALLY, POKEY, ANTIC, GTIA, MMU, Delay line.	NOW -- NTSC NOW -- PAL
800XLF	SALLY, POKEY, ANTIC, GTIA, MMU, FREDDIE.	Oct 1984 -- SECAM Nov 1984 -- NTSC, PAL
900XLF	SALLY, POKEY, ANTIC, GTIA, MMU, FREDDIE.	Dec 1984 -- NTSC, PAL Feb 1985 -- SECAM
900XLKF	SALLY, KERI, MMU, FREDDIE.	Jan 1985 -- NTSC, PAL

This balance of this memo describes the detailed implementation of the four XL computers and the goals for the disk drive re-design.

2.0 XL FAMILY COMPUTERS

The four XL computers are named:

1. 800XL
2. 800XLF
3. 900XLF
4. 900XLKF

2.1 800XL

This machine is the present production 800XL for NTSC and PAL video systems. This product is the starting point of the cost reduction process.

2.2 800XLF

The 800XLF machines are new designs which incorporate the FREDDIE memory control IC to reduce system cost. The FREDDIE reduces system cost and board area by replacing the following ICs:

1. (2) x 74LS158
2. (1) x 74LS51
3. (1) x C060472 (Delay line)
4. (1) x 74LS375

A further benefit to the use of FREDDIE is that the 800XLF may be built with 200 nsec access time DRAMs.

The first 800XLF computer is the SECAM video output machine released from Sunnyvale this week (8/31/84). New PCBs are required to support the NTSC and PAL video systems.

In all other respects, e.g. keyboard, housing, power supply, cartons, etc., the 800XLF computers are identical to the present 800XL.

2.3 900XLF

900XLF computer uses the same electrical design as the 800XLF -- the only electrical change relative to the present 800XL is the use of FREDDIE. The major changes in this machine are the use of a new keyboard and housing design. Versions of this machine must be done to support NTSC, PAL, and SECAM.

2.4 900XLKF

900XLKF computer is the first and only XL family machine to incorporate KERI. The PCB must conform to the same outline as 900XLF and will use the KERI 68 pin LCC to replace the ANTIC, GTIA, and POKEY. As in 900XLF, FREDDIE will be used as the memory control circuit.

This design will use the new housing and keyboard first introduced in 900XLF. The sole purpose of this design is to cost reduce 900XLF design by substituting KERI for the three other custom circuits.

Only NTSC and PAL versions of this PCB will be produced.

3.0 THE NEW 1050

The deletion of the disk control circuits from the proposed XL CPU's requires that we initiate an immediate program to cost reduce a 1050 compatible drive. This drive may be based on either the 3.5" or 5.25" mechanism.

The cost reduced 1050 drive will incorporate two performance improvements which we believe will not affect unit cost: increase in capacity to 163K bytes and increase in transfer rate to 38.4K baud. The drive must support the present serial interface protocol (SIO), must be transparent to existing 810/1050 software programs, and should use an external AC adapter for power.

4.0 PROGRAM GOALS

The 800XLF NTSC/PAL PCB design should be turned immediately for volume production in November 1984. This PCB will be initially laid out in Sunnyvale to achieve minimum cycle time. Artwork will be sent by 12-Sep-84 to Y. Okubo for production engineering in Atari Japan. PCB samples will be made in the USA for FCC testing purposes. The goal is to achieve RFI levels which support a "permissive" change.

The 900XLF PCB will be laid out by Atari Japan based on the 800XLF electrical design. This design must be turned to support production of 25K units in December, 1984. PCB samples and a sample housing must be obtained by the 1st week of October to initiate the FCC certification process.

The 900XLKF PCB will be laid out by Atari Japan to support pilot production of 2K units/mo in January, 1985. PCB samples for FCC purposes must be obtained in the 1st week of November, 1984.

The New 1050 program will commence immediately in Sunnyvale to produce a controller design and a housing design for production in January, 1985. A detailed schedule will be forthcoming.