System Issues Study Group meeting minutes - Document number X3T10/95-227r0
Meeting place: Sheraton Inn Harrisburg, Harrisburg, PA
Date: May 10, 1995

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I apologize for the delay in these minutes. I was out of the country
with no email for a couple of weeks (sorry, that's the best excuse
I can come up with on short notice). I'll make a strong effort to
get minutes out within a week in the future.

Duncan Penman
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Attendees:

Larry Lamers	Adaptec
Ron Roberts	Apple
Gerry Johnsen	Ciprico
Joe Chen	Cirrus Logic
Dhiru Desai	Cirrus Logic
Dave Evans	Compaq
Bill Dallas	Digital Equipment
Dal Allan	ENDL
Kevin Calvert	Future Domain
Nancy Cheng	Hitachi
J.R. Sims	HP
Dan Colgrove	IBM
Duncan Penman	IIX
Mark Shipman	Intel
Pete McLean	Maxtor
Kirit Patel	Oak Technology
Steve Heil	Panasonic
Curtis Stevens	Phoenix Technologies
Steve Finch	Silicon Systems
Devon Worrell	Western Digital

1. SI Reflector and FTP Site
    Duncan reported that the reflector is functioning well, with light
    traffic. There are about 200 subscribers at present.

    A proposal for a directory reorganization/expansion of the
    fission.dt.wdc.com ftp site was presented. This has since been
    posted to the ATA and SCSI reflectors.

2. Large Drive Support Issues
    EDD - Enhanced Disk Drive BIOS interface specification from
    Phoenix Technologies. Curtis Stevens reported he will remove the
    PRELIMINARY stamp from rev 1.2 and put it on the fission ftp site
    by Monday, 5/15. Phoenix has agreed to remove the Phoenix name from
    it, so that it may be a vendor-neutral spec. Curtis will submit it
    to SFF to be published. The SI meeting voted to not request it be
    incorporated as an informative annex to ATA-3. Instead we are
    proposing a bibliography of ATA related documents be added to the ATA-3
    standard. I will post a first version of the proposed bibliography
    in the near future.

It was noted that EDD seems to have become accepted as the industry standard approach for supporting hard drives >528MB. Microsoft and IBM have endorsed it, and we believe all major PC system and BIOS suppliers support it as well. I consider that this closes the SI agenda items of 1)accessing large drives, 2)ATA disk intechangability, and 3)BIOS-to-OS interface standard.

Greater Than 8GB Support for SCSI (through INT13h). Since EDD defines a 64-bit LBA addressing capability, which is expected to be used by ATA drives in the future, it seems very reasonable for suppliers of SCSI host adapters to use the same interface. The chair asked that attendees sample their companies to see, 1)if they plan to use INT13h extensions to access SCSI drives, and 2)if they have any alternative BIOS interface proposals they want the industry to be aware of. Note that this is a liaison activity only, pointing out a problem and potential solution. Vendors may, of course, use any mechanism they wish to support >8GB. An email on the subject will be posted to the SCSI reflector.

3. Plug and Play Related Issues
These include the following: 1)boot and POST issues, such as the order of installing option ROMs at Power On, 2)logical drive ID assignment, 3)FDISK partitioning rules and behavior. It was noted that most attendees are relatively uninformed on these subjects. Curtis Stevens(Phoenix) and Mark Shipman(Intel) agreed to give an overview of PnP as it pertains to IDE drives at the next SI working group. As a group we will defer work on these issues until then, although individuals are encouraged to work on their own.

4. Host Software
Kevin Calvert reported that the ATASPI proposal is being reworked for DOS and Windows 3.x so that it will incorporate existing ASPI functions as well as support for ATAPI devices. It was recommended that he submit the new version to SFF for publication. He will distribute copies at the next SI working group meeting and will give a short tutorial on ATASPI at that time.

Bill Dallas, chairman of the CAM working group, described his desire to define a universal transport layer which could be used to standardize the connection between device drivers and the port specific firmware for any type of external interface. This would be an extension of the layered structure already defined in CAM for SCSI. He and Kevin are going to prototype the structures needed to support IDE in a CAM-like transport layer.

5. PCI/IDE Host Register Definitions
Two activities were proposed to attempt standardization of host register definitions.
1) Control of ATA transfer rates. There are a lot of different implementations and it makes BIOS development very difficult. We can't change the existing hardware but probably could influence future designs. Curtis Stevens will post a list of what he considers the requirements for a register set definition.
2) Control of Command Overlap and Queueing. Not clear yet what the host requirements will be, but there will be some. As this feature develops we should track it with an appropriate host side

control interface.

6. Future Working Group dates

June - none
July - 7/12, Colorado Springs
7/21, Milpitas

Regards,
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