

# COMPUTER MALFUNCTION AS A RESULT OF COMPLEMENTARY METAL OXIDE SEMICONDUCTOR (CMOS) SETUP ERROR AND ITS EFFECT ON THE OWNER'S ECONOMY

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## ABSTRACT

*Complementary Metal Oxide Semiconductor (CMOS) setup, holds information about the configuration of the computer system, changing any information inside it, may prevent the computer from running properly. In this work, I have shown how a hard drive error reported by it can be corrected. It was suggested that a visit to the CMOS setup and reprogram it with the hard drive parameters or better still call a maintenance engineer to fix it.*

**Keywords:** BIOS, CMOS, SETUP, IDE RIBBON CABLE, PRIMARY MASTER.

## INTRODUCTION

Information Technology (IT) helps to boost the productivity of industries. As different industries help use technology to drive different aspects of their business, this could be loss if computer systems are not maintained or breakdown.

In accounting and financial analyses, ratios are common methods to evaluate and compare companies. One of such ratios is IT spending. IT spending as a percentage of revenue is focused on describing IT spending as a cost to the business.

As IT spending managers and executives can describe their contributions to the economy in terms of reliability and customer access. For instance, by making systems available 99.9% of the time, it is possible for more customers to interact with the company's website. This is crucial for online retailers for instance, if Amazon.com were to go down, the company will lose millions of dollars. The same can be said of systems in cyber cafes.

IT spending could also be defined in terms of operational budget. By using this measure, it means if accompany spends ₦5.0m on maintaining existing IT services, an operational measure of IT would only focus on the ₦2.0m spend on the maintenance.

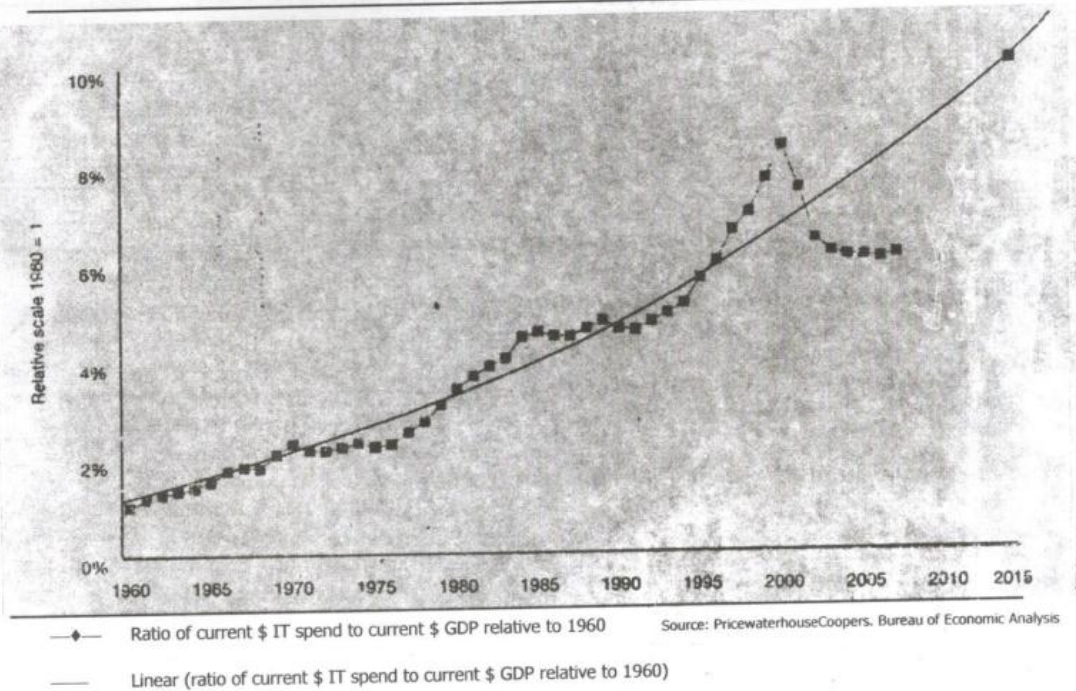
Table 1 gives the relationship between IT spending, net profit and operating expenses in United State industries. It shows that companies whose operating expenditure is less than 75% of revenue IT spending is less, and companies whose operating expenses are higher than 75% IT spending are high.

Therefore, system should be repaired when they breakdown as they contribute to the productivity of the company. The relationship between the IT spending and GDP is shown in Figure 1.

**Figure 1:** IT spending, net profit, and operating expenses (US industries, 2005).

Operating expenses less than 75% of revenue	Net profit	IT spend % revenue	OpEx % revenue	Operating expenses more than 75% of revenue	Net profit	IT spend % revenue	OpEx % revenue
Banking & Financial Services	24.0%	5.4%	49.3%	Energy	10.7%	2.3%	77.5%
Professional Services	19.3%	4.5%	72.2%	Pharma & Medical Products	9.8%	4.0%	84.0%
Telecommunications	13.5%	3.9%	59.1%	Chemicals	9.0%	2.4%	94.0%
Media	11.9%	4.9%	64.7%	Transportation	9.0%	3.3%	76.6%
Information Technology	10.7%	4.7%	59.2%	Consumer Products	7.4%	2.6%	82.1%
Construction & Engineering	7.1%	1.7%	72.3%	Insurance	6.8%	3.3%	81.7%
Metals & Natural Resources	6.1%	1.4%	45.3%	Retail	6.5%	2.1%	78.6%
Electronics	5.4%	3.4%	56.1%	Food & Beverage Processing	5.9%	2.2%	83.5%
Utilities	5.1%	2.5%	40.6%	Manufacturing	5.5%	3.6%	77.7%
Health Care	4.3%	2.9%	74.9%	Hospitality & Travel	3.6%	4.8%	89.2%
Average	10.7%	3.5%	59.4%	Average	7.4%	3.1%	82.5%

Source: Gartner IT Key Metrics Data 2006.



## THE ROLE OF CMOS

In simplest terms, CMOS RAM is nothing more than very low-power static RAM. Since RAM is naturally lost when system power is removed, a battery is added to the PC that continues to provide power to the CMOS RAM. This "CMOS backup battery" keeps the date, time and system parameters intact until you turn the system on again.

## REPAIRING THE CPU

To solve the problem of access to the Hard Drive, try to enter the CMOS setup, by launching the setup utility. This can be done in the first few moments after the system boots-just after the memory tests is finished, but before the operating system starts to load. A note on the display will usually indicate the correct key or the combination, such as:

Press (F1) to enter setup....

So, press F1 and that led to the following CMOS screen.

ROM PC/ISAH BIOS (<<P2B>>) CMOS SETUP UTILITY AWARD SOFTWARE, INC.	
Standard CMOS Setup BIOS Features Setup Power Management Setup PNP, and PCI Setup Load BIOS Defaults Load Setup Defaults	Supervisor Password User Password IDE Had Auto Detection Save & Exit Setup Exist without saving
ESC: Quit F10: Save & Exit Setupt	↓↑→← : Select item (Shift) F2: Change colour

Then, highlight and selected the Standard CMOS Setup and that display the following screen.

ROM PC/ISAH BIOS (<<P2B>>)											
CMOS SETUP UTILITY											
AWARD SOFTWARE, INC.											
Date (mm:dd:yy): wed, March 252010											
Time (hh:mm:ss): 9:5:2											
Head Disk Type Size CYIS Head Precomp Lande Sector Mode											
Primary master: None	0	0	0	0	0	0	-				
Primary slave: None	0	0	0	0	0	0	-				
Secondary master: None	0	0	0	0	0	0	-				
Secondary slave: None	0	0	0	0	0	0	-				
Drive A: 2.44mb, 3.5in											
Drive B: None											
Video: EGA/VGA											
Halton: All Errors											
<table border="1"> <tr> <td>Base Memory: Ok</td> </tr> <tr> <td>Extended Memory: Ok</td> </tr> <tr> <td>Other Memory: 512k</td> </tr> <tr> <td>Total Memory: 512k</td> </tr> </table>								Base Memory: Ok	Extended Memory: Ok	Other Memory: 512k	Total Memory: 512k
Base Memory: Ok											
Extended Memory: Ok											
Other Memory: 512k											
Total Memory: 512k											
ESC: Quit    ↓↑→← : Select item    PU/PDH1--:modih											
F1: Help    (Shift) F2: Change colour											

Select the Primary Master option and next select the type under it; select Auto, and Quit to the CMOS setup screen and select F10 to save and Exit. If restart the computer, one still get the Non-system Disk or Disk Error.

Then, open the computer case and inspect the interior of the CPU, it would be discovered that the IDE ribbon cable that connect the Hard Disk to the motherboard was not connected. So, connect the Hard Disk to the Motherboard using the IDE ribbon cable. Restart the CPU, the same result was display, disconnect the IDE cable and check the cable orientation and fix the cable using the right orientation, I restart the CPU and after a short period of time, window 98 is loaded and its icons display on the screen, these signal the end of repair.

#### CONCLUSION

The problem shows the controlling power of the CMOS over the CPU. Once properly configured, the computer applies the information to initialize all the components when booting up and basic functions for co-ordination between system components is enable. This repair saves a lot of difficulties and money.

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