ANSWERS MISP2 – ASSIGNMENT NO. 2

MISP2-A2Q1 – Convergence & Strategic Uses of IS/IT (ShaValaNewSex)

A2Q1.1 – Provide at least 3 examples of the application of convergent technologies in a typical domestic living environment. Be as creative as you can.

ANSWER

Let us see where my imagination and creativity brings me into and whether it is worth and deserving of turning into a Hollywood or Crazywood movie. Ha ha ha.

1. My intention is to have a voice-activated “Intelligent Control System” for my house. I will put hidden sound receptors and speakers in the walls of my house that connect to a central control computer system. The system will be “trained” to recognize my voice. With it I can command the system to turn on/off the house’s audio-video system, or the lights, the air-conditioning, the doors, the toilets, the taps and showers in the bathrooms, the microwave oven, the kitchen stove, etc. The “walls” will respond to my commands by the appropriate replies. I will speak to my “walls” to dial up and speak with a friend (like through a telephone) at any time and anywhere in the world. The convergent technologies here are: audio my voice + wireless communications speak through the air + voice recognition software + computer electronic control signals + home appliances control turning on/off etc.

2. Another wish is to have a fully automated residence with “feature recognition” also using an Intelligent Control System. The door gates will open automatically when it recognizes the combination of my car and its driver. The front porch lights will turn on automatically if it is dark, and the “speaking walls” will greet the alighting passengers with well wishes like “Assalamualaikum. May the Peace and Blessings of Allah Be Upon You. Welcome to my abode” The hidden video cameras will scan the visitors (their physical features) and conduct authentication for passage into the residence. And the residence main door will open automatically, i.e. only to authenticated and approved persons. If some of the visitors are not recognized, the “walls” will speak politely and request for identification. The door will only open after every person has been approved. The columns of the porch have “infra-red” sensors to scan for body temperature profiles. If the person’s physical features do not match its pre-recorded body temperature profiles, then authentication failed. The video feature recognition system will also scan for a person’s normal “postures, body gaits, movements, styles of walking, swinging of hands, etc” against pre-recorded data. Authentication is considered passed if it meets at least 80% of the movement scan matches. Etc, etc.

3. A truly original wish I have always wanted is to have “a mind control” intelligent system. I would like to have many hidden electronic sensors in my walls that can read my brain waves (me only and not others) and execute my commands by “my thinking”. The system must be able to capture my thinking patterns and execute my commands without me having to speak, move my hands, feet, body or even blink my eyes. All I need is to think about it, and the door will open, the air conditioning will turn on and off, the computer will turn on, connect to the internet, open my emails, reply my emails, etc, etc, just by “my thinking” about it. Ha ha ha. I will just think and the web browser will move from website to website, scroll through the pages, etc. I get to control the TV channels and the programs I want to watch just by my thinking. To top it all, my most advanced system would be, for the system to anticipate what I will think of next. Ha ha ha. It will suggest to me what to do next, and I will have the final say in the decision to go or not to go about it. It is all done through my thoughts. Ha ha ha. What technologies have converged here? Ha ha ha.
A2Q1.2 – In any organization, most IS/IT departments started off with just providing technical support and managing computer resources and activities. These limited roles did not fully exploit the potential contributions of IS/IT to the organization. To strategically realize IS/IT contributions to the business, Hirschheim et al, believe that the defined roles of IS/IT should be viewed differently. What are the views of Hirschheim? (Hint: Refer to GB1-SPIS in Chapter 1, page 13)

ANSWER
Hirschheim and his research associates suggested that there are three(3) stages in the roles of IS/IT that provide strategic contributions to the organization:

1. **Delivery** – The first stage is the role of IS/IT in providing internal support to the organization’s systems and technology. Take an example of Federal Express (FedEx), the courier company that delivers packages around the world. The IS/IT support is such that it can track its packages on a 24x7x365 basis anywhere around the world. It can promise a customer a certain service level, like delivering within the next business working day through the use of its IS/IT. The famous true story of FedEx dispatching a helicopter to pick up and deliver its package from a distress call of its stranded snow bound delivery truck, shows its commitment to providing “service delight” towards the customer. The use of IS/IT internally here is for tracking and “delivering” its service level promise to the customer.

2. **Reorientation** – After delivery, the next stage in the role of IS/IT is in re-orienting its activities to support the functions of the business. This means providing services directed towards the objectives and importance of the business like the right software, databases, office automation, applications, computing capabilities etc, as required by the business. The tracking software for FedEx above is a good example for other departments in the organization to re-orient or think about only those IS/IT services that support the business. Do not go around purchasing IS/IT assets that do not support the business.

3. **Reorganization** – After the organization has been re-oriented to support the business, the next stage in the role of IS/IT is to help re-organize the activities, responsibilities, thinking and mindset of the various departments and senior managers. The right persons must be provided with specific responsibilities with regards to the IS/IT investments and strategies to support the business. The differing business needs of different departments must be integrated to achieve one common and supreme goal – the overall objective of the organization. Each department just cannot go about and do things on its own without considering its “value contribution” to the overall business goal. Note: VCA is Value Chain Analysis.

A2Q1.3 – Almost all modern businesses today are supported by some kind of IS/IT. Achieving competitive advantage using IS/IT (i.e. the outcome – short lived) and sustainability of IS/IT (i.e. continuously deliver value) in the business are 2 separate issues. How does Bankinter achieve both in its organizational capability?

ANSWER
Bankinter achieves both competitive advantage (short term benefits) and sustainability (long term benefits) through sophisticated information systems and a flexible commercial approach, i.e. constantly changing and entering into new businesses, changing the bank profiles from middle-market banking to private banking and finally to retail banking. It exploits IS/IT technology fully in the transformations as evidenced by Bankinter CEO saying coyly: “This is not a bank. It is a technology company that happened to do banking”. Ha ha ha.
Note that competitive advantage is considered a short term advantage because competitors quickly copy, follow what you did and finally catches up with you. That is always the case. You may have a “Leader Advantage” for a while but not forever. When your competitor catches up with you, you no longer have the advantage.

Take the case in the next example. “If the two of you are running away from a lion, i.e. a hungry predator, it really does not matter how fast you can run because what matters is how fast you can outrun your competitor, i.e. your friend”. Ha ha ha.

Points to ponder: Are you going to wait for your friend and die together and be noble? Ha ha ha. Or are you going to capitalize on both your strengths, strategize and turn back against the lion? Ha ha ha. Do you have the time and resources to do so? Have you planned ahead before getting into the unfortunate situation of being chased by the hungry lion? Are you going to use the offensive or defensive strategy? Would you play dirty by sticking out your leg and get you competitor to fall down and get eaten by the lion? This foul Machiavellian strategy would help you eliminate one competitor, wouldn’t it? Ha ha ha.

The real lesson here is: What you must really do in actual competition is to constantly and continuously run faster than your competitors. Ha ha ha. This is the sustainability of that leader advantage. Or simply said, you must be the “ahead of the rest” all the time. I guess that’s why girls like leaders as their boyfriends. It is just plain common sense. And that is exactly what Bankinter did. Ha ha ha.

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MISP2-A2Q2 – External Factor Evaluation (EFE) & Internal Factor Evaluation (IFE)

In SWOT Analysis (Strengths, Weaknesses, Opportunities & Threats – e.g. refer to our MISP1 Answers to Assignment No. 3, Question 3) the organization must evaluate its business situation by looking internally for its strengths and weaknesses, and also externally for opportunities and threats.

A2Q2.1 – What major forecasting techniques would you use to identify (a) economic opportunities and threats and (b) demographic opportunities and threats? Why are these techniques most appropriate?

ANSWER

The Good Book 2 on page 96 discusses about sources of external information (i.e. remember that Opportunities and Threats in SWOT analyses are external factors) and advises us about some forecasting tools: quantitative and qualitative techniques. Forecasts are educated assumptions about future trends and events. Forecasts are vital to the strategic-management process and to the success of organizations.

(a) For economic opportunities and threats, a combination of both quantitative and qualitative forecasting techniques should be used, with more weight put on the qualitative side because economic factors and other quantitative variables can change wildly and rapidly (recall PEST analysis – future changes in Political scenarios, Environment, Socio-Economy and Technology). For example, a regional war or scattered acts of terrorism affects economic factors and so quantitative forecasts using economic measures of historically unstable data would be inaccurate. As an example say, a year ago the exchange rate was Saudi Riyal SR 3.5 per USD. With the war going on nobody knows what will happen next. Using this historical value of exchange rate to forecast the future quantitatively can be done but will not be accurate due to its unpredictability and volatility caused by those external factors. In addition, the relationships between these many external factors are expected not to remain the same in the future so quantitative forecasts are not appropriate.

Politically today, we can see that the “occupation of Iraq by the US” has caused the sudden close relationships of previous enemies like Iran, Iraq, Syria, Palestine, Hezbollah and Hamas.
That was not the case when the occupation started. Who would have thought earlier that such a situation would happen?

(b) For demographic opportunities and threats, it seems that a quantitative forecast is appropriate because the stable pattern of birth rates and the number of people and their profiles living in a geographical area will not vary significantly (unless it is after a major war like the "baby boom" around the world after World War II) so the historical pattern of data of birth rates is reliable to be used for future predictions. I do not think that the recent introduction of “Viagra – the sexual hormone stimulant” (i.e. new technology) would suddenly and significantly change sexual habits and eventually change current birth rates. Ha ha ha. But who knows?

Quantitative forecasts are most appropriate when historical data are available and when the relationships among key variables are expected to remain the same in the future. This is the case for demographic opportunities and threats and so we can confidently use published and unpublished demographic data in our forecast. Demographic means "population pattern”.

A2Q2.2 – Explain why prioritizing the relative importance of strengths and weaknesses in an IFE matrix is an important strategic-management activity.

ANSWER

The IFE Matrix is the Internal Factor Evaluation Matrix that assesses the major strengths (S) and weaknesses (W) in the functional areas of the business. It also provides a basis for identifying and evaluating relationships among those areas.

In strategic-management, it is important to prioritize each strength and weakness according to some weighting scale like (1.0 for all important and 0.0 for not important) because common sense says that not all strengths and weaknesses contribute the same effect or weight. All the strengths would not each contribute equally to the total strength of the company. Similarly, all the weaknesses would not each contribute equally to the total weakness of the company.

For example, take the case of a company where you have one first-class honors graduate and one second-class honors graduate. You certainly would not expect that the "brain-power" contributions from both of them towards the company to be the same. You must figure out a way to assess their relative contributions.

Take another example. In a university, your CGPA (cumulative) gives an overall figure of your grade point achieved up to the time in question. Your semester GPA is contributed by your subject grades (A, B, C etc) points multiplied by the weights (i.e. credit hours of the subjects). So the "credit hours apportioned to each of the subject” is its weight contribution to the GPA for the semester. Not all courses give you the same credit hours. Similarly, just because you have a CGPA of 3.3 and have a degree in Software Engineering, does not mean that the CGPA is almost wholly contributed by pure IT subjects. You may actually have high scores for non-IT subjects to give you that 3.3 CGPA. Ha ha ha. So people are smart enough to ask for your actual transcripts and really assess how you have performed in university. Ha ha ha. If you are smart, which I think you are, you will certainly put more resources and hard work to score good grades in courses that have high priorities, i.e. high credit hours. These are the courses that give greatest impacts to your GPA and ultimately your CGPA.

The learning points: The above examples provide the essence as to why we must prioritize and score the relative importance of the strengths and weaknesses in the IFE matrix so that we can put more resources and efforts into the higher priorities and less into the lower ones. The ultimate objective strategically is to win against our competitors.
A2Q2.3 – Give some advantages and disadvantages of cooperative versus competitive strategies.

ANSWER

Cooperative Strategies (GB2-SMCC page 87)

The simple story here is: If you cannot win over them, join them (cooperate). Normally there are no losers.

1. If you join them, you will achieve a win-win situation – an advantage for both.
2. If you join them, both of you will have one less competitor in the market – an advantage for both of you.
3. If you join them, you will create a product with both strengths added in – an advantage for both of you.
4. If you join them, the market will have less competition and there will be less innovation and creativity in future products for the benefits of customers – a disadvantage for all.
5. If you join them and become one, both of you get more efficient and hopefully high productivity - you can lay off workers who do not give “value” or is redundant to the new organization (i.e. those that you may want to lay off before but you cannot) because with the re-organization you now have valid reasons to do so, you do not have to duplicate business functions, you can use the more efficient machinery you partner has, the new organization will become slim and trim, etc – advantage for both of you but not the laid-off workers.

Competitive Strategies (GB2-SMCC page 91)

The simple story here is: If you can win over them, fight them (compete). In competition there will always be a winner and a loser.

1. If a firm detects weakness in a competitor, no mercy at all is shown in capitalizing on its problems - let only the strong and efficient ones survive – an advantage for the winner and a disadvantage for a loser.
2. Innovate or evaporate – When you compete you must continuously innovate or you will perish - customers will get good and high quality products – an advantage for all.
3. In competition, if you do not have the technology for your products, acquire it – by merger, by acquisition or by a hostile takeover – an advantage for the winner and a disadvantage for the loser.
4. When you compete, you will work hard to improve your products and reduce your cost - it improves internal efficiency, no wastage and provides cheaper prices to the customer – an advantage for both you and your customer.
5. When you compete you sometimes want customers to think of you highly like being a caring and good corporate citizen - so you sponsor environmental campaigns, provides scholarships, adopt poor communities, etc – an advantage to both you and society as a whole.
We relate cooperative and competitive strategies to the learning points below:

**In MISP2-Assignment-01 Question No 4**, we saw that Sun Microsystems and Laszlo Systems consciously decided on a **cooperative strategy** to combine their strengths to win in the big potential market of applications for mobile devices and consumer appliances. Each company cannot go alone into the market as each has a weakness and cannot win in the market. The cooperative strategy gives them a win-win-win situation. Ha ha ha. What is the third win here?

**In MISP2-Assignment-01 Question No 5**, we saw that Oracle and Red Hat "unintentionally" got into a position of competition (**competitive strategy**). Oracle must provide the best service it possibly can to its database customers running Red Hat Linux or Red Hat Linux “look-alike without Red Hat logos”. Oracle also cannot wait for the Linux operating system bug fixes to be released very late. Oracle can do the bug fixes faster and much cheaper than Red Hat. Red Hat does not have the technology for an industrial strength database. This situation is true competition on strengths (S) and weaknesses (W). Oracle may say that they are really helping Red Hat by supporting Red Hat Linux users that are using the Oracle database. We know it is just a matter of time that Oracle database users will move into Oracle’s version of the Linux OS. Users will no go with Red Hat’s version of Linux OS anymore because Oracle provides bug fixes faster and cost a lot cheaper. Ha ha ha.

**Learning points**: Is this fortunate or unfortunate competition? In life there are no such things. There is just one type of competition - the plain good old vanilla type "competition". Why vanilla flavor? Vanilla is a term that people use when they mean “generic”. To further add dramatic effects we ask this question: Is the Oracle-Red Hat story a dog-eat-dog competition?

I have even heard the term “cut-throat” competition many times (reference GB2-SMCC on page 87 – 3 lines from the bottom of page), i.e. intensely cut your selling prices (meaning slash your own throat, not of your rivals of course) to win against competitors on the basis of lowest prices (meaning to a point that you may bleed to death) i.e. lose or not making any profits at all. Ha ha ha.

So the dramatic plot of “dog-eat-dog” means you will do anything to survive the really intense competition up to the point of killing (eating) your own kind (un-intentionally I mean). This view of mine (WRY) I believe is quite near to the strategy interpretation of the Oracle-Red Hat story above. Ha ha ha.

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**MISP2-A2Q3 – Setting a direction for Information Resources.**

**A2Q3.1 – Study a typical example of a SWOT analysis for an IS/IT outsourcing company as shown in Figure 14.8 in reference GB3-MIT on page 571. Assuming that you are the CIO (Chief Information Officer) of that company, what do you do (i.e. your strategies and action plans) now that you know very well your strengths, weaknesses, threats and opportunities?**

**ANSWER**

**Important Information.**

You are strongly advised to refer to GB2-SMCC on page 205, specifically to Figure 6.4 to systematically analyze the SWOT matrix and come out with strategies and action plans.

Generally the four(4) reasoning principles (inductive and deductive) in the analyses of the SWOT matrix to come out with strategies are as follows:
**SO strategies** – Use the strengths - relate the strengths to take advantage of the available opportunities in a positive way to come out with the strategies.

**WO strategies** – Look at the weaknesses – overcome the weaknesses by taking advantage of the opportunities in a positive way to come out with the appropriate strategies.

**ST strategies** – Use the strengths – relate the strengths on how to avoid or minimize the threats in a positive way to come out with the strategies.

**WT strategies** – Look at the weaknesses – minimize the weaknesses by avoiding the threats in a way to come out with the appropriate strategies

**STRATEGIES** - Notice that we begin with (S) and (W) and relate to (O) and (T) and not the other way around. We essentially look into internal factors (S,W) i.e. ourselves, against the external factors (O,T) to systematically come out with possible strategies.

In the next step, we need to prioritize strategies, to rank or arrange in a proper order, those strategies that provided the greatest impacts higher up compared to the lesser ones.

**ACTIONS** - In the subsequent step, we look at each strategy and come out with a list of possible actions against the particular strategy. We again rank and arrange these actions in order of their impacts to the business.

**DECISIONS** - We finally select those actions among the many possible actions, those with the most impacts positively (i.e. highest competitive advantage) to the business. This is how decisions are made in the strategic-management process. We implement those actions and hope for the best. Ha ha ha.

We demonstrate as an example the application of the SO strategy to Figure 14.8 – Example SWOT Analysis in GB3-MIT on page 571.

- S4 – There is a stable, competent professional IS staff with expertise in designing and programming transaction processing systems
- O4 – The internet provides data and interaction capabilities that would be of substantial strategic use to the firm.

When we apply the SO strategy (i.e. look at the strengths and take advantage of the opportunities), we essentially can combine S4 with O4, and may come out with a strategy like: the firm should develop an interactive, internet or web based transaction processing application for its business operations.

We can do the same for the ST, WO and WT strategies against the Figure 14.8. Completing the ST, WO and WT strategies would be a good exercise for you.

**A2Q3.2 – Describe in your own words what you understand by the statement that “An effective IT architecture is dependent on a high quality process by which data are collected and transformed into information”**.

**ANSWER**

The statement in italics above states that the organization’s IT architecture is considered not effective if it does not have a high quality process that can transform collected data into useful information for the organization.

The straight run DIKAR model, collects **data (D)**, transforms it into **information (I)**, which forms the organization’s **knowledge (K)**, for the basis of developing strategic **actions (A)** to produce useful **results (R)** for the organization.
The statement in italics can be rephrased to say that the organization’s IT architecture is considered not effective if it does not have a high quality process to execute the DIK portion of the full DIKAR straight run model.

A2Q3.3 – Do you believe that strategic advantages obtained by the effective use of IS/IT are sustainable? If yes, explain why you said so. If no, also explain why you said so.

ANSWER

The answer is both a yes and a no depending on the circumstances.

NO. Sustainability of strategic advantages can only be achieved in competition if you are always and continuously the leader in the pack (i.e. continuously running faster than your competitors). Specifically, sustainability of IS/IT strategic advantages is very difficult to achieve as your competitors will finally catch up with you, particularly if the IS/IT technologies are also available to them and can be used by them.

YES. We can sustain continually the IS/IT strategic advantages if we own the IS/IT technology (proprietary) and not allow it to be used by our competitors, normally up to the duration that our patent rights permits (like 15 years in the US). The trick is to continuously create and develop new technologies, incorporate them into our products and not to forget to patent them. This will give the continuous lead all the time, and make our competitors lag behind us in multiple gaps of say 15 years at a time. Ha ha ha. Now you should understand why we must be creative and innovative. This is when we consider fair play among the competitors. We should not consider the unethical ones (shameful people) that do not observe copyrights and patent protection laws. Catch them, sue them in courts and get money out of them too. Ha ha ha.

MISP2-A2Q4 – Strategic Management in Nonprofit and Governmental Organizations.

The strategic-management process is being used effectively by countless nonprofit and governmental organizations, such as the chambers of commerce, educational institutions, medical institutions, public utilities, libraries, government agencies, Girl Scouts and Boy Scouts, the Red Cross, and religious groups.

A2Q4.1 – Why do you think Girl Scouts and Boy Scouts use the strategic management-process? Go to the appropriate websites and provide your answer.

ANSWER

What do Girl Scouts and Boy Scouts “win” against the competitors? What competitors?

The simple answer is that Girl Scouts and Boy Scouts used the strategic-management process not against competitors but against themselves for their own improvements – for example, to be cost effective in their operations, to get more funds for their operations, to provide most impacts for their good works, to touch and help more people in the community, etc. They may use SWOT, PEST and other appropriate tools in their strategic-management process.

A2Q4.2 – To gain a better understanding of the strategic-management process, we must read and study strategy articles extensively. Where would we go and search for information for example, to know about the reasons and strategies for a hostile takeover attempt? List the possible sources of strategy
information and provide one fully qualified reference for a website or a source that we could get information about a hostile takeover.

ANSWER

The answers for good sources for strategy information are provided in reference: GB2-SMCC in Chapter 5 on page 192. I do not think it is necessary for me to list them here. It is actually for your exercise. That is how you should learn.

One story of a hostile takeover is the famous HP-Compaq Hostile Takeover. Just go to GOOGLE on the internet and search for the phrase “Hostile Takeover HP Compaq”. The Google search engine will provide you with a list of results. Ha ha ha.


**The Proposed HP/Compaq Merger**

HP/Compaq merger and its implications, Windows XP and Market Confidence levels post New York - A tripartite study

We take an in-depth look at the proposed HP/Compaq merger: what are the benefits of such a union?

Is it marriage or misalliance?

Who are the winners and who are the losers?

Hewlett and Packard family members have publicly announced their opposition to the HP board approved deal which will finally be put to a company vote in March.

Merger or hostile takeover? Which is it?

MISP2-A2Q5 – Please refer to PDF file MISP2-MiniCase-Assn2-Q5.pdf.

The concept of "virtualization" is a very hot topic in IT, IS and ICT circles today. It is being used for high performance computing, parallel computing and clustering technologies.

Study the online TechWeb News, dated Oct. 17, 2006, the article titled "**Microsoft Offers Virtualization Technology For Free**". Then answer the following questions:

A2Q5.1 – What is virtualization all about? What does Wikipedia say about virtualization? Search the internet for other “virtualization technologies”. List them.

ANSWER

Virtualization according to Mr. Wikipedia

In computing, virtualization is "a technique for hiding the physical characteristics of computing resources from the way in which other systems, applications, or end users interact with those resources. This includes making a single physical resource (such as a server, an operating system, an application, or storage device) appear to function as multiple logical resources; or it can include making multiple physical resources (such as storage devices or servers) appear as a single logical resource."
List of Virtualization technologies (may not be necessarily complete)

* Virtualization Development
* Virtual machine monitor
* Comparison of virtual machines
* Operating system-level virtualization
* Comparison of Application Virtual Machines
* Emulation
* Hypervisor
* Physical-to-Virtual
* Virtual Tape Library
* IBM SAN Volume Controller
* X86 virtualization — hardware-assisted virtualization.
* Nanokernel

A2Q5.2 - Why do you think Microsoft is ‘charitable’ enough to offer Virtualization for free? What are the hidden objectives and strategies? This is not a trick question! Ha ha ha.

ANSWER

1. In parlance (speech/conversation), they say there is no such thing as a “free lunch”.
2. And one Malay proverb says “There may be prawns behind the stone”.
3. And in computer terms “WYSINWYG – What you see is not what you get”

All of the three statements above mean the same thing - that there must be some hidden agenda behind what virtually appear up front. Ha ha ha

I believe that Microsoft offered the VHD Image Format (one of the virtualization technologies) for free so that it can ensure continuity in its business of selling operating systems (OSes) software. Microsoft wants to make money on the OSes and not on the VHD Image Format technology. Microsoft gave away the technology for free for both commercial and open source communities, undoubtedly in a charitable act.

I also believe that Microsoft is afraid of competitors providing open source alternatives that are better and are not tied to the Microsoft’s OSes. Microsoft quickly announced the offer for free strategically to take up the “leader advantage”. When many people adopted the technology Microsoft will get the competitive advantage of availability of support by many vendors. When you use the specific Microsoft technology (yes free) you must also buy the Microsoft OSes to go with it to make the whole thing work (this is where the money is). Other free and open source OSes have not yet caught up with providing drivers and support to work with the free VHD Image Format of Microsoft.

So those Microsoft stalwarts, eager and excited to adopt this new technology will continue to become loyal customers of Microsoft. This is a very good strategy.

The “freebies” guys/gals out there will have to wait for the time when the free and open source operating systems like Linux, support the free VHD Image Format of Microsoft, to truly “enjoy” completely free software from head-to-toe. Ha ha ha. You still have to buy the hardware unless somebody gives it to you for free too. Hello Microsoft. Any free hardware?