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Consumer Technology Contemplations - 2005

*I know I'm about a month too late into the year to be making any tech predictions, but what I'm about to present to you aren't necessarily prognostications per say – they are some possibilities and I expound my opinions about various information and communication technologies (ICTs) with a dash of prudence by introducing them in the context of the **technology hype cycle**. You too should read today's article with a grain of salt, but when these predictions come true, remember where you heard them in the first place.*

- Yours truly,
Umar Ruhi.

1. Experiential Anecdote

As a management consultant in the e-Business and Supply Chain Management specialties, it's an all too common experience to hear my clients talk about new technologies that will "forever change the way things are done" in their businesses. Over the past years though, I have learnt to subtly dispel such prophesizing and exaggerated claims in light of the historical development that a myriad of technologies have evolved through.

2. Introducing the Gartner Hype Cycle

The Gartner Hype Cycle (originally conceived by the Gartner Group) is a valuable idea that has emerged out of the consulting community in the past few years. This multipurpose model explicates a common phenomenon in the technology sector where new technologies and products are over hyped when they are initially launched, only to subsequently disappoint the audience before finally maturing and being widely adopted. Let's take a closer look at the model (see figure 1).

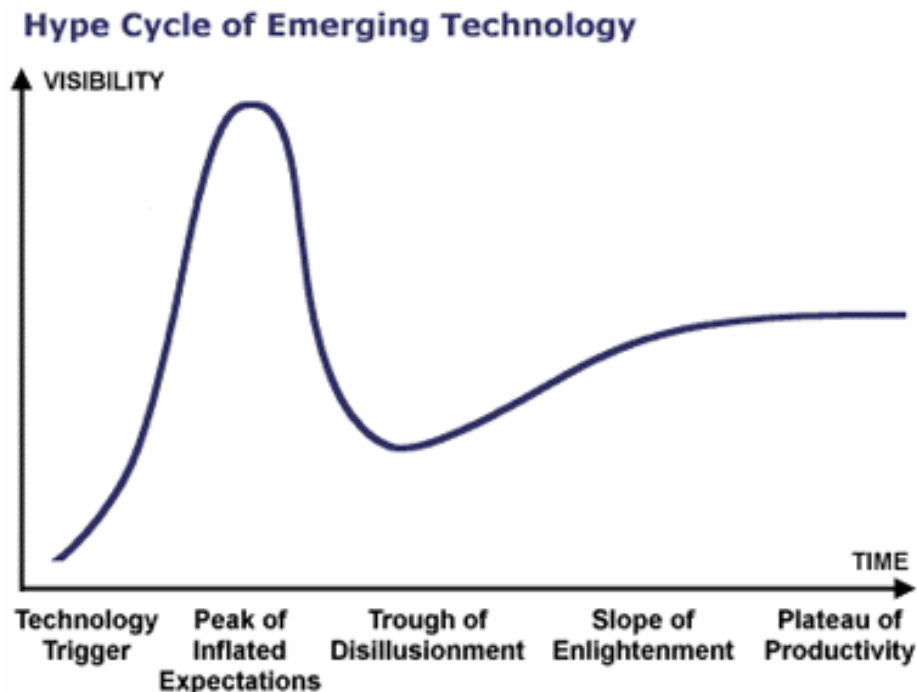


Figure 1 – The Gartner Hype Cycle (Source: Gartner Group)

The graphic depiction of the hype cycle above highlights the five phases of technology evolution which are briefly described herewith:

I. Technology Trigger: The first phase of a Hype Cycle symbolizes a significant technological innovation or breakthrough which is followed by product launch and other events that generate significant press and industry interest.

II. Peak of Inflated Expectations: In this phase, the technology becomes the talk of the town and a frenzy of publicity typically generates over-enthusiasm and unrealistic expectations. There may be some successful applications of the technology, but there are typically more failures.

III. Trough of Disillusionment: Perceptibly, the failures from the previous phase now lead the mass media to abandon the topic of the particular technology and talking about it becomes unfashionable.

IV. Slope of Enlightenment: Although the press may have stopped covering the technology, those businesses which invested capital resources in the early phases might still continue to experiment with the application of technology to their business processes in order to understand the benefits of the technology. It is these businesses which may eventually gain first-mover advantage in their industries and offer practical solutions and help establish implementation best practices.

V. Plateau of Productivity: Finally, the technology reaches its plateau of productivity as its real benefits become widely demonstrated and accepted. At the same time, the technology also becomes more stable and evolves into its second and third generations (widely referred to as 2G and 3G offerings).

It is using these stages in the technology hype-cycle that I now discuss various current and emerging trends in the consumer technologies marketplace.

3. Market Status of Current & Emerging Technologies

In this section, I highlight various contemporary hardware and software technologies and applications vis-à-vis their market position and development trends.

i) Gigabyte Web Mail: The GMail hype has come and gone. I personally have more than a dozen free GMail invites lying idle without any takers. In contrast, last year, a select group of people were selected by Google to try out their beta version of GMail which offered a gigabyte of storage space. Microsoft soon followed suite and upped the storage space for hotmail users. The result now is an over abundance of free web mail services which offer huge storage spaces. The service offering is **falling down the hype curve really rapidly into the trough of disillusionment**. In order to see a renewal of these offerings, service providers will need to re-evaluate their value propositions. For instance, Google will need to address subscribers' concern over privacy which has impeded the uptake of GMail. Furthermore, the companies involved in sending targeted ads to user inboxes will need to consider an explicit opt-in model rather than an implicit opt-in. Finally, service providers will need to tie in their web offerings with desktop email client applications such as Outlook and Eudora.

ii) Wireless Web: It was in the year 2000 that I first checked my hotmail inbox through my cell-phone. Although wireless web has since become a standard GPRS offering with most GSM service providers, the wide scale adoption of this technology still lies far ahead. Form factor of devices is still problematic as complicated keystrokes and intricate mouse features on cell phones make web navigation difficult for the average user. Secondly, cell phones and satellite based telecommunication networks still lack sufficient computing power and bandwidth respectively to enable them to offer a broad range of internet based services. This leaves most wireless web initiatives in **the trough of disillusionment** as manufacturers try to improve cell phone features and functionalities, and service providers configure web offerings specifically for mobile customers.

iii) HDTV (High Definition Television): If you haven't paid much attention to the HDTV hype mainly because you didn't want to get tempted just yet into spending a load of cash on home theatre gear, then you're in good company, and you've probably made a wise decision. Most early adopters of this technology were left frustrated because of lack of content that could be rendered via this new and improved standard. It is only recently that cable service providers have started to offer customized programming for HDTV subscribers. That being said, the story is starkly different on the other side of the Atlantic where the technology is still in its early stages and the European home entertainment industry hasn't broadly accepted the technology yet. In my opinion this technology at best is only now starting to **emerge out of the trough of disillusionment**.

iv) VoIP (Voice over IP): An increasing number of broadband internet service providers have now started to offer Voice over IP (VOIP) services alongside their regular internet service offerings. Usually branded as "Internet Phone Service", most VoIP services now offer emergency 911 calling which was previously a barrier to adoption for the average household. Secondly, the adoption of cable broadband internet has consequently increased awareness of VoIP for residential customers who are just now starting to understand the value of virtual telephone numbers (yes, you can choose your area code regardless of where you live) to help them reduce their long distance calling charges. Hence, I purport that VoIP has **moved from the trough of disillusionment to the slope of enlightenment**. The next couple of years will see greater number of subscribers, not only from businesses but also from households.

v) Multi-Layer DVDs: Were you among those who thought a 5 to 8 Gigabyte DVD would be the answer to your data storage woes? I certainly did three years ago, but as a true characteristic of the information overload age, consumers still want more space, be it for their home videos, data backups or audio/video media. Multi-Layer DVDs are here to offer a solution. For instance, Fluorescent Media Disks (FMDs) are being touted to be able to hold between 25 to 140 gigabytes of data. We can expect the higher end of such technologies to be more relevant in enterprise computing but slender versions of New Multi-Layer DVD writers are already being prototyped and released to selective consumer test markets. It is hence only a matter of time that this new technology catches up to speed with the average household, and with the establishment of industry wide standards, I see them **fast moving up the slope of enlightenment**.

vi) Desktop Search Tools: The year 2004 saw a profusion of front-end applications that can search your own computer. Some examples include Copernic Desktop Search, Google Desktop Search, Yahoo! Desktop Search and Ask Jeeves Desktop Search. Needless to say that these tools gained popularity because of the suboptimal performance of the generic search tools in other Windows applications. Some of these tools make it possible to find documents, emails, media files, internet history and chat logs quickly and effectively. Additionally, some tools allow parallel searching on the web as well as the desktop and allow users to view relevant results in a single application. Perhaps a lot of what we are seeing in these tools will soon become standard functionality in newer versions of the Windows Operating Systems and other desktop applications, but for now, these tools offer great advantages over their default counterparts. As people experience what these tools have to offer, they continue to **move up the slope of enlightenment**.

vii) PDA Smart Phones: A full-featured mobile phone, an office applications suite, various calendar organizers, a simple email and text messaging application, a built-in color web browser, a digital camera and an mp3 player – these are just some of the exciting features that users will find in a PDA smart phone. Just as technology integration may be the catch-phrase at your workplace, device convergence is the contemporary key idea in consumer electronics. Vendors such as Palm, Handspring and HP are vying to gain significant market shares in this newly emerging market. Grey markets on e-Bay have already become a significant market contender for consumers looking for cheap deals, and I expect the use of PDA smart phones to continue to **rise over the next little while through the slope of enlightenment** as the technology becomes affordable and more people start using it.

viii) **WLANs:** Portable connectivity is on the rise. More and more devices around the household are becoming wireless enabled (through Wi-Fi or Bluetooth platforms) to allow users to be seamlessly connected to everything around their homes at all times. Superior networking standards like 802.11g have already been adopted by major technology vendors while trying to make it easier to install and use these technologies across the home. Wireless networking “kits” from vendors like D-Link, SMC, LinkSys and Microsoft have made networking a simple chore for the average computer user at home. As devices like wireless network cards become standard components in new desktop machines and laptops, wireless technologies will increasingly replace their wireline counterparts and enable efficiencies around the home. Hence, they’re currently **positioned very near the plateau of productivity** on my hype cycle model.

ix) **Wi-Fi Hotspots:** As a direct consequence of the trend elaborated in the previous point (WLANs), wi-fi hotspots continue to become more pervasive in public places. Laptop and PDA users will enjoy more wireless accessibility throughout densely populated metropolitan areas. Schools, Cafes, Restaurants, Motels and Airport Terminals are just a few places where roaming mobile users can hook up to a wi-fi hotspot to check their emails or browse the web. Furthermore, many businesses are starting to offer free wireless internet to entice more business from potential customers. It is by virtue of this growing trend in pervasive wi-fi networking, that I position it on **the slope of enlightenment**.

x) **Alternative Web Browsers:** The year 2004 continued to witness browser war being waged by a half dozen or more software companies. Whereas in the mid nineties, Microsoft had gained the lead in the browser market by winning the right to embed Internet Explorer (IE) in its Windows operating system, today, yet again, people are starting to look for alternatives. IE’s vulnerabilities and its lack of certain specific features are driving great interest in alternative browsers such as Firefox, Opera, NeoPlanet and Avant Browser. Built-In popup blockers, animation filters, tabbed browsing and customizable skins are just some of the features that are enticing users to experience these new offerings. These browsers will continue to **climb up the slope of enlightenment** as more technology savvy users discover the applications that best fit their purpose and likings.

To conclude my discussion in this section, figure 2 summarizes and illustrates my positioning of the various technologies and trends discussed above.

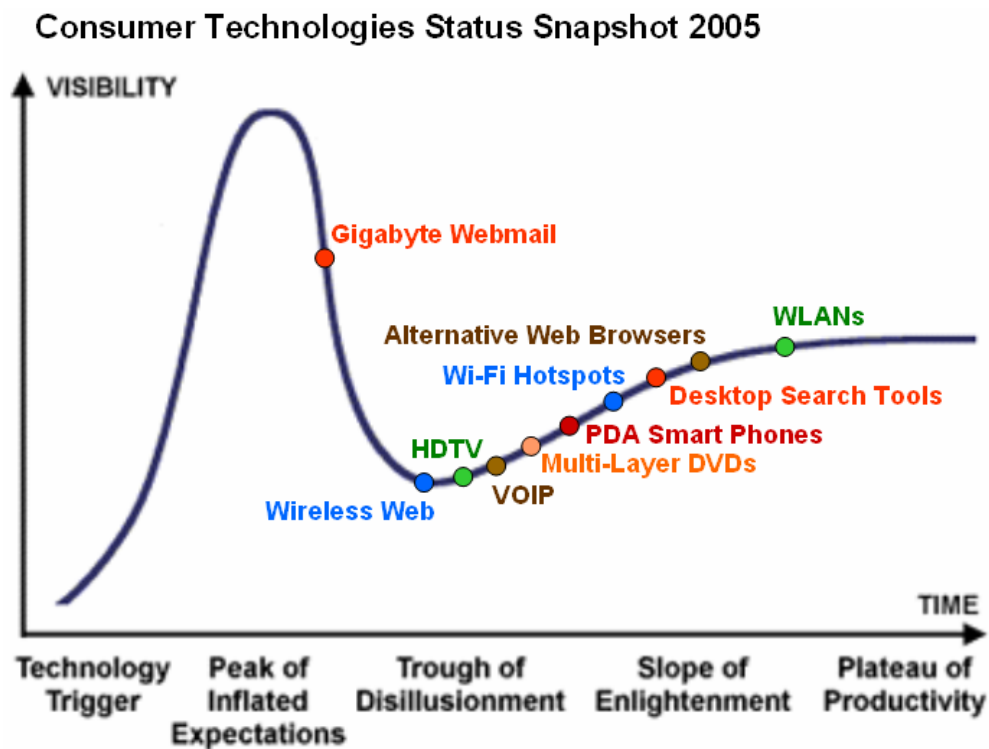


Figure 2 – Technologies & Trends mapped onto the Gartner Hype Cycle

4. Key Takeaways & Summary

Economical, Useful and Trendy - that's the message of vendors and service providers who are striving to get a slice of the pie in the consumer technologies marketplace. Cheap is the new "in" as companies do all they can to get mainstream users to try out their products. No longer do households have to wait before a certain technology matures through its business use and becomes affordable for individual consumers.

Nevertheless, a lot of these economical and trendy technologies still have a long way to go before they can become a widespread phenomenon. Lack of standards at the industry level, unfeasible value propositions at the organizational level and impractical expectations at the consumer level are just a few reasons why certain technologies have not lived up to their initial hype. In this article, I have attempted to position contemporary technologies and technology related market trends along the Gartner Hype cycle to deliberate a viewpoint of their current status and future outlook. It is hoped that the discussion demonstrates how certain technologies like desktop search tools, wireless networking and VoIP are starting to become rife while others such as HDTV, gigabyte webmail and wireless web are still lagging behind their anticipated adoption rates.

Article Addendum

I thought I'd list some of my favourite tools and places you can find them here for you to *try them out yourself*.

- ✓ **Copernic Desktop Search Tool:**
<http://www.copernic.com/en/products/desktop-search/index.html>
- ✓ **Google Desktop Search Tool:**
<http://desktop.google.com/>
- ✓ **Avant Web Browser:**
<http://www.avantbrowser.com/>
- ✓ **NeoPlanet Web Browser:**
<http://www.neoplanet.com/>
- ✓ **Free Wi-Fi Hot Spots Directory:**
<http://www.wififreespot.com/>

About the Authors:

Umar Ruhi is a University lecturer in the Operations and Decision Sciences Area and teaches courses in Management Information Systems, Operations Management and e-Business at the School of Business & Economics, Wilfrid Laurier University. A software engineer by profession, Umar holds a B.Sc. degree in Computer Science and an M.B.A. in e-Business & Knowledge Management. With over five years of experience in e-Business consulting, Umar has managed operational technology projects through the design to the deployment stages, and consulted for multinational organizations such as General Electric, and Cisco Systems. His professional qualifications include various industry endorsed certifications including those from IBM, Cisco, Novell and Sun Microsystems. He is also currently completing his Ph.D. in Information Systems with a research focus on Knowledge Management and Community Informatics.