PHONE WORLD

Issue 14 | April - May 2015 | Price Rs. 150

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Market of Pakistan

Reformation of Pakistan's
Education System through m-Learning

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Adnan Khan
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Dear Readers,

We are living in the most revolutionized era of technological innovation, numerous life changing pieces of technology have become part of our lives but certainly smartphone is at top of the list. The functionalities this handheld device performs are truly phenomenal and open many doors of advancements in other related fields as well. A massive growth can be witnessed in Pakistan device market as well which suggests that smartphones imports will soon surpass feature phones. The substantial growth in 3G/4G subscriber base is also quite encouraging as it has reached 12 million at the end of March, 2015. Our team has compiled an exclusive report which highlights key trends of thriving device market of Pakistan.

M-education is the concept that is making waves in the international arena of technology. Smart education is not a fantasy in 21ist century rather it has become a reality worldwide. What prospects it has for the Pakistani society and what barriers are challenging the implementation of m-Education system in Pakistan is the topic that has been covered in our feature article, “Reformation of Pakistan’s Education System through m-Learning”. It will provide a great insight to the evolution that is required to bring change in weak education system of Pakistan.

An exclusive interview of Ricardo Tavares is also one of the highlight of our current issue. Ricardo Tavares is a leading international consultant who has vast working experience in Pakistan’s telecom sector. In his interview he gave his valuable acumen regarding the evolution of ICT sector in Pakistan and shared his experience of working with Pakistani tech big-wigs.

Phone World team puts up great effort to bring together the best and finest quality work for its readers. I hope you guys will appreciate our efforts and give us your feedback so that we can further improve Phone World Magazine.

Enjoy reading…!!

Thank you,
Adnan Khan
Managing Editor

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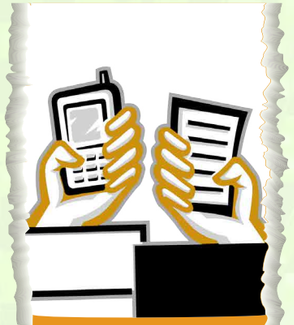

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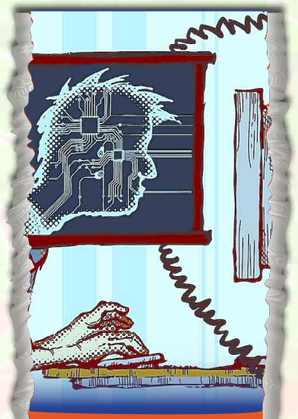

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By Rizwana Khan

The Growing Device Market of Pakistan

Technology has made a huge impact on society and revolutionized our lives in ways we never imagined before. One of the most life changing piece of technology is the smartphone, an all in one portable devices that not only connects us to other people but other devices as well. We use smartphones to do countless task like surfing the internet and social media platforms, checking emails, managing calendar, listening to music, making payments, playing videogames, taking photos, reading books and news, controlling other connected devices, writing text messages and every now and then we use them for their original purpose, to make phone calls. All of this was not possible some 10 years back but today the functionalities that can be performed by a single handheld device are phenomenal.

According to the PTA's latest data, 3G/4G subscribers reached 12 million showing MoM double digit increase

While, mobile sector of Pakistan is the most thriving industry of the country right now and rightly so because of the technological, regulatory and business advancements that are going through leaps and bound and the overall scenario for sector is quite positive rather bullish. Against all speculations that after the SIM verification process the number of mobile subscribers will shrink to less than 50 million, the verified SIMs still hovers around 108.8 million in the country.

According to the PTA's latest data, 3G/4G subscribers reached 12 million showing substantial increase of of double digital Month on Month (MoM) growth. This growth in mobile broadband market also indicates the increase in smartphone penetration in the local market.

Competition in the local mobile device market place is heating up further as there are now 49 mobile brands available in the country

With 3G/4G services now available in the country, smartphones have become more affordable as more and more brands are entering the market with Average Selling Price (ASP) touching around Rs. 3000/= and great number of Pakistani consumers are shifting from basic mobile phones to more sophisticated smartphone devices.

The competition in the local mobile device market place is heating up further as there are around 49 mobile brands available in the country including local and international players. While, international brands like Samsung, Sony, HTC and Apple are quite well known and popular in Pakistan but Chinese global brands are also making footprints. Huawei, Oppo, Lenovo, GFive, Haier and GRight are the Chinese brands that have not only made their name in the international scene but have strongly positioned themselves in the market whereas some other brands like Xiaomi and Android One by Google are also expected to be launched in the near future. G-Five has recently announced that it will very soon start to manufacture smartphones locally, hence becoming first local manufacturers of mobiles in Pakistan.

G-Five has announced that it will soon start to manufacture smartphones locally, hence becoming first local manufacturers of mobiles in Pakistan

Interestingly, Pakistan is now considered as one of the very few countries where a local brand i.e. Q-Mobile is the market leader when it comes to numbers both in term of device imports and models. According to estimates they now have over 50% market share of all the mobile phones imported into the country that includes both feature and smartphones.

In order to provide a more indepth understanding of these brands Phone World team has gathered a data of six months (Oct, 2014-March, 2015) of all mobile brands being introduced by companies in Pakistan.

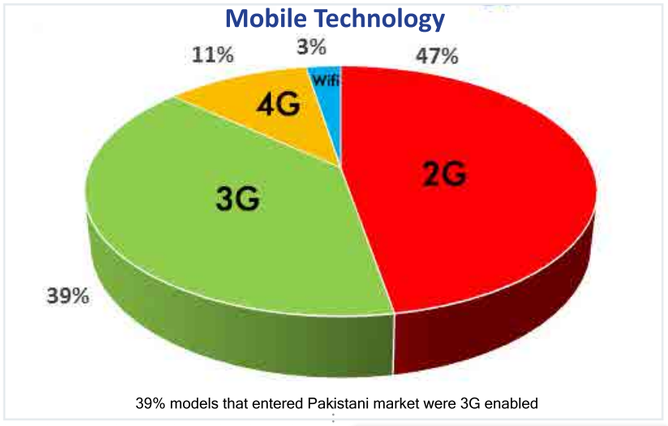
Pakistan is now considered as one of the very few unique countries where a local brand i.e. Q-Mobile is the market leader

The total number of handset models introduced during these six months is 306,this number is quite high if we consider the time duration. In the following section we have provided some analysis of these brands being introduced in Pakistan.

Mobile Devices Technology (2G/3G/4G)

From technology point of view 47% of the models were still 2G but this shows a sharp reduction in comparison to previous year. 3G enabled handsets models witness huge growth in Pakistani market. 39% handset models that entered the market were 3G enabled.

The total number of handset models introduced during last six months is 306



39% models that entered Pakistani market were 3G enabled

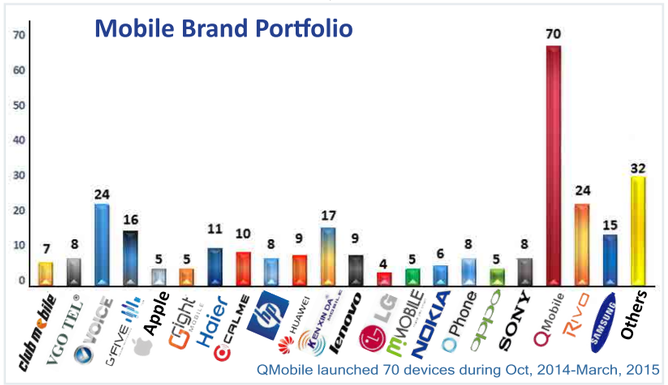
Local smartphones brands played a major role in this extensive increase in penetration as they flooded the market with low cost 3G handsets. 4G enabled devices which still are quite costly were mainly brought by international brands this is why the percentage is quite low i.e. 11%. Since, 4G is a totally different technology as compared to 2G and 3G therefore the 4G LTE enabled handsets are comparatively more expensive. The local smartphone brands are somewhat cautious to bring these handsets in the market as they are using price competitiveness as their key strength to position themselves in the market.

However, now that two mobile operators, Zong and Warid have started their 4G LTE services in the country, demand for LTE enabled handsets will increase and ultimately local brands will have to bring these devices if they want to compete in the market with the international brands. Therefore, we could witness increased growth in 4G handsets market. In fact QMobile has already launched its first LTE handsets in the Pakistan market.

Brand Portfolio

The Pakistan distribution scenario is quite diverse where some of these brands have launched numerous handset while others have only a couple of devices in their portfolio.

Q-Mobile has been the most active mobile brand that launched 70 models during October, 2014 to March 2015 time period. The second highest number of models introduced in the market were by Voice Mobile and Rivo. It is a very interesting scenario that the most aggressive players in market are all local brands. As a new brand Rivo has especially done well as it launched wide range of models just after its launch.



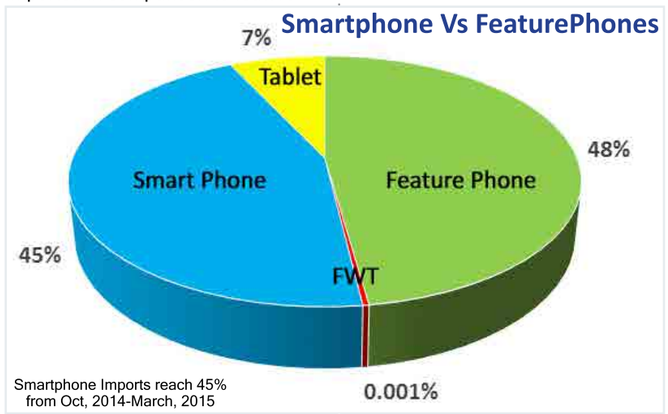
QMobile launched 70 devices during Oct, 2014-March, 2015

Qmobile has recently launched devices with Qualcomm chipsets and so have Rivo. So we can expect the competition will get tougher in local brands using more sophisticated chipsets

When it comes to international brands G-five, Huawei, Samsung, Sony and Lenovo have introduced fewer models as compared to local brands. Nokia which used to be a market leader a couple of years back only brought 6 devices during the entire period. GFive and Huawei has made major inroads into the Pakistani market by introducing around 16 and 9 models respectively while Kenxinda introduced 17 models. Please note that the number of models introduced is one thing and it doesn't necessarily mean that these brands also have greater market share in terms of devices or revenues.

Device Genre (Feature V/s Smartphones)

The 3G/4G auction last year initiated by PTA and the subsequent roll-out along with low cast data packages have spurred the demand for smartphones to such an extent that in the near future smartphones will surpass feature phones for the first time in the country. Pakistani market saw in six month duration a whopping 45% smartphone models imported in comparison to feature phones which stood at 48% of the imported models. The number of models for tablet stood at 7% with only 1% dongles. Again, note that the number does not reflect the market share in terms of absolute numbers or revenues but of genre of devices imported through legal channel.



Smartphone Imports reach 45% from Oct, 2014-March, 2015

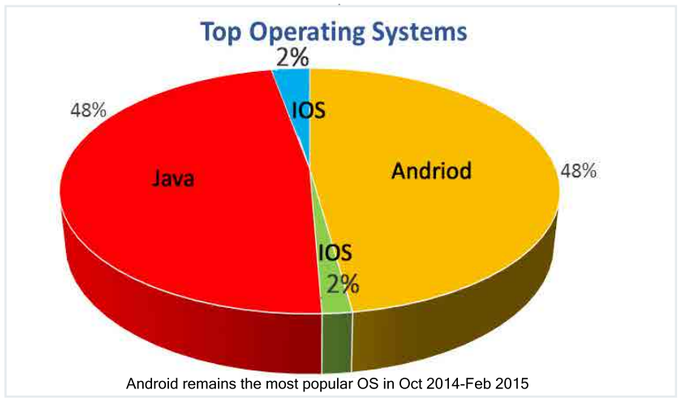
Q-Mobile has been the most active mobile brand that launched 70 models during 6 month period

Operating System

Android is the most popular operating system with almost 81% market share in the world and like rest of the world, it is also the most favorite operating system of Pakistanis too.

Qualcomm has also announced low cost chipset range to address the demand of the developing market especially to attract local brands

During last six months 48% smartphone brands that were imported in the country were Android based handsets, while same number of feature or Java based OS brands were imported.



Android remains the most popular OS in Oct 2014-Feb 2015

This is a major decrease in import of such phones in the country and the trend in expected to continue as more and more people are now switching to smartphones, where the dominant OS is Android. Windows and iOS operating system models are quite few because of high prices of these devices.

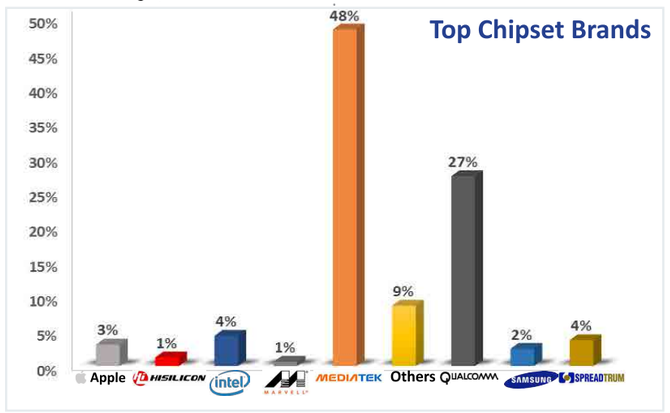
Chipset

This is a very important part of a mobile phone especially when we talk about smartphones as most of the functionalities and applications unlike in the feature phone (that only perform voice and some basic features) depends upon the capacity, capability and efficiency of the chip. Along with CPU, chipset make the complete SoC (System on Chip) of the phone which improves the performance and speed of the handset. Although, Qualcomm and Intel are among the top and high-end chipset manufacturers but MediaTek is the most popular chipset manufacturer in Pakistani market.

Most Chinese OEMs are pushing systems based on this Chipset to fit the pocket size of the consumers.

The reason behind the popularity of MediaTek chipset in local brands is that these chipsets are comparatively cheaper than Qualcomm and other high-end chipset manufacturers and due to the price sensitivity factor of local market they become the choice product at the expense of the overall performance.

Lately, Qualcomm has also announced some low cost chipset range to address the demand of the developing market especially to attract local brands. Qmobile has recently launched such devices i.e. Noir L-10, Noir LT 600, Z-8 and W-1 with Qualcomm chipsets and so have Rivo with their Phentom PZ-8 and Phentom PZ-10 so we can expect the competition will get tougher in local brands using more sophisticated chipsets in near future.



With more cores the phone gets more smoother, screen resolution gets sharper, applications load faster, the phone does not lag, HD video stream smoother and games with higher processing can be played easily. This is why it is very important to use multiple core chipsets to make work faster and at low power, there prices might be a little higher but so will be the performance.

Future Outlook

Pakistan is considered as one of the fastest growing countries in the mobile market. Only ten years ago, the cost of mobile handsets especially smartphone was over USD 500 and only the upper class were able to benefit from it but now mobile phone manufacturers have succeeded in producing low cost mobile handsets specially smartphones bringing them to USD 70, thus making it possible for middle and even lower class to use this technology which had become a necessity.

Pakistan is a price conscious market and all the brands available in Pakistan give special importance to this factor. The reason for speedy success of local brands is that their products are price competitive. According to the industry analysts, 2015 will be their year of fierce competition and in addition to prices new features including, applications and quality will play a major role in success of every brand. More and more brands are entering the Pakistani device market every now and then while telecom operators like Zong, Ufone and Telenor have also jumped in with their own low priced 3G & 4G enabled handsets. We recently saw Haier re-launch their brand while GFive announced local manufacturing of cellphones in Pakistan. All of this shows that there is still lot more room for growth, therefore lot more has yet to be seen in the future.

By Saima Ibrahim

Reformation of Pakistan's Education System through m-Learning

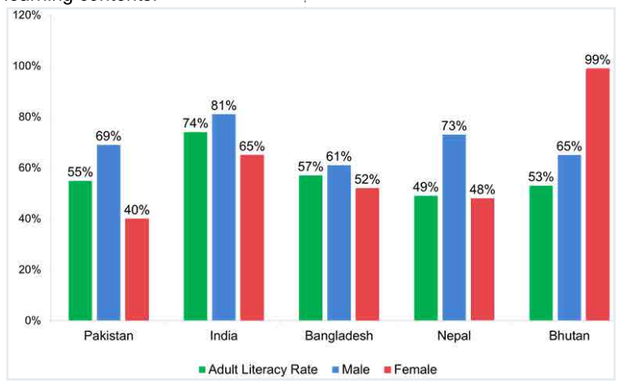
Technology has been making inroads into education for decades. But the mobile revolution is changing education in more fundamental ways than just providing a new gadget that delivers information. Mobile devices with appropriate content and learning tools, particularly tablets, are changing the way we learn and think about learning. The connectedness of people has led societies to learn and experience new things in a more convenient way. Searching through for a precise definition one could not help but agree on UNESCO explaining the phenomenon as "Mobile learning involves the use of mobile technology, either alone or in combination with other information and communication technology (ICT), to enable learning anytime and anywhere. Learning can unfold in a variety of ways: people can use mobile devices to access educational resources, connect with others, or create content, both inside and outside classrooms. Mobile learning also encompasses efforts to support broad educational goals such as the effective administration of school systems and improved communication between schools and families"

M-education implies the process of learning through personal electronics like smartphones, tablets, and social media channels etc. Learning through mobile is the fastest and most innovative mode of learning in today's world. Using mobile tools for creating learning aids and materials has become an important part of informal learning.

M-learning is convenient as it is accessible virtually from anywhere. Sharing is almost instantaneous among everyone using the same content, which leads to the reception of instant feedback and tips. M-learning also brings strong portability by replacing books and notes with small devices, filled with tailored learning contents.

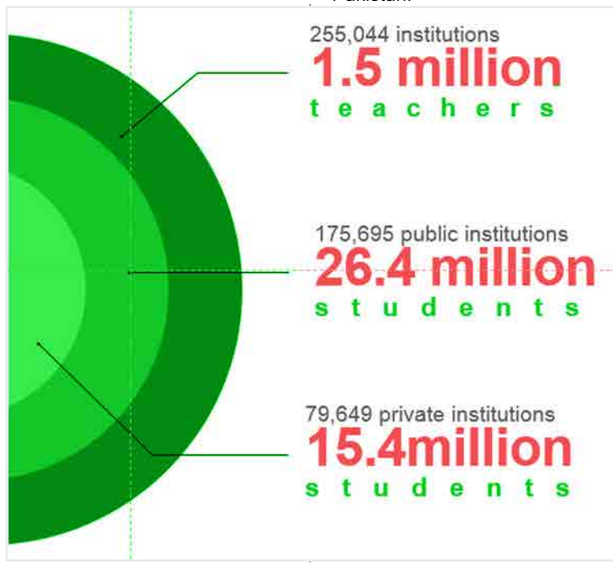
Pakistan's traditional school system is disappointing and huge reforms are required in the whole setup. As in the Education Development Index, which combines all educational access, measures that Pakistan lies at the bottom with Bangladesh, in the region, and is considerably below in comparison to Sri Lanka.

The Global Competitiveness Index (GCI) shows, Pakistan's performance is weak, on the health and education related elements of competitiveness, when compared with other countries in the region like India, China, Bangladesh, Sri Lanka and Malaysia. For this reason, our government must realize the potential of m-education and with help of technology it can improve the functioning of education system.



Pakistan's adult literacy rate in comparison to other South Asian states is also low; despite the fact that youth can bring prosperity into the country, they are still deprived of many educational facilities in Pakistan.

There are total 255,044 institutes in the country out of which 176,405 in rural and 48,766 institutions in urban areas of Pakistan.



Whereas only 19% of this number is contributed by private sector and more than half i.e. 62% are state-owned institutions.

Mobile learning involves the use of mobile technology, either alone or in combination with other ICT tools to enable learning anytime and anywhere - UNESCO

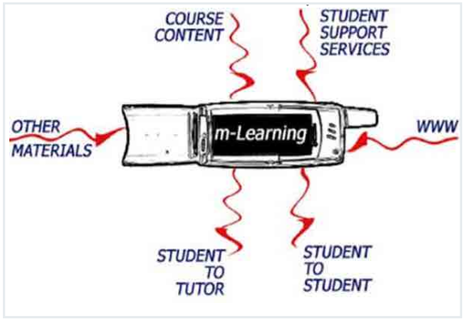
While, almost 42 million of Pakistani children are enrolled in the education sector, a same number of children are outside of the schooling system that makes ensuring the basic fundamental right provision even more challenging which says that "The State shall provide free

and compulsory education to all children of the age of five to sixteen years in such manner as may be determined by law."

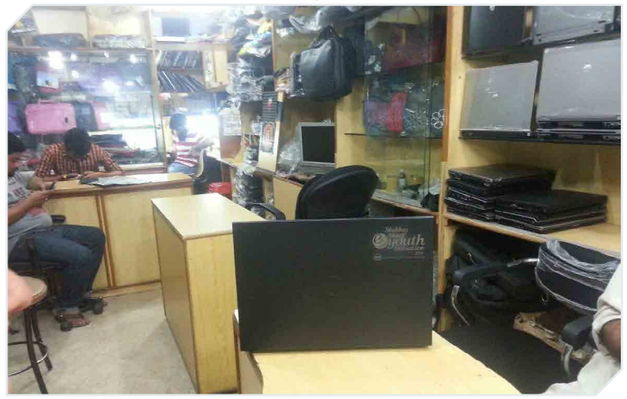
Pakistan Education Development Index lies at the bottom in the region

Therefore, if the Government is serious to overcome this challenge it has to move fast and it has to move now. One of the important element for meeting this challenge would be introducing M-Education or e-learning into education sector as it can bring huge changes in shortest possible time. While the importance of m-learning cannot be overemphasised to overcome the huge challenge that is on hand, the other important fact is the importance of the right strategy for implementation of m-education.

For an M-education model to succeed and be adopted it must have a content strategy, Learning Management System, Social Interfaces and access to other asset with affordable devices and connectivity customised to local environment and should revolve around the student, which is the most important stakeholder.



In the last couple of years we have seen numerous schemes that were introduced by the Government to impart technology intervention into our education system. But unfortunately most of them faced failure due to inappropriate strategies. One such initiative was "Prime Minister Youth Laptop Scheme" by the present Government as a way to overcome the educational challenge.



The fundamental objective of this scheme was to enhance the scope of research and increase the access to information technology. A budget of Rs. 4.0 billion was allocated for this scheme in the financial year 2014 and 100,000 laptops were to be distributed among the students. For this purpose a separate assembling plant was established via a contract between Haier China and Government of Pakistan. The authorizing body, Higher Education Commission (HEC) was busy in devising distribution criteria for the students, which shows that an unnecessary attention was given to the process of distribution rather than the end results.

The PM Laptop scheme was an utter failure with majority laptops being sold in the market for 1/4th the price

Also most of these laptops without any content strategy or connectivity found their way in the local electronic markets being sold at less than half price because there was no check and balance strategy about who is getting it and how the laptop will be beneficial to the student. Although given free, they were poised to fail as the scheme was mishandled, wasting Tax Payers Money for political gains.

If the Government is serious to overcome the educational challenges, it has to move fast and it has to move now

Another important element for an education system is to meet the criteria of its effectiveness to succeed through performance based outcomes.

M-education could probably play a facilitating role to meet these important criteria:

Access: Both physical approach and utilization of existing facilities can be further enhanced via M-education.

Equity: Just and fair opportunities and access for all age learners can also be ensured via M-education.

Quality: Quality is mandatory for both teachers and students in order to meet the current and future academic and business challenges. And it can only be achieved through the introduction of fast and innovative ways of education through M-education.

"Education is the most powerful weapon we can use to change the world", according to Nelson Mandela and the world can be better only through easy ways of learning. Smart education is not a fantasy in 21st century rather it has become a reality worldwide. Prosperous regions like America and Europe had already achieved milestones in it but unfortunately Pakistan is not aware of the worth and future of m-learning.

Smart education is not a fantasy in 21st century rather it has become a reality worldwide

There are some huge barriers that are not letting educationalist to improve the traditional education system of Pakistan. For example Availability of Physical Facilities, Electricity, Gender disparity, Regional disparity, untrained teachers and lack of funds are hindering the basic growth of our education system.

Unfortunately the progress of Ministry of Education is not satisfactory enough in this regard. Hence in order to bring reforms into snail-paced performance of our Ministry, the intervention of technology is mandatory. There is dire need to introduce the alternative ways of learning into our traditional education system; which includes:

i. Awareness about M-education

ii. M-mobile: Educational Applications

iii. Online libraries

iv. E-learning

v. Distant learning: Computerized education program (virtual classrooms)

vi. Social networks/platforms

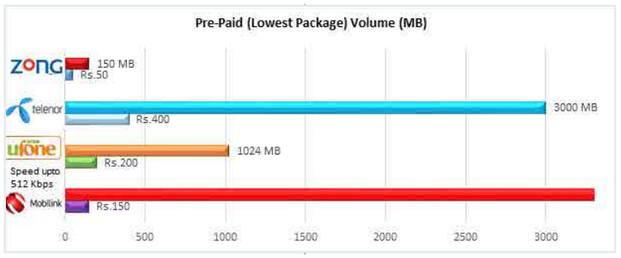
vii. Affordable devices and connectivity

The Pakistan constitution States that it shall provide free and compulsory education to all children of the age of five to sixteen years

Affordable devices and low cost internet packages after the launch of 3G and 4G in Pakistan has made the dream of M-education more realistic.

M-education: Challenges and Barriers

Only a couple of years back a 3G smartphone that cost more than Rs. 30,000 is now available for less than Rs. 5,000/= only making it within reach of common man in Pakistan and the prices are likely to fall in future as well. With the provision of such low cost devices to the students, the education system can be improved or facilitated with little effort. If done appropriately, students can learn through next generation technologies especially data services & connected devices.



In order to make this effective, the Government needs to be more thoughtful and vigilant to design and take initiatives that can bring technology into our education system and pave the way towards M-education.

The Government of Pakistan need to devise result-oriented strategies which must include better content and affordable mobile devices in order to revolutionize the education system through M-education model

In Pakistan, more than half of population is living below poverty line; which means that access to education is not possible for this half of population due to their low income and expensive education. Pakistan has one of the lowest literacy rates in the world and according to the United Nations Educational, Scientific and Cultural Organization (UNESCO), it is 60% and Pakistan stands at 160th in the world. Many schools and colleges are entering the education industry especially in various big cities of Pakistan but those living in rural areas are at a greater loss. Even if children want to study, they can't, due to lack of resources. Government is increasing its budget for education sector each year but unfortunately no positive results have emerged. Low cost devices with appropriate content strategy can help bridge this gap to provide access to the better standards of education even in far flung areas of Pakistan. The Government of Pakistan needs to devise result-oriented strategies which must include better content and affordable mobile devices in order to revolutionize the education system through M-education model.

Few interesting initiatives have already been taken by both Public & Private sectors institutions including the E-learn.punjab by Punjab Government, Elap.pk (e-learning), PSL Pakistan, UNESCO Projects, MDi Pakistan and Taleem-E-Paksitan. Taleem-E-Pakistan is the largest online database of academic contents in Pakistan. In 2014, Pakistan Telecommunication Company Limited (PTCL), largest ICT services provider of the country also launched an online education program 'Illuminating Learning Movement (ILM)' which aimed at providing customized and interactive e-learning solutions to underprivileged students.

Smart learning can improve our education system once its worth has been recognized by educationalists and government. As it is State's responsibility to provide free and compulsory education to children between the ages of five to sixteen years in a manner that is determined by law.

Whether we like it or not, whether we are ready for it or not, mobile learning is the next step in a long tradition of technology facilitated learning

Pakistan is a place where education is really important for the development of the country. More the generation is educated, greater will be the achievements. The government should look into the progress of how various neighboring countries have been interpreting the post-2015 education strategy, such as India, Nepal, Sri Lanka and Bangladesh – all of whom boast higher literacy rates and learning outcomes than Pakistan.

For this type of achievements we have to unite together and work for education. Some of the private institutes are offering mobile education in the country, whereas others are still following the old patterns. It will improve our education system and will help us in development of a student. It is important to bring new technology into the classroom which delivers education material and promote learning.

Public & Private sectors institutions have taken some noteworthy initiatives including the E-learn.punjab by Punjab Government

Mobile learning can be used to diversify the types of learning activities students participate in. Mobile learning supports the learning process rather than being integral to it. Mobiles provide relatively inexpensive opportunities than the PCs and Laptops. Mobiles can also prove continuous and significant support for the learners. A huge advantage of mobile education is that, it decreases training costs and it is a fastest way of learning as well.

The age of mobile learning is here to stay, what we need is to take advantage of it. Whether we like it or not, whether we are ready for it or not, mobile learning is the next step in a long tradition of technology facilitated learning. It will feature new strategies, practices, tools, applications, and resources to realize the promise of pervasive, personal, and connected learning. It responds to the on-demand learning interests of connected citizens in an information-centric world.

NATIONAL

M-Ticketing

The newest talk of the town!

By Kanwal Ayub

GREATER INTERNET PENETRATION COUPLED WITH THE 3G/4G SERVICES IS INCREASING 'M' INFRASTRUCTURE IN OUR COUNTRY

New technology trends often burst in commerce market much rapidly; the story is not too different for 'm' trend. This trend is promising and appealing because it's based on the same principles that helped turn e-commerce into such a big success in Pakistan.

Entrepreneurs in Pakistan have given a personal touch to their businesses by making their presence felt in the social media but also by emphasizing on developing mobile-compatible sites and applications.

Here, I want to highlight the ultimate operational trend in Pakistan's traveling industry. Tearing a ticket stub is replaced with a speedy swipe card system called e-ticketing and now a simple handset is just a few steps away to take its place.

Mobicash provided a feasible solutions to commuters by introducing first of its kind cash-less travel service

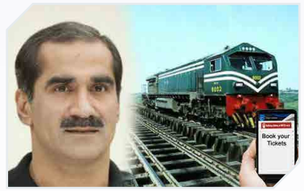
One of the studies suggested that e-ticketing was the fastest growing category, which became a reality all over the world in just short span of time. This forecasts an acceptance and future of the m-ticketing system in Pakistan. Not only travelling but it will also serve as a mode of entry to a small but growing number of entertainment events like concerts, movies, plays, etc.

Tearing a ticket stub is replaced with a speedy swipe card system called e-ticketing and now a simple handset is just a few steps away to take its place

Introduction of services like Easypaisa, Timepey, Mobicash has enabled our industry to facilitate the rural areas of Pakistan. Long ago, PIA collaborated with Easypaisa, which allowed passengers to pay their fares from their own mobile phones via an Easypaisa Mobile Account. These types of services are available round the clock and offer customers an alternative payment process which is secure, reliable, and efficient.

Recently, Mobicash provided a feasible solutions to commuters by introducing first of its kind cash-less travel service. Travelers will be able to use Lahore Transport Company's bus services by loading cash onto their TPL Trakker's Near Field Communication (NFC) tag through a nationwide network of Mobicash agents. This technology was being used in Singapore and now commuters in Lahore would benefit from this technological advancement and the system would run on build-operate-transfer.

Not only the bus services, but the railway ticketing of Pakistan will also facelift its structure focusing on the importance of technology. Saad Rafique, Railway Minister of Pakistan has also announced that the IT Department of Pakistan railway will be revamped and an IT system will be implemented. A project for installation of an e-ticketing system in Pakistan Railways has already been decided which will be completed in 10 month time.



After the successful completion of e-ticketing project the focus will be shifted to m-ticketing, where people will be able to purchase tickets through their mobile phones.

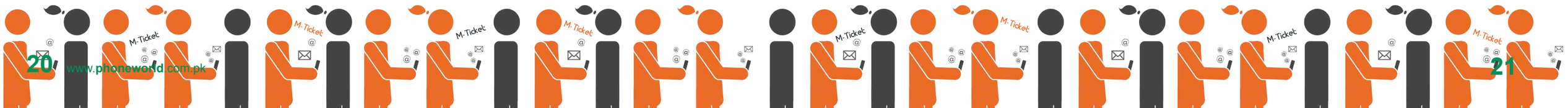
Introduction of services like Easypaisa, Timepey, Mobicash has enabled our industry to facilitate the rural areas of Pakistan

M-ticketing is a perfect example of self-service, m-economy where the Internet has now become the domain of information, options, bookings, and capacity-allocation.

A project for installation of an e-ticketing system in Pakistan Railways has already been decided which will be completed in 10 month time. After the successful completion of e-ticketing project the focus will be shifted to m-ticketing, where people will be able to purchase tickets through their mobile phones

To stand the test of time, Pakistani companies and operators need a mixed-approach implementation that is influenced by globally tested strategies, along with local elements.

It might have failed in some parts of the world, but in Pakistan, we are pretty confident that it is here to stay and grow more speedily than ever.



NATIONAL

By Rizwana Khan

THE THRIVING STARTUPS CULTURE OF PAKISTANI IT INDUSTRY

As the world is moving towards smart cities and Internet of Things, smartphones have become the most powerful and trend setting gadget among all the developments and advancements. With the success of smartphones, mobile application development has also become one of the fastest growing industry in the world. It is because of these interesting and customized applications that have provided the basis for smarter and more connected societies.

Like rest of the world, Pakistan's IT industry and mobile application sector is thriving with creative and interesting mobile applications developed for local and international market. Be it for Google Play, Apple App Store, Windows Phone Store, BlackBerry App World or Nokia Store, Pakistani app developers have developed wide variety of high-rank apps for all platforms. they have created some amazing apps including Ninja Fruit Bash, TenPearls, Groopic, Clean Lahore App, Duddoo Aur Dhobi, Olaround, application for Shaukat Khanum Memorial Hospital etc. The number of apps created by Pakistani developers is overwhelming but it is about time that transitional step from quantity to quality is taken, because only then we will be able to achieve the top app makers position in the international arena.

Private and governmental organizations can play a vital role in highlighting the true potential of Pakistani app development industry and luckily both sectors have recognized their responsibility and taken up actions for the progression in the said field.

The most evolved startup culture can be seen in the IT industry and more specifically in mobile app development where the potential is immense and quite impressive

A latest trend that has taken the world by storm is the startup culture as the focus has been shifted from brick and mortar enterprises to idea-based digital economies. This startup trend has also hit the world of technology and the concept especially became popularized in Pakistani where unemployment is soaring with one of the highest percentage of youth around the world. A Healthy start up culture is what is needed right now to give a socio-economic hope to the people as it is a good way for self-empowerment and betterment of the society.

The most evolved startup culture can be seen in the IT industry and more specifically in mobile app development where the potential is immense and quite impressive. 3G/4G has most certainly opened new doors to progress, according to PTA's latest data the number of mobile broadband users of 3G and 4G have reached 12 million at the end of March, 2015.

Pakistani App developers have created some amazing apps for national and international market, including Ninja Fruit Bash, TenPearls, Groopic, Clean Lahore App, Duddoo Aur Dhobi, Olaround, application for Shaukat Khanum Memorial Hospital etc

This growth in 3G/4G subscribers also indicate increased level of awareness among Pakistani people regarding smartphone functionalities and applications and many individuals and companies entered app development world.

It is a very healthy sign that both government and private organizations are showing their commitment towards this booming industry. In order to show support and encourage individuals and startups who are engaged in the creative process of app development, Telecommunication Authority (PTA) took up an initiative by launching a competition "Pakistan Mobile App Awards 2015" in partnership with all mobile operators, Internet Society (ISOC) Asia-Pacific Bureau and Samsung.

The purpose of this competition was to provide a platform for inventive youth of the country and to boost mobile app development industry. Plan 9 is another notable initiative that is taken by the Punjab Information Technology Board and since its conception, Plan9 has incubated over 60 startups. On the other hand, private startups and incubation centers have also made their mark in app development industry. P@SHA, Peshawar2.0, invest2innovate, PurePush, LUMS Center for Entrepreneurship, and Code for Pakistan are among the prominent entrepreneurial organizations that are promoting and supporting app development in Pakistan.

We have the resources and the talent all we need is some support that can take us to the right direction. This is the right time to make the strike; with all the talent, budding startup culture, tech-savvy populace and facilities, we can become the largest mobile application developers in the world.

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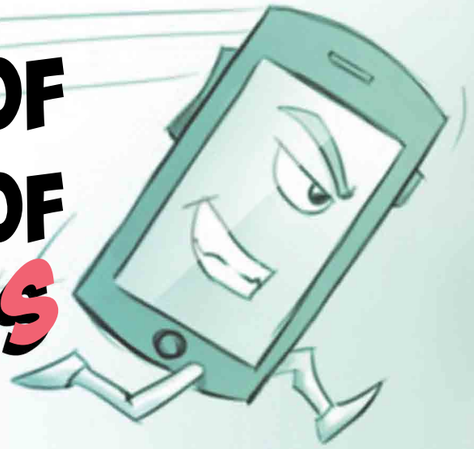
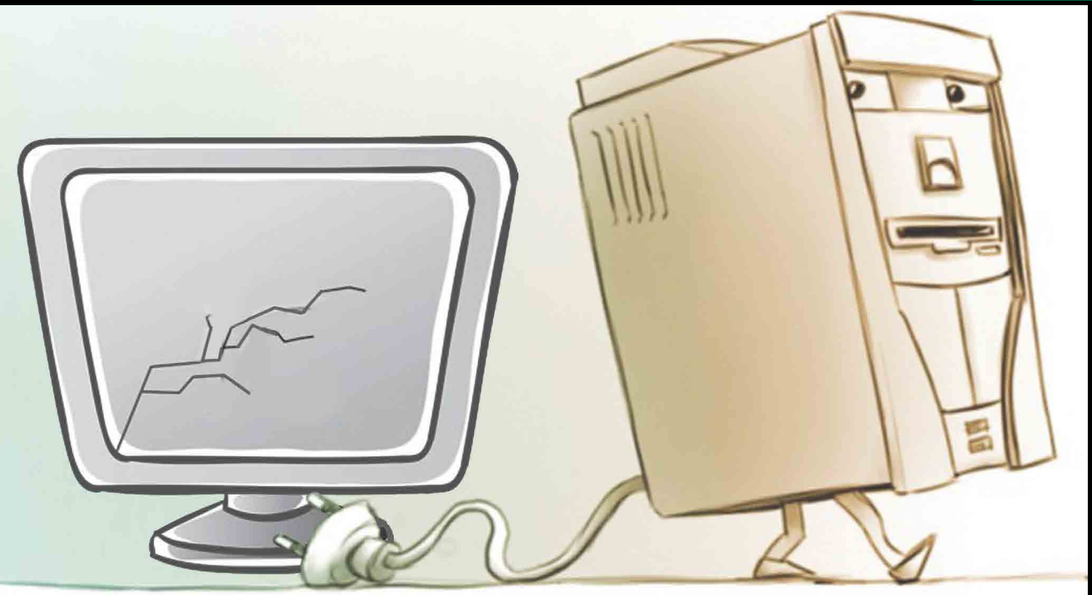
FEATURE

By Saima Ibrahim

BLEAK FUTURE OF PCs AND RISE OF SMARTPHONES





Technological change has always been the important part in evolution of mankind. Everyday a new marvel and latest invention becomes a part of our lives. The journey from Charles Babbage's first ever computer to desktops, laptops, tablets and smartphones, elucidates the most thrilling and exciting part of human survival since its existence. No matter where we are sitting, every minor information related to any element of the world is at our right click now. Who knew that one day a room size computer would be made compact to such an extent that we can hold it in our hands. Now gadgets are more trendy and easy to hold. Due to the ease and user-friendly nature of these devices we have seen that the huge computers or PCs are now replaced by trendy smartphones and tablets. Therefore, this shift from PC to cell phone is the biggest of its type.

Due to the ease and user-friendly nature of these devices we have seen that the huge computers or PCs are now replaced by trendy smartphones and tablets

Worldwide people are spending more time on their smartphones than on traditional PCs, suggested by many studies as well.

Global shipment of PCs and laptops is stagnating day by day; whereas the influx of smartphones is still on the rise

This is also evident from the fact that global shipment of PCs and laptops is stagnating day by day; whereas the influx of smartphones is still on the rise. Buyers are spending more time on their phones in the same way as they use to do on their computers, they are also spending more money in buying these trendy devices. The outcome is quite obvious that soon mobile devices will surpass PCs.

Logging into social media from smartphones is as easy as ABC these days and to look at the other side of picture, PCs or even laptops are not that frequently accessed by users in their busy life style. According to the market researcher International Data Corporation's latest report, worldwide personal-computer shipments have dropped 2.4% in the fourth quarter as demand from businesses for new machines has actually declined. Many reasons have contributed to this decreased use of PCs as now there are many game-changers in the market and people are facilitated with many other classy options. The IDC report also highlighted that some of the decline was offset by rising interest in Google Inc.'s Chromebooks, which are low-cost laptops running Google software, and promotions by Microsoft Corp. around its Windows 8 software and Bing search.

According to the market researcher International Data Corporation's latest report, worldwide personal-computer shipments have dropped 2.4% in the fourth quarter as demand from businesses for new machines has actually declined

PC sales have been under pressure for several years as consumers increasingly do more computing on mobile devices such as smartphones and tablets as they are easier to handle.

Late Steve Job, the CEO of Apple, also prophesied about the future of smartphones and tables. He added to this tech-war that soon PCs will be surpassed by fashionable tablets and cell phones. The recent crazy tablet and smartphone growth has clearly indicated that 2015 will be the year in which Job's post-PC prediction will become reality.

Late Steve Job, the CEO of Apple, also prophesied about the future of smartphones and tables. He added to this tech-war that soon PCs will be surpassed by fashionable tablets and cell phones

As internet is changing, there are multiple things we can do with our phones in coming years as compared to the oversized personal Computers of 90's. Previously sitting in subway and making a Skype call was an over-loaded idea, even making a video call via 3G/4G connected pocket-sized device was just not plausible.

The search giant Google has announced its plans to change its ranking method accordingly through a brand new algorithm. Browsing for information or study, entertainment, social websites, news or media, online shopping, gaming etc. all are now easily accessible through smartphones and tablets.

Smartphone's victory over PC is also highlighted by Gartner, a leading data analyst, according to which Worldwide sales of smartphones to end users recorded fourth quarter of 2014 with an increase of 29.9% from the fourth quarter of 2013 to reach 367.5 million units. And Apple is on the top since 2012 in this competition as the following chart indicates:

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This increased mobile market can prove to be a cash-cow for mobile industry in coming years. Mobile giants like Apple, Samsung, Huawei, Lenovo, Xiaomi etc. are already in competition to launch their best devices and attract their users.

	Q4 2014		Q42013	
Units	Market Share	Units	Market Share	
Apple	74,832	20.4%	50,224	17.8%
SAMSUNG	73,032	19.9%	83,317	29.5%
lenovo	24,300	6.6%	16,465	5.8%
HUAWEI	21,038	5.7%	16,057	5.7%
Xiaomi	18,582	5.1%	5,598	2.0%
Others	155,701.6	42.4%	111,204.3	39.3%
Total	367,484.5	100.0%	282,866.2	100.0%

Source: Gartner (March 2015)

The mobile economy is blooming at an even faster rate than expected by many think tanks of the industry. Although PCs might not completely be replaced by other devices in the near future but their use will definitely diminish to a larger extent.

By M.Bilal Abbasi

By Saima Ibrahim

Emerging Trends of Digital Media Marketing in Pakistan

The never ending advancement of IT has brought huge changes to the way businesses do advertising and marketing toady. The rapid evolution of digital media has created new opportunities and avenues for advertising and marketing. Fueled by the explosion of devices to access digital media, this has led to the exponential growth of new techniques, “digital advertising” being one of them. It has become even more difficult to convince people as today they have lot more options to pick from. That is why, companies today find it quite challenging to position their products and services in the market.

Social Media Marketing is the most famous and easy way of digital marketing, which is very common in Pakistan

Digital marketing is often referred as ‘online marketing’, ‘internet marketing’ or ‘web marketing’. Digital marketing is different from the traditional marketing strategies as it involves use of channels and methods that enables an organization to analyze marketing campaigns and understand what methods are working and what are not typically in real time.

Communication in the business environment has metamorphosed in many ways. It is no longer enough to derive strategies to reach out to people in the limited spectrum of consumers, stakeholders, associates and employees through traditional mode of communication.

Unfortunately, Email marketing is not a common practice in Pakistan but in foreign countries like US, Canada, and Russia. it is an influential marketing strategy used by multinational companies

Today, brand communication is all about individually connecting with people and retaining that connection where digital marketing has become the main assistance.

Digital media is an ever growing source of news, shopping, social interaction and entertainment and now consumers are even more exposed not just what your company says about its product but what friends, media, peers and relatives are saying as well. People want to have the brand they can trust or can relate to.

Pakistani companies are also adopting different digital marketing techniques to enhance their brand’s awareness. Typically there are many digital marketing tools which are used to gain interest of customers and to exhibit products to people around the world. These tools consist of:

- Email Marketing (Advertising, Newsletter and Promotion)
- Pay per click (PPC) Marketing
- SEO Link Building (Content & Keywords, Accessibility, Technical and Compliance)
- Social Media Marketing (Content & Keywords, Accessibility and Technical Compliance)
- Online Presence (Website, Forums, Blogs/News portals and Online Advertisements)

Among all these tools, Social Media Marketing is the most famous and easiest way of digital marketing, which is very common in Pakistan as well.

Despite the fact that the internet is now increasingly available all around us via 3G/4G Services, Wireless Broadband, DSL, Pakistan is still lacking the level of digital inclusion that was expected

Another common method of digital marketing is Email, which is one of the quickest and most cost effective way to promote your business, to stay back in touch, to generate enquiries and drive sales.

To be successful, an email campaign needs planning, realistic goals, timing and a secure platform to support it. Unfortunately, Email marketing is not a common practice in Pakistan but in foreign countries like U.S., Canada, Russia it is an influential marketing strategy used by multinational companies.

Marketing through cellphones’ SMS became increasingly popular in the early 200s in Europe and some parts of Asia now this trend is also gaining popularity in Pakistan

Marketing through cellphones’ SMS (Short Message Service) became increasingly popular in the early 200s in Europe and some parts of Asia when businesses started to collect mobile phone numbers and send content. On average, SMS messages are read within four minutes, making them highly convertible. This trend is also gaining popularity in Pakistan, Political party Pakistan Tehreek-e-Insaaf has used maximum benefit from its nationwide SMS campaign.

Pakistan is an emerging market, hence huge efforts are required to bring the international standards of “digital marketing” to generate more revenues for businesses

Despite the fact that the internet is now increasingly available all around us via 3G/4G Services,

Wireless Broadband, DSL, etc Pakistan is still lacking the level of digital inclusion that was expected. Although Pakistani marketers have realized the true potential of digital marketing but they can only reap the benefits when people will react to digital marketing trends. They need to go an extra mile to get a firm grip in this new hyper-fragmented world and attract unaware Pakistani consumers.

Digital marketing is different from the traditional marketing strategies as it involves use of channels and methods that enables an organization analyze marketing campaigns and to understand what methods are working and what are not typically in real time

Pakistan is an emerging market, hence huge efforts are required to bring the international standards of "digital marketing" to generate more revenues for businesses. Here are the digital marketing trend that Pakistani marketers should work on to increase their customer base and loyalty.

By Rizwana Khan

Top 10 most Dangerous Things People Do With their Smartphones

1 No password on their smartphone

2 Auto sign-in for banking and financial websites

3 Use Smartphone While Driving

4 Click on links in fraudulent emails

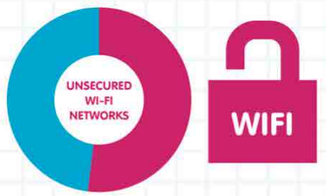
5 Post photos online while on vacation

6 Post photos online without turning off location settings

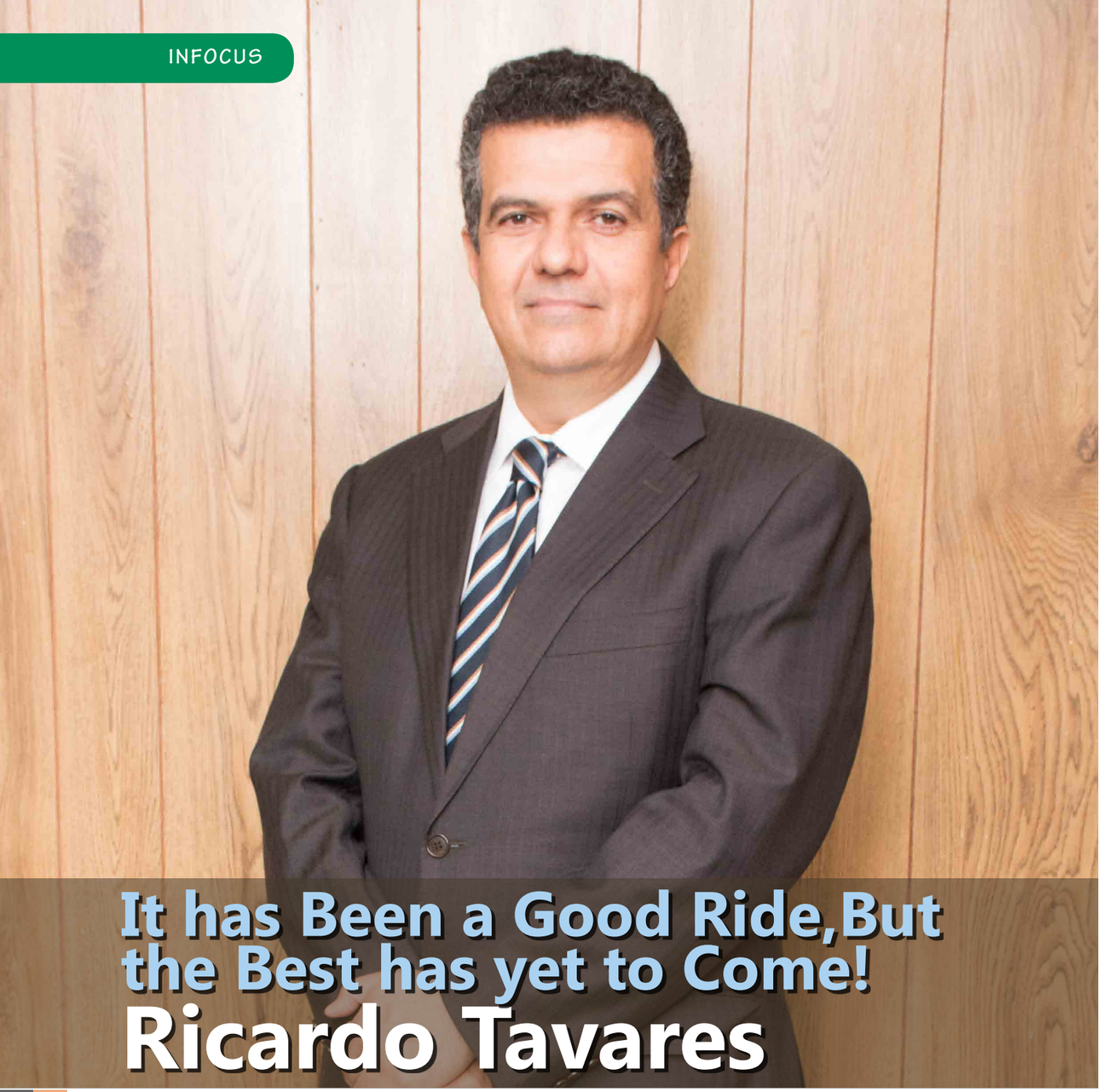
7 Share personal data with fraudsters who call pretending to be from their bank

8 Sport a naked smartphone

9 Connect to unsecure wireless networks



10 No smartphone insurance



It has Been a Good Ride,But the Best has yet to Come!

Ricardo Tavares

By Rizwana Khan | By Saima Ibrahim

TechPolis provides international consulting services to leading players in the mobile technologies sector and helps them to navigate policy and regulatory challenges by guiding government relations, building industry alliances, designing advocacy campaigns, and providing crisis management. TechPolis' experience is concentrated in five regions: Middle East & North Africa, South & Central Asia, Southeast Asia, and Latin America.

Ricardo Tavares is a leading international consultant on ICT policy and regulation. From 2004 to 2010 Ricardo was Sr. VP at the GSM Association, the international trade association for mobile operators. He was a Sr. Director of International Operations at San Diego, California-based Wireless Facilities, Inc. from 1999 to 2003, and was General Manager of WFI's Brazil office in 2001/02, managing the roll out of 1,500 cell sites from radio planning to civil works to core network connectivity.

In an exclusive interview with PhoneWold team (PW), Ricardo Tavares (RT) shed light on his ten year journey in Pakistan and the ups and downs he saw in Pakistan's ICT sector. Here is what he said.

PW: How did you start your work in Pakistan?
RT: In 2005 I was working as a Senior Vice President for Public Policy at the GSM Association. One morning I got a call from Tom Phillips, Chief Regulatory Officer, who asked me if I could go to Pakistan. The answer was yes so few weeks later I landed in Islamabad to meet the CEOs of the five operators and their heads of strategy, regulation, and communications. I still remember our first meeting at Mobilink's office in Jinnah Avenue. It was a great experience that I still remember with fondness even 10 years later.

Over the years I have developed numerous solid friendships in Pakistan

Over the years I have developed numerous solid friendships in Pakistan. I have also worked on various aspects of policy and regulation in the country from regulation of WLL, taxation policy, mobile termination, and rates of 3G/4G auction. As I tell my Pakistani friends, it has been a good ride, but the best has yet to come.

PW: How would you explain your experience of working in Pakistan and to what extend was it beneficial for you and your organization?
RT: When I first came, I was drawing on my experience acquired in Brazil with the regulation of WLL. That made addressing that issue in Pakistan easier because I had already dealt with, and successfully resolved a similar case in Brazil. Soon, however, I was using experience acquired in Pakistan to deal with problems in other countries.

A better overall taxation policy would make taxation fairer in the country, allowing for phasing out telecom-specific taxes, thus increasing adoption and giving a big boost to the economy

My experience in Pakistan added new perspective to my work. One example of this is the question of how operators can remain profitable with ARPU lower than two dollars. There are very few places you find ARPUs as low as Pakistan but operators here have managed to pull out revenues at end, there are lessons for other low-ARPU countries. I also learned a lot about taxation. In societies where the middle class, landowners and the rich mostly do not pay any taxes, the mobile industry becomes a target because it is a very transparent industry–it reports to stock exchanges and investors care about companies being

compliant with the rule of law. But the truth is, high taxes on mobile in Pakistan hold back the adoption of mobile services. A better overall taxation policy would make taxation fairer in the country, allowing for phasing out telecom-specific taxes, thus increasing adoption and giving a big boost to the economy.

General policy conditions must be enticing for operators to acquire spectrum

PW: What is your vision for IT in Pakistan?
RT: The IT industry is very important in South

because Pakistan does not present these conditions. Can this change over time? Yes, it can. But it must start with power. The government is right to focus on power generation. Let's do it for the 21st century, with smart grids for distribution, linking energy and telecom. Once power issue is addressed, mobile manufacturing industry can become competitive in Pakistan, and you can take it from there to address labor and logistics, which includes supply chains.

PW: What should we expect from the remaining spectrum auction and what benefits will it bring to the country?
RT: We just had the 3G and 4G auctions a little over a

demand is strong, and spectrum pricing is more attractive than the cost of massive adoption of new methods of using spectrum efficiently, operators will opt for spectrum. However, let's first look at the demand for data and incentivize it.

Telecom is a great source for building positive image for Pakistan. For example, very few countries have won as many awards from GSMA as Pakistan

positioning. It is vital to use the digital economy to bring social good and help to address the serious problems of the country.

PW: What are the challenges for the Pakistan in the coming years and how should our ICT leadership prepare for these challenges?
RT: My thinking is very simple. I come from a country, Brazil, with a population close to 200 million people. I see Pakistan also with a population close to 200 million today. In 20 years, Pakistan's population will be bigger than Brazil's. Demographics are a very important determinant of economics. Pakistan will stay here and its population will grow. Telecom is an

Asia. Pakistan has number of excellent schools of engineering and a cluster of creative and well-trained engineers and technology business leaders in Islamabad, Lahore and Karachi.

The country also has a strong mobile sector. This provides a great platform for technology innovation. There are lot of companies here doing great stuff, many of them under the radar. Every time I visit, I meet with very interesting innovators. I am a firm believer in the capacity of the local IT industry to address real problems in Pakistani society, from the education of girls and rural kids to innovation in IP and digital security. It can also generate hard cash for the country on the IT outsourcing side.

PW: What potential do you see for local assembly and local manufacturing of Telecom Equipment especially mobile phones in Pakistan?
RT: I find it very difficult to see how a handset-manufacturing industry can be created in Pakistan without any of the basic elements of competitiveness. The electronics industry is the most global industry in the world. It goes where there are competitive conditions in terms of infrastructure, labor, and logistics. The reason this industry is not here yet is

year ago. Operators and users are experimenting with high-speed mobile data, creating data traffic. I see the industry at the moment mostly satisfied with spectrum. Globally, we will see mobile operators adopting new technology solutions such as small cells and heterogeneous networks to improve spectrum usage.

Telecom industry has seen a tremendous acceptance and generated enthusiasm in Pakistani society

Governments used to planning their budgets by counting on collecting a lot of money from the telecom industry may get a surprise. The level of debt/EBDTA of operators is generally getting above 2x. Financial markets do not like that and punish operators when this happens. Spectrum has become a major source of debt for operators as they have to borrow money to pay for it.

Now, there are alternatives emerging with Warid, for example, deploying small cells here in Pakistan. Market demand for spectrum is not there right now in Pakistan.

But of course it all comes down to pricing. If data

PW: According to you, what has changed in the Pakistan telecom scene in the past 10 years and what prospects it has for the future?
RT: I think the telecom industry has seen a tremendous acceptance and generated enthusiasm in Pakistani society. It also attracted a great deal of foreign capital to the country, which has remained committed instead of walking away at any sign of trouble. Successive governments have begun to better understand the industry. The future is really of increasing government-industry partnership to tap the incredible potential.

PW: As a technology consultant, what do you think we need to do to get more of that sort of traction globally? What do you think is missing?
RT: I will be totally frank, which is the only way to really help. Telecom is a great source of good for building positive image. For example, very few countries have won as many awards from the GSMA as Pakistan. In fact, only Brazil has won as many as Pakistan. This must be a coincidence but there are brand destroyers such as insurgency, terrorism and violation of human rights which are counter-productive. I would like to see the telecom industry and government working together to maximize the benefits of the positive telecom branding and

essential service and a driver for economic growth. For the country as a whole, we also have to look at a major structural determinant: geography. Pakistan is part of several "regions": South Asia, the broader Middle East, and Central Asia. It links China to the Gulf, Afghanistan to the ocean, and India to Central Asia. This is a profile for a trading country.

Pakistan will stay here and its population will grow. Telecom is an essential service and a driver for economic growth

It requires visionary leadership to look 50 years ahead and say: let's build a better relationship with all of our neighbors and build one of the greatest trading nations the world has ever seen - Dubai, Singapore or Hong Kong on steroids. Lots of things are difficult, but let's start enhancing links with fiber optics–it is a great and safe way to do it. Data is the new currency, and you have to build a lot of capacity and links to benefit from this new data-driven world.

PW: How do you see Mobile Education in Pakistan as key to fill up the large gap we have in removing illiteracy?

RT: Pakistan should become the world champion of mEducation. Let's put research & development into both technology and educational practices. There are resources for it in the Telecom R&D Fund. You must transform your weakness into your strength. Education is dismal in this country but the status quo can be disrupted. This is what technology is all about. Let's fight the good fight for education side-by-side with teachers and technologists. Let's involve government and mobile operators working together with teachers and IT innovators. There are great opportunities in our times, and mEducation in Pakistan is one of those.

Our niche is really managing high-stakes policy and regulatory cases

PW: How much pressure does international competition put on you? Who do you consider your biggest competition?

RT: TechPolis is a small firm. We work with very big clients. Our niche is really managing high-stake policy and regulatory cases. We follow closely what the key players do in our field, but our value added is really knowing superbly well the issues and having the operational expertise and flexibility to work hands-on with firms and organizations to get them through crucial moments. We excel in that because we are nimble, flexible and focused. Our research-based approach combined with strong communications experience makes a huge difference.

Data is the new currency, and you have to build a lot of capacity and links to benefit from this new data-driven world

PW: What will TechPolis look like in the future, say five years from now?

RT: We are already doing a lot of work on the basics for the Internet of Things, 5G and hetnets. But the real question of the future is how mobile digital will help us to solve society's problems in education, safety, citizenship.

PW: Anything you would like to say to our readers?

RT: I have gotten to know Pakistan very well. It's one of the countries were I have a lot of personal and professional friends and truly enjoy visiting. I will never my role in making a difference in Pakistan.

Rapid Fire

Your first mobile phone?
Nokia.

Your most frequent caller?
My wife.

Who do you call the most?
My wife.

Which Pakistani Dish you like the most?
It's actually a sweet, Halwa, which I like in all flavors.

Favorite Brazilian Dish that you eat?
Rice and beans mixed is really the day-to-day food in Brazil, and it is the best Brazilian dish for me. You can add meat, fish, or eggs, and have it with a mixed salad (lettuce, tomatoes, and onions), but the base is really simple, delicious and healthy.

Favorite Pakistani Restaurant?
Monal, on top of the hills overlooking Islamabad.

Is your smartphone a distraction for you?
Yes, it is. Social networks are part of my day-to-day work but I must confess that sometimes I get carried away.

Which application do you use the most?
Google maps.

Which handset are you using right now?
Samsung Galaxy 5, but I miss the old Blackberry from RIM, which was kind of an extension of my body.

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Smartphone Review

By Ikram Ullah

QMobile NOIR Z8

THE SLIMMER, SLEEKER AND TRENDIER PHONE

After the release of QMobile Noir Z7 which had a 1.7GHz Octacore processor along with 1GB RAM and 16GB ROM and was known as the sleekest Phone, QMobile has now launched another flagship phone that is even a step ahead of the previous one.

QMobile's new Noir Z8 has once again exceeded the expectations of public. The LTE enabled is truly a flawless phone; the design, specs, display, sandstone back cover and last but not the least, competitive price will make every customer rush to get the device.

The most important feature of Noir Z8 is the Quad Core processor with 1.2 GHz speed and QUALCOMM Snapdragon-410 chipset (MSM8916).

Design

The sleek design and easy grip with sandstone back cover is the main attraction of this phone. The device is fully black leaving the two side supporting rigid bars that are installed for the support of Noir Z8 from shocks and breakage.

Display

QMobile Noir Z8 has a wonderful display which can amaze the viewers when a High Resolution Movie is being played. The screen is 5″ with HD Display with 1280*720 resolution with 320 dpi.

The GPU Version is OpenGL ES 3.0 with frequency range 200 ~ 400 MHz. The screen supports up to 5 fingers consecutively.

OS

Noir Z8 comes with the latest version of Android 4.4.4 (32-bit) and with Android SDK Version 19 with the Kernel of Linux version 3.10.

Set of Choices

- What most of the users want in a smartphone is a good camera, which Noir Z8 does have.
- All users need is a fast and efficient processor and display for HD graphics as do the QMobile Noir Z8 have in it.

Performance and Benchmarking

Benchmarking is a technique to check for the processor's speed, efficiency of RAM, page placement and page replacement strategies regarding ROM and benchmark it to get best results for generating complete analysis of device performance.The following apps have been used for QMobile Noir Z8 Review which including Antutu, Vellamo, GPU-Bench.

AnTuTu

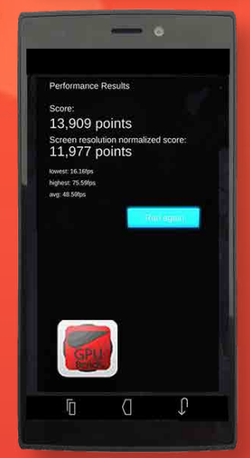
Noir Z8 scored better as expected and it marked 21240 points on the board and found its position just below ASUS ZenFone 5, which is an international brand with better specs.

Vellamo

Vellamo is a Qualcomm's application that performs numerous tests over the devices and checks for the performance and approximation of single-core, multi-core and the speed, display and look of browser and previews the results over the board in a graphical form.

GPU Benchmarking

GPU Benchmarking is a Graphical Processing Benchmarking application that is used to check the graphical performance of a device. Noir Z8 scored 13,909 points with its Qualcomm's Vender with GPU Frequency ranging in between 200MHz~400MHz.



Specs

Processor: 1.2GHz Quad-core processor,CPU Qualcomm Snapdragon-410

Display Size: 5.0 Inches 1280*720 resolution with 320 dpi

Display Color: Display Colour

Networks: **2G:** GSM 850 / 900 / 1800 / 1900
3G: HSDPA 850 / 900 / 1900 / 2100
4G: LTE band

Memory: 16GB built-in,2GB RAM, microSD card (supports up to 32GB)

Color: Black

Battery: 2400

Entertainment: FM radio, 3.5mm audio jack, MP4/WMV/H.264/H.263 player, MP3/AAC/WMA/WAV player, SNS integration, Google Talk, Games (built-in + downloadable)

Other Features: Dual SIM, GPS + A-GPS support, Geo tagging, Google Search, Maps, Gmail, Youtube, Calendar, Torch, Speakerphone

Messaging: SMS(threaded view), MMS, Email, Push Mail, IM

Pros

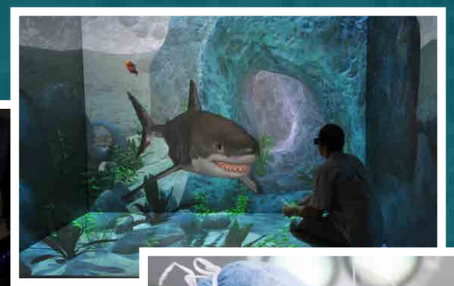
- Better camera of 13 MP.
- 2GB Ram and 16 GB Rom.
- Quad-core processor of Qualcomm with model Snapdragon-410 with 64 bit as its type.
- 4G-LTE support.
- Slim body with beautiful sandstone back cover.

Cons

- Back panel is removable but it has tiny locks which makes it a difficult to remove

Rating

★★★★★



INTERNATIONAL

By M.Bilal Abbasi

THE CYBERNETIC WORLD OF VIRTUAL REALITY

The concept of Virtual Reality (VR) has been around for decades, it's just now people are becoming aware of it. Virtual Reality has promised to change the world since late 60's. In 1960 Sensorama Simulator become first VR machine to stimulate all senses, it included a stereoscopic display, fans odor emitter, stereo speakers and a moving chair. Sensorama Simulator was created by cinematographer named Morton Heilig, he also invented a head mounted television display designed to let users watch television in 3-D.

Virtual reality (also known as immersive multimedia) is a computer-simulated environment that replicate or simulates real-world environments, as well as simulates physical presences in real or imagined worlds. VR technology has traditionally been a virtual sight- and perhaps sound-based experience, but has the potential to recreate other sensory experiences, such as virtual taste, smell, and even touch.

It was in 2014 VR stepped into the consumers spotlight in the form of a prototype head mounted display set called the Oculus Rift

It was in 2014 VR stepped into the consumers spotlight in the form of a prototype head mounted display set called the Oculus Rift. Palmer Luckey the inventor of the Oculus Rift aimed to create a platform for immersive video games but today the developers from many fields like aviation, tourism, medicine are running wild over endless possibilities. The Oculus Rift's inspired many to create and focus on VR headsets, Oculus in now owned by Facebook.

Oculus and Samsung have collaborated together to launch one of its model publically called the Samsung Gear. The Samsung Gear uses technology from Oculus and turns Galaxy Note 4 into a VR headset. Another VR headset was announced by Samsung at MWC 2015 that uses the Samsung S6 or S6 edge to give its users the best viewing experience.

Samsung and Oculus are getting some stiff competition as HTC also revealed it VR headset called the Vive

But this year both Samsung and Oculus are getting some stiff competition as HTC also revealed it VR headset called the Vive. The Vive is powered by gaming company Valve and it sounds like it'll outperform anything we've seen yet.

Oculus and Samsung have collaborated together to launch one of its model publically called the Samsung Gear. The Samsung Gear uses technology from Oculus and turns Galaxy Note 4 into a VR headset

The biggest advantage of HTC's Vive among others is that it lets your walk around the physical world to move you in the virtual one, so you feel more involved in the experience than you would if you had to move using a games controller. Of course, walking around the real world while looking at a virtual one could result in bumping into walls. But HTC and Valve have thought of that, and real world obstacles are marked in the virtual world.

Sony cannot be excluded for the ongoing VR headset race as it has also announced its VR headset called the Sony Morpheus. But Morpheus isn't expected to be available publically till next year. Sony promised that when Morpheus arrives people will be able to play graphics at a whopping 120 frames per second, this is faster than 90 frames per second that others could manage and could end potential motion sickness.

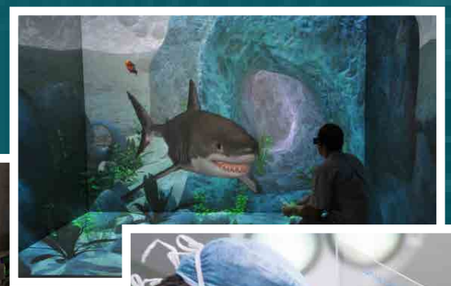
Virtual reality is used in many areas ranging from Healthcare/Surgery, Gaming, Education, Military, Architecture, Entertainment, Sports, Rehabilitation/treatment of phobias and others. The list of applications for VR is endless. Developers can take advantage of this platform and use it to unlock various impossibilities.

Virtual reality is used in many areas ranging from Healthcare/ Surgery, Gaming, Education, Military, Architecture, Entertainment, Sports, Rehabilitation/ treatment of phobias and others

From the Healthcare prospective development can be done to develop such applications which can be used to train the next generation of doctors, paramedics and other medical personnel. VR headset can be used in medical schools as a mean of education and instructions. It can enable medical students to acquire knowledge and understanding about the human body by means of interaction within a virtual environment.

Medical students can perform 'Hands on' procedures but in a safe and more controlled environment. They can make mistakes and learn from them without any risk of patient's life and death

Medical students can perform 'Hands on' procedures but in a safe and more controlled environment. They can make mistakes and learn from them without any risk of patient's life and death. They interact with a virtual patient and as a result of this, learn skills which they can then apply in the real world.



Telecommunications is another field which can utilize virtual reality technology, in particular mobile communications which enables easy access to a variety of VR based projects. The main challenge is to deal with a medium which mainly relies upon the tone of voice, intonation, gesture and body language as compared to spoken words. Spoken words only account for a very small percentage of the overall communication. But traditional forms of communication such as the telephone are being superseded by video conferencing, Skype and live chat. These communication mediums can be used on the internet and other similar systems and are seen as cheaper and more flexible.

Gaming is an obvious virtual reality application and is used in VR Headsets as it can portray virtual worlds and true gaming experience but there are a whole host of uses for virtual reality headsets

Telecommunications can be used to help virtual reality systems such as surgery simulation or telemedicine. An example of this is remote surgery in which images from that surgery can be transmitted to various locations around the world. It also enables surgery to be performed in remote locations using robotic technology and virtual reality.

Gaming is an obvious virtual reality application and is used in VR Headsets as it can portray virtual worlds and true gaming experience but there are a whole host of uses for virtual reality headsets. The entertainment industry is one of the most enthusiastic advocates of virtual reality these include gaming, virtual museums, galleries, theatres, virtual theme parks and many others fall into the category ‘edutainment’ in which the aim is to educate as well as entertain.

There are numerous ways VR headsets can be used to provide enormous benefits one of them is the use of VR headsets in military. As nowadays terrorism and security issues are one of the main concern not only for Pakistan but all over the world. VR headsets can be adopted by the military and can be used for training purposes particularly for training soldiers for combat situations or other dangerous settings where they have to learn how to react in an appropriate manner. A virtual reality headset or simulation can enable them to do so but without the risk of death or a serious injury. They can create a particular scenario, for example engagement with an enemy in an environment in which they experience this but without the real world risks. This has proven to be safer and less costly than traditional training methods. These may include flight simulations, battlefield simulations, medical trainings (on field) and vehicle simulation.

Virtual reality and its utilities is a form of technology which creates computer generated worlds or immersive environments which people can explore and in many cases, interact with

Virtual reality and its utilities is a form of technology which creates computer generated worlds or immersive environments which people can explore and in many cases, interact with. Virtual reality has its advocates and opponents which are mainly due to a lack of understanding about this technology and its capabilities. Unrealistic expectations coupled with lack of awareness regarding technical limitations means that for many people, virtual reality is difficult to grasp or even take serious.

By Rizwana Khan

The man Behind the First Tweet

Jack Dorsey

Dorsey is the creator of Twitter, the biggest micro blogging site on the Internet, with millions of users using its application every month and with over 1.6 billion search queries per day. Dorsey is also the founder and CEO of Square, a mobile payments company that has made a lot of noise during 2012 after raising one of the biggest rounds of funding from the Venture Capital industry. In 2008, he was named to the MIT Technology Review TR35 as one of the top 35 innovators in the world under the age of 35. For 2012, The Wall Street Journal gave him the “Innovator of the Year Award” for technology. Dorsey was announced as a new member of the board of directors of The Walt Disney Company on December 24, 2013.

In terms of technology, we‘re going to see a better and more immediate experience around the everyday things we do in life

In the tradition of computer science entrepreneurs such as Bill Gates, Steve Jobs and Mark Zuckerberg, he dropped out of college before receiving his degree. Instead, Dorsey moved to Oakland, California, and in 2000 started a company offering his dispatch software through the Web. Shortly after starting his company, Dorsey came up with the idea for a site that would combine the broad reach of dispatch software with the ease of instant messaging.

Dorsey approached a now-defunct Silicon Valley company called Odeo to pitch the concept. Later Dorsey, Stone and Odeo co-founder Evan Williams started a new company, called Obvious, which later evolved into Twitter. Within two weeks, Dorsey had built a simple site where users could instantly post short messages of 140 characters or less, known in Twitter parlance as “tweets.” On March 21, 2006, Jack Dorsey posted the world’s first tweet: “just setting up my twttr.” Dorsey was named the company’s chief executive officer. Co-founder Evan Williams replaced Dorsey as Twitter’s CEO in October 2008, with Dorsey staying on as company chairman.

Dorsey had set his sights on other projects. He became an investor in the social networking company Foursquare and launched a new venture, Square, which allows people to receive credit card payments through a tiny device plugged in to their mobile phone or computer.

On March 21, 2006, Jack Dorsey posted the world‘s first tweet: “just setting up my twttr„

FEATURE

INTERNET SLANG NEXT GENERATION LANGUAGE

LOL (Laugh out loud), SELFIE, TWERK (dance move), YOLO (You only live once), FOMO (Fear of missing out), Emoji, Derp, Blondie, Babymoon and the list goes on

Language is never static; it keeps on altering and adapting new words into common use or sometimes it attaches new meanings to old words. Although, it changes slowly but the technology and internet has energized the process by acting as a catalyst for emerging words.

I'm trying to highlight the impact and usage of 'Internet Slang' in our daily language. We see that every year, hundreds of new words and phrases that come from internet slang are added to the dictionary.

Some of the famous example of these words are, LOL (Laugh out loud), SELFIE, TWERK (dance move), YOLO (You only live once), FOMO (Fear of missing out), Emoji, Derp, Blondie, Babymoon and the list goes on.

However we cannot give all the credit to internet, as one language change that has absolutely been phenomenal is the 'text talk'

Internet is an amazing medium for languages to grow; online you show how dazzling you are by manipulating the language of the internet. However we cannot give all the credit to internet, as one language change that has absolutely been phenomenal is the 'text talk', a mixture of often vowel-free abbreviations and acronyms, just like TXT, GTG (Got to go), TTYL (Talk to you later), IDC (I don't care), TC (Take care), GR8 (Great), M8 (Mate), WTH (What the hell) and other abbreviations like FU (F--- Y--) if you know what I mean, =P.

The magic started when this mode of communication jumped out of internet and started merging into our language

Texting was first designed to be a quicker and easier alternative to a phone call, who knew this fast version of communication will become part of our language.

Whether it's Facebook, Twitter, Instagram, Whatsapp, or any other community of people on the Internet, one is bound to develop a tongue that refers to things that applies specifically to that community

Not only is this, but we would also acknowledge social media and smartphones for playing their role in flooding the language with new words and phrases. It is quite evident that smartphones have blurred the line between phone and internet, by becoming the most dominant stimulus on our channel of communication.

The magic started when this mode of communication jumped out of internet and started merging into our language. It grew so fast and large that it encompassed a large majority of the real-world population, where it is hard to differentiate between the previous and the new version of words.

Whether it's Facebook, Twitter, Instagram, Whatsapp, or any other community of people on the Internet, one is bound to develop a tongue that refers to things that applies specifically to that community. For instance, if one wants to communicate in this virtual world then being familiar with the words like OMG, LOL, LMAO, ROFL is a must.

It was also hard for Oxford Dictionary to ignore this 'Next Generation Language' referred as internet slang. As a result, several abbreviations and words took up their place in Oxford Dictionaries every year.

There is now a "seismic generational gap" between the older and younger generations when it comes to how often modern informal language is used

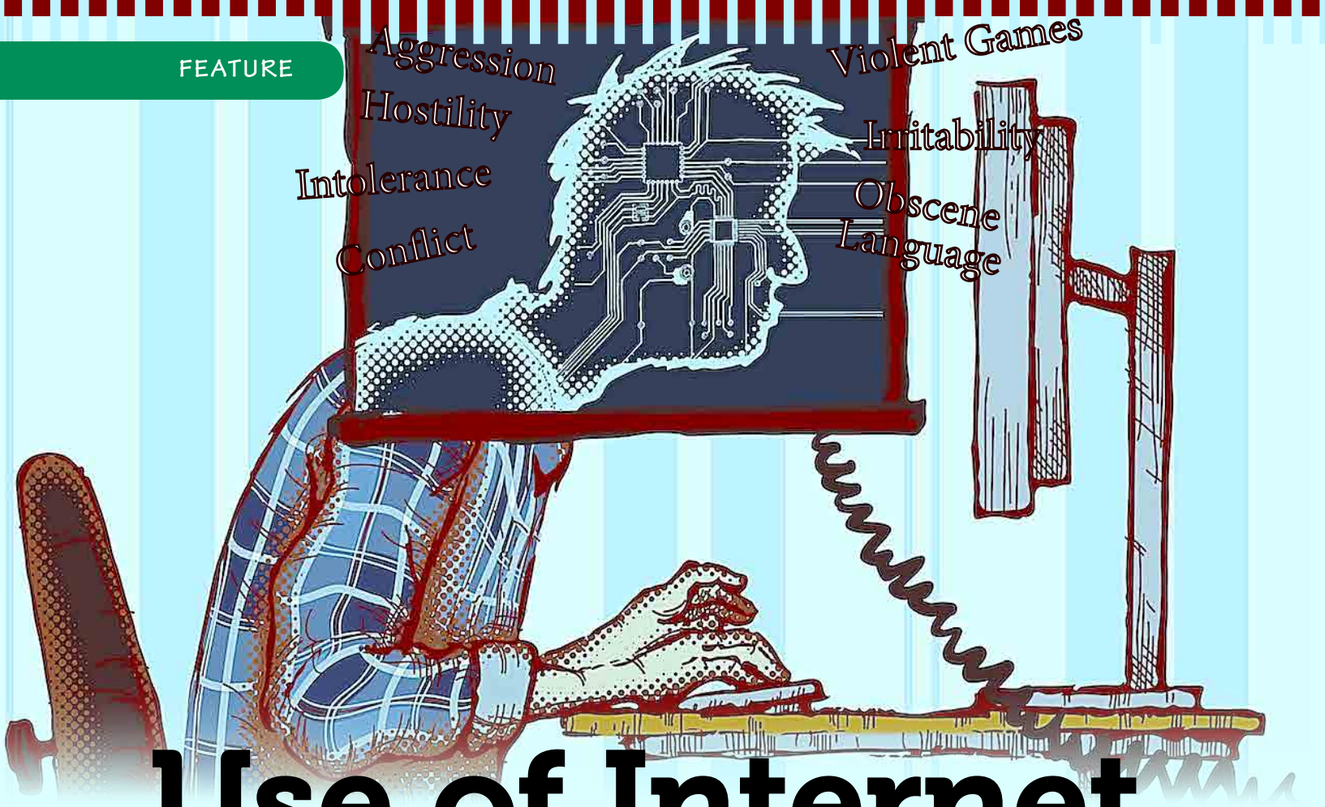
There are people who think that these informal additions to the language will have a level of violence that would leave English unrecoverable from internet slang's assault. However, we do have people who think that English language has accommodated and will continue to accommodate the pressures that various forms of communication may bring.

Most of the parents today think that teenagers speak an entirely different language on social media and messaging. There is now a "seismic generational gap" between the older and younger generations when it comes to how often modern informal language is used.

The next time you text, think about your linguistic kinship, and remember you are the 'Next Generation'

These arn't just social networks that are changing our language; it's the rise of technology in every home. It's the migration of wired Internet to wireless and the transformation from a PC to cellphone. This is the fast paced digital world; it has an inevitable impact on our lives and language, even on the people who aren't necessarily heavy Internet users.

The next time you text, think about your linguistic kinship, and remember you are the 'Next Generation'



Use of Internet and its Effects on Morality of Pakistani Youth

By Rizwana Khan

The technological evolution has been going on side by side with the human evolution for ages now, from advent of wheel to the invention of printing press, electricity, automobile, telephone, television and internet to modern weaponry, Internet of Things, genetic engineering, and space technology show the extraordinary evolutionary process of technological advancements, creating a better world to live in. But with all these progressions and innovations another thing that has been constant in the society is the meager attempt to keep peace and align technological advancement and morality.

A new cybercrime law has recently been introduced in th country but it is facing lot of criticism and new amendments to the law are already being suggested

It is true that splitting of atom and advent of internet has brought dramatic changes into the world but at the same time both have forced human race to evaluate the moral consequences of their use. Increasing use of internet has been a good influence in the domains of education, personal relationships and economy and has undoubtedly provided numerous opportunities to the people but at the same time it has also invited potential for deceit and irresponsible behavior. Technology is a manmade modification which can be either used for good or bad depending upon the person who is using it. Therefore, it is imperative to create a moral code for its regulation and use.

Internet and its effects on morality has been a hot topic of debate for many years, especially in a third world countries like Pakistan where literacy rate is quite low and religion is misinterpreted with conflicting social values, internet seem to be the only place to release frustration. Internet has no doubt provided a platform for interaction and communication but it has also created insensitivity towards other human beings and their sufferings and feelings.

With all these progressions and innovations another thing that has been constant in the society is the meager attempt to keep pace and align technological advancement and morality

Children play violent games, full of murders and human mutilation that now they have forgotten the sanctity of life and what it means to be compassionate. The absence of physical presence in the virtual world of internet has removed all fears from the mind of people so that they can say and do things that they can't even imagine doing in reality.

Intolerance, use of obscene language, hostility, aggression, conflict and irritability are common traits found in the youth of internet world. People have also found ways to make money on the internet which in return has given birth to other types of immoral activities such as identity, theft or hacking into personal accounts, selling of illegal stuff and goods, fraud among other things. Every day we hear about numerous cases of internet harassment.

Another alarming issue with regard to internet immorality in Pakistan is the news that Pakistan is among the top countries that access pornographic websites on internet. Chairman PTA Ismail Shah recently stated that 64,000 websites have been blocked so far, of which 50,000 pertain to pornography and the remaining relate to blasphemy. On the other hand, there are numerous terrorist groups' propaganda websites that contain misinterpreted verses from the Holy Quran, jihadi songs, statements in support of sectarianism and propaganda material against the security forces. These websites are being used for expansion into Pakistan by the Islamic State and al-Qaeda through brain washing innocent youth of Pakistan. It is strange that blocking YouTube, Facebook and Google was easy for the government but not these websites that are potential threat to sovereignty of our nation.

Fire is a good servant but a bad master, in the same way if we don't use internet properly and let it rule our minds the result would be disastrous.

In a third world countries like Pakistan where literacy rate is quite low and religion is misinterpreted with conflicting social values, internet seem to be the only place to release frustration

Firstly it is the responsibility of parents and religious institution to impart right teachings and core values in the children and then it is responsibility of government to design laws and moral codes under which process could be regulated without any hitches. Although National Response Centre for Cyber Crime is quite active but still no proper law has been introduced in the country, 2007's Prevention of Electronic Crimes Ordinance" was the last effort that was made to tackle the issue but after that no worth mentioning step was taken, even that ordinance that was in effect for just two years and was not renewed. A new cybercrime law has recently been introduced in the country but it is facing lot of criticism and new amendments to the law are already being suggested.

Chairman PTA Ismail Shah recently stated that 64,000 websites have been blocked so far, of which 50,000 pertain to pornography and the remaining relate to blasphemy

The civil society activist and experts from the telecom industry has raised its concerned regarding the law stated that unclear and ambiguous language of the bill could he used by the government for its personal benefits and impede the freedom of a common man.

With the advancements in technology it is imperative that we impart the proper education to our children about right and wrong, it is our responsibility to behave in a dignified manner. It is high time that we grab the bull by the horns instead of showing it our back and getting a lethal strike. As John Naisbitt has wisely said, "The most exciting breakthroughs of the 21st century will not occur because of technology but because of an expanding concept of what it means to be human."

The most exciting breakthroughs of the 21st century will not occur because of technology but because of an expanding concept of what it means to be human

By Kanwal Ayub

TELECOM CAMPAIGNS

TELECOM CAMPAIGNS

The advertising campaigns play a vital role in promoting a brand/product. A truly memorable campaign creates a visceral response – but one bad campaign can ruins it all. PhoneWorld keeps a close eye on the latest ad releases in telecom industry. Here is a critical review of the latest telecom campaigns.

Superior Quality

5 — Wi-tribe

Highlighted Feature:
A TVC showing the superior quality internet by Wi-tribe

Elegantly crafted! The idea was both fresh and perfect for an internet service provider. It was a 30 seconds TVC that pictured a group of guys on picnic taking instructions on how to cook from their wives.

It was a picture-perfect ad, perhaps just as rare. Not only did it invite reconsideration of a Wi-tribe's boring image; it connected most of us with the theme.

5 Rupees Offer

4.5 — Mobilink

Highlighted Feature:
FREE whatsapp, Facebook & 20MBs internet in just Rs. 5

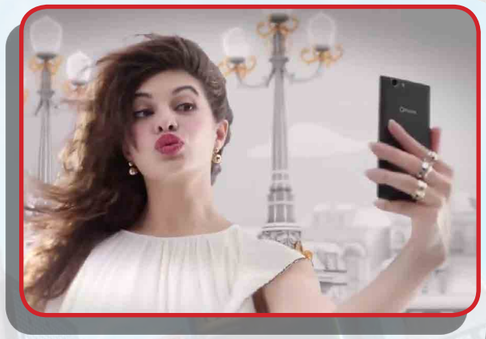
Mobilink, the major telecom behemoth of Pakistan has a clear-cut mandate of staying #1 in the arena. Not only it has unmatchable coverage and offers for the consumers, but it also connect with the users through its promotional campaigns.
This time, Mobilink does such a brilliant job in its '5 Rupees Offer' TVC; the concept was quite appealing and actors were new, as we are tired of seeing the same faces in commercials again and again.

Rivo Advance A200

4 — Rivo

Highlighted Feature:
The TVC introduced Rivo Advance A200 feature phone

Hina Dilpazeer (MOMO) is by far the most iconic, humorous and memed comedian of the country. She is funny as hell, loved by all, and has that effortless, don't-take-it-too-seriously confidence that makes her look natural.
The campaign focused on the voice quality of Rivo Advance A200 feature phone, where this handset solved Momo's hearing issue. Mobile companies have been doing humor ads before. But being a new player RIVO has done it better than others. I would give it an extra (*) for an excellent execution of the idea.



Qmobile Noir Z8

3.5 — QMobile

Highlighted Feature:
TVC showing the features and specifications of Qmobile Noir Z8

Qmobile repeated its history once again by hiring a foreign actress, who is known for her stunning looks. Yes! I'm talking about Jacqueline Fernandez; the 'KICK' girl was recently seen in Noir Z8's TVC.

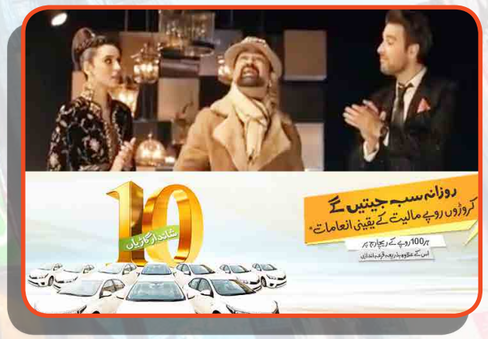
It is a 'selfie' focused campaign, which is obviously not new as we have already seen Fawad's 'Grandfie' ad. But still we would rate it better than previous Qmobile's ads, where all the high budgeted actress did nothing else than 'I NOIR, DO YOU?'
P.S. We finally saw some expressions

Super Inami Offer

2.5 — Ufone

Highlighted Feature:
On recharging Rs.100 credit, win 10 luxurious 1300cc cars, 60 motorcycles, 60 gold earrings, free minutes/SMS and MBs

Mubarik ho! You have successfully wasted a minute of your life listening to 'Mubarik Ho', which made us jump to the end for the conclusion. All we could see was bunch of people greeting each other, HUFF! This was one of the lamest and the boring ads by Ufone.
Ufone need to push a new presenting strategy in its advertisement as it is hard to deliver the same kind of powerful marketing messages without changing the pattern.



3G Phones Launch

2 — Telenor

Highlighted Feature:
This TVC introduced low-budget 3G enabled smartphones by Telenor

It's not every day that a company pours money into a brand campaign that involves destroying its product. But that's exactly what Telenor did with its 'Saachi Yaari' theme and now this 3G Phone Launch TVC.

Nokia 3310 jokes were once groundbreaking and popular, but now? I find it quite bizarre and out dated. All I want to say, 'Humne apko 5 bar dekha, ap humko bilkul pasand nahi aye'

By Saima Ibrahim

Is Tech Addiction Taking Over Our Lives...!!??

Technology has entered into our lives in many forms. Movies to social media networks and countless electronic devices, everything demands our attention whenever we turn to them. The level of this temptation is so high that sometimes we are even ready to neglect our family and friends just to join a group chat on WhatsApp or video call on Facebook. We check our Facebook and our friend's latest updates and life events, we check Twitter for the sake of our favorite celebrities' tweets, we don't even miss Instagram many times a day.

It is worth knowing that how these tech-industrialists and App developers design their gadgets and Apps and help in increasing our addiction level

Interestingly when we are done, we start this whole process once again, a habit commonly found in all of us today. If reading this has triggered your mind then you are also a technology addicted person. With all great technological advancements we are not only attracted but in reality we are addicted to it.

Recognizing and admitting about your tech-addiction isn't a bad thing actually. This also doesn't mean ending your use of technology rather it implies that doing whatever you need to do so that the technology can improve the quality of your life without letting it take the control. Hence, overcoming this tech-addiction is something that needs to be focused on these days as the way the world is getting globalized it is also disconnecting actual relationships.

Due to the advancements in internet after 1990s, "internet addiction" has actually evolved; which even led to mental disorders. One of recent such disorder is "Social Media Anxiety Disorder". It is a syndrome that relates to generalized social anxiety, and is developed when any activity of social media affects the mental and physical well-being of an individual.

We check our Facebook and our friend's latest updates and life events, we check Twitter for the sake of our favorite celebrities' tweets, we don't even miss Instagram many times a day

Individuals who engage in social media discussions fear that interaction with people will bring feelings of judgement, self-consciousness, evaluation and inferiority. Often it leads to feelings of inadequacy, embarrassment and depression.

Behavioral research has already proved that activities like checking your phone, Facebook, Twitter all the time or even browsing the Internet for interesting information and discovering a fascinating article, all these activities trigger the reward center of our brain, hence increasing dopamine levels.

The reason technology is designed in this always-on, always-connected, constantly notified manner is simply because that's exactly what users desire, the tech industry is simply giving us what we want

This increased dopamine (a hormone) then initiates a compulsive desire to obtain pleasure and this desire after a while becomes impossible for many people to ignore.

Tech Industry Capitalizes our Addiction

It is worth knowing that how these tech-industrialists and App developers design their gadgets and Apps and help in increasing our addiction level. It's the very nature of how smartphone apps are designed that encourage the constant stream of dopamine-inducing notifications.

Observing the other side of picture, we cannot solely blame the tech-industry for enslaving us all the time and occupying our minds and daily life activities. The reason technology is designed in this always-on, always-connected, constantly notified manner is simply because that's exactly what users desire. The tech industry is simply giving us what we want.

The fear of "missing out" is principal to human nature from decades. This fear drove people for decades, to try to do what everyone else is doing – to follow what everyone else is following.

Whether you deny or accept it but all of us do such silly things just in order to keep an eye over our fear of "missing out" or something which is done by others

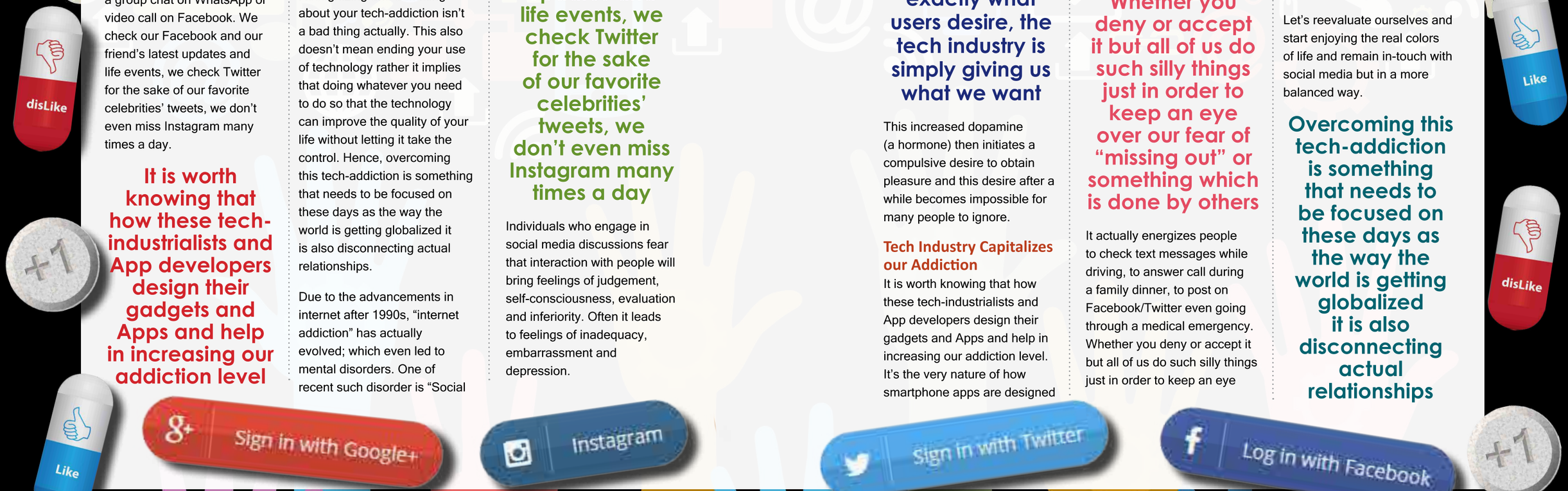
It actually energizes people to check text messages while driving, to answer call during a family dinner, to post on Facebook/Twitter even going through a medical emergency. Whether you deny or accept it but all of us do such silly things just in order to keep an eye over our fear of "missing out" or something which is done by others.

Let's reevaluate ourselves and start enjoying the real colors of life and remain in-touch with social media but in a more balanced way

Now that we have a better understanding and appreciation of what the problem is, it's time to look at different ways that we can configure our mobile phone, browser or computer so that these compelling notifications and other distractions don't take over our entire life.

Let's reevaluate ourselves and start enjoying the real colors of life and remain in-touch with social media but in a more balanced way.

Overcoming this tech-addiction is something that needs to be focused on these days as the way the world is getting globalized it is also disconnecting actual relationships



Rivo Phantom PZ15

Smooth, Sleek and Fast !!!

Rivo Mobile is a newly formed mobile company that was launched a couple of months ago in Pakistan and is being distributed by Advance Telecom, the country's leading mobile phone distributor. In such a competitive market with numerous companies trying to make their mark, there is little space leftover for a new company to secure its position. Yet Rivo Mobile was launched and has established an impressive position in very little time with the support of Advance Telecom's preexisting trust and credibility amongst consumers.

Rivo Mobile has currently introduced seven separate series of handsets. The flagship is the Phantom series comprising of the company's most refined smartphones. Next is the Rhythm series which offers mid-range smartphones. And lastly, 5 assorted feature phone series under the labels Advance, Classic, Jaguar, Neo and Sapphire are offered providing users with extremely straightforward and affordable handsets.

Let's get to know Rivo Mobile's Phantom PZ15 and learn what it's all about.

It is one of the fresh releases that has instantly become the center of attention in the market. Rivo Phantom PZ15 comes with 2 GB RAM, 16 GB Internal Memory and a 1.7 GHz Octa-core Processor, combined with its famous sleek design, a wonderfully shaped 5" HD AMOLED display, and all this at the affordable price of just Rs. 22,000. So what more could a customer want?

Display:

The display of Rivo Phantom PZ15 is an HD AMOLED capacitive touchscreen with 16M colors, up to 10 finger multi-touch capacity, a 5 inch display, 720*1280 resolution and 320 pixel density.

Front Camera:

PZ15 has dual cameras, the front camera is 5 MP Auto Focus with face-detection, face beauty options and 2880 * 1728 resolution.

Rear Camera:

The rear camera is 13 MP with smart features like geo-tagging, touch focus, autofocus, face detection, smile detection, high density resolution with LED flash support and capturing capability of up to 4160 * 3120 resolution. Rivo Phantom PZ15 enables users to capture high detail videos and sharp pictures.

CPU:

Rivo Phantom PZ15 is powered by an Octa-core processor with CPU Model (MTK MT6592) of Mali-450 MP Renderer with 32-bit as its type and 1.7 GHz with 8 times speed (1.7 * 8), with frequency ranging from 728.0 ~ 1664.0 MHz enabling Rivo Phantom PZ15 to compete with the best in benchmarking tests like Antutu and Vellamo.

RAM:

Most smartphones have 1 GB memory, which was sufficient up till now for handling heavy apps like Facebook, Skype and was a means to run the latest games smoothly but with recent updates and extensions in applications, graphics and user-involvement, the need for bigger memory continues to rise. Therefore, one of the best things about Rivo Phantom PZ15 is that it already comes with 2 GB RAM.

Storage:

With 16 GB of built-in Internal Memory to store all your records and data, there is never a fear of low space. However, Rivo Phantom PZ15 can support up to 32 GB with a memory card.

Interface:

Rivo PZ15 has an attractive interface with a sleek look. It comes pre-installed with apps like Facebook, Skype, Twitter and even some of the current most popular games like Candy Crush Saga and Subway Surfer. The keyboard and keypad for messages and dialing are as per standard.

An interesting change is found in the gallery. By moving inside the gallery, videos play in the background without sound, making it even easier to grab the video of your choice. The camera is also supported with a QR-Code Reader facility.

Bench-marking:

Antutu

With an Octa-core processor and 2 GB RAM (which are the core parts for the overall performance of any device), the results are very good and at some points, the Rivo Phantom PZ15 is at the top most in its category list.

Vellamo

Vellamo is a Qualcomm bench-marking application that provides the best results with graphs after comparison. The Multicore, metal (single core) and the browser's performance are very good.

GPU Benchmark

GPU Benchmark is an application for testing graphics, smoothness and performance at the lowest and highest levels when frames are passed over the Graphical Processing Unit. Rivo Phantom PZ15 scored 14,665 points on the board which are some of the best when compared with similar smartphones.

Rank:

Assembling the best and newest technology in a slim and sleek module is truly magical, obliging me to give the PZ15 no less than 4.5 stars out of 5.

M. Mohsin Rehman

TOP MUST HAVE APPLICATIONS & GAMES FOR YOUR SMARTPHONE

imo free video calls and chat

Rating : 4.2 **Price: Free**

Think your vocabulary is strong? Test your skills with two player Hangman! Take your phone and challenge your friends with a battle of words. Avoid SMS and phone call charges. Send unlimited messages and make free video and voice calls over your 3G, 4G or Wi-Fi connection. Make high-quality video and voice calls

Stick Runner

Rating : 5.0 **Price: Free**

Stick Runner is a simple and tricky line runner game. Control the running stickman. It's simple addicting game about running dash guy. He is insane and doesn't have a rope like in a stunt and can't fly like a bird so gravity will make you fall down if you lose! Challenge yourself with a crazy running stick guy. Control that line runner and try to run as long as you can. Run, jump and roll for your life.

PUREPUSH ON THE GO

PAKISTANI SOFTWARE DEVELOPER APPLICATION

PK Cargo Transport

Rating : 4.0 **Price: Free**

You can tryand prove your driving simulation skills by moving various kind of Cargo from one place to another with cultural music and artistic track. Truck used in the game displays the beautiful culture of Truck painting that is a popular form of indigenous art and featuring floral patterns and poetic calligraphy and we are sure that you will love to drive such decorative trucks and would accept the challenge.

PAKISTANI SOFTWARE DEVELOPER APPLICATION

Zapya (Sharing, File Transfer)

Rating : 4.4 **Price: Free**

Zapya can transfer photo, music, video, and other file types from one device to other devices without mobile network nor Wi-Fi connection. The content is transferred directly from device to device at 128 times Bluetooth speed! Thoroughly defeat BlueTooth/NFC/AirDrop. Better than all you know.

The Centaurus

Rating : 4.3 **Price: Free**

The shopping experience at your favourite mall just got better. The Centaurus, the first ever mall app, is a wholesome solution catering to both the customers and the brands, keeping them in touch 24/7.

PAKISTANI SOFTWARE DEVELOPER APPLICATION

Unilever E-Store Pakistan

Rating : 3.7 **Price: Free**

From an unofficial app you can place an order for Unilever Products to be delivered to your home or office address.

PAKISTANI SOFTWARE DEVELOPER APPLICATION

Best Audio Equalizer

Rating : 4.3 **Price: Free**

Best equalizer app for your smart phone's to improve sound effects. Improve your smart phone's or tablet's sound quality with Best Audio Equalizer app and home-screen widget. Audio Equalizer lets you adjust sound effect levels to get best out of your Music or Audio coming out of your phone.

PUREPUSH ON THE GO

PAKISTANI SOFTWARE DEVELOPER APPLICATION

Umall

Rating : 3.5 **Price: Free**

Ufone brings you the most trusted one-stop-shop with an unbeatable shopping experience. All you have to do is just swipe and tap and you can buy from a huge list of brands.

PAKISTANI SOFTWARE DEVELOPER APPLICATION

PakWheels

Rating : 4.2 **Price: Free**

The PakWheels application offers an easy to use and intuitive interface allowing you to search from a huge pool of Car, Bike and Accessory listings. You can apply filters to get more precise results.

PAKISTANI SOFTWARE DEVELOPER APPLICATION

Medicine Reminder

Rating : 4.3 **Price: Free**

Having trouble remembering your medicines or keeping track of your prescription? Medicine Pill Reminder has the solution and it's easy and simple. Using this application you can keep track of your prescription and never forget another medicine. This application will remind you when to take your medication or when you have to attend a doctor appointment.

PUREPUSH ON THE GO

PAKISTANI SOFTWARE DEVELOPER APPLICATION

Telenor Music

Rating : 3.9 **Price: Free**

Stream your favorite Pakistani, Bollywood and English songs wherever and whenever you want from our collection of 500,000+ tracks. Stream hundreds of thousands of tracks using 3G or WiFi

PAKISTANI SOFTWARE DEVELOPER APPLICATION

Hearts Love Watch Face Pro

Rating : 4.3 **Price: Free**

Impress your loved ones with this elegant watch face. Please feel free to send us your valuable feedback and suggestions. Your feedback is important to us. Enjoy lovely watch face.

PUREPUSH ON THE GO

PAKISTANI SOFTWARE DEVELOPER APPLICATION

My Warid

Rating : 4.1 **Price: Free**

Think your vocabulary is strong? Test your skills with two player Hangman! Take your phone and challenge your friends with a battle of words.

PAKISTANI SOFTWARE DEVELOPER APPLICATION

Fayaz Ahmad Khan

New Arrivals

Qmobile Noir Z8

OS :	Android v4.4, Kitkat
Display:	5 inches
CPU:	1.2 GHz, Quad-Core
Camera:	13 MP
Memory:	16GB built-in, 2GB RAM

Telenor Smart 3G

OS :	Android v4.4, Kitkat
Display:	4 inches
CPU:	1 GHz, Dual-core
Camera:	3 MP
Memory:	4GB built-in, 512 MB RAM

Haier ESTEEM L50

OS :	Android v4.4, Kitkat
Display:	5 inches
CPU:	1.2 GHz, Quad-Core
Camera:	13 MP
Memory:	8GB built-in, 1GB RAM

Voice Xtreme X3

OS :	Android v4.4, Kitkat
Display:	4.5 inches
CPU:	1.3 GHz, Quad-Core
Camera:	8 MP
Memory:	8GB built-in, 1GB RAM

GFive LTE1

OS :	Android v4.2, Jelly Bean
Display:	5 inches
CPU:	1.3 GHz, Quad-Core
Camera:	8 MP
Memory:	8GB built-in, 1GB RAM

MMobile P10I

OS :	Android v4.2, Jelly bean
Display:	4 inches
CPU:	1.2 GHz, Dual-Core
Camera:	5 MP
Memory:	4GB built-in, 512MB RAM

QMobile Noir X350

OS :	Android v4.4, Kitkat
Display:	4.5 inches
CPU:	1.3 GHz, Quad-Core
Camera:	5 MP
Memory:	8GB built-in, 1GB RAM

QMobile Noir X700

OS :	Android 4.4, (Kit Kat)
Display:	5 inches
CPU:	1.4 GHz, Octa-Core
Camera:	8 MP
Memory:	8GB built-in, 1GB RAM

Haier i70

OS :	Android v4.4, Kitkat
Display:	5 inches
CPU:	Octa-Core
Camera:	13 MP
Memory:	32GB built-in, 1GB RAM

President G10

OS :	Android v4.2, Jelly Bean
Display:	5 inches
CPU:	1.7 GHz, Octa-Core
Camera:	8 MP
Memory:	16GB built-in, 1GB RAM

Fayaz Ahmad Khan

which 1 would YOU like to CHOOSE

Samsung Galaxy S6 edge

OS: Android OS, v5.0.2 (Lollipop)
Chipset: Exynos 7420
CPU: Quad-core 1.5 GHz
Camera: 16 MP, optical image stabilization, autofocus, LED flash
Memory: 32/64/128 GB, 3 GB RAM

Huawei Ascend G7

OS: Android OS, v4.4 (KitKat)
Chipset: Qualcomm Snapdragon
CPU: Quad-core 1.2 GHz
Camera: 13 MP, autofocus, LED flash
Memory: 16 GB, 2 GB RAM

Lenovo A7000

OS: Android v5.0 (Lollipop)
Chipset: Mediatek MT6752m
CPU: Octa-core 1.5 GHz
Camera: 8 MP, autofocus, Dual-LED flash
Memory: 8 GB, 2 GB RAM

Sony Xperia E4g

OS: Android OS, v4.4.4 (KitKat)
Chipset: MediaTek MT6732
CPU: Quad-core 1.5 GHz
Camera: 5 MP, Autofocus, LED flash
Memory: 8 GB, 1 GB RAM

OPPO Mirror 3

OS: Android OS, v4.4.4 (KitKat)
Chipset: Mediatek MT6592
CPU: Octa-core 1.7 GHz
Camera: 8 MP, Autofocus, LED flash
Memory: 8 GB, 1 GB RAM

Huawei Y635

OS: Android OS, v5.0.2 (Lollipop)
Chipset: Qualcomm Adreno 306
CPU: Quad-Core 1.2 GHz
Camera: 5 MP
Memory: 4 GB, 1 GB RAM

Oppo Neo 5

OS: Android OS, v4.4 (KitKat)
Chipset: Qualcomm MSM8916 Snapdragon 410
CPU: Quad-core 1.2 GHz
Camera: 8 MP
Memory: 8 GB, 1 GB RAM

Huawei P8

OS: Android OS, v5.0.2 (Lollipop)
Chipset: HiSilicon Kirin 930/935
CPU: Quad-core 2 GHz
Camera: 13 MP Autofocus, Optical image stabilization, Dual-LED (dual tone) flash
Memory: 16/64 GB, 3 GB RAM

Sony Xperia M4

OS: Android OS, (Lollipop)
Chipset: Qualcomm Snapdragon 615
CPU: Quad-core 1.5 GHz
Camera: 13 MP, autofocus, LED flash
Memory: 8/16 GB, 2 GB RAM

Samsung Galaxy Grand

OS: Android OS, v4.4.4 (KitKat)
Chipset: Qualcomm Snapdragon 410
CPU: Quad-core 1.2 GHz
Camera: 13 MP, autofocus, LED flash
Memory: 16 GB, 1.5 GB RAM

M. Mohsin Rehman

Windows Phone

Qualcomm snapdragon

W1

Windows Phone is reinvented around you.
We get it—your life is full, and this phone keeps up.
It wasn't designed for all of us, but for each of us.
Features like Live Tiles keeps you closer to the stuff that matters most to you with up-to-the-moment updates right on your Start screen.

Simple
Attractive
Productive

OneDrive is free online storage. Automatically upload your photos and videos and get to them from any device. *Get 15 GB for free when you sign up and + 15 GB when you automatically back up your photos from your phone.

Windows with Dual SIM Support

QMobile

www.qmobile.com.pk

QMobile

Launches Windows Phone with with Microsoft and QUALCOMM

QMobile is undoubtedly the fastest growing, number one smartphone brand of Pakistan. It is known to bring novel and refreshing trends in the device industry of Pakistan. Following its old mantra of innovation, QMobile have once again taken up a unique and unusual step by introducing QMobile W1 smartphone, hence becoming Pakistan's first mobile manufacturer in local brands to launch windows phone.

Another highlight of this newly launched smartphone is its Qualcomm Snapdragon processor MSM8212 which is designed to deliver a valued balance of performance, robust connectivity and better battery life for entry level smartphones.

The first QMobile windows phone W1 is a 4 inch 3G device, dual SIM support, 5MP rear and digital front camera, 1.2 Ghz quad core processor, MSM8212 Qualcomm Snapdragon chipset, 4GB ROM, 512MB RAM, 1950 mAh battery and comes at an affordable price of 7900 PKR.

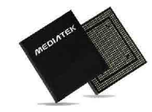
QMobile have once again taken up a unique and unusual step by introducing QMobile W1 smartphone, hence becoming Pakistan's first mobile manufacturer in local brands to launch windows phone

QMobile has revolutionized the mobile industry at large, both in terms of price and style. It has already performed really well in Pakistani market especially in smartphones because of the innovative and trendy devices they have produced. Let's wait and see what other innovations it will bring in the future...!!!

SONY

Capture and share the fun instantly.

XPERIA E4
Dual



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Dual Sim

3G

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MT6595m 2.0GHz
4G LTE True8Core

SAMSUNG
SAMSUNG
Galaxy S6 | S6 edge
NEXT IS NOW
Surfaces reflect, curves flow, metal and glass fuse, giving rise to a revolutionary dual-edge display. Samsung Galaxy S6 edge. What's next, is now.