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ADNAN KHAN
Managing Editor

Dear readers,

Another year overshadowed by Corona Virus has come to an end. Fortunately, things have gotten a lot better with COVID vaccinations finally introduced this year. The year 2021 has also been good for the IT and Telecom industry with many new trends taking over the tech world. The Billionaire race to go to space started between Jeff Bezos, Elon Musk, and Richard Branson. Foldable phones, Robotics, and NFTs also became the newest trends. At the same time, El Salvador became the first country to make Bitcoin a national currency. In a bizarre move, Facebook rebranded itself as Meta while LG left the smartphone business. Chip shortage continued to be a problem resulting in a delayed and limited release of a number of smartphones.

As far as our local market is concerned, 3G/4G subscribers reached the 100 million mark this year. A number of tech-related policies and bills were approved including, social media rules, spectrum auction policy, and right of way policy. In a landmark move, Smartphone manufacturing started in Pakistan where a number of international OEMs including big names like Samsung launched their mobile production in the country.

As always, we have compiled some great articles in our current issue as well. In one of our articles, we have discussed how social media has evolved over the years and where it will take us in the future. In another article, we have tried elucidating the impact the ICT industry can have on our export market. We have also critically evaluated the controversial social media laws for our readers to better understand their impact. Despite the 5G buzz going on in the country for the last few years, international organizations like GSMA still believe that Pakistan will not be on the 5G growth map even till 2025. We have tried to find out the reasons behind the lack of trust in our industry in one of our articles as well. We also have an exclusive interview of Tamrakar Rakesh. Currently, he serves as a 5G standard expert at Vivo.

Our regular sections, including phone reviews, Smart moves, TVC reviews, top applications, and smartphone wishlist are also part of our current issue. We always try to bring something new and exciting for our readers and hope you guys will appreciate our efforts and give us your feedback so that we can improve further.
A Very Happy New Year to all, we hope you are staying fit and safe.

Enjoy Reading…!!!

Sincerely,
Adnan Khan.

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Phone World

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THE CONTROVERSIAL
SOCIAL MEDIA RULES 2021
by Usama Anjum

Over the years, the usage of social media has vastly multiplied, urging the need for bounding the users to rules and regulations. In Pakistan, these rules have evolved over the last few years and are documented together as the "Removal and Blocking of Unlawful Online Content (procedure, Oversight, and Safeguards) Rules, 2021."

Severe Backlash to the Previous Rules (2020)

The social media rules, which were notified in November 2020, had faced severe resentment from digital rights activists, the Internet Service Providers of Pakistan (ISPAK), the Asia Internet Coalition (AIC), and the general public. The technology firms had also threatened to halt their services in the country if the rules were unchanged, adding that the new regulations would make it tough for them to resume their operations.

In addition to that, those rules were also challenged in the Islamabad High Court (IHC). During one of the hearings on the petition in the high court, the attorney general of Pakistan had guaranteed the federal government was ready to review the rules. Consequently, Prime Minister of Pakistan Imran Khan formed an inter-ministerial committee to review the controversial social media rules.

Revised Rules (2021)

These rules of 2021 are basically an amended version of the November 2020 formulated rules that faced backlash and criticism from all segments of society. The contemporary rules have been framed under the 2016 Prevention of Electronic Crimes Act (PECA) by the Ministry of Information Technology. These grant permission to the Pakistan Telecommunication Authority (PTA) to block any website or online forum at the decision of the court, Ministry, or any other law enforcing organization. An element of contention in these Social Media Rules comes forth when the content creators are not offered any incentive or protection as it is very important for digital growth in the country. The rules also make it mandatory for the Social Media Companies to register with the Pakistan Telecommunication Authority (PTA) within the coming three months. Along with this act, these companies must also establish their official offices in the country whenever feasible. The service providers and social media company (significant or ordinary), under these laws, will not have any content published that go against them in any manner.

> **The rules also make it mandatory for the Social Media Companies to register with the Pakistan (PTA) within the next couple of months**

Under these laws, Internet Service Providers are also taken into account along with the Social Media Companies. It is obligatory for both the entities to ensure mechanisms that block live streaming of any immoral or unethical degrading content through online information systems in Pakistan, upon receiving intimation from PTA.

There are some relaxations as compared to the last draft of these rules after resentment from various entities. According to the revised rules, internet users are not curtailed from expressing their views, as per Article 19 of Pakistan's constitution. However, there still exist checks and balances that do not allow certain sensitive issues to be promoted. These include the religious segment, contribution to any offense, or even to the security forces of Pakistan. These are issues that can't be shared or talked about and would not be accepted if violated. The restriction also applies to any false information being spread that contributes to the disruption of the peace and harmony of the society.

According to the revised rules, internet users are not curtailed from expressing their views, as per Article 19 of Pakistan's constitution

A few other things banned under the revised rules include "content against Pakistan's cultural and moral trends" in addition to the content that could "destroy" the morals, ethics and harm the mental and overall development of children.

Sweeping Powers to the PTA

PTA is also authorized under these rules to take notice of any online content and use its power to remove or block it. The authority now will provide 48 hours to the relevant service provider to comply with the instructions of removing or blocking the content. However, in terms of an emergency, PTA can seek the removal of the online content within 12 hours from the time of receiving the directions (whilst specifying the reason for the emergency).

The Social Media outlets would now also have to appoint an authorized compliance officer and grievance officer to the PTA that will cater the complaints within seven working days. These companies can have a fine of up to Rs. 500 million imposed on them. Complaints made by any aggressive or irrelevant person (anonymous) to the PTA shall not be entertained. For any minor lodging a complaint, the accompanying guardian must be vivid.

Furthermore, any individual can file complaints to the PTA against any fraud or hate speech online, with the assurance of it being kept confidential. The PTA, however, will not accommodate any complainant, if required necessary information is not provided timely or hearings are not complied with. Even, the government departments and ministries are eligible to file a complaint to the PTA over the said issues.

Digital Media Report amidst the Revised Rules

Digital media freedom acts as a pillar of a democratic nation. However, as per a recent report from IRADA, the state of digital media freedom in the country remained fragile during 2020-21. It is due to some regulatory pressures and threats against digital freedom of speech as devised in the social media rules. The netizens were exposed to rising online disinformation, which include fake messages related to Covid-19 origin and treatment, which put their health and safety in danger. There is no stringent and effective measure drafted in the revised social media rules that can address the issue of disinformation. The report was entitled 'Regulatory Repressions Amid Pandemic: State of Digital Media Freedoms in Pakistan 2021' and it was published by the Institute for Research, Advocacy and Development (IRADA) on International Internet Day.

While Pakistan registered a minor improvement in internet accessibility and use amid the global COVID 19 pandemic, the digital freedoms of media workers and internet users were intimidated by the government's enforcement of controversial rules to regulate online content.

The report encompasses five areas concerning digital media freedoms. These include access, online freedoms, privacy, legal framework, and judicial actions. The reason for incorporating these areas is to forge a wide-ranging understanding of the impediments faced by journalists and citizens in the effective and ethical use of the internet.

The digital divide has a debilitating effect on women, religious minorities, and other marginalized groups and the revised social media rules can add to this misery.

> **The digital divide has a debilitating effect on women, religious minorities, and other marginalized groups and the revised social media rules can add to this misery**

Impact of the Revised Social Media Rules

Although the revised social media rules have offered some relaxation for all the stakeholders involved in it, a few loopholes still persist. For instance, freedom of speech is still suppressed in some regards as you can't even make positive criticism against some particular institutions. Furthermore, due to some stringent measures as previously discussed, foreign companies will lose confidence in investing in Pakistan. In addition to that, it can also hurt the sentiments of the general consumers and the content creators. They were earning from these platforms and now it has been halted because of the regulatory pressures and other impediments.

Recommendations for the Government

Facilitating Content Creators

Unfortunately, the revised social media rules don't contain any clause for facilitating the content creators, protecting them, or providing them with any incentives. The government must work on this and facilitate the content creators in order to improve the digital landscape of the country. It can also help in boosting the economy as the influx of remittances in dollars to the content creators can improve the balance of payments.

> **The government must facilitate the content creators in order to improve the digital landscape of**

Freedom for Constructive Criticism towards any Entity

One of the contentious clauses which haven't been changed in the new rules is that no one can speak against the armed forces and some other segments of the government. It is a great threat to the digital freedom of speech as institutional development in a democratic society can come with positive criticism. So that is an authoritative rule and must be changed.

Issue of Misinformation

We are living in an era where misinformation has increased to a great deal. False news is propagating everywhere and sometimes it gets really hard to distinguish between true and false news. In the newly revised rules, there is no clause regarding the issue of misinformation and particularly how to distinguish it. Apart from that, they should appoint an authority whose sole job is to counter the misinformation and hold those accountable who are responsible for spurring it.

Countering Phishing attempts

Hacking attempts have become a common sight in Pakistan. Recently, the National Bank of Pakistan's Systems has been hacked. In addition to that, a minister told that FBR's website is subjected to 71000 hacking attempts each month. So in order to tackle this horrific issue and to safeguard countries assets, the government must add clauses in the new social media rules like if any entity like the NBP faced phishing attempts and isn't able to resolve on its own, then such entity will have to appoint any renowned agency to counter hacking attempts in the future.

KEY BENEFITS OF
BACKUP SOFTWARE

WHY SHOULD YOU
BACK YOUR COMPUTER UP

Against hardware errors and malfunctions, viruses, and hackers.

Allows you easy access to your files and data in the event of a breakdown.

TYPES OF STORAGE SERVICES

CLOUD STORAGE
Stored in the "cloud" so in the event an emergency occurs (robbery, fire, natural disaster, etc.), your backup is safe.

LOCAL STORAGE
Stored on an external hard drive that can be easily transported from person to person.
Have a thumb drive with recent documents of significance.

ONLINE STORAGE
Stored on the Internet through a service.

THE DOS & DON'TS OF BACKING YOUR COMPUTER UP

Do find what backup method works best for you.

Don't just stick to one backup method; use a variety of methods both onsite and offsite.

Do check the backup settings to make sure they are appropriate.

Don't delete information once it's backed up, keep the first copy too.

Do change your settings to automate the backup as much as possible.

Don't backup your Windows directory or Program Files folder.

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WHAT NEEDS TO BE BACKED UP

Photos & Videos
Make sure your memories are backed up so you can treasure these for years to come

Documents
Most important part of a backup
Preserves personal information used for school, business, etc.

Monetary Information
Ex. bank statements, tax records
Vital to have a physical copy since it involves money

Samsung A22

A FUTURE READY SMARTPHONE

Design

The Galaxy A22 5G is a pretty smartphone; there are no two thoughts about it. Similar to the Galaxy A52 and A72, the A22 5G gets that chic design: matte finish, flat surfaces, and an overall design that's trying to set its own trend in a sea of similar-looking phones.

Similar to most affordable Samsung phones, the Galaxy A22 5G has a plastic unibody construction. The designers have, however, used good quality plastics that emulate a matte glass finish.

A bulbous chin and a large droplet-style notch seem out of place. It also makes the phone a giant, given that the actual display measures 6.6-inches.

Display

Samsung has made a name for itself with its AMOLED displays in the past but the 5G-induced cost-cutting sees it skipping the OLED panel in favor of an IPS LCD panel. It looks fine while browsing social media or watching YouTube videos.

Samsung tries to pull in geeks with a refresh rate of 90Hz and that helps to a large extent with smoother scrolling. Viewing angles are wide without notable loss in colors but sunlight legibility is average.

Cameras

Galaxy A22 5G has got three cameras on the rear and a single 8-megapixel camera on the front.

The main 48-megapixel camera is the one worth using. In daylight, the camera maintains a closer-to-natural white balance along with decent amount of details. However, it struggles with exposure and as light levels fall, it relies on artificial enhancement to brighten up the photos. The Night Mode is great for a phone of this price.

The front camera is good as long as there's ample light falling on your face. The details aren't great but the dynamic range is fine and the algorithms love enhancing the skin tones.

Battery

With 4G networks running the show, the Galaxy A22 5G delivers supremely good battery life. The 5000mAh capacity battery can last up to a day and a half with moderate usage with 6.5 hours of screen-on-time on an average.

Performance

MediaTek's Dimensity 700 is making it possible for brands to bring affordable 5G phones to the market. With 6GB RAM and 128GB storage on my base version, the Galaxy A22 5G is among the fastest Samsung phones money can get you in this segment.

Despite running Samsung's resource-intensive One UI 3.1 interface, the Galaxy A22 5G keeps it going all smooth and fast. I haven't witnessed unnaturally long app load times or random app crashes on this phone yet. If you primarily do social media browsing, deal with emails, make video calls, watch videos, and take photos, this Galaxy A22 5G has adequate performance potential to keep you happy.

Samsung's One UI 3.1 on Android 11 is elegant. The basic software experience is on par with what you get on an expensive Galaxy S21, i.e., beautifully formulated icons, well-designed interface elements, and all the bunch of Samsung extras neatly integrated with the system.

Pros

- Matte Finish Back
- 90Hz Smoothness
- Good Main Camera
- 5G Bands Support

Cons

- Poor Selfies
- Sub-par Display

Final Verdict

If you are considering a 5G phone for the long term, then the Galaxy A22 5G could be a great option in that case.

Galaxy A22
Product Specifications

SUPER AMOLED

5,000mAh Battery

Rear Camera

Ultra Wide
8MP (F2.2)

Main
48MP (F1.8), OIS

Macro
2MP, (F2.4)

Depth
2MP, (F2.4)

Front Camera
13MP (F2.2)

73.6mm

159.3mm

DOLBY ATMOS

LTE

90 Hz
Refresh Rate

Violet

Mint

White

Black

HOW FEASIBLE IS IT FOR PAKISTAN TO USE
ELECTRONIC VOTING MACHINES?

by Onsa Mustafa

Everyone should be able to vote. This is true. The controversy between the best way to do so is still not clear. With the progression of technology, many are pinched at the idea of making elections available electronically. Although the technology exists, it is important to consider if it is reliable and safe. Different nations are considering it a safe and reliable way to do elections electronically. For that reason, Electronic Voting Machines or EVMs have been introduced within the past twenty years.

Many nations including Australia, Belgium, Brazil, Germany even India, and many more are now using EVMs for their elections

Now the current government of Pakistan has also planned to do the next election's electronically. For that reason, the Prime Minister of Imran Khan is taking significant steps. He has ordered the Ministry of Science and Technology (MoST) to show a keen interest in the project and make it possible for the availability of EVMs before the upcoming elections.

Although this is not simply in the government's hand to implement this technology in the upcoming elections.

Among all, the Election Commission of Pakistan (ECP) has a key role in bringing this electronic mechanism of voting into the country.The government is quite optimistic to use Pakistan-made EVMs in the country.

MoST has already showcased a prototype of the EV machine

The system will work on the data provided by the National Database and Registration Authority (NADRA). The working mechanism is quite simple too. There are two parts to the voting process through EVMs. The first is the verification process where any voter with an ID card is verified through a thumb or a fingerprint as a valid voter. After that, they will go to the machine and press the button for their favored candidate which would save the vote on the backend. A ballot paper will also be printed with the favored candidate's symbol, and it will be then dropped into the ballot box.

A special ballot paper would be used in the machines on which ink would not fade or dull for five years. EVMs would be tested against cyber attacks.

For that purpose, MoST has challenged a 1 Million Reward for those who can hack Pakistan-made EVMs.

The system does not employ the use of the internet due to concerns of hacking

The govt officials have also revealed that these are 100 percent standalone machines and are also not connected so chances of rigging are further decreased.

Moreover, the identity of the voter would remain anonymous as information would be encrypted. According to the government officials, EVMs can operate in areas where the temperature drops to 10 degrees below zero and also in localities where mercury touches the 55 degrees centigrade mark.

The machines are being developed using indigenous technologies at half the cost of imported devices by the National University for Science and Technology, COMSATS, and National Institute of Engineering (NIE) — the three establishments under the Ministry of Science and Technology. The three institutions can manufacture 2,000 machines on daily basis, costing an estimated amount of Rs. 65,000 each, which is half the price of imported devices that offered no guarantees of working properly.

Overall, Pakistan needs between 350,000 and 400,000 EVMs to run the upcoming elections smoothly.

There were five proposed EVM models; three had been imported and two others were being manufactured in Pakistan.ECP, who will finalize the model of the machine, is also not in the favour of the government. ECP had raised 37 objections to the proposed introduction of EVMs. The commission, in a document submitted to the Senate Standing Committee on Parliamentary Affairs, has warned that the machine was prone to tampering and its software could easily be altered.

If EVMs are fully installed in the country, it will not only bring revolution in the country but will take the country a stepahhead in the digital race

Despite the strong resistance from the Election Commission and the opposition lawmakers, the government successfully passed amendments to the Elections Act, 2017, allowing the use of electronic voting machines (EVMs) in general elections. the government has declared that there will be no use of the internet, and EVMs will not run any operating system. So, the machines can not be compromised. Also, the officials said that 27 of the 37 objections raised by the ECP were not even related to the commission.

By putting aside the dispute of government and opposition, if we think whether it is necessary to bring the electronic voting in the country or not. The answer is yes.

The use of EVMs has a very futuristic impact on the digitalization of the country. Also, it will help to reduce the cost of elections that the country bears after every five years because EVMs are a one-time investment. Although the maintenance cost still exists.

Through EVMs, the scope of invalid votes will be abolished which could not be possible in the paper ballot system

EVM will also make the process of casting votes simpler as one does not need to mark a ballot paper and put it in the ballot box. By using EVM, the voter just has to press the button against the favored candidate and symbol of his choice and the vote gets recorded. Similarly, the scope of invalid votes will be abolished which could not be possible in the paper ballot system.

EVMs also made the counting process quicker and less error-prone. Because of the software used in EVMs, the result can be declared in a maximum of an hour. There is no need for printing millions of ballot papers. This leads to saving money on account of paper, transportation, printing, distribution, and storage.

Although the government has not declared any of such features. But if both audio and visual indications for the voter to be added to the machine, it will be helpful for the disabled persons to cast their votes. Similarly, EVMs also reduce the human resources as no more people require to verify the ID cards of the voters.

The idea of electronic voting has been received with mixed feelings and doubts. There is an obvious fear that the system can be manipulated. There is also the problem of prevalent illiteracy, particularly in rural areas. One solution to this could be training or tutorials to help people in operating the machines.

Security is as important as reliability in guaranteeing the integrity of the voting process and public confidence in the system. People do not use things in which they have no confidence. Losing confidence in the election means losing confidence in the system and the government. The elected government in modern democracies derived its legality from the electoral process. As this process has an immense importance and failing to secure its validity could undermine the system of government.

The concept of electronic voting system is not a new one. By using this system, the national voting system will be more secure, faster, and easy to use. No doubt, EVMs cover the necessities that met the requirement for a fair, transparent, and reliable election tool. If this system is brought into practice, it will reduce the rate of crime. This system is a small contribution to the fair process of election. Let's make our country smart and let's make our nation become a super-power.

MEDIA BRAINWASHING
AND YOUR CHILD'S MENTAL PROGRAMMING
by Nayab khan

It is quite astonishing how much time a large number of people waste each day staring at what can only be described as "mindless information" on their social media "brainwashing" gadgets!

Many of the comments heard on the buses, in stores, and elsewhere have practically no intelligence behind them and are simply low-quality nonsense. What socially valuable function do Facebook, Twitter, and Instagram serve?

There is a common misconception that just because something is technically feasible, it is inevitably a "must-have" and hence socially acceptable

There is a common misconception that just because something is technically feasible, it is inevitably a "must-have" and hence socially acceptable.When we talk about Media brainwashing, we tend to realize that something unproductive yet against the social norms is prevailing without any accountability. Since we have given a free hand and independence to the media (that could have been used for better productivity), we are suffering from a steep 'LOW' quality of content.

A new 'LOW' in child's upbringing

A human brain is designed in a way that could trigger it if its going against its natural mechanism and the same goes for children, but they are vulnerable in many situations. Some domains of impact have been recognized by research studies as having detrimental effects on children.

Young people who give most of their time to the screen are more vulnerable to these detrimental states of excess social media use

Young people who give most of their time to the screen are more vulnerable to these detrimental states of excess social media use, depression, low self-esteem, susceptible peer pressure, inferiority complex, and to its highest extent even suicidal thoughts. Hence, we can say that media is compelling a young brain to change the way they look, eat, walk, sleep and study at the same time. In many ways, we have seen that media is promoting negative experiences such as 'Inadequacy about your life or appearance.'

Desensitizing Behaviors

In the early 1970s, studies have demonstrated that considerable exposure to media violence increases the likelihood of violent behavior in certain children and adolescents. Other impacts on children include desensitization to the pain and suffering of others, as well as a predisposition to be frightened of their surroundings, seeing the world as a hazardous place.

Young people who give most of their time to the screen are more vulnerable to these detrimental states of excess social media use

These days, children are prone to video and mobile games, and that too contains a genre of violence. The leisure they feel playing such games is beyond the next level and it is clearly satisfying their dopamine needs. Free access to online streaming movie apps including Netflix, Amazon, HBO Max, and others is also considered as a culprit of detrimental effects on children.

Young children may have difficulty distinguishing between make-believe and reality. They may be disturbed if a parent figure dies in a movie or if youngsters are subjected to terrible events. Viewing films including sex, violence, drug misuse, adult themes, and inappropriate language can be harmful to children and teenagers.

Young children may have difficulty distinguishing between make-believe and reality

Many movies are not suitable for youngsters. Older children and teenagers may imitate hazardous and perhaps deadly actions seen in movies. The child or a young when reaches his/her puberty should not be left alone while streaming movies or even games, there has to be parental supervision.

Does media have the power to manipulate?

A few years ago, there were quite a few threats of media manipulation incurred by the government propagandists and the hustling publicists. There were significant threats, yet attentiveness served as simple and effective protection.

The case study of an American Media Manipulator revealed shocking realities about how media is being aided in manipulating people's minds.He in his article on 'Forbes' wrote that "When the news revolved not by its significance but by what readers are clicking; when the cycle is so fast that the news could be anything other than consistently and regularly incomplete; when dubious scandals derail election bids or wipe billions off the market capitalizations of publicly traded companies; and when the news frequently covers itself in stories about 'how the story unfolded'—media manipulation is at work". Today's media, fueled by blogs, is on relentless attack, due to the crushing economics of their business, dishonest sources, unreasonable deadlines, page view quotas, incorrect information, greedy publishers, bad training, consumer demands, and so much more.Ignorance and Misinformation can be Fatal for youth.

We are just a click away to know what's really happening in the world. Today, the dump of misinformation is exposed to our youth through different media and social media platforms. Under an alluring arrangement, fake news appeals to their feelings by welcoming them to spread them indiscreetly. All of this is upheld by a gadget—the smartphone— in which the activity of sharing is a matter of trust. Along these lines, they are less inclined to check a piece of content prior to resending it in the event that it comes from their near and clear.

Today, the dump of misinformation is exposed to our youth through different media and social media platforms

In today's globalized, networked, and service-dominant society, the need to generate engaging, distinctive, and significant customer encounters is challenging. People are not dumb, but they are misinformed and misled by the media.

There are some findings which were carried out in several Asian and European nations, United States, and Australia regarding the study of teenagers' behaviors, and more particularly of children and adolescents, in terms of misinformation.

Today's media, fueled by blogs, is on relentless attack, due to the crushing economics of their business, dishonest sources, unreasonable deadlines, page view quotas, incorrect information, greedy publishers, bad training, consumer demands, and so much more

Their access is mostly through social media, where secondary sources and content shared by friends are valued more highly than the original source of information. They are less concerned with the veracity of a news article and more concerned with things that truly affect them, ideally of a funny, startling, or unique kind."False, incorrect, or inaccurate information created, presented, and disseminated to intentionally cause a profit or a public harm and has a beneficial impact on the receiver."

Media psychology and Video Games

Video gaming is attracting a lot of attention, both positive and negative. Psychologists have differing opinions, but they all agree that gaming has an influence on children, teens, young adults, and even those in their 70s.

The debate over game violence, bloodshed, and the fact that gamers spend hours playing games not only riles the video game industry but parents and psychologists alike have raised concerns about the potential for violence, because the gamer is an active participant rather than a passive observer, as with television.

The debate over game violence, bloodshed, and the fact that gamers spend hours playing games not only riles the video game industry but parents and psychologists alike

Who is controlling the reins of the Media?

"Controlling the narrative" is one of the most popular and current term in business, politics, and smart society.The ultimate goal of the media has become to ideologically dominate the minds of the public. The media promotes beliefs that support imperialism, capitalism, racism, sectarianism, misogyny, militarism,authoritarian brutality, vigilantism, and anti-working-class hostility. Ideological control is purposefully built by Bourgeois or Capitalist intellectuals and then disseminated by the mass media (print, radio, television, cinema, Internet). As a result, because the Capitalist market owns the media, they can choose, define, and broadcast the economic, social, religious, and cultural notions that comprise the established status quo.

Taking Back Control

How can we use social networking sites without being addicted to them? Media companies and social media sites must modify their websites to reduce the danger of addiction. They may utilize opt-out default settings for elements that promote addiction, making it easier for users to self-regulate their usage. Users should also evaluate whether their personal circumstances make them prone to problematic use. Excessive Screen time is also predicted by factors such as an increased tendency to experience unpleasant emotions, inability to cope well with everyday issues, a need for self-promotion, loneliness, and fear of missing out.

There are companies dedicated to grabbing and selling our attention — and social networking is the finest bait. Facebook, Instagram, and Twitter have brought us closer together around the campfire of our common humanity. They do, however, come at a personal and political cost. Users must determine if the pros of these sites exceed the negatives. Bring back your child to more physical and mental activities rather than putting them in the mouth of a wolf. Children are vulnerable to any information they get from mass and social media. Make your parental supervision highly vigilant for your child's best upbringing.

Children are vulnerable to any information they get from mass and social media

SMART
MOVES FOR SMARTER NATION

Pak Nigehban – National Emergency Response

Pak Nigehban being part of COVID-Gov-Pk app allows its users to locate the nearest hospital to find out beds or ventilators and figure out lab conducting coronavirus tests. When a user clicks on "Hospital/Lab" widget, the application picks the current location by GPS and points out all pinned hospitals and PCR testing labs in the vicinity on a map. The interactive map is linked with Google Maps and provides you with the direction of the labs as well.

Special Education

This APP will inform the people /parents /guardians about the services/facilities available in the DGSE's centres / institutes   as well as in the FDE schools for inclusive education. .

It will assist them in the selection of suitable educational institution near to their residence. They can apply online without Physical access to the relevant centre.

It also inform about the status of their submitted applications. It will be helpful to b ring differently-abled school children in the education system.

Clean and Green Pakistan

The Clean Green Pakistan Champion Program mobile application allows every citizen of Pakistan to become a Clean Green Champion. Either you're an Individual or an organization. Once, you register yourself for the application; you can upload activities for any of the following indicators;

1. Tree Plantation
2. Total Sanitation
3. Hygiene & Liquid Waste Management
4. Safe Drinking Water
5. Solid Waste Management
6. COVID-19 Dashboard

These activities are then approved. Since this is part of the Championship Program, you will get points based on your activities. The more activities you have, the more points you earn. The app will require your personal information like CNIC so that the Ministry of Climate Change can ensure that the users are authenticated and validate the activities submitted by users based on it.

BIG DATA
ITS PROSPECTS AND CHALLENGES IN PAKISTAN
by Sarah Khan

According to the "Beyond the Hype: The Hard Work behind Analytics Success", "The main goal of a formal organizational strategy for data and analytics is typical to improve decision-making with analytics in a wide realm of activities. (and) Our survey results and interviews offer strong evidence that successful analytics strategies dramatically shift how decisions are made in the organization."

In very simple and layman terms the Big Data is all the information that the global world is creating with the passing of every second that is spent on the "world wide web" or through the handheld devices

In very simple and layman terms the Big Data is all the information that the global world is creating with the passing of every second that is spent on the "world wide web" or through the handheld devices that are used by all, from a toddler to an old-age person. In this "Big Data," the click baits, the reviews, the feedback, the quality checks, the small surveys, etc. that we do or come across all add to it. All this data collectively form very large, more complex data sets, especially those that are collected from new data sources.

These data sets are so voluminous and big, that the normal old traditional data processing software cannot manage it nor put it to some good use.

Examining the big data, extracting the hidden information from it i.e. the hidden patterns, correlations, market trends, and customer preferences that can help the organizations make better decisions, are all part of the complex process of data analytics. Data analytics, in real is extracting the information for future use. They try to see and find a common trend, a pattern that is being adopted by the users whether they are common people or some other small or big organizations that are the customers. All these findings point to and answer the Business intelligence (BI) questions about a specific business as to how they run their businesses. It helps them in the guesswork of facilitating a client, customer trying to know what is to be asked or demanded of them before it is even asked for.

In Pakistan, the Punjab province with its over 100 million population have kept a social order and peace. Their digitization transformation journey over the past decade is worth sharing. In the Dengue Monitoring Platform, smartphones were used to track down the government efforts and coordinate between the 17 government departments that were related and involved in the anti-dengue activities across Punjab. The reporting of over 100 million activities has been done through this system and still the count increases.

In Punjab, the computerization and automation of all police stations have resulted in the discovery of thousands of vacancies in the police department after the successful roll-out of the e-transfer system. The digitization of all the Punjab Police employees enabled the electronic generation of transfer and posting orders, thus thousands of vacant positions were discovered. The computerized and digitalized complaints registrations have opened more than a million full lifecycles of criminal and civil case records, from the 36 districts of Punjab.

After the success in Punjab, the same process and practice have been replicated in other provinces too like in Sindh and Baluchistan. And as these systems are all over the internet the systems of different provinces interact and talk to one another digitally and in doing so have helped in tracing and arresting over 100,000 criminals.

The transformation of the manual laborious system to a computerized system gives hope of no human mishandlings or delays with the data or records. The citizens are facilitated without any discrimination or biasness. The computerized system ensures remote, paperless, and cashless transactions with the government and also promises easy and uniform access to government facilities.

The transformation of the manual laborious system to a computerized system gives hope of no human mishandlings or delays with the data or records

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Big Data Challenges in Pakistan

Though the computerized and digitization of the data has a promising future of transparency and equal opportunity for all, but however till the complete transformation takes place Pakistan still has to overcome some challenges.

1. Work Ethics and Culture

Digitization is creating one system, one platform, and one rule for everyone. The digital system does not understand the prevailing status quo of society. The biggest opposition that this transformation of accepting and being part of Big Data is the fear of one rule for all and the old status quo mentality. It is more of a battle against biased culture, which is not that open to the elements of transparency, visibility, and accountability for all stakeholders. This situation needs to be handled by experts who have an understanding of such mentalities.

2. Frequent Leadership Changes

Any transformation process is never a small feat that is completed in a very short span, and that too of a whole system, that has been functioning since independence. The top most management or the leaders who are directing the transformation once replaced or taken over by new leaders can threaten the successful completion of the transformation. The vision or the understanding developed between the leader and the team can be transferred completely to the successor. So if by any bad luck it does happen and the leader is replaced by a new one, there is a good chance that the whole development made in the project to date may go down the drain as if as the new leader doesn't agree with the old ways. Thus, a great loss of resources can incur along with a delay in the transformation/project delay.

3. Rules for Software Procurement

The system and rules of procurement in Pakistan have not been updated with time. There is no proper straightforward rule for the procurement of software; as per 'the government books, if something is delivered, it has to be either a tangible good or service. There is no separate delivery category for software. Thus the software contracts are treated the same way, which completely goes against the nature of software. Software engineers solve different algorithms and create software, and no two software engineers can solve an algorithm the same way and so will be their implementation. So the work of one cannot be completed, managed, or maintained by another one.

Without any guidelines to walk on, there will always be unnecessary procedural delays, both in public policy formulation and service delivery to citizens

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It would be better if the software engineer who developed the software be traced and given the contract, as being the creator, the management and maintenance of the software will be easy and the system will run smoothly.

4. Data Governance Policy

No national policy exists on the use of Data Governance. There is no guidance on how to deal or use the data storage, data backup, data anonymization, internal/external data sharing protocols, and data monetization. Without any guidelines to walk on, there will always be unnecessary procedural delays, both in public policy formulation and service delivery to citizens.

5. Digital Payments Gateway

A proper pathway, documentation for the payments is a fundamental building block to digitally capture and document all economic activities, commerce, and trade. Along with that understanding and identifying the reasons for the payments is also essential; whether the payment is against an invoice or an agreement? Is it a partial or full payment? Is it a payment made for a service or delivery of goods? Ideally, all fines, fees, and taxes should only be accepted electronically, without any cash handling.

Once the system is established and fully functional, it will provide a mechanism as to how to evaluate the government's tax policy. The collected tax has whether increased or decreased the revenue. In a commodity market, the real demand for basic and essential commodities can be known with the e-payments, and also will shed light on the demand locality-wise, and around important events. Most importantly the prices of these commodities can be regularized by ensuring a better balance between supply and demand.

6. Secure and Reliable Digital Access

To be part of the digitized world it is important to make big data access common especially in small cities, remote areas, farms, motorways, and highways. It is needed if the dream of implementing a serious digitization effort to take root in Pakistan is to be realized in the real world. Till there is no free and proper digital access across Pakistan, we can never have comprehensive, reliable, and timely information regarding on-ground situations, which is critically required for good decision-making at the top.

Modern techniques of employing big data management, artificial intelligence, and effective human-computer interaction are the key areas that will help accelerate the process of e-governance.

POCO X3 GT

A STAR IS (RE) BORN

Design and Built

The Poco X3 GT may be a mid-ranger, but it sure doesn't look like one. Whether you get the sparkly Stargaze Black version, the striped Cloud White or the Wave Blue one, you'd have a cool looking phone that will stand out.
This GT model also employs the latest Gorilla Glass Victus screen protection, something that was exclusive to flagships until recently.

The rest of the Poco X3 GT is made of plastic, though it does still feel decent- the frame has matte finish, while the shiny plastic back looks and feels like glass. Just like most of the Xiaomi and Poco mid-range phones, the Poco X3 GT is IP53-rated, promising protection from dust and water splashes. It is NOT waterproofed, though.

Almost the entire front is occupied by the 6.6-inch LCD screen. It supports adaptive 120Hz refresh rate, HDR10, and DCI-P3 color space.The back is made of plastic, but it can easily pass as glass one. It's one of these slightly curved multi-layered pieces, all glossy and pretty thanks to a cool paintjob.

Cameras

The Poco X3 GT features a triple-camera that's placed on a rather large island on the back. There is a 64MP primary camera, an 8MP ultrawide shooter, and a 2MP macro camera. A dual-LED dual-tone flash is around, too.

The Poco X3 GT has a 16MP selfie camera that uses a 1/3.06" OmniVision OV16A1 sensor with 1.0μm pixels and a Quad-Bayer filter. The sensor is behind an f/2.45 aperture lens that has a fixed focus.

The main camera of the Poco X3 GT can do 4K recording at 30fps, as well as 1080p at 30fps and 60fps. The ultrawide snapper maxes out at 1080p at 30fps, while the macro shooter- at 720p at 30fps.

Battery

The Poco X3 GT, just like the Poco X3 NFC and Poco X3 Pro, is powered by a solid 5,000mAh cell. Fast wired charging is supported, and the 67W adapter is bundled with the phone.

Performance

The Dimensity 1100 is no slouch, far beyond the kind of Snapdragon 600 series you'll find in Poco's lower-spec M3, and able to clearly deliver where it matters. Handling of the software is smooth, while even top drawer apps and games run without fuss. Part of the Dimensity 1100 chipset is that it's 5G capable too.

Pros

- Excellent battery life.
- Very loud speakers.
- Ample storage space.
- Great selfies, 4K selfie video too.

Cons

- The display is an LCD
- No night mode on the ultra-wide camera

Final Verdict

The Poco X3 GT is a phone of many flagship traits. The GT's 120Hz LCD screen is truly one of the most adaptive we've experienced, the performance is excellent even if the cooling isn't ideal, the battery endurance is impressive, and the charging is incredibly fast.

MEDIATEK DIMENSITY

1100

67W Turbo Charging
In-box charger

UFS 3.1

Dual 5G SIM

LiquidCool Technology 2.0

120Hz
refresh rate

DynamicSwitch
Technology

6.6"
DotDisplay

64MP
TRIPLE CAMERA

Dolby Atmos
DUAL SPEAKERS

Victus

Corning® Gorilla® Glass
Victus™

BIGGEST EVENTS

of 2021

1 Smartphone manufacturing started in Pakistan.

2 NFTs became the newest Blockchain trend.

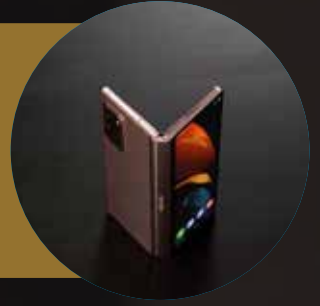**3** LG left the smartphone business.

4 Billionaire race to go to space started between Jeff Bezos, Elon Musk, and Richard Branson.

5 First foldable phone Samsung Z fold was launched in the market.

6 A number of tech-related policies and bills were passed in Pakistan including, social media rules, spectrum auction policy, and, right of way policy.

7 Amazon included Pakistan in its seller's list.

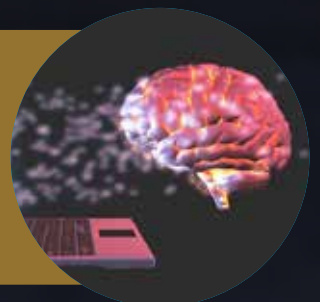**8** Microsoft beat Apple to become the world's most valuable company.

9 El Salvador becomes the first country to make Bitcoin a national currency.

10 Scientists at Brown University fully connected a human brain to a computer via a transmitter device. Trial participants with paralysis were able to move robotic limbs by simply imagining their movement.

6G will be Ready for Deployment by 2030

TamrakarRakesh, 5G Standard Expert, Vivo

5G connectivity has become a dire need of the modern era. Consequently, smartphone manufacturers are focusing on acquiring the best 5G technology for their devices. In line with that, the Chinese company Vivo has been constantly innovating the 5G infrastructure. For this purpose, they have hired the renowned 5G expert, TamrakarRakesh. Currently, he serves as a 5G standard expert at vivo. Tamrakar manages 5G physical layer system design, research, and standardization. He is also involved in developing 5G (NR) radio access technologies which include data channel, control channel, pilot signals, multi-antenna technologies, and mmWave technologies. An interview was conducted with TamarkarRakesh to further discern about the 5G landscape of the company.

Q: What are some of vivo's most notable contributions to mobile industry?

TR: Vivo focuses on innovations in hardware design and the software ecosystem to improve terminal performance and user experiences. Vivo invests heavily in 5G connectivity to reach the stage of product realization and getting this technology into the hands of consumers. One of vivo's most notable contributions includes the standardization and performance enhancement of Rel-17 multi-SIM technology. Previously, an incoming voice call from one competing 5G SIM card would interrupt the data flow of the other, resulting in abysmal performance as one would cancel the other. Having discovered early that consumers preferred 5G smartphones with dual-SIM card slots for greater flexibility in different usage scenarios, vivo researchers successfully sought to negate the clash, leading to the existence of multi-SIM 5G smartphones on the market today.

Always innovating with the end user in mind, the Rel-16 terminal power-saving technology patented by vivo manages to simplify terminal actions. It lowers normal energy consumption by creating a new "dozing" state, allowing the device software to become inactive while the hardware becomes idle. 5G smartphones can now intelligently catch every chance to take a rest, thereby prolonging battery life.

Always innovating with the end user in mind, the Rel-16 terminal power-saving technology patented by vivo manages to simplify terminal actions

Another issue raised by 5G technology is the increasing number of antennas and components installed inside a smartphone. However, users are relentless in their pursuit for ultra-thin smartphones. vivo's proprietary 3D stack design uniquely encases all this industry-leading technology to allow new 5G smartphones to be even slimmer than its 4G predecessors.

Q: Vivo aims to empower consumers by providing access to 5G connectivity at every price point. How far has vivo managed to do that?

TR: Vivo is working on making 5G devices ever more accessible and affordable and releases over 20 models of 5G devices covering all price ranges from 1,000 – 6,000 RMB. To democratize and popularize the powerful capabilities of 5G to the masses, vivo's5G smartphone product lineups have a broad spectrum, ranging from professional photography, high performance, selfie taking, e-sports etc., to serve various kinds of user needs around the world.

Q: How can 5G help improve connectivity? Will 5G be rather an optimization of 3G/4G, or is there a revolutionary element?

TR: 5G is not a simple optimization of 3G/4G, it incorporates many breakthrough technologies, for example it utilizes millimeter wave spectrum with abundant frequency resources to support reliable communication. It also employs massive MIMO technology with beam-based operation. 5G supports wide range of frequency bands with very wide bandwidth, to provide support to services such as eMBB (enhanced mobile broadband), URLLC (ultra-reliable low latency communication), mMTC (massive machine type communication).

5G allows a new kind of digital infrastructure tovirtually connect everything and everyone. It supports not only the smartphone type of device, but also reliable communication for industry applications, autonomous driving, UAV (unmanned aerial vehicle) communication etc

5G allows a new kind of digital infrastructure tovirtually connect everything and everyone. It supports not only the smartphone type of device, but also reliable communication for industry applications, autonomous driving, UAV (unmanned aerial vehicle) communication etc. A whole lot of new applications from education, healthcare, industry, infrastructure, entertainment, public services, environment monitoring can be supported. 5G will provide humankind with the foundation to establish smart cities with comprehensive internet-of-things technologies that can efficiently restructure our lived environments and redefine our everyday lifestyle.

Q: What is vivo's vision and future plans on 5G?

TR: Wireless mobile technologies are developing fast, a new generation of technology comes out every 10 years, currently academia and industries are coming together to define visions, goals and researching technologies to meet the targets. As 5G commercial networks are gradually deployed around the world and progressively advanced devices increasingly permeate every aspect of our livelihoods, thought leaders of the mobile industry are already looking forward to its next generation: 6G.

Vivo communication standard experts have analyzed how the sixth generation will embody much more than technological transformation as it merges our physical and digital worlds

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Vivo is part of a select few that hold the extensive expertise and in-depth understanding of consumer needs to turn this vision into a reality. To kickstart this exciting new era, the vivo Communications Research Institute released two white papers in late 2020 that break down the facets of 6G technology. Providing a diverse set of hypothetical scenarios and case studies, vivo communication standard experts have analyzed how the sixth generation will embody much more than technological transformation as it merges our physical and digital worlds.

Q: What are the major challenges that need to be tackled on the way to the technological maturity of 5G?

TR: Commercial 5G networks are being rolled out globally with rapid speed. The network operates mainly in two spectrum ranges named as FR1 (Frequency Range 1) and FR2 (Frequency Range 2). FR1 includes frequency bands up to around 7GHz while FR2 includes frequency bands from

24GHz to 52GHz, which is also known as millimeter wave band. Currently, FR1 based technology is much more mature than FR2 based technology. 5G as a complex technology can support extremely wide bandwidth, hence the power consumption at the base stations and 5G devices is a big challenge. To fully unlock 5G's powerful capabilities, another challenge could be the development of new applications.

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Q: According to you, what should be done to ensure 5G will become a true global standard?

TR: The 5G technical standard was formed by a series of innovative R&D efforts led by companies such as vivo. The 5G products or services consumers are presented with today are actually a refined conglomeration of technologies formulated by the 3rd Generation Partnership Project (3GPP), a consortium of international telecom standards organizations that provide a stable platform for collaboration.

Currently, more than 150 commercial 5G networks have been deployed globally and there are more than 500 million active users with more than 100 million 5G enabled smartphones shipped every quarter. The deployment and the commercialization of 5G should be a joint effort by multiple parties depending on factors including network infrastructure readiness, availability of 5G devices

Q: How exactly vivo's 5G would affect our life?

TR: Vivo has invested heavily in 5G connectivity to reach the stage of product realization and getting this technology into the hands of consumers. It goes without saying that 5G can facilitate limitless applications, on both industrial and consumer levels. For tech-savvy individuals accustomed to heavy device usage loads, 5G will be a game changer in elevating their collective digital devices into powerful, cloud-synced gateways capable of tapping into the most resource-intensive applications and data streams. Hundreds of thousands of industries are currently undergoing paradigm shifts as enterprises and countries race to propel society into the next phase of technological transformation. Besides, the industries are

becoming integrated, owing to the reliable and streamlined network between machines, devices, and other digital objects. With many creative applications ranging from augmented reality/virtual experiences to vehicle-to-everything driverless cars and many more, 5G will provide humankind with the foundation to establish smart cities with comprehensive internet-of-things technologies that can efficiently restructure our lived environments and redefine our everyday lifestyles.

5G will provide humankind with the foundation to establish smart cities with comprehensive internet-of-things technologies that can efficiently restructure our lived environments and redefine our everyday lifestyles

Q: What would be the difference between 5G and 6G? What timelines we are looking at for 6G?

TR: 5G supports eMBB, URLLC, mMTC services, enabling higher data rate than 4G, low latency communication for industrial application, and IoT devices. 6G is able to achieve the free connection between the physical and digital world. 6G will improve the degree of freedom in connection in domains of space, time, range, sensory, interaction and finance. The 6G communication system will be an efficient system for communication, computing, storage and data integrated services. For example, the peak data rate of 6G will be faster for 5 times than 5G; the latency will be shortened by 10 times and the reliability will be enhanced by 100 times. Tentatively, standardization of 6G mobile technology could start in 2025 and complete first version by 2028. That means 6G will be ready for deployment by 2030.

Vivo Y53s

CLEAR SHOT, SWIFT PLAY

Design and Display

The Vivo Y53s phones come in various color combinations. The brand has retained its uniqueness by providing some eye-catching designs. You will have two variants, black green, and blue-purple.

The phone comes with a 6.58-inch touchscreen display with a resolution of 1080x2400 pixels. It weighs 190g and the sidebar displays 8.4mm thick. If I talk about motion blur, there is a 60Hz refresh rate.

vivo's Side Fingerprint design integrates the fingerprint scanner with the power button – so you can turn on the display and unlock your phone at the same time. The time it takes to unlock from a lit screen is a mere 0.24 seconds.

Cameras

The Vivo Y53s on the rear packs a 64-megapixel primary camera with an f/1.79 aperture; a 2-megapixel camera with an f/2.4 aperture, and a 2-megapixel camera with an f/2.4 aperture. The rear camera setup has autofocus. It sports a 16-megapixel camera on the front for selfies with an f/2.0 aperture.

Super Night CameraSuper Night Mode on the rear camera is supported by multi-frame denoising to render splendid night shots even when it is dark. Super Night Selfie on Y53s leverages Selfie Softlight Band and a noise cancellation algorithm to pack a punch in low-light conditions.

Performance and Battery

The Vivo Y53s runs Funtouch OS 10.5 is based on Android 11 and packs 128GB of inbuilt storage with 8 GB RAM with the freedom to expand storage via a dedicated micro SD card slot. The Vivo Y53s is a dual-SIM mobile that accepts Nano-SIM cards.

The Vivo Y53s comes with the 12nm – MediaTek Helio G80. The phone come with a Li-Po 5000mAh battery that lasts almost a full day after heavy use. You will have a much larger 33W fast charger.

Pros

- Latest Android 11 operating system with custom UI
- Gyro-EIS is available for stable video recording
- Huge 5000 mAh battery with fast charging support
- Decent image and video quality in adequate daylight

Cons

- Medium processing chipset
- Without any gorilla glass protection.

Final Verdict

If you love the camera and need a faster charger, the Y53s might be the best choice.

64MP

6.58" FHD+ Colorful Screen

64MP* Rear Camera

5000mAh Battery + 33W FlashCharge

5000mAh

8GB RAM + 3GB Extended RAM

RAM
8GB + 3GB

Leveraging ICT to
Increase Exports

by Fizza Attique

Economists tell us that one of the main reasons for our economic woes is the lack of emphasis on exports. From earning foreign income to financial import, Stabilizing currency to balancing the payment deficit issues and persistent service debts issues, Pakistan has a long way to go.

No doubt, Pakistan is a competitive country but in addition to that, the exports of the country should be proportional to the market trends, quality and should be based on internationally acceptable standards. IT services and hi-tech manufacturing play a major role in growing exports which leads to better and improved GDP. Unfortunately, the main hurdle in boosting Pakistan's export is the scarce investment opportunities which in turn are due to the non-conductive and uncertain investment environment. The unpredictable demand and inflation, unstable

output growth come into existence which indicates macroeconomic uncertainty in the country.

The main hurdle in boosting Pakistan's export is the scarce investment opportunities which in turn are due to the non-conductive and uncertain investment environment

These indicators are adversely impacting the private investments in the country for years. The Lack of investment has remained the main reason behind the declining exports over the last 10 years. In addition to that high tariff structure, inconsistent growth, low penetration in global markets and lack of infrastructure and technological advancements have also aggravated the situation. Another reason for the stagnant growth of IT exports is the government's irrational policies and complex incentives offered to the industry.

Whereas other successful countries are carrying on export-led growth strategies with a goal of high savings and investment rates which results in rapid growth. Improving export competitiveness in the global market is essential for increasing Pakistan's exports. It should also be mentioned here that Pakistan exported $25 billion worth of goods during the current year, which is the highest ever since 2013-14. Everyone celebrated this, but let's not forget that in a country whose population is 220 million with an abundance of raw material and resources, this growth is negligible as compared to many other countries much lesser populations. For instance, Malaysia and Turkey exported $188 billion and $157 billion of goods with populations of 32 million and 84 million respectively. Singapore with a population of only 6 million people and no raw resources exported $372 billion, while Hong Kong with only 7 million people exported $496 billion.

The future rests with the innovative world of technological advancements with AI (artificial intelligence), 5G, IoT (internet of things), cloud and mobile computing, data mining, cryptocurrency, robotics, and blockchain which are considered a new normal in the world. In the next few years, computers will take over humans and bring more intelligence. The countries which were looking to increase their IT growth have capitalized on these technologies and have achieved increased GDP.

Through this transformation, IT companies like Apple, Microsoft, and Google have reached market capitalizations of above $1.5 trillion, and are today worth more than Italy, Canada, Russia, South Korea or Australia. This is the new technological disruptive world order.

Even knowing this, we are not even equipping our youth with hi-tech knowledge and skills. One-third of our population is between 15 and 35 years old, and another 75 million under the age of 15 are ready to join the intellectual and technological work force over the next 15 years. For many years, universities are offering IT degrees, and other institutes offering short courses. Under the presidential initiative for Artificial Intelligence and Computing (PIAIC), large numbers of coders are being trained.

Even after these efforts, we are not able to make an impact on IT exports as our standard of IT training is not at par with other developed countries globally. Due to this, less than 20 percent of IT graduates are able to qualify for IT export industry.

We cannot compare ourselves with India who has started their IT journey after independence and are quite successful. In 2021, Pakistan increased IT export to $2 billion as compared to India's $200 billion. If our youth were trained as per global standards, we could have perhaps reach IT exports of at least $30 billion. While we are lagging behind our neighbor country, India is all set to overtake the US with the largest population of hi-tech IT developers in the world by 2024.

So, how exactly Pakistan can Increase IT exports hence, leading to sustainable economic growth?

Establish World Class IT Institutions

We need to analyze everything from the scratch in order to bring change in the IT export sector. The most important and basic step that is needed is the establishment of World Class IT institutes. Offering four years programs shouldn't be compulsory instead they should focus on at least six months to one-year hi-tech IT certifications to help students build basic skills.

Over the next five years, the goal should be to produce 10,000 best IT certified developers. These programs should be like PIAIC but since it's quite slow with a few hours' instructions per week, the IT programs should be more knowledge-based and quick.

Empower SMEs

Pakistan has almost around 3.3 million small to medium enterprises. These companies contribute to 30% of Pakistan's GDP and generate approximately 25% exports, keeping this in view, some policies should be made in order to empower SMEs. Apart from this, Government should work on providing money, grants, loans, bonuses, and cash rewards to start-ups and exporters. Capital through private investors (venture capitalists and angel investors) should competitively be made available to the Incubator IT companies.

Establish IT Incubators

The government should consider incubator centers in each and every university and these incubators must be connected together. Apart from IT skills, these centers should also provide other basic skills such as marketing, branding, HR skills, business development, and project management workshops to IT professionals and companies that will help them learn 360-degree solutions.

Create Online Database for Freelancers

Government should collaborate with forums like PSEB, PASHA, etc. to create an online database of all freelancers and IT companies and advertise them on social media platforms to make them visible globally.

Appoint Overseas Pakistani with Exceptional IT Skills

The overseas Pakistani having exceptional marketing skills and PR Network. They should be appointed as IT Ambassadors in technology hubs and should be asked to help Pakistani companies and businesses to grow and learn. Difficult time requires innovative thinking and out-of-the-box solutions, so this is high time that we should start thinking about capitalizing on exportable services and products requiring minimal infrastructure and investments.

According to experts, it almost takes one year to learn new technology and another one year to master it. If we start working on this today, we will not be left much behind the other successful countries. Taking advantage of this opportunity and relevant resources can make a big difference.

TECH TWIST

01 WordPress powers 40% of the top 10 million sites on the web. WordPress is a Content Management System (CMS) that allows webmasters to quickly create a blog and manage content on a website.

02 The start of the Internet started in the early 1960s when Paul Baran began researching packet switching, one of the core technologies behind the Internet.

03 The most popular language by far on the internet is English. Over 25.3% of the internet is in English, 19.8% is in Chinese, and 8% is in Spanish.

04 Internet world stats show that Asia is the continent with the highest number of internet users in the world, somewhere around 2 billion.

05 Samsung is 38 years and 1 month older than Apple. Samsung was founded as a grocery store on March 1, 1938, by Lee Byung-Chull. Apple Founders Steve Jobs and Steve Wozniak created Apple Computer Inc. on April 1, 1976.

Top Reasons That Make Vivo Y33s the Most Desirable Mid Ranger of 2021

Smartphones these days are such an important part of our lifestyle, that it has almost become an extension of our personalities. vivo, the leading global smartphone brand recognises this and continues to elevate user experience with each product by constantly innovating and creating newer products that best suit the evolving needs of consumers.

Today we will be talking about the newest entrant of the Y series portfolio, vivo Y33s, and all the wonders it can do! To begin with, the smartphone is a stunner with regard to its design and a maestro when it comes to aspects like camera, storage and battery. Here are top 5 reasons why vivo Y33s is going to ace consumer expectations in the mid-range segment.

Fabulous Camera Setup

The all new vivo Y33s comes packed with a 50MP Rear Camera, that is supported with a 2MP Bokeh Camera and a 2MP Super Macro Camera beautifully crafted into vivo's signature Dual Tone Step, inviting users to explore the powerful imaging technologies that lie within. The 50MP Rear Camera sensor revolutionizes high-definition photography with pristine clarity irrespective of zoom in or crop.

Premium Design

The Y33s exudes a slim and trendy design with a luxurious and premium feel. This slender phone with a 2.5D packs a massive battery into an 8.0mm thin body. The 182g device is a piece of surprisingly lightweight tech that allows a comfortable and hassle-free hold. The simple aesthetic of vivo's Dual Tone Step in the camera alignment also adds to the elegance of the device. The smartphone features top notch textures and hues with the following options:

Mirror Black   *Midday Dream*

Battery Backup

The all-new vivo Y33s is equipped with a 5000mAh Battery + 18W Fast Charge that defies all battery woes for a consumer. The smartphone features three powerful tactics: a 5000mAh (TYP) battery, 18W Fast Charge and vivo Energy Guardian (VEG). With the help of these, the user can charge the phone quickly to make full use of the large battery capacity and enjoy efficient energy management.

Massive Storage

The smartphone is equipped with 8GB RAM memory. It comes with an Extended RAM 2.0 that permits the 8GB RAM to extend up to 4GB by using the idle ROM space, making switching between apps smoother and lag free.

Stunning Display

The smartphone sports a 6.58-inch FHD+ in-cell display that delivers bright colors and vivid details. From the fingertip to the eye, the experience is seamlessly smooth and delightful, offering undisputed clarity whether one is watching movies or playing games. It also provides protection for the user's eyes with a built-in blue light filter.

Infinix Zero X ^Pro

Design and Display

The sleek design is something that makes the phone stand out. Plus, the 7.8mm slim form factor gives the phones a decent grip.

Apparently, you can choose the best option from a wide choice of shades. For starters, Zero X Pro is workable in two impressive color options, including Nebula Black and Starry Silver. On the other hand, the additional Tuscany brown color arrives with a ceramic leather finish. Plus you'll also get the premium glass back. It also features a fingerprint sensor on the display as usual.

However, you won't get the protection of corning gorilla glass, even though the phone has a 6.7 inch AMOLED display panel. But the smartphone has achieved the 120Hz refresh rate that ensures you can smooth the UI experience, while the screen brightness nits are comparatively high than the average phone, so no problem in watching the screen outdoors.

Cameras

The camera technology used in Infinix Zero X Pro offers the most suitable result, whether shooting in daylight or in night mode. It all goes very well with the precise mix of AI software interaction. In addition, the native camera app has a dedicated night mode to accurately tone dark subject photos. Also, the colors and saturation of the image come out decent. So you can click on the best time of your life without worrying.

In terms of specs, the Infinix Zero X Pro has a 108MP main camera. As for the secondary camera setup, the combination of an 8MP ultra-wide lens and periscopic telephoto brings the potential of 5x optical zoom. While the selfie department houses a 16 MP lens that offers 1080p video recording.

The phone renders 4K video resolution with 30fps. However, the video stabilization features are not available as you will notice during use. However, the company compensates with many modes and filters. After that, you will also have an exclusive feature to create short videos.

Memory and Hardware

The power optimization via the MediaTek Helio G95 chipset handles all multitasking and renders an amazing performance experience. The chipset works on the 12nm architecture.

You're getting a built-in gaming center that improves game performance and renders optimal graphics with the adaptive refresh rate needed for the game. In terms of storage support, you're getting a configurationof 256 GB space with 8GB of RAM. Expand storage limits through the dedicated secondary slot.

The long-lasting battery is the main selling point of the Infinix smartphone, and they strategically used this feature in the Infinix Zero X Pro. Under the hood, the Li-Po 4,500 mAh battery powers the entire ecosystem and provides more than 5 hours of screen time to watch series on the web excessively. Inside the box, you will have the surprise 45W fast charging that will fill your battery to 100% in less than 50 minutes.

Also, you can equip a 3.5mm connector with the usual Type-C 2.0 port to supply the battery.

Pros

- 45W fast charging support
- 5X optical zoom capability on a telephoto lens
- 120Hz refresh rate
- Impressive design layout

Cons

- Without NFC and 5G connectivity
- Without any gorilla glass protection

Final Verdict

The Infinix X Pro smartphone comes with an exciting set of features that are often seen in the mid-range segment. The display capability, battery life, and camera support are noteworthy compared to the previous Infinix Note 8 series phones. Overall, it is a great choice in the mid-range segment.

Infinix
ZERO X PRO

See Beyond.

60X Periscope
Moonshot Camera

48MP
Super Night Camera

Helio G95
Ultra Game-play Processor

MediaTek helio | G95

Memory Fusion Technology 2.0
8GB RAM + 3GB Extended RAM

*Memory Fusion Technology will be supported by OTA upgrade

6.78"
FHD+

90Hz
Super Fluid Display

5000mAh Battery
&18W Fast Charge

RIVERSONG
Made for Everyone

Riversong Technology, a leading premium smartphone accessories manufacturer, has introduced various range of wearable products in line with the future of mobile accessories and immense growth in smartphone sales to boost the wireless technology in the country.

Haitham Kalakeche, CEO Riversong Global says, "The evolution of wireless connectivity in mobile accessories has gone full circle and has become the most preferred connectivity solution. The future of wireless networks seems to be faster, smarter, and more efficient. Wearables consist of artificial intelligence and IoT which keep track of information and instructions also help through these technologies."

According to the RIVERSONG's Global COO-Sales, Syed Ali Yousuf, "Mobile phone accessories demand and usage have been increasing drastically over the years. With the increasing technology awareness and the growing purchasing capacity of the masses, Pakistan as a market has shown a potential for growth of the technology sector."

"Previously, the consumers used to spend between $200 to $300 USD on mobile phones as per their needs. Within few years the new technology and demands have made the consumers to spend between $500 to $800 on smart phones which also had led to increase in demand of mobile phone accessories in Pakistan."

End user customers in Pakistan are now splurging on the mobile accessories like wearables, audio and power banks to support the necessity of smartphones."

Despite the COVID-19 pandemic, the second half of 2021 saw the overall demand for consumer electronics to be stronger compared to previous years and this will likely continue throughout 2022 overall.

The demand for chargers, wearables and earphones is also anticipated to significantly increase in the coming years. As modern-day smartphone batteries are unable to endure heavy usage, the demand for power banks is expected to increase rapidly.

Riversong is in plan to announce strategic partner for Pakistan. The accessories manufacturer is also seeking to expand its global reach by establishing its presence in over 45 countries by the end of 2023.

Riversong Technology, a leading consumer electronics company driven by constant innovation to offer a range of affordable and stylish smart gadgets and mobile accessories based on advanced technology. The company has a global presence in more than 35 countries across Europe, Middle East, Africa & South Asia has become one of the fastest growing global brands. All the products come with a one-year replacement warranty. More information, visit **www.riversongtech.com**

EDGAR FRANK CODD

American Computer Scientist and Mathematician

Edgar Frank Codd; American computer Scientist and Mathematician

(born August 19, 1923, Portland, Dorset, England—died April 18, 2003, Williams Island, Florida, U.S.),

British-born American computer scientist and mathematician who devised the "relational" data model, which led to the creation of the relational database, a standard method of retrieving and storing computer data.

Codd interrupted his study of mathematics and chemistry at the University of Oxford to become a pilot in the Royal Air Force during World War II. Following graduation in 1948 he moved to the United States, and he later became a U.S. citizen.

Codd joined IBM in 1949 and worked as a mathematical programmer on some of the company's early computers. He invented the technique of multitasking, which allows several programs to run at once. In 1967, after receiving a doctorate in computer science (one of the first degrees for the study of cellular automata) from the University of Michigan, Codd moved to IBM's Research Laboratory in San Jose, California.

In 1970 Codd published his seminal paper "A Relational Model of Data for Large Shared Data Banks," which described a new way of structuring data using ideas from set theory that eliminated the need for knowledge about the internal structure of a database. Although IBM researchers Donald D. Chamberlin and Raymond F. Boyce developed SEQUEL, later named Structured Query Language (SQL), in the early 1970s, the company was slow to market the relational database system, which only the most advanced computers of the time were capable of running. Meanwhile, Codd's ideas were put into practice by several new companies founded in or around Silicon Valley, including Oracle Corporation, Informix Corporation, and Sybase Inc., before IBM introduced its SQL/DS in 1981. In 1983 SQL/DS was renamed DB2, and it remained IBM's main database management system (DBMS) into the 21st century.

Codd was honored for his achievements by the Association of Computing Machinery, the British Computer Society, the National Academy of Engineering, the American Academy of Arts and Sciences, and the Institute of Electrical and Electronics Engineers. In 1981 Codd received the A.M. Turing Award, the highest honor for computer science.

6 ANTICIPATED INNOVATIONS
COMING TO SMARTPHONE CAMERAS IN 2022

by Usama Anjum

Smartphone camera technology is refining with every passing year. Even in the preceding year, it has witnessed some remarkable advancements due to which it has replaced the conventional cameras in many aspects. In 2021, smartphones with numerous lens systems became a common sight. Comparatively, there is an improved sensor, size, and resolution which implies that users can take more details and render photos accurately even in complex lighting conditions.

In addition to that, Artificial intelligence (AI) algorithms improved many aspects of photo processing. However, it's not the endpoint as a number of changes are coming in the next year, as smartphone manufacturers look to provide cutting-edge camera technology.

Therefore, we just need to assess the trends that will prove to be a primary driver of this change. In a webinar named Global Mobile Camera Trends 2022, smartphone experts from leading smartphone companies like TECNO, Samsung, and DXOMARK Image Labs, discussed some of the key trends that are likely to take over the camera technology in the upcoming year.

New OIS Technology

OIS stands for Optical Image Stabilization. The technology is being extensively used in the smartphone nowadays and is improving with the passage of time. According to Jimmy Hsu, who is a senior product manager at TECNO, the pre-2019 trend for OIS was about one degree of stabilization. He also told that in 2021, standard stabilization has improved to three degrees because of the launch of pan-tilt OIS.

And now, in 2022, the company intends to introduce the first Android phone with sensor-shift. Compared to conventional Optical Imaging Stabilization, TECNO's sensor-shift technology can achieve a response frequency of 5,000 adjustments per second.

This implies that TECNO is setting its sights on OIS stabilization up to five degrees.

Bringing More Depth in the Photos

It is evident that the photos with the sharply rendered foreground and blurred background can lead to a pleasing effect specifically while shooting portraits. Though, in order to do this, the smartphone must be able to recognize depth and subject edges. In this regard, with Time of Flight (ToF) and Dynamic Vision Sensors (DVS) improving, smartphones will get improved at developing 3D models of the scene and detecting edges.

, ToF and DVS could be the opportunities where mobile phone cameras start to outperform (DSLR) cameras

This will enable more exact measurements and provide the users with features like enhanced and gradual blurring of backgrounds. According to HSU, ToF and DVS could be the opportunities where mobile phone cameras start to outperform (DSLR) cameras.

A better Optical Zoom

Popular smartphone manufacturers are working on 'continuous optical zoom,' which will enable the users to shift between various focal lengths smoothly. This needs the exact movement of lenses within small spaces with no effect on the image quality.

Hsu envisages that the market could witness continuous optical zoom in the second half of 2022. Furthermore, he said that it would enable the users to shift between 3x and 5x optical zoom. Moreover, he also believesthat advanced technologies like long-stroke motor development and Active Optical Alignment could lead to 3x to 10x zoom in 2023.

High-Res Camera Sensor with Pixel binning

Major sensor manufacturers like Samsung are going to deploy an algorithm-driven technique known as pixel binning that allows high-resolution sensors (with a small pixel size) to perform comparatively better even in low-light conditions. According to Pan Xuebao to Samsung, "Just like our human eye will dilate when we are in a darker environment to let in more light, similarly, in low light conditions, our algorithm will automatically put the sensor in high sensitivity mode."

In this mode, the little individual pixels 'combine' and perform like larger pixels.

RGBW Sensors (Enhancing Low Light Performance)

Thesedays,smartphonemanufacturersare using various techniques to improve low-light performance. The RGBW technology addresses the problem at the sensor level.

Adding white pixels in the RGBW pattern improves light sensitivity by 60%, which implies that the sensor should be able to absorb more light from the environment

The camera sensor catches color information via a mechanism called the Color Filter Array (CFA). Traditional camera sensors use CFAs arranged in the Bayer format, which contains a pattern of Red (R), Green (G), and Blue (B) filters. However, the RGBW sensors add White (W) filters to this combination.

According to Hsu, adding white pixels in the RGBW pattern improves light sensitivity by 60%, which implies that the sensor should be able to absorb more light from the environment. In addition to the RGBW, the smartphone manufacturers are also inventing Glass+Plastic lens technology. Currently, the majority of smartphone lenses are produced out of plastic, but putting glass elements into the lens construction enhances the transmission of light. With the combination of both, the result is an overall 200% increase in light intake.

Using a more advanced AI to take Portrait Photos

As camera quality improves, we can see more details of the images. New technologies enable our portrait photos to be more accurate, particularly for people of color. While hardware improvements are necessary, smartphone software also plays a major role in shaping the final image.

As Macudzinski from DXO Mark states, "We need to be very good at processing, that is, to understand what the user's intention was and modify the image adequately." Therefore, for portrait photography, the AI engine recognizes and categorizes distinct elements such as faces and hair color to find out the subject's age, gender, and skin tone.

New technologies enable our portrait photos to be more accurate, particularly for people of color

Then the photo is optimized for more clarity, color, and backlight, which assists with more precise reproduction of darker skin tones even in low-light environments.

Advanced AI Improving Camera Capabilities

As per the Counterpoint Research's whitepaper, Artificial Intelligence is becoming advanced enough to identify dynamic scene elements like trees, he sun, the moon, or the sky in the background.

Artificial Intelligence is becoming advanced enough to identify dynamic scene elements like trees, he sun, the moon, or the sky in the background

Furthermore, AI will assist in interpreting light information. For example, if a user is capturing a scene against the sun, the algorithm operates to underexpose the sun and further illuminates the subject.

MOITT THROUGH USF
Launches 2 more Projects to Provide Broadband Services on

Ministry of IT & telecom through Universal Service Fund (USF) awarded contracts worth approximately PKR 300 million to Jazz for providing High Speed Mobile Broadband services on M3 and M5 Motorways. Federal Minister for Information Technology and Telecommunication (MoITT), Syed Amin Ul Haque and Federal Minister for Communications, Murad Saeed witnessed the contract signing ceremony held at the USF Office. The contract was signed by Haaris Mahmood Chaudhary, CEO of USF with Syed Fakhar Ahmed, Chief Corporate Regulatory Affairs Officer& Mr. Mudassir Hussain Vice President of Jazz. The Federal Secretary for IT & Telecommunication and Chairman USF Board, Dr. Muhammad Sohail Rajput and Member Telecom, Muhammad Omar Malik were also present at the ceremony.

The Federal Minister for Communications, Murad Saeed congratulated theFederal Minister of IT and Telecommunication, Syed Amin Ul Haque, USF and Jazz for launching thehigh-speed mobile broadband projects for the motorways. He said, "This will not only provide connectivity to the commuters on the motorwaysbut also enable immediate communication and rescue in case of an emergency. The present government isworking relentlessly toprovide maximum facilities to the citizens of Pakistanin order to bring ease into their lives."

While addressing the ceremony, Federal Minister for IT and Telecommunication, Syed Amin Ul Haque said, Through the M3 project, USF will be providinghigh-speed mobile broadbandaccess to 54.92 km of unserved road segment that passes through the districts ofSheikhupura, Nankana Sahib, Faisalabad, Toba Tek Singh & Khanewal.

This will not only enable the commuters on the Motorway but will also provide facilities to the residents of adjoining districts and villages.Similarly, through the second projectM5,high-speed mobile broadband coverage will be provided to 78.85 km of unserved roadsegment that passes through the districts of Multan, Bahawalpur, Rahim Yar Khan, Kashmore, Ghotki & Sukkur.

The cost of awarded contracts is approximately PKR 140 million for M3 projectand PKR 154 million for M5 project and both projects will be completed in a span of 12 months."It is pertinent to mention that throughUSF's Motorways and National Highways program, 1,929 km of road segmentlength has been provided with broadband coverage. We are committed to providing uninterrupted mobile network on all major highways of the country and we are moving fast in this regard."

HOW TO DOWNLOAD PHOTOS, VIDEOS FROM WHATSAPP STATUS TO YOUR ANDROID SMARTPHONE

WhatsApp is not just about texting anymore, several new features like WhatsApp status, display pictures also matter a lot to the users. Just like Instagram stories, Facebook stories, putting up WhatsApp stories are also in trend. But what if you see a really funny video or a great picture on someone's WhatsApp status? Of course, you can take a screenshot of the image but what about a video? Let's dive into this feature and see how we can download someone else's WhatsApp status on our smartphone.

STEP 1
Download Google Files on your android smartphone.

STEP 2
Tap on the menu icon at the top left corner in the app.

STEP 3
Tap on "Settings" and turn on the toggle in front of "show hidden files".

STEP 4
Go to file manager of your device.

STEP 5
Internal storage>WhatsApp>Media>Statuses.

STEP 6
All the status that you have viewed will show in the folder, tap on the desired image or video.

STEP 7
Long press on the selected item and save it to your desired location for example camera, WhatsApp images, downloads and so on.

These steps can differ from one Android device to another. In most of the cases, you will find the WhatsApp media folder right on the screen as soon as you open the File manager.

DESI STARTUP
TRUCK IT IN

In an age of technology, road freight is stuck with a century old connectivity mediums like landlines and phone calls. The industry loses $40B+ globally each year to market inefficiencies by hurting businesses with high costs, low reliability and no transparency.

TRUCK IT IN was founded in 2020 by execs who led operations building businesses ground up for Careem and Bykea with annual turnover of $150M+.

Truck it in connects shippers and truckers through its online platform, making it easy for both parties to do business together. The shippers get access to a reliable fleet of trucks at competitive pricing with features like live tracking and reports/insights, and truckers receive instant loads and assurance for back-haul (return trips).

Truck It In has added $3 million to its pre-seed round in an extension to close the round at $4.5 million. In a statement, the startup claimed that it is the largest 'pre-seed round' for any trucking startup in the world. The announcement comes just five months after Truck It In raised $1.5 million. At $4.5 million, it is the largest pre-seed round in the region.

The startup was founded by three innovative entrepreneurs: Muhammad Sarmad Farooq, Raza Afzal, and HaiderNavid. All three of them have previously led different functions and categories in startups like Careem and Bykea and have immense experience in this sector.

The Evolution of Social Media

How Did it Begin, and Where Could it Go Next

by Sehrish Kiyani

Good morning, everyone, I am awake. Where's my phone? Where is it? Oh, thank God, I got it! Can you relate to this? Shake hands mate, welcome to the squad. This is the story of every house now. We have built a habit of going through our social media feed right after we wake up in the morning. It is so common to talk about the intriguing news we surfed the other night at the breakfast table. The same thing goes at the lunch and dinner and the cycle goes on.

Social Media is a hotspot that connects people all around the globe. The use of social media is growing exponentially. Over 80% of the 4.66 billion people on the earth who have access to the internet utilize social media.

Over 80% of the 4.66 billion people on the earth who have access to the internet utilize social media

this is insane! Isn't it interesting that in the current times, we feel that social media is more crucial to us than food and water? Through Facebook, millions of people are connected. Some people we haven't seen in years can be easily communicated with. We can communicate with these people via social media without feeling as awkward as we would if we had to speak to them face to face, right?

But do you know where Facebook or Instagram came from? Are you aware of how social media has evolved? What are we doing on social media? What is its impact and what are the benefits and drawbacks of internet surfing?

For most of us, social media is a synonym for 'fun.' But no, there's a lot more to it. There is a significant contrast between the media we use today and the media we used a decade ago. At first, social media was significantly different from the media of today's world.

The Birth of Social Media

Now come the main and best part, the evolution, origin of social media. Why was it dubbed "Social Media"? Is it able to socialize us or not? Were we unable to socialize before the advent of social media? We may think of social media as a fresh fad but let us take you back. This was the period when Facebook, Snapchat, and emails didn't exist. Written letters were the primary means of communication between two people before the 1800s. These letters and notes served as that era's social media. They were passed from one person to another by hand. Then came something interesting and quick, what we call 'social media' now. Yes, this is the time when the first telegram was invented in the 1790s.

The telegram was a big step forward in terms of message delivery at that time. It made sending and receiving messages easier and faster. Even though telegraph messages were brief, they were a revolutionary means of communicating news and information. But the major inventions that took social media high above the sky include the telephone and the radio. The telephone and the radio were invented in the 1890s and since then electronic media made a great impact on our lives. Both technologies are still in use today, however, the newer versions are far more advanced than their earlier counterparts. People could converse instantly across enormous distances. In the twentieth century, technology advanced at a breakneck pace. The first supercomputers were created, and then humans gradually developed a huge web capable of connecting every corner of the globe.

In the twentieth century, technology advanced at a breakneck pace. The first supercomputers were created, and then humans gradually developed a huge web capable of connecting every corner of the globe

Yes, you got it right! We are referring to the internet. Social media exploded on the internet. We shifted from sending messages by hand to sending them via social media Apps. Following the development of blogging, social media grew in popularity. Sites like MySpace and Wikipedia surged in popularity in the early 2000s, while Photobucket and Flickr enabled online photo sharing.

YouTube debuted in 2005, ushering in a completely new way for people to communicate and exchange information over long distances. By 2006, Facebook and Twitter became available to individuals all around the world. These sites are now among the most popular social networking sites on the web today. Facebook provides us with the most recent and up-to-date information. Instagram provides us with a lot of inspiration for living a healthy and affluent life. For us, a growing number of social media channels serve as our primary source of entertainment and information.

Thousands of people have made money using social media. The development of e-commerce has also accelerated. Today's social media platforms sell more than just brand awareness, engagement, and visibility; they also sell extremely specific indicators of direct sales. Users, by the way, contribute to this phenomenon. Research shows that people trust social sales and easily buy things through WhatsApp and Instagram. Part of the appeal is that there is literally something for everyone.

Here is What Will Happen in the Future

The world is changing so quickly that it's difficult to predict what will happen next. Will our lives be entirely transformed into virtual reality? Is social media assisting in the expansion of your business? In 2021 and beyond, what can we expect from social media users and advertisers? For entertainment, news, and business, the future of media is continuing to turn to digital improvements, which means big prospects for companies.

Recently, we saw the power of social media when Covid-19 came and put the entire world to a stop

As the number of platforms for internet media expands, so does the audience. Maintaining an online presence that allows businesses to engage successfully with their customers is crucial. Recently, we saw the power of social media when Covid-19 came and put the entire world to a stop. But it didn't do anything to social media it grew even stronger than before.

When the direct work was completely cut off, social media kept the world alive!

Business Future via Social Media

Companies can gain significant benefits from mobile video marketing. Data analysis will provide critical insights and help businesses compete more effectively. The continuing investigation of developing technologies such as virtual reality and augmented reality will alter how we engage with the digital world as humans. Because social media enables free dialogue between consumers and businesses, marketers have a one-of-a-kind opportunity to communicate directly with big groups regarding potential customers. Predictive analytics and artificial intelligence are currently being employed in social media analytics. Brands can forecast the optimal times to post and the types of content that will elicit participation using social media analytics. Brands can also utilize automated messaging to respond to social media users immediately. When consumers interact on social media, businesses can set up automatic messages to send to them. Customers are increasingly using chatbots and other cognitive systems to get quick answers to their questions. On social media sites, advertising will be radically transformed. It will not be necessary to waste money on posters and banners. Social media influencers will have complete control over the advertising business.

Many of these influencers have millions of followers. Once they say something, it is immediately transmitted to their million fans. As a result, the product gets advertised in a short period.

Take Away!

There are a variety of social networking sites available today, and many of them may be linked to allow cross-posting. This creates an environment in which people can interact with a large number of people while still keeping the warmth of one-on-one communication. We can only conjecture on how social networking will evolve over the next decade or perhaps 100 years, but it appears certain that it will exist in some form for as long as humans exist. It is unavoidable and cannot be eradicated. Social media undoubtedly have a stronghold. It indeed entertains us with loads of goods, but on the other hand, our privacy is being compromised. We see posts and blogs regarding our interests without even disclosing our likes as if the controllers are aware of our identity and activity. Whether or not we tell the social media guns about ourselves, they are quite familiar with us.

We can only conjecture on how social networking will evolve over the next decade or perhaps 100 years, but it appears certain that it will exist in some form for as long as humans exist

Social media is a strong weapon now, or we might say it is a modern world army having positive and negative aspects. This force possesses the capacity to enhance or degrade the reputation, projects, products, and businesses. That is the heart of the duty that social media will be obliged to shoulder, and we have to live with it.

THE MAGIC MAN
SHOT ON VIVO X70 PRO

Need an expensive camera setup to make a perfect professional film? vivo has just busted this myth with its all new X70 Pro– closing the gap between mobile and professional photography.

Vivo, a global tech giant, added another flagship device—vivo X70 Proto its premium X series in Pakistan. Owing to its ultimate professional camera features, a well-known director, Soheb Akhtar took the challenge to shoot a complete film using vivo X70 Pro and everyone has been waiting for it to come out ever since. Well, the wait is finally over as "The Magic Man"– Shot on vivo X70 Pro is here.

The Magic Man is a short film completely shot using the vivo X70 Pro under the direction of Soheb Akhtar. Written by Ali Hussain,it very beautifully portrays the story of a Magic Man, who after years of hustle, finally gets his wish granted but had to give it all up to save someone's life. The film is a perfect mix of emotions, great acting, direction and amazing equipment-making it a must watch. Director of The Magic Man, Soheb Akhtar, shares his experience of making the entire film using vivo X70 Pro "Since vivo has cooperated

with ZEISS for the X70 Pro, we were wondering if it could clearly record an environment with complex light sources and even under extremely dark environments. This inspired us to create The Magic Man.The performance of X70 Pro while shooting this film was way beyond our expectation as it handled the low light and photography in motion extremely well. Capturing the true emotions as the power behind it can be felt by the audience. Photography is not an art for a selected few but an enjoyment for all of us. This is a phone that can realize your dreams. With X70 Pro in your hands, everything is possible and every try is capable of creating a great film."

As a brand, vivo wholeheartedly supports mobile photography. The brand has therefore been constantly researching and innovating to make camera technology more enjoyable and accessible. With the X70 Pro, vivo has delivered a diverse range of

photography and videography features for users to explore. Having continued its strategic partnership with ZEISS, a leader in optical technology, vivo further advances its camera system with the Ultra-Sensing Gimbal Camera coupled with Gimbal Stabilization 3.0, for high-quality stable images.

Moreover, vivo X70 Pro is equipped with ultimate night photography and videography features such as Real-Time Extreme Night Vision, Super Night Video, Pure Night View and Pro Cinematic Mode, each portraying its prowess. With X70 Pro, vivo makes it possible for everyone to experience a professional quality photography and videography and record every moment with extreme clarity.
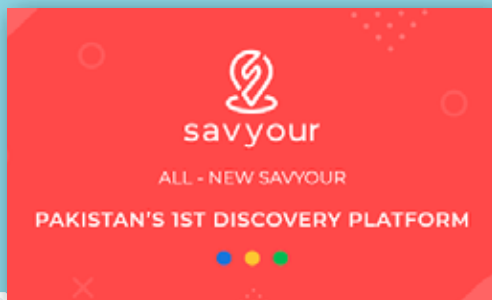
TELECOM CAMPAIGNS

Zong Free Google Maps Service TVC

Featuring Danyal Zafar, Zong portrays in a very attractive manner about its free Google Maps Service. Zong provides a free Google Maps to make your correct way towards your destination. Overall, the ad is appealing.

Verdict: A Good TVC

Savyour- Save your Money and Time

Savyour's latest TVC is very entertaining and energetic. The ad features Rap Demon, a renowned rapper of the country. The ad highlights how you can avail different discounts and cash back on your purchase. Savyour is basically a Lifestyle App, offering Cashback, free deals and discounts on 500+ brands. At this time of hour when everything is so expensive, Savyour gives you a hope to get your desired item at a reasonable price. Overall, I really like the rap.

Verdict: A very energetic TVC

Easypaisa Pin Chor TVC

Easypaisa warns its users in a very funny and entertaining way about the people who are asking your for your pin. In this TVC, Easypaisa emphasizes on not to share your Easypaisa pin with anyone. In the ad, the "Pin Chor" are asking for the pin in different ways. So beware and never share you Pin or any other personal data with anyone. I really like the ad because of its fun moment and a very serious message

Verdict: A very Helpful and useful TVC

PTCL Unlimited Internet TVC

Finally, PTCL brings a little entertaining ad about its unlimited internet services. In this TVC, PTCL shows how it was difficult for a family to consume internet after 10.p.m. But after installing PTCL in their home, they are free to use internet without any worry. Overall, i like the fun moment in the ad.

Verdict: A Good effort

Jazz Digit Elite Phone TVC

Jazz Digit Elite is Jazz's exclusive bar phone. The TVC features Imran Ashraf. He is a taxi driver in the ad and elaborates the amazing features of the phone. The phone also comes with different apps like Facebook, WhatsApp, Jazz World and JazzCash which usually the other bar phones do not have. Overall, the ad is ordinary and could have been much more attractive because of the "Bhola" existence in the ad.

Verdict: An ordinary TVC

OPPO Reno 6 TVC

Recently OPPO has launched the Reno 6 TVC. The brand ambassadors AsimAzhar and Maya Ali highlighted the key specs of the phone including the AI camera and sleek design. The tagline of TVC is "Every emotion in Protrait" which sound quite catchy and fully describe how Reno 6's cameras work.

Verdict: Astonishing phone in Impressive TVC

SAMSUNG
Galaxy S21 Ultra 5G

Epic.
In every way
108MP
8K

888 5G
Qualcomm snapdragon

Introducing Galaxy S21 Ultra 5G. Designed with a unique contour-cut camera to create a revolution in photography — letting you capture cinematic 8K video and snap epic stills, all in one go. And with Galaxy's fastest chipset, strongest glass, 5G and an all-day battery, Ultra easily lives up to its name.

S21

Brought to you by
LETSGO DIGITAL

PRESS RELEASE

Smartphone Powerhouse **DCODE** hosts its First Business Partner Connect Event

DCODE, an emerging Pakistani Smartphone Brand owned by Premier Code, celebrated its entry into the tech market with its first Business Partner Connect event held on the 12th of November at Royal Palm, Lahore. DCODE's exciting event, hosted by Natasha Hussain, was attended by business partners, stakeholders, employees as well as tech experts and enthusiasts.

After an amazing display of the brand video, the product managers AumarAbbassciy&Shahid Imam showcased their 4 models that are taking the market by storm. They highlighted that DCODE Cygnal, Bold, Cypher and X feature bold designs, long-lasting batteries, HD+ screens, super-pixel modes and bloat-free Android 11 experience that make themmust-havesmartphonedevices.

Following a detailed presentation on their product line, a factory video was revealed to showcase the manufacturing and assembling of DCODE at their factory in Karachi.

The event continued with speeches from the Head of Sales Central and North, UmairShahid and Head of Sales South, KashifKafil where they motivated the dealers to put in their best performance for mutual growth.

The speeches were followed by an award ceremony where the CEO Syed Muhammad Naqi, the GM Usman Tariq, and the Member Board of Directors of Premier Code Shah Arshad Abrar handed out awards to the best-performing dealers. The officials also gave out prizes to the lucky draw winners.

The coveted event ended with DCODE catapulting itself as a noteworthy competitor in the smartphone industry and ushering in a new era of tech accessibility and affordability for the people of Pakistan. The world-class products are available across the country and can be purchased at mobile outlets. For more information on the products, you can visit their website

www.dcode.com.pk

GAMES

& APPLICATIONS

AVAN-STATS

Avan-Stats is a simple app that allows you to monitor and adjust temperature and humidity of your apartment or your office space.

BOOST FITNESS STUDIO

Plan and Schedule your classes with us from your Mobile device. #BOOSTyourself

BIG ZIG MONSTER

Improve your stress, sleep, and more with the world's first personalized meditation program, now free for your first year.

AW DIGITAL

The A@W Digital App is your gateway to the ARCHITECT@WORK universe. Find all the information you need about your registered events in one place.

SPEECHIFY - TEXT TO SPEECH TTS

Speechify is a text to speech (tts) screen reader that can read any text, PDF, document, book, email, file, or article online out loud on your phone.

NFL LIVE STREAMING AND MORE

This is best application for NFL - Football, NCAAF - College Football, NBA - Basketball, NHL - Hockey, MLB - Baseball with best quality

MILK CRATE CHALLENGE

Take the challenge yourself on your mobile device! Make it to the top of the milk crates, can you? Very easy to control but impossible to master it.

PLUTO TV - LIVE TV AND MOVIES

The leading free streaming TV and movie service is available to you! Watch 100s of live TV channels and 1000s of movies and TV shows, all streaming free.

Vivo X70 Pro

Display: 6.95 Inches
Memory: 256GB Built-in, 12GB RAM
Camera: 50MP + 12MP + 12MP + 8MP

Price: Rs. 139,999

Vivo Y21

Display: 6.95 Inches
Memory: 64GB Built-in, 4GB RAM
Camera: 13 MP + 2 MP

Price: Rs. 27,999

Infinix Note 11 Pro

Display: 6.95 Inches
Memory: 128GB Built-in, 8GB RAM
Camera: 64MP+13MP+2MP

Price: Rs. 31,199

Realme Narzo 50i

Display: 6.5 Inches
Memory: 32GB Built-in, 2GB RAM
Camera: 8MP

Price: 21,999

Samsung Galaxy Z Fold 3

Main Screen: 7.6" Dynamic Amoled 2X
Cover Screen: 6.2" Super Amoled
Memory: 256GB Built-in, 12GB RAM
Camera: 12MP, Triple Camera

Price: Rs 299,999

Samsung Galaxy Z Flip 3

Main Screen: 6.7" Dynamic Amoled 2X
Cover Screen: 1.9" Super Amoled
Memory: 256GB Built-in, 8GB RAM
Camera: 12MP, Dual Camera

Price: Rs 194,999

An Online Store with Offical Warranty www.phoneexpress.pk

Iphone 13 Pro

Display: 6.1 inches
Memory: 128GB Built-in, 6GB RAM
Camera: 12 MP + 12MP + 12 MP

Price: Rs. 256,000

Tecno Camon 18 Premier

Display: 6.7 inches
Memory: 256GB Built-in, 8GB RAM
Camera: 64MP + 12MP + 08MP

Price: Rs. 55,999

Samsung S21 Ultra

Display: 6.8 Inches
Memory: 256GB Built-in, 12GB RAM
Camera: 108 MP + 12 MP + 10 MP + 10

Price: Rs. 57,999

Samsung Galaxy A52s 5G

Display: 6.5 Inches
Memory: 128GB Built-in, 6GB RAM
Camera: 64 MP + 12 MP + 5 MP + 5 MP

Price: Rs. 40,900

Xiaomi Redmi Note 10 Pro

Display: 6.67 Inches
Memory: 64GB Built-in, 6GB RAM
Camera: 108 MP + 8 MP + 5 MP + 2 MP

Price: Rs. 50,999

Xiaomi 11T

Display: 6.67 Inches
Memory: 128GB Built-in, 8GB RAM
Camera: 108MP+8MP+5MP

Price: Rs. 79,999

Infinix

The Future is Now!

NOTE 11PRO
PLAY BIG

MediaTek helio G96

Helio G96
Ultra Gaming Processor

64MP
Ultra Night Camera

30X
Telescope Zoom

Monster
Game Kit

120HZ
6.95" FHD+ Ultra Fluid Display

33W Super Charge
5000 mAh Battery

The Multi- screen
Collaboration

Phone World

iPhone 13 Pro

The iPhone 13 Pro and iPhone 13 Pro Max are Apple's new high-end flagship iPhones.

Display	Capacity	Chip	Camera
6.1-inch XDR display with ProMotion	128GB, 256GB 512GB,1TB	A15 Bionic Chip New 6-core CPU	Pro 12MP camera system Telephoto, Wide, and Ultra Wide cameras