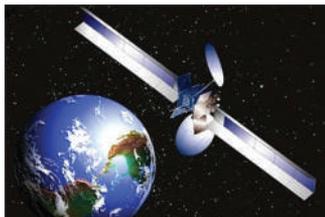# TECH INSIDER

An In-Depth Look Into Remote Sensing

Human beings have a natural tendency of looking out for things in unorthodox ways. Technological innovations have made it easy to get into physical entities without much of a hassle. Incorporation of satellites into outer orbits to get know-how of changing environmental, geographical scenarios of the earth using electromagnetic radiations is called remote sensing. Weather forecasting is just one dimension, military too uses satellite imagery to gain strategic depths. Natural hazards can be predicted to an extent and the target audience can be warned of a possible threat. Drones, satellites and airplanes are generally used to get a broad-based idea of the building scenario and mapped to address the issue by targeting the "fault lines". The footprints of land, mountains and atmosphere as recorded by remote sensing device helps to pre-empt situations, scenarios, environmental variations and natural hazards.

Spectral lines of different wavelengths see through objects to give a deep insight into the developing trend. Our eyes can only perceive waves ranging within a certain zone which is called the visible zone. Some of the attributes of an object are never explored. Remote sensing serves the purpose of deep penetration by reading out patterns of light waves falling in ranges other than visible ranges. Active remote sensing devices use their own light to detect and record the reflective index and to graphically represent a scenario such as presence of vegetation in a certain area. Passive remote sensing devices use sunlight as the source of light and record the reflection pattern unto a certain object to give an insight reading of various physical and environmental dynamics of the targeted entity under study.

Remote sensing is a powerful tool to explore the hidden treasures, possible environmental catastrophes or weather patterns. Topographic features of turmoiled zones, environmentally vulnerable zones can be observed, monitored, studied and evaluated using remote sensing.

Forensic details of a natural calamity, its threat level, weather upheavals, timely and untimely variations in weather patterns, locating zones with diverse flora and fauna are tracked, viewed and assessed for further action. Application of radiations of various wavelengths and frequencies help explore the pros and cons of an ongoing or an upcoming natural phenomenon such as floods or an earthquake. Remote sensing is an apparently simple, meaningful and applied-oriented technique to view and review what our eyes cannot see through. ▪ Yasir Hayat

Digital Healthcare

All human beings and other living beings are prone to death, decay and disease. People afflicted with some ailment, disease, disorder or syndrome have to reach out to a medical facility for treatment. With the unprecedented rise in human population over the years, it has become exceedingly difficult for medicinal and health care administration and consultants to substantiate ever increasing demands with adequate and timely response. Management of resource has become difficult and procurement of resources, division and distribution of medicinal resources have been an issue of grave concern. Technology and digitization of sources and resources are now bridging the gap between patients and consultants and are acting as a reunification force in dealing with people with multiple and diverse diseases effectively an in the nick of time. Digitization of medical data and history, use of AL-based apps to record, interpret and read data has expanded the range and capacity of healthcare facilities.

Artificial intelligence mechanism interprets medical record, research papers to come up with most convenient therapies. Computers can read through loathes of information pertaining to medical history, medical gazettes, research papers to sum up the content in a few words and with suitable suggestions too. Algorithms are used to streamline the machine learning process. Computers with artificial brains read through the files and documents in split seconds or a few minutes and highlights the pertinent points which help doctors to narrow down the possible ways of treating or curing a specific ailment with efficiency and command. In oncology, computers with artificial brains, track the recovery process of a cancer patient by reading through the numeric patterns and interpreting with tangible answers. The doctor can reorganize accordingly with alternatives or with the same mode of treatment as per the computers call.

Telemedicine is one subtle dimension of modern day digital healthcare where the patient can communicate with a therapist instantaneously across a live wire. A video link streamlines the process of integrated communication where a doctor, or a team of specialists, responds to call of the patient. The normal process of patching up with a doctor by fixing an appointment and then waiting for a reply could intensify the symptoms in the due course. With telemedicine, online communication will serve the purpose of patient-doctor meeting via a video link. Many companies and remotely owned organizations have developed apps, integrated the data of doctors, paramedics, freelancers, who shall respond to the call of patients via digital conference, through a call or a video link.

Digital mode of healthcare has opened up the dimensions of healthcare facilities and installations, patients can collaborate more frequently and with more ease. Digital healthcare has made amends for lack of medical facilities and resources, overcrowded hospitals and the resulting mismanagement. ▪

The Sharing Challenge

From cell phones to self-driving cars, wireless technologies send radio waves, a type of electromagnetic radiation, through the air to transfer information. Invisible radio waves help to scan hurdles on the way of self-driving cars, enable us to send and receive text messages or calls through a cell tower and especially let scientists and astronomers detect molecules in our atmosphere or other parts of the galaxy. All these waves travel in their particular lane in radio spectrum and with different radio wavelength for wireless communication but sometimes, this spectrum become overcrowded leaving signals astray from their actual lanes and resulted in 'interference'. It can destroy scientific research or left a billion-dollar instrument to not function properly and can interfere with radio signals from space.

To overcome the scenario, researchers are working on the methods to share these radio lanes with everyone without interference. Green Bank, W.Va. is such a National Radio Quiet Zone with set of telescopes fixed there to receive signals from space to help astronomers to understand the universe. The use of such wireless devices which sends out radio waves like cell phones and internet is prohibited in the area. The telescopes at Green Bank are powerful enough that they can hear the tiniest bits of energy from a distant pulsar but meanwhile, they can also catch up nearby stray signal for being sensitive. Overcrowding and interference on the radio highway aren't only frustrating scientists but for everyone who wants to use radio devices. The solution lies in the less usage of radio devices which will save more space for scientists research work. ▪

WiFi 6

This season, a lot of latest technology concepts were showcased at Consumer Electronics Show 2019 in Las Vegas and WiFi 6 was one of them. Popular companies like TP-Link, Netgear, and Asus introduced first ever WiFi 6 routers, the next generation of the of the wireless standard, which works much better than 802.11ac (Wi-Fi 5) and will be replaced with 802.11ax (WiFi 6). The next generation of WiFi technology is coming with its improved features including, increased capacity, smarter data rates, better performance in even crowded places with several connected devices, and improved power efficiency which means it will save your device's life etc. Though, the latest routers will be available in stores but, there is no reason to install them as old devices don't work for the new standard yet. Consumers will need to wait until the upgraded connected devices with the latest standard are available and these products are expected to arrive at the end of this year. ▪

Accessing a Remote Computer

You are at work, your parents/relatives needs your support for fixing problems in computer like "I am unable to make a Skype call", "How I can play HD videos on YouTube" or something like that, and they want you to fix the issue quickly either by visiting or instructing them on phone, which further going to take several hours of your busy routine. But, Chrome Remote app is the solution of the problem as it lets you to easily gain the temporary control of your troubled relative computer to resolve the issue or to show them the solution. The Chrome Remote Desktop app is available on Chrome Web Store for PCs, Macs, Linux systems, and Chromebooks. The app also works smoothly on mobiles but you have to scroll around the display to see the full view of the screen which makes things a little bit difficult. Apart from the Chrome Remote Desktop app, several other remote access software are also out there like Team Viewer and AnyDesk to connect up to your home computer remotely. ▪
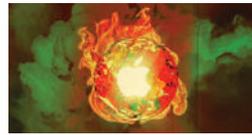
Lift Off-Selfie Drone

Nowadays, selfies have become such a craze that people don't even care to risk their lives for a funky snapshot in a bid to earn maximum likes and comments on social media. Phone selfies have lost their charm with the arrival of selfie stick and then another technology takes the world by storm: Selfie Drone. Two German engineers designed a brand new portable drone, 'Drone X Pro' to let selfie lovers take stunning photos and videos from above to impress others. The best part is that anyone can fly and control it as well as it's perfect to take ultimate selfies. The new arrival has also put many drone companies out of business for being cheap. So enjoy flying a drone, take selfies from incredible angles and impress friends with your coolest selfies. ▪

Increasing Brand Value

Climate change is ravaging the ecosystem, habitats, and communities but, Apple sees the bright side of the story. Tech giant considers it a chance to sell more iPhones as disasters will increase its brand value for being reliable devices to be used in emergency situations like these can act as a flashlight or a siren or can be charged with car batteries. That's according to Apple's filings to Carbon Disclosure Project (CDP) which further states: "If Apple is successful in creating products attractive to people whose purchasing habits are changing due to concerns about climate change or rising electricity prices, it may result in a small competitive differentiator for our hardware products". The filing also referenced Apple's SOS service and 'Find My Friends' app. ▪

WhatsApp Dictation

Being a perfect platform for chat fans, WhatsApp keeps offering regular updates to its users around the world. Now, WhatsApp has rolled out an exciting new feature 'Dictation', meant for those too sluggish to type messages in WhatsApp. WhatsApp Dictation allows users to compose their messages by speaking into smartphone's microphone which further translated into text format. To use the feature, you should have the latest version of the app installed in your smartphone. Open a contact to whom you wished to chat with, hit the text bar and click on chat keyboard>microphone icon and start speaking what you want to type in your message. The microphone will listen and the speech-to-text feature will transform speech into text. Once it's done, then click the 'Send' button. Microphone icon usually found in the top right corner on Android and in the bottom right of the screen on iPhones. ▪

Quick Facts

• **Asus** launched its Chrome OS tablet for classroom use.
• A report revealed **Apple's** plans to launch game subscription service.
• **Toyota** rolls out its upgraded self-driving cars at CES with more trunk space.
• **Spotify** 'Don't Play This' feature will soon allow users to block artists from the playlist.
• **Amazon** will soon bring Echo Wall Clocks back into the market after fixing the connectivity issue.
• Google will end classic **Hangouts** app in October.
• **LG** will reveal its first 5G phone on 24th February.
• Facebook's **Community Actions** feature is a new way for users to support their cause.
• Google launched speed limits feature within **Google Maps** on iOS and Android devices. Google Maps also started to show adjacent transit stops in place listings.
• **Facebook Messenger's** redesign version is finally available for everyone.
• Amazon announced an autonomous six-wheeled robot **'Scout'** to deliver packages.
• **Microsoft** developed Code Jumper to make coding accessible for visually impaired students.
• **Wiliot's** new Bluetooth chip works without a battery and harvest energy from ambient radio frequencies in the air.
• Apple turned off **FaceTime** feature over security flaw.
• Google is launching RCS Chat on **Google Fi** network.
• **Xiaomi** showcased the first prototype double folding smartphone.
• Google's new search feature **'activity cards'** aimed to help users to continue their past searches.
• **Microsoft** released the updated version of Skype with SMS messaging addition and revamped contact panel.
• **Huawei** confirmed to launch 5G phone with a foldable screen at MWC.
• **Office 365** has arrived in Mac App Store.
• **WhatsApp Business** hits 5 million users.
• **Apple** is planning to launch three iPhones this year with three cameras on the back.
• **Mozilla** released Firefox 65 with a new interface for fine-tuned control over trackers.
• **Mark Zuckerberg** intended to integrate WhatsApp, Instagram and Facebook Messenger.
• **Gmail** mobile app gets a 'Material Theme' overhaul.
• **Fortnite's** latest update brought the Bluetooth controller support on iOS & Android.
• Google announced the closing timeline for **G+ users** and it's April 2019.
• **Panasonic** unveiled its new full-frame mirrorless cameras, Lumix S1 and S1R. ▪

Battle of Survey Tools

In the growing digital era, online surveys play an important role in making the direct connection between the client and the company. They also add reliability to content marketing and provide great insights into what the client demands. However, they are not only limited to marketing instead they can act as a platform for students, institutes and etc. No doubt, there are numerous great survey platforms but there are few features which differentiate them from one another like price, user-friendliness, and design. Let's dive deep into three top platforms the Google Forms, the SurveyMonkey and the Typeform to highlight those differences.

Google Forms

As the name refers, Google Forms has taken the survey platform to the whole next level by being very reliable and addicting.

• Google has made the Google Forms highly addicting by providing an ultimate free trial. The most noteworthy thing is the fact that free trial has all the functionalities that the signed users get.

• Google has taken user-friendliness in Google Forms to the whole next level as the results are sent to Google Sheet to make the data analysis quicker.

• Google Forms has this amazing backup system that all the results get saved automatically in the cloud and they can be auto-sent to Google Sheet too.

SurveyMonkey

Another great survey platform is SurveyMonkey which has been getting massive hype since its release because of its inimitable features.

• SurveyMonkey makes it absolutely easy for its users to have their results in their palm by creating its own mobile app. It gives the users a chance to create a survey on the desktop but get the results on the mobile.

• It is the only survey platform that has the Kiosk Mode, which allows the users to present the survey in full–screen mode on the tablet. Hence, it is the best platform for conducting the surveys amid seminars.

• SurveyMonkey is very user-friendly when it comes to search according to the user's responses.

Typeform

Typeform has totally transformed its users' life and broken the stereotypes by letting them enjoy the joyful version of the survey platform.

• Typeform is extremely joyful and up-to-date. It has the most amazing design and creation process which let the users play with its joyous features while creating the survey.

• It is user-friendly, means it will help you make a lot of decisions while creating the survey.

• Typeforms come with embeddable widgets which let the users set in the Typeform right inside their web page. ▪

Sneak Peek
Coming up in March Issue

• **MWC 2019**
• **1 TB Storage Chips in Making**
• **Setting up Two-Step Verification**
• **Role of Technology in Overcoming Water Crises**
• **Kids Corner & a lot more**

Google Chrome Updates

Imagine you are watching a video on YouTube and also want to navigate something else in other tabs without leaving what you were watching. Here, Google can help you to sort it out with its Picture-in-Picture extension for Chrome OS version 72. The extension is available on Chrome Web Store to let you interact with other sites while watching videos in floating windows. Still, you should have Chrome OS Beta 72 installed on your device to enable PiP extension. Picture-in-Picture feature was already enabled by default on Chrome version 70 for macOS, Windows and Linux. However, it doesn't always function properly when manually set to enable it in Chrome OS but now it can be activated through the keyboard shortcut Alt+P or by clicking the icon in version 72. Meanwhile, Google also aimed to develop a new warning in Chrome browser against imposter websites which make their URLs look like the real webpage. The warning will let you to notice if something wrong happened with a website URL or if you moved to a scam site. Google is still testing warning feature which alerts users that they aren't on popular website of their interest and also give them the option to 'ignore' if they want to keep going on the website. ▪

Business Expo 2019

Skylite Networks entertained visitors by displaying technologies at business expo organized by Majlis Khuddamul Ahmadiyya Pakistan on January 24-26 in Rabwah. Many dignitaries visited the stall and appreciated our efforts for unlocking the treasure of information technology to nurture the skills of the youth. May Allah enable us to keep serving our community. **Ameen**