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KIET GROUP OF INSTITUTIONS

Alumni Section

Kumar Ravi
Associate Staff Engineer
Nagarro

Hands-on gadget review: Prima Projector

Pico mini portable projectors evolved for business use, so road warriors could give presentations without lugging a big, mains-powered projector to plug into their laptop. But these mini marvels are coming into their own for home entertainment, especially now that it's safer to invite friends over to watch a movie or match in the garden than the house. This one is tiny and lets you enjoy a big picture anywhere... so long as it's dark. There are lots of portable projectors on the market and many features to consider. First up, the Prima is great on size: it's roughly the size of a smartphone at 146x78x18mm and 188g. It comes with a carry bag, remote control, USB power cable and a small tripod. You can fit everything in the carry bag.

The tripod is handy because it lets you tilt the projector up at an angle towards your screen. It's stable but small, designed to sit on a desktop. I was delighted though to find that the thread on the underside of the projector is a standard one that works with any tripod. That makes it easy to find a compact tripod that will stand on the floor but work with the Prima.

I mentioned its USB power cable... the Prima has a built-in rechargeable battery and battery life is another factor to consider when buying a portable projector. Its 5,200mAh battery is quoted as being good for three hours of video playback but our tests suggested less. We only got around two hours from each full charge (1 hour 40 minutes and 2 hours 5 minutes to be precise, both times watching an HDMI source). The bad news is that this means it might not last for a whole movie but the good news is that its power supply uses USB, so you can use a USB powerbank to keep it running much longer. So it's still viable to use the Prima to play video at the back of the garden or even on a campsite.

The next consideration is brightness and the Prima fares OK for such a small DLP projector. Brightness is measured in lumens and the brighter (i.e. more lumens) the better. Home cinema projectors deliver thousands of lumens, portables deliver hundreds. The Prima's 200 lumens is good for such a small machine but you can buy portable projectors that give a brighter picture (see below). What the 200 lumens figure means practically is that the picture is only bright enough when it's dark. This isn't a projector you can watch in the afternoon. If you're indoors and not in direct sunlight you can get away with using it in the daytime but fairly close up, for a small picture, to make the most of its brightness.

But come dusk, it comes into its own outdoors. We used it to create a Covid-safe garden cinema with a basic 16:9 projector screen that cost just £45 online. It measures 100in diagonally and

pulls down manually. You can mount it anywhere with just two screws.

The makers claim that you can enjoy a screen size of up to 200in and, although you'd lose brightness, that's doubtless possible in the dark. But that's a really large screen – more than 4m wide – and the projector has a long throw distance,

so it would need to be about 6m away from the screen. Such large screens are harder to come by too. So 100in is more realistic. You don't need a screen at all, a plain white wall will do, but a screen is designed to optimise brightness.

The resolution is 1080p Full-HD, which is better than many portables and frankly all you'd expect from most home cinema projectors. While 4K Ultra-HD is commonplace in TVs now, 4K projectors are still pricey.

We found the picture on the 100in screen to be plenty sharp enough. Focus is manual, a simple dial. There's also a manual power switch on the side and a lens cover that slides across. All the other controls are touch-sensitive icons on the top. These light up slightly but are very hard to make out in the dark and not brilliantly responsive. The same controls are replicated on the remote and that's more responsive as long as you point it at the back of the projector. Sadly, if the projector is positioned a long way from the screen (for a large image) and you're beside or in front of it then the remote control just won't work as the only infra-red receiver is on the back.

There are built-in speakers but the sound is weedy. It's loud enough for a work presentation but not for a home cinema. So you must either pair wirelessly with Bluetooth or use a headphone-style 3.5mm socket to plug in an external powered speaker. This neatly gives you a bigger, beefier cinema sound. We found the wired connection to be more reliable.

Wi-Fi and Bluetooth are both built in, so you can pair the Prima with your devices but also directly connect it to home or mobile broadband. This is where the Prima's cinema-friendly features come into their own. It has Android 7.1 built in, so the home screen features apps like YouTube. You can also download other popular video apps. For example, if you have a Netflix account you could use it directly on the projector, like a Smart TV.

A cyber security expert claims Data of 10 crore mobikwik users for sale on dark web company denies claim

In what is being called the biggest data leak in Indian history, A site on the dark web claimed it had 8.2 terabytes of MobiKwik user data. The data included email addresses, phone numbers, scrambled passwords, transactions logs and partial payment card numbers.

The website also claimed that it had KYC documents of 3.5 million users, and each visit to the website displayed four random images from the data dump. KYC documents are required for users who want to access certain services without any limitations.

The dark web site features a searchable database that allows users to look up their phone number or email to verify the authenticity of the data breach claim.

A seller on a well-known cybercrime forum claims to be selling access to the database for 1.2 bitcoin — about $70,000.

The Sequoia Capital India-backed startup says it can't yet prove if the data actually belongs to MobiKwik users. "It is incorrect to suggest that the data available on the darkweb has been accessed from MobiKwik or any identified source," the startup wrote in a blog post.

In a statement, MobiKwik said the company had conducted a thorough investigation and did not find any evidence of a breach.

MobiKwik said it was closely working with authorities and was confident that security protocols to store sensitive data are "robust and have not been breached." It added that it was getting a third-party to conduct a forensic data security audit. "We are committed to a safe and secure Digital India."

Microsoft wins a deal of $22-Billion to make Augmented Reality Gear for US Army

Microsoft has won a contract for augmented reality headgear for US Army soldiers worth $21.88 billion around Rs. 1,60,290 crores . Microsoft will rapidly start producing the Integrated Augmentation System under the contract. The award aims "to deliver next-generation night vision and situational awareness capabilities to the Close Combat Force at the speed of relevance," A head-mounted display used by soldiers for battle and training employs sensors for night and thermal vision in addition to providing data for help in engaging targets and making tactical decisions. The programme delivers enhanced situational awareness, enabling information sharing and decision-making in a variety of scenarios

And a Washington-based company recently launched a platform called Mesh (Mesh is powered by Azure cloud computing system) In which long-distance coworkers can collaborate as though in the same room, using augmented reality glasses and cloud computing power. One of the easiest ways to think about it is Microsoft Mesh connects the physical and digital worlds, allowing us to transcend the traditional boundaries of space and time .

ISRO launched Sounding Rocketto Study Neutral Winds and Plasma Dynamics

ISRO has developed a series of sounding rockets called Rohini series, which are used for probing the upper atmospheric regions and for space research.

The Indian Space Research Organisation (ISRO) has launched a sounding rocket to study attitudinal variations in the neutral winds and plasma dynamics from Sriharikota spaceport.

ISRO has developed a series of sounding rockets called Rohini series, important among them being RH-200, RH-300 and RH-560, number in the name indicating the diameter of the rocket in mm, according to the Bengaluru-headquartered space agency.

"Launch of sounding rocket (RH-560) to study attitudinal variations in the neutral winds and plasma dynamics carried out today (Friday) at SDSC SHAR, Sriharikota," ISRO tweeted.

Sounding rockets are one or two stage solid propellant rockets used for probing the upper atmospheric regions and for space research. They also serve as easily affordable platforms to test or prove prototypes of new components or subsystems intended for use in launch vehicles and satellites.

Delhi Governmnet planning Virtual Education Model to Make Education Accessible Anywhere in India

A great use of technology , this initiative is an outcome of education going online over the last year in the wake of COVID-19 pandemic.Delhi Deputy Chief Ministerannounced the plan to introduce a first-of-its-kind virtual model of education.

Accordig to news It is a "unique experiment" would make education accessible to students in any part of the country, or even globe. Based on the principle of "anywhere living, anytime learning, anytime testing", the minister said, the virtual schools will help benefit students residing in any part of the country , "The Delhi government has decided to introduce a new category of schools in Delhi, the Virtual Delhi Model School, that is, a school that will not have four walls or a building, but there would be children, teachers, learning, examinations, and assessments, and studies shall be completed."It will be a unique experiment in itself, and will probably be the first virtual school in the world. Work has already begun on the design of this school and it will be my endeavour to ensure that this school is ready and functional by the next session".

Guardians Personal Safety App Launched by Truecaller That Allows Location-Sharing With Specific Contacts

Truecaller launched a new personal safety app called Guardians , The new app from the caller ID platform is designed to crowdsource personal safety of its users by letting them share their location and alert their guardians in case of an emergency. Truecaller claimed that the Guardians app — built in-house over the past 15 months with team members from Sweden and India — would never share any personal information with any third-party apps for commercial use, including the Truecaller app. Guardians debuts just ahead of International Women's Day 2021 on March 8.

According to Truecaller the Guardians app is a free-to-use experience, without any ads or premium tiers. In the coming days, a shortcut to download the Guardians app will be provided through the regular Truecaller app to bring new users on board.

The Guardians app allows users to select personal guardians from their contact list, choose when to stop or start sharing location, and can even set up permanent sharing with selected contacts. Users can also share their location during a particular trip, and the app will keep working in the background. It also comes with the ability to notify selected guardians to let them precisely follow the user's location in case of an emergency.In a normal scenario theapp shares location intermittently to preserve battery life. It, however, shares precise location once switched to the emergency mode. Aside from location sharing, the app shares the users' phone status, along with its battery life and network strength. It supports interoperability and is claimed to be device agnostic. This means that the app will provide location tracking even if the user has an Android phone and their selected contacts have the iPhone, or vice versa , Once the details are shared, Guardians allows the contacts to call or message users with one tap. The selected contacts can also look at the particular location of the users once it's shared through the app.

According to Cyfirma COVID-19 Vaccine Makers Serum Institute of India, Bharat Biotech Targeted by Chinese Hackers

According to cyber intelligence firm Cyfirma a Chinese state-backed hacking grouptargeted the IT systems of two Indian vaccine makers whose coronavirus shots are being used in the country's immunisation campaign. India produces more than 60 percent of all vaccines sold in the world. Goldman Sachs-backed Cyfirma, based in Singapore and Tokyo, said Chinese hacking group APT10(Stone Panda) had identified gaps and vulnerabilities in the IT infrastructure and supply chain software of Bharat Biotech and the Serum Institute of India (SII), the world's largest vaccine maker.

"The real motivation here is actually exfiltrating intellectual property and getting competitive advantage over Indian pharmaceutical companies," said Cyfirma Chief Executive Kumar Ritesh, formerly a top cyber official with British foreign intelligence agency MI6. He said APT10 was actively targeting SII, which is making the AstraZeneca vaccine for many countries and will soon start bulk-manufacturing Novavax shots.

"In the case of Serum Institute, they have found a number of their public servers running weak web servers, these are vulnerable web servers," Ritesh said, referring to the hackers. "They have spoken about weak web application, they are also talking about weak content-management system. It's quite alarming."

Machine learning could help find veins for easier blood draws

Researchers in Russia have developed a prototype of a medical imaging system that uses neural networks to analyse near-infrared images of veins and project a venous pattern onto a patient's body.

According to a paper written by researchers at Skoltech in Moscow, the system could help make blood draws much easier and less of a nuisance for patients with difficult access to veins.

In the paper, the researchers cited that out of approximately 20 million blood tests performed globally every day, almost 45 per cent are estimated to involve some discomfort for the patient whose veins are harder to access because of medical conditions such as diabetes, a particularly young age, or simply individual characteristics of the body. In these cases, when veins are hardly discernible and non-palpable, even experienced medical professionals have to turn to technical aids or risk multiple or inaccurate punctures, which can even have health consequences, especially for older adults.

To tackle this, Dmitry Dylov – associate professor at the Center for Computational and Data-Intensive Science and Engineering at Skoltech – and his colleagues assembled an intelligent near-infrared vein scanner, which can determine vein contours in an arm or leg rather accurately, automatically, and independently (without any input from the user). They did so by using artificial neural networks and reinforcement learning to better analyse images and project them back as a visual aid onto the patient's body, adjusting for shape and position.

He explained: "Infrared vein scanners have become commonplace in clinical practice. However, this is the first one that does everything entirely by virtue of modern AI: one neural network cleans and processes the infrared signal, the second one detects contours of the veins, and the third one continuously 'worries' about alignment to assure the contours projected to a patient's arm overlap with the actual veins.

"Remarkably, all we had to do was to tell the system what is good and what is bad during the training stage, and the neural networks managed to learn the rest by themselves, automatically finding optimal settings for new patients, environments, and even distortions, even if the system has never encountered them."

Vito Leli, a Skoltech PhD student and lead author of the published work, noted there are many factors hindering the detection of veins even in the infrared range where the vein contrast is better. "So the instrument was posed to face mostly the algorithmic and the image-processing challenges. We wanted to account for the high variability of the contrast of vasculature among patients (for example, due to skin tone and thickness, etc.). Our final algorithm is also capable of vasculature detection even for low signal-to-noise ratios (SNR), as validated on a cohort of patients."

The team assembled a prototype device and tested it in experiments with volunteers, showing it was able to detect the venous pattern in the near-infrared spectrum and then project it back as an image onto people's arms.

AI-based system to support world's first test of multiple drone fleets operating in the same urban airspace

An Israeli software company is taking part in a two-year pilot programme that will see drones operate in mesh networks to validate the safe and efficient integration of drone deliveries in urban environments.

To realise the future of autonomous airborne delivery, flight system, and Unmanned Traffic Management (UTM) specialist Airwayz is taking part in the pilot that they say will see drone delivery tested "above and beyond" any other scheme of its kind. In a world-first, drones fleets from multiple delivery companies are operating in Hadera, just north of Tel Aviv.

According to EyalZor, CEO and co-founder of Airwayz, drone delivery has the potential to increase the safety, speed, and efficiency of transport systems across the globe, but warns that, so far, the company has only seen these types of pilot schemes test drones moving back and forth across a corridor of airspace.

"This restricts the number of drones that can work in an area and risks entire operations being abandoned if any part of the corridor becomes inoperable mid-mission," he added. "This way of working in corridors is simply not practical for the technology to scale-up for commercial use."

Zor and the team at Airwayz hope the pilot scheme will demonstrate how drones can operate in a mesh, reacting safely to real-time situations, while also maximising delivery efficiency for a commercially viable solution to drone delivery.

The pilot programme, organised by the Israeli Innovation Authority in collaboration with the Ministry of Transport and the Prime Minister's Office, began in March 2020 but saw drone flight tests starting for the first time last week (15 March). According to TomerSerok, an engineer at Airwayz, the firm is the only software company in the world that does both piloting and sky control.

"There are quite a few companies that purchase their own drones and build the software around the one drone for certain missions," he explained. "A lot of these companies also provide loads of air traffic management software for control towers, but the shift from manned to unmanned traffic management has become a challenge for these companies when having to manage many drones in a small space."

Serok stressed a human cannot manage all these drones in any given space, therefore services need an artificial intelligence system within all these drones that can do decision-making in a matter of seconds. "Because we have a UTM and a pilot system, which was granted by the Israeli government about a year ago, that allows for multiple drones operating together in any given environment."

Five separate delivery companies used their own differing USS (UAS Service System) in the pilot, all of which are managed by Airwayz's UTM, which can uniquely manage fully autonomous operation across multiple drones with the use of AI technology. This allows the drones to operate in a mesh network rather than along a corridor.