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Technological Ascension



NOVA INNOVATIVE COMPSKEY





iPhone 14 & iPhone 14 Plus

**"Simplicity is the ultimate sophistication"
— Steve Jobs**



Apple is one of the leaders in innovation, design, product strategy, and execution. While Apple prides itself on creating better experiences, we forget what actually goes into that ”

Apple would design under the premise of detail. How granular can they go? What is the smallest thing that will make a difference? Instead of worrying about solving big problems with every change, they focused on solving small things first.



Recent launch

Apple introduces iPhone 14 and iPhone 14 Plus

A new, larger 6.7-inch size joins the popular 6.1-inch design, featuring a new dual-camera system, Crash Detection, a smartphone industry-first safety service with Emergency SOS via satellite, and the best battery life on iPhone

iPhone 14 and iPhone 14 Plus take stunning photos and video with a powerful camera system featuring new Main and front TrueDepth cameras, the Ultra Wide camera for unique perspectives

Both models include the A15 Bionic chip with a 5-core GPU, which offers incredible performance and efficiency for demanding workloads, and is designed with privacy and security built in.



Powerful Camera Upgrades Enabled by Photonic Engine



Photo and video capture with a new 12MP Main camera featuring a larger sensor and larger pixels, a new front TrueDepth camera, the Ultra Wide camera to capture more of a scene, and Photonic Engine for a giant leap in low-light performance.

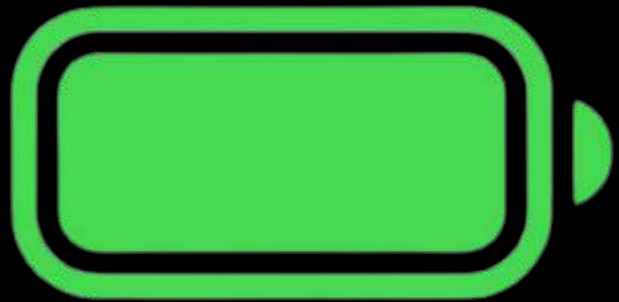
Through a deep integration of hardware and software, Photonic Engine improves mid- to low-light performance for photos across all cameras: up to 2x on the Ultra Wide camera, 2x on the TrueDepth camera, and an impressive 2.5x on the new Main camera.

Photonic Engine enables this dramatic increase in quality by applying the computational benefits of Deep Fusion earlier in the imaging process to deliver extraordinary detail, and preserve subtle textures, provide better colour, and maintain more information in a photo.



A huge
Plus

for



Get our best battery life ever on iPhone 14 Plus. And awesome all-day battery life on iPhone 14.

**Up to
26 hours
video playback on
iPhone 14 Plus**

**Up to
20 hours
video playback on
iPhone 14**

**Add a MagSafe
charger for faster
wireless charging⁴**



Crash Detection and Emergency SOS via Satellite

The entire iPhone 14 lineup introduces groundbreaking safety capabilities that can provide emergency assistance when it matters most.

With a new dual-core accelerometer capable of detecting G-force measurements of up to 256Gs .

Automatically dial emergency services when a user is unconscious or unable to reach their iPhone.



The iPhone 14 lineup also introduces Emergency SOS via satellite, which combines custom components deeply integrated with software to allow antennas to connect directly to a satellite, enabling messaging with emergency services when outside of cellular or Wi-Fi coverage.



Layouts

A layout guide defines a rectangular region that helps you position, align, and space your content on the screen. The system includes predefined layout guides that make it easy to apply standard margins around content and restrict the width of text for optimal readability. You can also define custom layout guides.

A safe area defines the area within a view that isn't covered by a navigation bar, tab bar, toolbar, or other views a window or scene might provide.

In iOS, iPadOS, and tvOS, the system defines a collection of traits that characterize variations in the device environment that can affect the way your app displays on the screen.

Using SwiftUI or Auto Layout, you can ensure that your interface adapts dynamically to a wide range of traits and contexts, including

- Different device screen sizes, resolutions, and color spaces
- Different device orientations (portrait/landscape)
- Split view
- External display support, Display Zoom, and multitasking modes on iPad
- Dynamic Type text-size changes
- Internationalization features the system can enable based on locale (left-to-right/right-to-left layout direction, date/time/number formatting, font variation, text length)
- System feature availability



Orientation

Aim to support both portrait and landscape orientations. People choose different orientations for a variety of reasons, and they generally expect apps to work well in every context.



If it's essential that your app run in a single orientation, don't tell people to rotate their device to match; if your app doesn't rotate automatically when someone holds the device in an unsupported orientation, they'll know instinctively to rotate it. If your app is landscape-only, make sure it runs equally well whether people rotate their device to the left or the right.



Future Design

“ These design standards change how we use everything. They influence how every product is built & how every product is designed. ”

“The product is not the experience. The task is the experience. If you can do what you set out to do, easily, is what determines if a product works.”

“It takes place in the details, in the minutia of how we use and do things as humans. But once you step back and notice the changes, it becomes evident that the future is already here”

“As users, we’re now so accustomed to simplicity in the products we use that we don’t stand for anything else. We expect to use products as tools. We use Medium to read & to learn, not to use a blog website. We use Twitter to stay connected, find news, share our thoughts, not to be on social media.”

“Apple pioneered this throughout its growth and change. Apple made this a standard throughout its revolutionary new product releases. The future has already happened and continues to happen every day. ”



Vande Bharat Express



The Vande Bharat Express, also known as Train 18, is an Indian semi-high-speed, intercity, EMU train which is operated by the Indian Railways only on four prominent routes as of October 2022, connecting major cities like New Delhi, Shri Mata Vaishno Devi Katra, Varanasi, Mumbai, Ahmedabad, Una (Himachal Pradesh). It was designed and manufactured by Integral Coach Factory (ICF) at Perambur, Chennai under the Indian government's Make in India initiative, over a span of 18 months. The unit cost of the first rake was estimated at ₹100 crore (US\$13 million), although it is expected to go down with subsequent production.

Exports:

These countries have shown interest of purchasing the train sets because the average cost of a coach is around ₹ 6 crores which is around four times lower than the world's average cost of ₹24-25 crores per coach which is about 0.2% the price of the French Talgo Train.

Initial Trial Runs

The train's first trial run occurred on 29 October 2018 in Chennai, focusing on crew orientation and testing the train's brakes, with further testing scheduled to be done in Delhi on 7 November and later in Rajasthan. An Indian Railways official reported that "some fuses went off" during the Chennai trial, but the issue was minor and quickly fixed. The train ended up leaving for Delhi later than expected, on 11 November and arrived on 13 November. Testing was set to commence along a section of track between Bareilly and Moradabad in Uttar Pradesh on 17 November, but the location was subsequently changed to the stretch of rail between Moradabad and Rampur due to unspecified issues with the initial section of track. The Moradabad–Rampur testing occurred at low speeds ranging from 30–60 km/h (19–37 mph). After the lower-speed testing, the train was moved to a section of track between Kota and Sawai Madhopur to be tested at operating speed. A team put together by India's Research Design and Standards Organisation will supervise the testing and give the go-ahead for the final speed test.

Chennai

Delhi

Bareilly

Rampur

Sawai

Kota

Some Intresting Facts

FACTS

Train 18 or Vande Bharat express is India's first engineless train. To date, trains in India have a separate engine coach while train 18 has an integrated engine like bullet or metro trains.

The newest and third Vande Bharat Express train has clocked a speed of 100 kilometres per hour (kmph) in 52 seconds during a trial breaking the record of Japanese Shinkansen trains which is of 55.5s

The train covered a distance of 492 kilometres in 5 hours and 10 minutes while normal trains like Shatabdi express takes 6 hours and 20 minutes for the same distance and route..

Train will have Wi-Fi-enabled content on demand which the passengers can watch on a 32-inch LCD TV. The air-conditioning is 15% more energy efficient. The current Executive Class facility of recliner seats will be available for all classes and the train will be equipped with a photocatalytic ultraviolet purification system in the Roof Mounted Package Unit (RMPU).

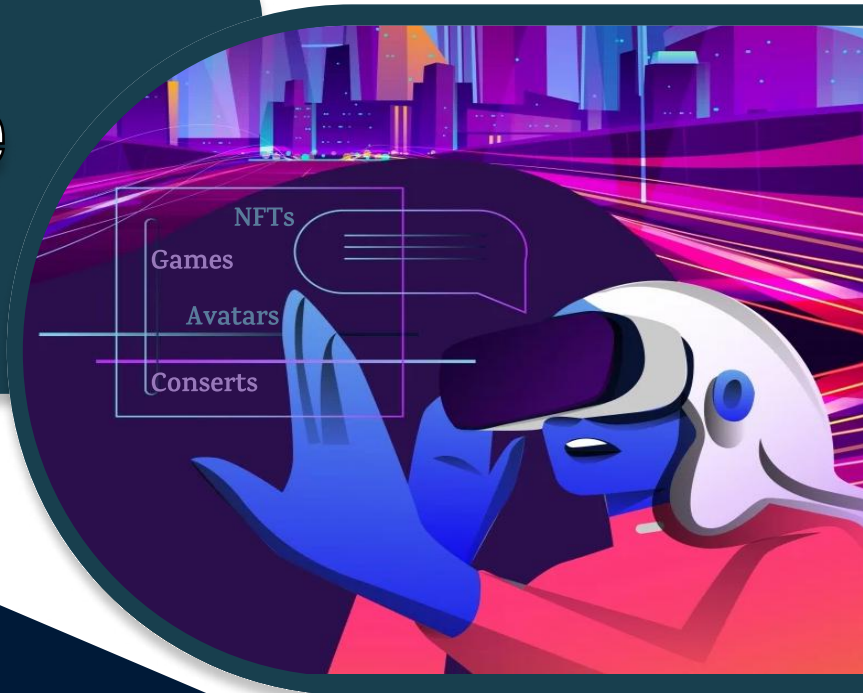
Bio-Vacuum toilets: To solve the problem of sanitation on the train that usually people face biovacuum toilets are used for both Indian and Western-style washrooms. It will provide zero discharge as we see in airplanes. Also, touch-free bathroom fittings are provided to allow users to experience sanitation without worry.



Metaverse?

Metaverse is an integrated network of 3D virtual worlds that use virtual reality, augmented reality, and many other advanced internet technologies. It is moreover a virtual reality-based world built using blockchain which is independent of our physical one where people can socialize and engage in a seemingly unlimited variety of virtual experiences.

What can we do in the metaverse?



Metaverse can be curated lands, digital streets, gaming planets, or NFTs.

We can attend meetings, conferences, events, invest in virtual land NFTs or tokens, etc through the metaverse.

It is used in games where participants use avatars to interact with each other. It has its cryptocurrencies.

Musicians and entertainment labels are experimenting with hosting concerts in the metaverse.



VIRTUAL REALITY

Virtual Reality Vs Metaverse



METaverse

Virtual reality is a technology for creating three-dimensional environments with elements of sight, touch, and sound.

Whereas the metaverse is an open, shared virtual world with 3D virtual spaces where users can explore and interact with content and other users as digital avatars.



Top companies building the Metaverse

META : Earlier known as Facebook, it's one of the top metaverse companies. It is currently working on horizon virtual workrooms, where people will be able to interact in virtual workrooms.

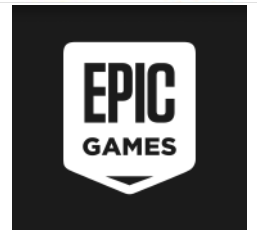


MICROSOFT : The focus of Microsoft is on the enterprise metaverse, to recreate office space and factory floors in the virtual world. It is incorporating metaverse concepts in its existing applications & software products like Microsoft teams.



APPLE : They are currently working on augmented reality, and the company is expanding its AR/VR ecosystem.

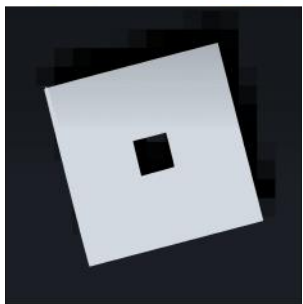
EPIC GAMES : Epic games is one of the top metaverse companies it's also investing money in developing animation capabilities to integrate story characters as assets in the metaverse.



NVIDIA : Nvidia has successfully created its omniverse platform which connects the 3D worlds in a shared virtual universe they are supporting artists and creators by giving them access to the platform.



ROBOLOX CORPORATION : It is an American video game company for building the metaverse. It lets the players create their interactive digital world.



It allows the creator to sell the assets created by them which leads to promoting the creator's economy. Its currency is Robux.

Metaverse in real-world examples



SECOND LIFE : The very first example of a virtual world with avatars, this game created a space for people to customize their looks and talk to individuals across the globe.



**SECOND
LIFE**™

FORTNITE : One of Gen Z's favorite games, Fortnite, has come up the ranks as one of the most popular online gaming worlds ever.



ROBLOX : Like Fortnite, it's a free-to-play game based on an immersive world created through existing gaming tech (rather than nascent techs like AR & VR).





READY PLAYER ONE : It is a film to visualize how the Metaverse might look. The story is based in a dystopian future where you can enter “Oasis”, a virtual reality world where you can practically do anything you want.

HORIZON : Meta’s platform for the Metaverse is already in testing. It uses avatars, customizable outfits, and interactive games.



IMVU : It's a virtual world where you can meet millions of people around the globe. Rooms, avatars, and even worlds are fully customizable, meaning there is a lot of creative freedom. And that is a glimpse of what the Metaverse will be like too.



POKEMON GO : This might seem like an unexpected example of a Metaverse, but this worldwide phenomenon was one of the first apps to utilize augmented reality. This will be key in creating the Metaverse.





Will metaverse replace the internet?



It was predicted that virtual reality would have a greater influence on the world. But there will be time restrictions for the usage of headphones whereas metaverse is independent of this problem it will be available to those who have or do not have access to a VR headset. However, the metaverse is unlikely to replace the internet.

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