



PARTNERSHIP

SOLUTIONS

BUSINESS

PLANNING

CREATIVITY KNOWLEDGE

CONFIDENCE IDEAS

SERVICE

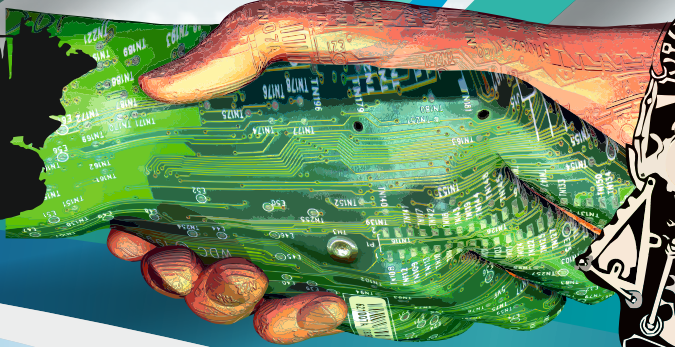
STRATEGY

CREATIVITY

MOTIVATION

INNOVATION

LINE



What kind of KPIs do you use in sli.do?

14

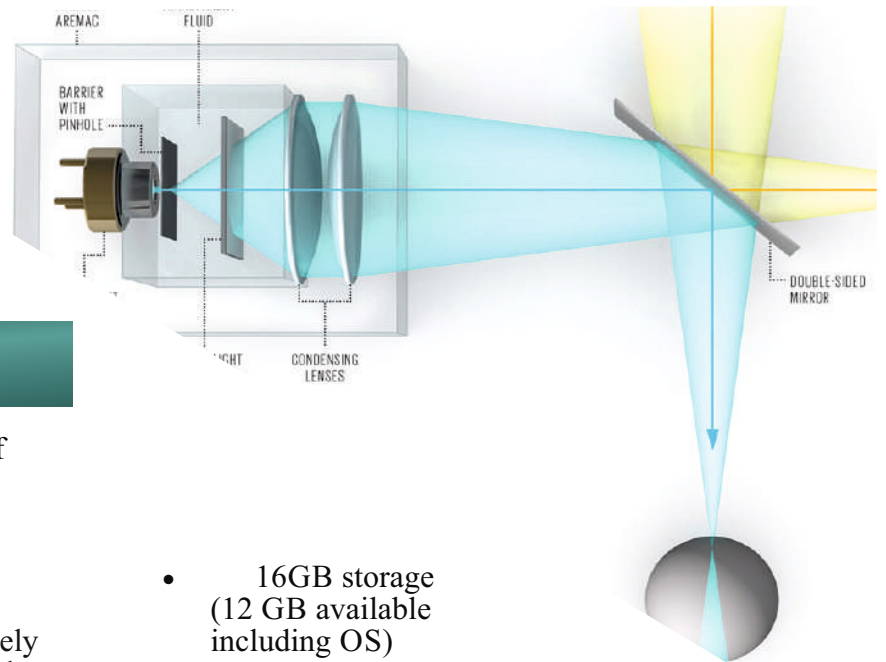
What do you think will be the TOP3 trends in 2023?



GOOGLE GLASS

What is Google Glass?

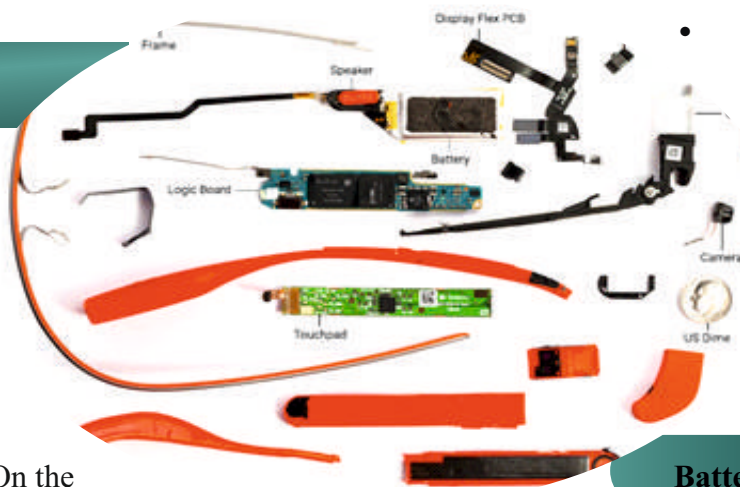
Google Glass is a type of wearable technology with an optical head-mounted display (OHMD). It was developed by Google with the goal is to build a wearable computer that records your perspective of the world and unobtrusively delivers information to you through a head-up display. Google Glass displays information in a smartphone-like hands-free format.



- 16GB storage (12 GB available including OS)
- Texas Instruments OMAP 4430 SoC 1.2Ghz Dual(ARMv7)

Architecture :

Google Glass is not a single-tiered system that directly formed by evenly distributed small units. By looking closer to Google Glass, we found that it is made up of many assemblies that are relatively independent. On the first level of hardware teardown, we found it involves these basic assemblies: main logic board, display assembly, battery, speaker, touchpad, etc.



- 2GB RAM
- 3 axis gyroscope
- 3 axis accelerometer
- 3 axis magnetometer (compass)
- Ambient light sensing and proximity sensor
- Bone conduction audio transducer

Battery module :-

It is a 3.7-V single-cell lithium polymer battery with a capacity of 570 mAh. It is not designed to be replaceable. The battery connects to the rest of the circuitry through a flexible circuit.

Main circuit board :-

The flex circuit from the battery connects to the main circuit board residing in the next plastic module. One side of the main board contains the power on/off button. The object next to it is the connector port for the recharging cable.

Touch pad :-

Moving to the circuit board that controls the touch pad, the main component is the capacitive touchpad controller.

For the developer Explorer units version 2

- Android 4.4
- 640×360 Himax HX7309 LCoS display
- 5-megapixel camera, capable of 720p video recording
- Wi-Fi 802.11b/g
- Bluetooth

Google Glass

Meet me in front

Video camera, display, and sensor module :-

The assembly contains the display and prism, a camera, a microphone, the gyroscope chip, and an ambient light sensor. Google Glass has the ability to take photos and record 720p HD video.

Interfaces

The interfaces are defined as information generated between different modules. They are largely determined by the architecture described above. By looking between these selected units, the detailed descriptions of how the different modules will interact can be found.

Features :-



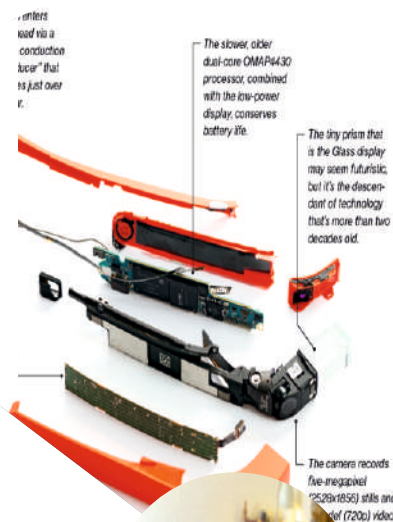
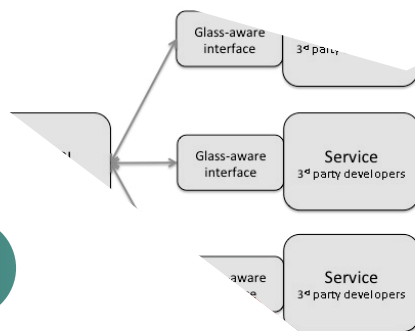
Menu :- Glass shows off what options users have available, ranging from taking pictures, engaging in a Google Hangout, recording a video, or sharing with others.



Reminders :- Glass can pop up a reminder on your screen to, well, remind you of an upcoming appointment or other meeting that you have planned.



Weather :- Like one of the cards that pops up in Android, Google Glass hopes to be able to deliver to you the current weather.



Dictate Texts :- There's no reason why Glass can't be used to dictate texts or short messages to others, using the built-in microphone, Google's cloud-based speech recognition, and a wireless



Travel Alerts :- I've never seen an alert when a public transportation link has been severed or is inoperable, but I assume Google has the capability to do so. This would be a handy feature.



Maps :- The widely used Google Maps are integrated into Glass, so that users will be able to chart the course of their journey or look up locations or establishments via voice commands



Translate :- This is a neat feature that may come in handy when you travel abroad. You simply need to ask Google Glass to translate a phrase or sentence from one language to the other and it will speak that out.





Check In : - Google users can check in at locations. No sign of Google Wallet or any benefit from doing so, though - does this mean that Google has abandoned the idea of discounts or benefits from repeatedly checking in

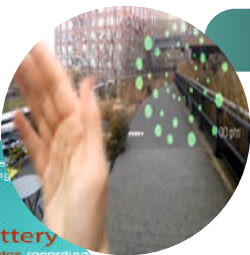


Hangout : - A nice touch. With Glass, there's every reason to believe that not only could you join a Google Hangout, you could share what you're seeing. In fact, with no self-facing camera, that might be the only way to communicate.



Take a Photo With a Wink : -

A face-based form factor demands a face-based UI. That's why it made sense when Google unveiled a "wink" functionality for Glass back in December. Now users can control their device with little more than a facial tic.



Play Games : - A number of "mini games" have been developed to showcase how the specs are a future gaming platform with unique properties all their own.

Google Compass : - Have access to a basic compass at all times.



How does Google Glass project the image onto the glass?

Google Glass uses a Field Sequential Color LCOS to project the rendered image through a lens and into the retina..

Basically, the image of each single color channel is synthesized by an LCOS array on a chip, while the illumination source is rapidly cycled through pure red, green, and blue LEDs, in synchronization with the color channel switching.

Each of these sequential images is passed through a series of lens elements that direct the resultant image to the user's retina. The result is that the user perceives a small translucent screen

hovering at about arms length distance, as



extended up and outward from the right eye. Since the colors are cycling very very quickly, the user perceives a full color video stream.

Battery
45 minutes recording time; an external battery pack can be used to increase time

Audio
Early model used a bone-conduction speaker to send audio signals through the skull directly to the inner ear; newer version has an ear bud

Camera
Photo/video, 12 gigabytes of memory

Projector **Prism**

© Dr. Julian De Silva has pioneered the use of Google Glass in facial cosmetic and plastic surgery
<http://www.londonfacialplasticsurgery.co.uk>
 +44 (0)20 8748 2860



Camera:
Photos - 5 MP
Videos - 720P

Audio:
Bone Conduction Transducer

Connectivity:
Wifi 802.11b/g
Bluetooth

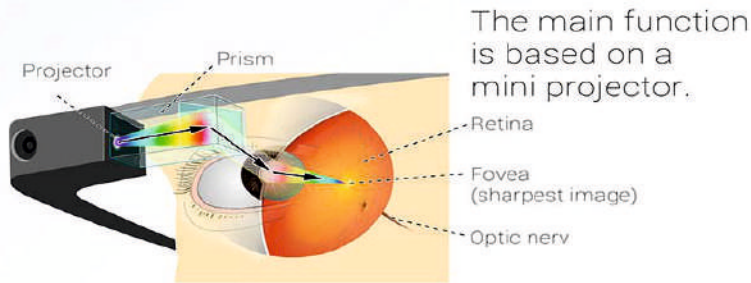
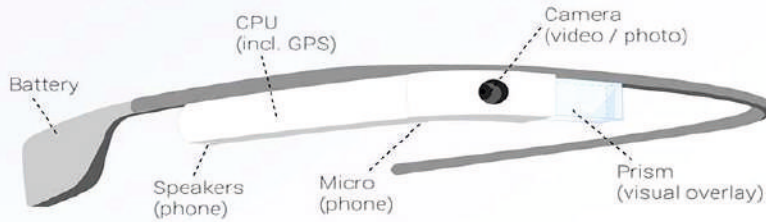
Charger:
Included Micro USB cable and charger.

Compatibility:
Any Bluetooth-capable phone. The MyGlass companion app requires Android 4.0.3 (Ice Cream Sandwich) or higher. MyGlass enables GPS and SMS messaging.

How Google GLASS works

Why can you see a sharp image?

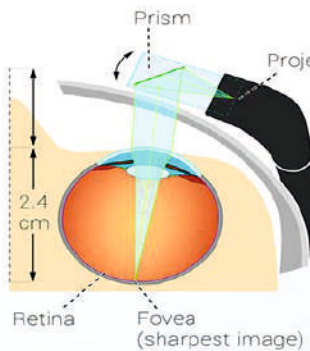
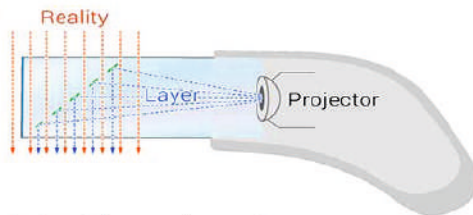
Infographic by M. Missfeldt
www.brille-kaufen.org



The main function is based on a mini projector.

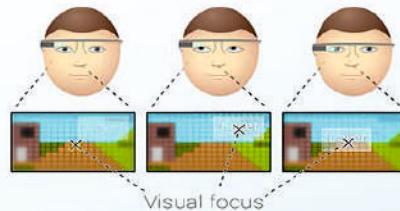


A clever prism projects a layer over reality light.



The prism focuses the image directly on the retina.

Position of layer depends on position of Google Glass:



Challenge:
What about people with normal glasses?
(more than 50% in most countries)



close to the eye, is sharp and clear. You can move the front part of the Google Glass easily to optimize the focus.

This informative infographic is a great how-to explanation of the science and technology built into Google Glass. Illustrations and images are used in this design to tell the story instead of data visualizations.

4 Problems Google Glasses Have To Solve Before Becoming A Hit :-

1. GOOGLE NEEDS TO AVOID "THE SEGWAY PROBLEM"

There's a reason that video glasses haven't taken off yet. And, for lack of a better term, we'll call it The Segway Problem. The Segway flopped in part for its cost and in part for the fact that humanity isn't quite that lazy, but there was a deeper, visceral reaction to the core of the product that signified a silly future rather than an inspiring one..

2. GOOGLE NEEDS TO NAVIGATE "THE ALWAYS ON PROBLEM"

The functions that Google blocks will be as integral to the platform's success as those that are enabled. Finding the perfect level of obtrusiveness within an omnipresent Internet connection could be the largest challenge of human-device interaction the electronics industry has ever encountered.

3. GOOGLE NEEDS TO FIND A KILLER USE-CASE

People in the Valley used to talk all the time about finding "killer apps"—that is, the one, defining use of a technology that'll spark its mass adoption. And no wonder With technologies such as augmented reality and Project Glass, the possibilities seem to outstrip the actual need.

4. GOOGLE NEEDS TO ATTENUATE "THE TOO MUCH FEEDBACK PROBLEM"

Where Project Glass is at now, what one spokesperson labeled "the feedback gathering phase" in our brief conversation today, is a tenuous spot to be in.

Google Glass is a technical masterpiece. It combines numerous functions and features in a very small unit. In addition to phone and camera (photo, video), it offers Internet connection, including GPS.

The core feature of Google Glass is a visual layer that is placed over the reality ("augmented reality"). This layer opens a door to amazing new possibilities. In the Google Glass contains a mini-projector, which projected the layer via a clever, semi-transparent prism directly on the retina in the eye. Because of this the image, even though it is so



AUGMENTED REALITY



What is Augmented Reality?

Total Immersion brings you the ultimate interactive virtual experience. It is the unification of digital software and live surroundings that generate scenes in real time, augmenting what you see to connect you with the digital and physical world.

Augmented reality (AR) is the integration of digital information with live video or the user's environment in real time.

a technology that superimposes a computer-generated image on a user's view of the real world, thus providing a composite view.

Augmented Reality :

The key to augmented reality is the software. Augmented reality programs are written in special 3D augmented reality programs such as D'Fusion, Unifye Viewer or FLARToolKit. These programs allow the developer to tie animation or contextual digital information in the computer program to an augmented reality "marker" in the real world.

AR applications for smartphones include global positioning system (GPS) to pinpoint the user's location and its compass to detect device orientation. Sophisticated AR programs used by the military for training may include machine vision, object recognition and gesture recognition technologies.

Some of the many actual or potential uses of augmented reality:

- The changing maps behind weather reporter s.



- A navigational display embedded in the windshield of a car.

- Visual displays and audio guidance for complex tasks.

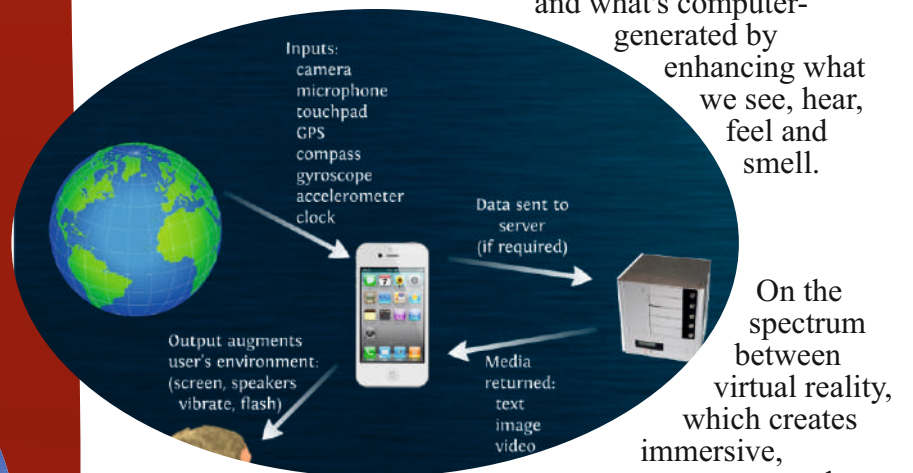
- Images of historical

recreations integrated with the current environment.

- A display in a pilot's helmet that allows the pilot to, in effect, see through the aircraft.
- Mobile marketing involving product information displayed over that product or its location.
- Video games with digital elements blended into the user's environment.
- Virtually trying on clothes through a webcam while online shopping.
- Displaying information about a tourist attraction by pointing a phone at it.

How Augmented Reality Works

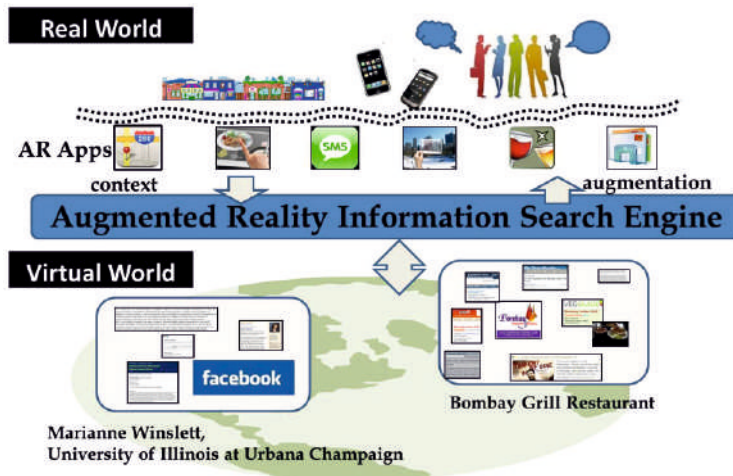
Computer graphics have become much more sophisticated since then, and game graphics are pushing the barriers of photorealism. Now, researchers and engineers are pulling graphics out of your television screen or computer display and integrating them into real-world environments. This new technology, called **augmented reality**, blurs the line between what's real



and what's computer-generated by enhancing what we see, hear, feel and smell. On the spectrum between virtual reality, which creates immersive, computer-generated environments, and the real world, augmented reality is closer to the real world. Augmented reality adds graphics, sounds, haptic feedback and smell to the natural world as it exists.

Augmented reality is changing the way we view the world -- or at least the way its users see the world. Picture yourself walking or driving down the street. With augmented-reality displays, which will eventually look much like a normal pair of glasses, informative graphics will appear in your field of view, and audio will coincide with whatever you see. These enhancements will be refreshed continually to reflect the movements of your head. Similar devices and applications already exist, particularly on smartphones like the iPhone.

Process of these three steps takes less than 40ms to match the human eye fluidity of 25 images per second. Powerful algorithms need to be applied and research is continuously progressing to further develop each of these three processes boosted by the growing performances of equipment and devices. Computer Vision is in itself a high consumer of CPU but higher is the available power, better is the sophistication of the algorithm for a truly enhanced user experience. Furthermore, with the rapidly progressing utilization of captors, such as GPS, Compass, gyroscope, thermometers, speedometer, the sum of information collected can be used to further enrich and boost users experience in a current context.



See where Augmented Reality applies to your needs and learn how you can be a part of it all, starting today.

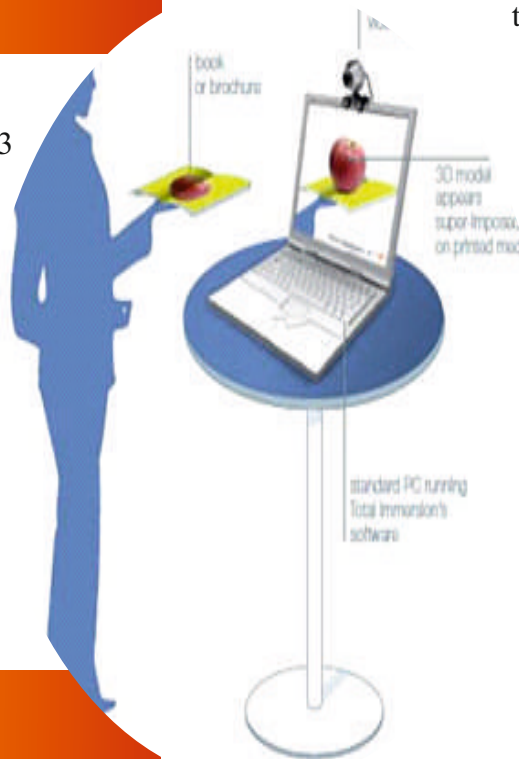
Applications of Augmented Reality :

- Architecture
- Archaeology
- Art
- Commerce
- Construction
- Education
- Gaming
- Industrial design
- Medical
- Military
- Navigation
- Office workplace
- Sports and entertainment
- Television
- Tourism and sightseeing
- Translation

How to experience Augmented Reality?

Our real time video stream requires 3 simple steps:

1. Recognition: Recognition of an image, an object, a face or a body
2. Tracking: Real-time localization in space of the image, object, face, or body.
3. Mix: Superposition of a media (video, 3D, 2D, text, etc...) on top of this image, object, face or body..



What are Augmented Reality Usages?

Offering cutting edge advertisement and applications for companies all over the world is our distinctive feature. Discover our one of a kind development by watching the successful results here.

How is our engine different?

- It provides more than just 3D mapping – detailed and accurate 3D scene representation, extracting data from 3D physical worlds in real time
- Advanced natural user interface – natural hand movements to control augmented objects
- Face to face operability - even if both sides wear glasses - 2 different users can “look” at the same object from their different positions
- Works both in and outdoor, even in direct sunlight
- The only AR engine using stereoscopic cameras – affordable hardware that's also eliminating the need for a depth sensor
- Efficient and smart computer vision algorithms – supporting a variety of mobile and wearable devices
- Low power consumption

The InfinityAR Engine :-

AR engine uses very basic and affordable hardware – 2D stereoscopic cameras, to provide:

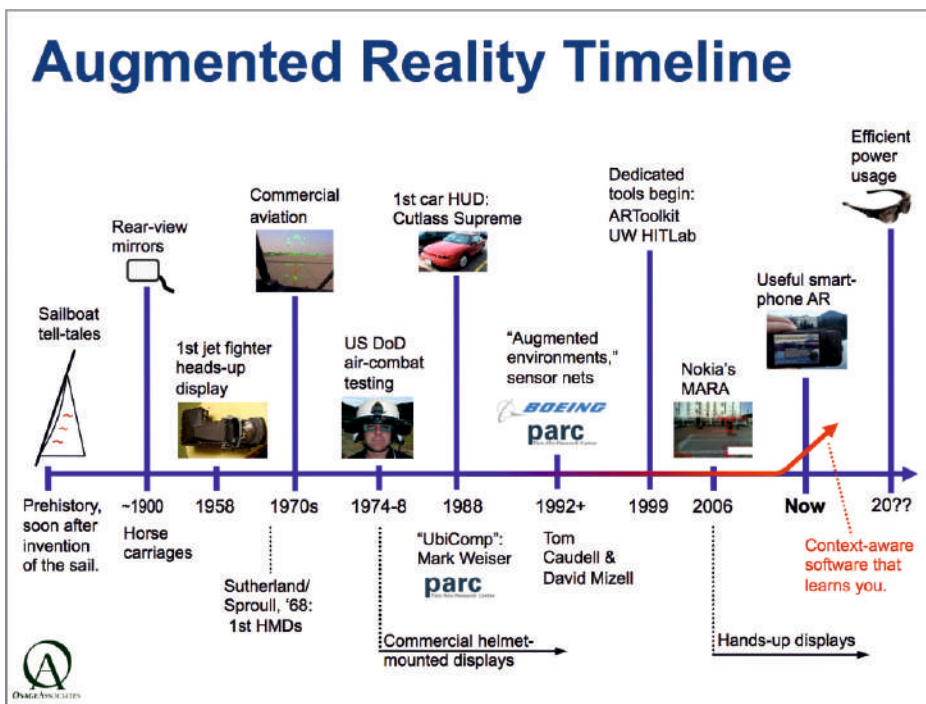
1. An accurate digital 3D scene representation of one's current physical environment.
2. Information about a broad series of essential factors that influence the environment and are crucial for building high quality real-life AR experience such as:
Light sources, reflections, transparency, shadows, etc.

Position and orientation

This brings the ability to determine the exact viewpoint of the device, and is needed for correct rendering of the scene as well as interpreting hand movements in accurate 3D space.

Physical world digitization

This module allows to create a digital replication of the physical world – where things are, what they look like, are they reflective or transparent, and what light sources exist in the scene.



Control and gesture NUI

This module allows control, through direct "contact" with virtual objects as well as through gestures. It requires learning through instruments such as neural nets typical hand poses and gestures.

Recognition of real world objects, their physical characteristics and how they affect the scene.

3. Ongoing analysis of user orientation and position in the environment

Sensing and presenting the environment from the user's point of view – because it keeps moving.

The technology behind our engine

Image matching

This engine performs the most basic need for all other components – the ability to accurately and robustly identify the same points in different image frames.



TOP 10 Upcoming Technologies

That may change world

We have seen great leaps in digital technology in past the past five years. Smartphones, cloud computing, multi-touch tablets, these are all innovations that revolutionized the way we live and work.

Get ready to print your own creative physical product. Get ready to dive into the virtual world, and interact with them.

BY
Shubham Singh



Google Driverless Car : - The driverless car will become reality. And it's now a reality, made possible by a search engine company, Google. While the data source is still a secret recipe, the Google driverless car is powered by artificial intelligence that utilizes the input from the video cameras inside the car, a sensor on the vehicle's top, and some radar and position sensors



attached to different positions of the car. Sounds like a lot of effort to mimic the human intelligence in a car, but so far the system has successfully driven 1609 kilometres without human commands!

Holographic TV : - This is more than just exciting; the future holds holographic television instead of your LEDs or extra HD TVs. The next generation of TV won't be about the screen size and quality but rather about viewing area. MIT researchers have created a chip which is able to render a holographic display as good as real world – 50 Gigapixels per second. The cost of such TVs would be too high, 'The technology itself is one that's easy and inexpensive and, as far as we are aware and Nature is aware, has never been applied to displays before.'



According to speculations such TVs will be available in the next ten years or so.

Eye-Tracking / Voice Commands : - Voice recognition products like 'Dragon from Nuance' are used extensively when transcribing voice to text.

This technology will be combined with augmented reality (AR) to create a near-invisible and natural user interface for your PMC. We'll call these information glasses. The object you're viewing and the words you speak will be transmitted to your PMC, which will interpret your intent, find and compute and then transmit the results back to you visually and verbally.

Look at a restaurant and say, "Do they have good salads there?" A moment later, you will hear the highest-rated salads,



communicated via your information glasses either by visual display or audible voice, depending on what you are doing at that moment, like driving.

AMPY : - This clever device uses the energy of your motion to recharge any device with a USB port. It's a bit like those watches that turn your wrist movement into kinetic energy. Walk 10,000 steps, cycle for an hour or run for 30 minutes and it will



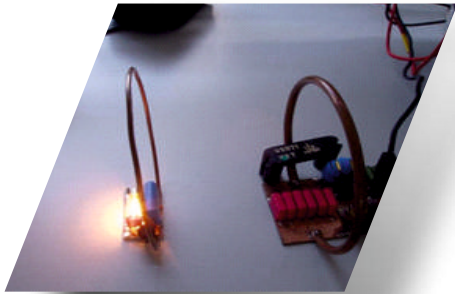
recharge three hours worth of battery life on a smartphone.

Navigation Glasses for the Blind : - The Navigation Glasses help blind users to visualize their surroundings, both in front and peripherally. Sensors in the glasses pick up the layout of the surrounding area, and deliver this information to the user via auditory feedback through the accompanying earpieces. In addition, a microphone allows the user



to communicate with the device and get accurate real-time feedback.

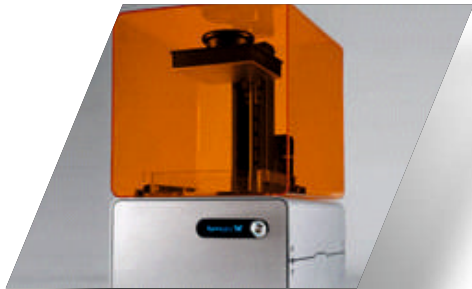
Wireless Electricity : -Among many fantasies that the mankind has, wireless electricity sure has earned its place. However, you would have to give this fantasy up because this is soon going to be a reality. We have seen wireless charging for gadgets and that's proof enough to build a structure



onto. A number of companies are trying to come up with electric 'hubs', which will be capable of powering up an entire house. The idea is to make use of the fact that some particular electromagnetic waves make it easy to transfer energy and electricity can be transferred between objects that are resonating at the same frequency.

1. 3D-Printer : - Just as the term suggests, 3D printing is the technology that could forge your digital design into a solid real-life product. It's nothing new for the advanced mechanical industry, but a personal 3D printer is definitely a revolutionary idea.

Everybody can create their own physical product based on their custom design, and no approval needed from any giant manufacturer! Even the James Bond's Aston Martin which was crashed in the movie was a 3D printed product!



Imagine a future where every individual professional has the capability to mass produce their own creative physical products without limitation. This is the future where personal productivity and creativity are maximized.

Scan Board portable scanner : - A portable scanner that allows you to take it to the book, rather than the other way round. The concept is simple: just pop the clear display over the page, snap a

scan of the text and then upload it to the computer via USB. The actual business of scanning uses a moving



laser pane inside the clear panel, just like in a regular desktop scanner - although how well this would work without darkness could be a sticking point.

U-Transfer USB : - The U Transfer lets you transfer files between USB sticks without the need of a PC. The



USB drives slot together to transfer information, and the small touch screen on the device itself would presumably be used to select files and folders to trade between the memory sticks.

VUUM Smart Hanger : -

Hang your clothes on this Korean design while you sleep and a stream of air infused with millions of



negative ions helps sterilise bacteria. Meanwhile, a blast of far-infrared rays resists the development of mould. The "smart" deodoriser removes cigarette odors and helps your

clothes smell peachy clean.



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- Asktheadmin.com
- Cybertechhelp.com/forums
-
- 50 Run commands for your PC : - <http://goo.gl/SjVvK03>
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- Cracking Password Protected zip files : - <http://goo.gl/yb2xq4>
- 100+ General Computer Books : - <http://goo.gl/Ka6iGG>

Mathway :- <https://www.mathway.com>

Instant food comparison :- <http://www.twofoods.com/>

Download all the free software you want at the same time :- ninite.com

Find places to go in public that are not crowded :- avoidhumans.com

A search engine for finding people :- pipl.com

Tracks prices for any product. :- camelcamelcamel.com

An easy way to send big files. :- wetransfer.com

Correct grammar and check for plagiarism :- writecheck.com

Find out how long it takes websites to load :- loads.in

Find nutrition information on various foods :- calorieking.com

A database of PDF manuals for various products :- manualslib.com

How Stuff Works :- <http://www.howstuffworks.com/>

A Discovery engine that finds and recommends web content to it's users :- <http://www.stumbleupon.com/>

