

Why Augmented Reality is Set to Invade More Territories in Our Lives

Enabling users of mobile devices to point their camera at objects and get relevant videos and images, and learn it without actually seeing it seems to be the next big idea which businesses will leverage



Augmenting Informations to extra pair of eyes

- AR will gradually become part of mobile experience
- Augmented info about places, objects to rule smart devices
- AR is (already, not going to be) the new 8th mass medium
- By 2020 there will be more than a billion users of AR apps
- More consumers will wear augmented reality devices



First time I really got excited about Augmented Reality (AR) was when I watched the TED talk about SixthSense technology back in 2009.

Today, we have come a long way and innovations like Google Glass proves that the stuff of science fiction will soon be part of our everyday lives. Today, AR exists predominantly as gadget based but in near future it will encompass a lot of motion-based interfaces via wearable hardware. This will help us become fast learners, video games will involve the world we actually live in our tasks will become a continuous stream of real-world actions with gamification built into it, and advertising will be more personalized and invasive than ever.



Apurba Dutta, Founder & CEO of VcloudIT

“AR will absolutely influence and transform all walks of our lives -education, entertainment, manufacturing, services, etc”

AR is a direct or indirect representation of physical, real-world surroundings whose components are enlarged by system-generated sound, video, graphics, etc. It is a bit different than Virtual Reality (VR), wherein people involve themselves to an extent that they exceed the boundaries of physical reality and have got nothing to do with real world events. The basic premise of AR is to “link the real and virtual worlds together”.

AR no longer the stuff of movies

Let's look at some examples. Today using AR apps like City Lens or Junaio, you can just point your camera on a picturesque city square in a country you are touring and get to know about various shops and services options. Google has a major initiative to augment information about historical places (including India) by enabling users of mobile devices to point their camera at the monument to get relevant videos, images, and historical write-ups and learn without even going in. Similarly a paper advertisement or a character in a children's book can come alive in 3D for your kid to interact with, not just on mobile but also on surfaces and screen beyond. Virtual trial-rooms have come closer to your phone wherein you can see how a particular design might look on you; share it with friends to get their feedback before buying. Auto companies are leveraging AR not just to experience the vehicle virtually but also to service customer/train their employees.

Computing power in our pocket enable AR

Isn't it amazing to know that in our pockets today, we have more computing power than all the computers NASA used in 1960s to launch man on the moon? In the last decade or so, hand-held phones have completely changed how the world communicates and today we are almost reaching 100% penetration with 7+ Billion phones in the world (smartphone is the fastest growing segment now). But as the mobile device market becomes saturated, companies are exploring options like the potential of wearable technology and augmented reality to continue growing their revenues in future.

Most of us are aware of the seven mass media, which have transformed our lives (Printing - late 1400s, Recordings - 1870s, Cinema - early 1900s, Radio - early 1900s, TV - 1950s, Internet - 1990s, Mobile, smartphones and tablets - 2000s). Now comes the next big thing, augmented reality.

What makes extra pair of eyes the next big thing

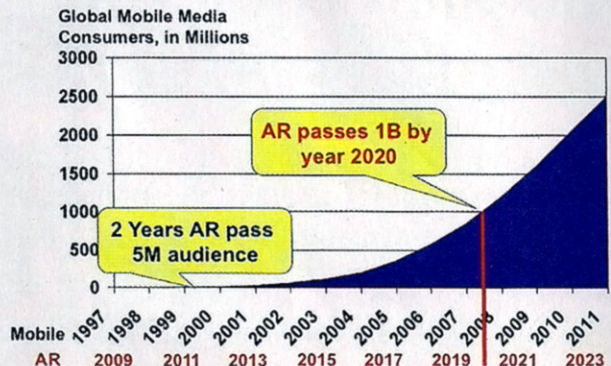
For a year or so, Raimo Van Der Klein (ex- CEO Layar) and renowned author Tomi Ahonen have been saying that AR is (already, not going to be) the new 8th mass medium. So let's look at some of the rationale behind it.

- It took two years since launch for mobile to achieve 5M users (1998-99) and when you superimpose AR, we see a similar trend, wherein 5M users of apps were achieved within two years (2010-11)
- Gartner analyst Tuong Nguyen says, "users now have an extra pair of eyes whether they are using their phone, camera lens or a pair of glasses --you look at something and based on the content, the location or the image itself, it can pull up relevant information." As AR leverages mobile devices and beyond, we can safely assume that it will follow a similar or faster trajectory of mobile growth.
- The analytics firm ABI Research states that in 2013, 68% of the developer spend was accounted for augmented reality applications, 22% for product enhancements and the remaining 10% was for standalone apps.
- Forrester Research recently reported that over 20 million US consumers are willing to wear AR devices.
- Earlier this year, IHS forecasted that the adoption of AR in smart-glass devices would drive volumes of 10 million units through to 2016.

Major challenges for AR today

This is all very exciting, but not all market intelligence agencies are predicting such bright possibilities for augmented reality. For example, Frost & Sullivan has predicted recently that though a number of AR products

Mobile Media And AR Media



will be released this year, the whole package of the smart glasses will not come into effect until late next year. Besides, these augmented reality products come with an evolution cycle that varies based on various factors like economy, culture and regions. It was also predicted that these products are highly expected in countries like India; however, the impact is not likely to be huge for at least a couple of years.

- **Not enough processing power and lasting battery on our devices** - AR requires heavy graphics processing and unless we have dedicated processors similar to graphics card in our PCs which consume a fraction of power compared to today, users will not be able to have an all day meaningful experience.
- **Another major area of concern is Privacy** - AR allows devices to be pointed at a person, and get information about them. The facial or image search could match profiles on many social networks and use the personal data to provide birth date, marital status, or sexual preference. This is socially very awkward and also infringes on people's privacy.
- **Lastly, financial motives will determine AR's survival** - Today, marketers are looking at using augmented reality to place their products or ads as part of the search features used on mobile phone applications. But, how far will these ads go? Will it be a power play with small business and local shops losing out to big companies who can pay AR developers to exclude those companies? So, instead of an unbiased search of city restaurants, will it be flooded with McDonalds and Subways, thus limiting the overall market potential?

In addition to improvements in image/object recognition, cloud computing has been one of the major growth drivers for AR. Next year, we will also see dedicated AR chips being incorporated in our mobile devices.

What we saw in movies like Minority Report, Terminator and Iron Man to large extent will be reality soon; forcing Hollywood directors to dream on and beyond... □