Telco2.0™

Analyst Note

Augmented Reality: Is there a valuable role for telcos?

JANUARY 2011

A Telco 2.0 collaboration with Augmented Reality expert analyst Christine Perey, Perey Research and Consulting.

Excerpt

An introduction to Augmented Reality (AR) including: key industry players; latest developments; and the AR ecosystem. The key strategic question is what role should telcos play? Three possible roles are outlined.

Telco 2.0™ keywords

Augmented Reality; Apps; Appstores; Telco 2.0; Business Models; Innovation

Who should read

CXO of Telco Operators, Strategists and Marketers from Telco Operators and Vendors

Contents

Analyst Note **1**

Contents 2

Table of Figures 2

Augmented Reality Today **3**

Introduction 3

What is AR? 3

Why AR Now? 5

AR Ecosystem Roles **6**

AR Browsers 8

AR Application Examples 9

Telcos' "toes in the water" 10

Alternate Visions of Telcos' Role in AR **10**

The telco as an accelerator to AR take-up and adoption 11

The telco as an AR platform 11

The telco as a data guardian 13

Conclusions and Next Steps **14**

Conclusions 14

Telco 2.0 Next Steps 14

About Christine Perey **15**

Table of Figures

Figure 1 - Sensors triggered by the environment deliver relevant data 4

Figure 2 - Milgram's Continuum from real to virtual 5

Figure 3 - Mobile AR Ecosystem 6

Figure 4 - Passive Operator Role in Mobile AR 12

Figure 5 - Central Operator Role in Mobile AR 12

Augmented Reality Today

Introduction

Augmented Reality (AR) is a hot topic right now, attracting much of the hype that was reserved for apps a few years ago. But what's beyond the hype? Is AR simply the next stage of development for existing value propositions, or will it bring with it entirely new propositions that offer new revenue streams for the Telecoms ecosystem?

In this Analyst Note, we explain what Augmented Reality is, why it is developing so quickly now and lay out four possible roles that telcos could develop in order to monetise the AR explosion in ways they haven't with apps in general.

This analysis was written in collaboration with Christine Perey, Perey Research and Consulting, a world expert in the AR field, who is working in association with Telco 2.0 at our forthcoming Americas, EMEA and APAC Executive Brainstorms and on further research publications.

What is AR?

In simple terms, 'Augmented Reality' applications and technologies bring users information that exists in the digital world and presents it automatically and intuitively in association with things in the real, or physical, world. Often, but not always, this information is from the web.

AR is about creating, making explicit and displaying the relationships between the real and virtual worlds.

At the highest level, AR can be seen as the latest evolution in information search, viewing and, ultimately, to its manipulation by the user. It's part of an evolution: the Web made Internet-based information accessible to audiences through websites and, when there proved to be too many web sites, with search engines. Search brought information access into the reach of everyone, everyday on a separate screen. With AR, digital information can be automatically 'connected', in context, to real world objects.

This can take many different structures but is best described as a three-stage process.

1. Sensors in the user's device (such as camera, GPS and/or compass, microphone, even a thermometer) detect a 'condition' in the local environment – say the visual image of a recognisable geographic feature like a mountain or famous building – and the user's pose relative to the environment.

2. The application or 'system' finds the digital data (any text, image, 3D model, video, URL, sound, etc.) that has previously been associated with the specific condition in the local environment identified by the sensor.

3. The digital information is presented visually (or aurally) to the user in such a way that it is 'synchronized' with the real world. It is only presented as long as the condition remains the same. When the user's condition changes, e.g. they move away from the object, the digital information disappears or is replaced with new information if the sensors are triggered by another condition.

This is illustrated in the example below.

Figure 1 - Sensors triggered by the environment deliver relevant data

Source: PEREY Research and Consulting

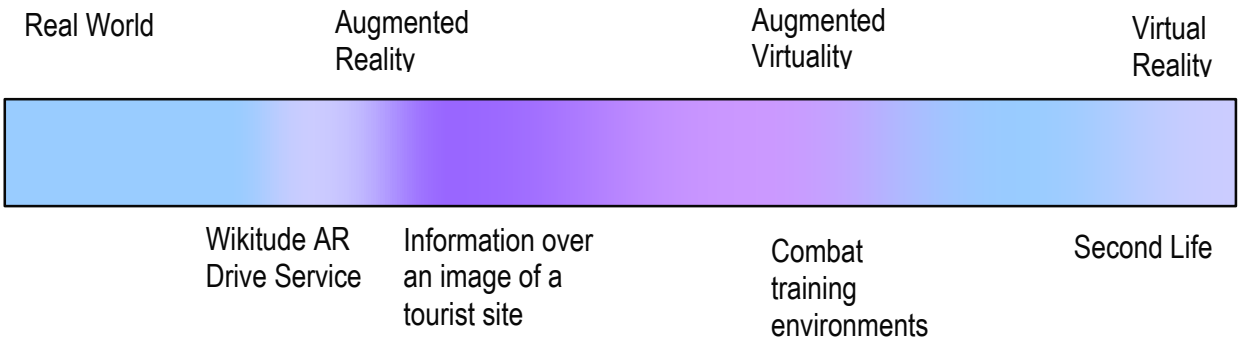
For a service to be seen as Augmented Reality, all three of these steps have to take place. To illustrate some differentiating features of AR services, let's compare two services: first without AR, then with AR.

- ***Non-AR Location Based Applications Example***. A basic GPS location service detects where you are. You then search your smartphone for information about restaurants nearby and these appear as points on a map around you. These are augmentations – virtual information with the real data that you input. The processes are neither automatic nor seamless.

- ***AR Location Based Applications Example***. The sensors of the Wikitude Drive AR service detect your location and direction of travel. To direct you, arrows are automatically generated and 'registered' on a live in-car video of the road ahead of you (not on a map view). Instead of a manual search, the 'Yelp' mobile AR application takes location information from the GPS and compass, identifies the local businesses in its database which are nearby, and returns local information that is overlaid on the live video where the business is visible.

'Augmented Reality' can be seen as sitting on a continuum with 'Reality' at one end and 'Virtual Reality' on the other. Augmentation can be used both ways – to augment the virtual world with real objects and to augment the real world with virtual data. An example of 'Augmented Virtuality' is a soldier training environment in which the "world", be it urban or forest, is synthesised and virtual, and where there are other real, 'flesh and blood' people operating at the same time. The soldier sees both the virtual world and the real people in one view. To help bring this to life we have annotated Milgram's Continuum with some examples below.

Figure 2 - Milgram's Continuum from real to virtual



Why AR Now?

AR is not a new development. In fact, it's been studied in one dimension or another in labs for over 20 years. However, the opportunities that emerged around mid-2009 have given the subject appeal and many practical, real-world applications are now possible. The most important developments have been the release of new sensor-laden and processor rich smartphones with touch interfaces connected to cloud services by faster networks.

In addition to enhancements in computing power, devices are increasingly pre-packed with GPS, compass, accelerometers and gyroscopes, adding to the now ubiquitous cameras and microphones. Thermometers, RFID and other wireless sensors are also appearing. At the same time a critical amount of information is available in digital format, meaning the potential for bringing the real and virtual worlds together through a mobile device is huge.

Other important developments adding momentum to Augmented Reality include:

- Improved computer vision algorithms increasing the reliability with which the feed from a camera can be matched with images in a database;
- Real time information is increasingly becoming the default, especially "local" (LBS) when the user is in transit and social information being updated in real time;
- Contextual services are better understood as having value to end users (e.g., get a coupon when you enter a store, not after you have left);
- The emergence of 3D (on the web, in cinema and on TV) is improving 3D technology that lends itself well to AR for visualization of information over 3D objects.

Combined, these trends have led to an upsurge in AR activity including by mobile operators. However, to date, this has been piecemeal and predominantly focused on customer acquisition and promotional activities. For example, Orange UK launched a free iPhone app and AR service for the Glastonbury Festival and others have released similar apps around special events.

So, what kinds of companies are the most active in Augmented Reality?

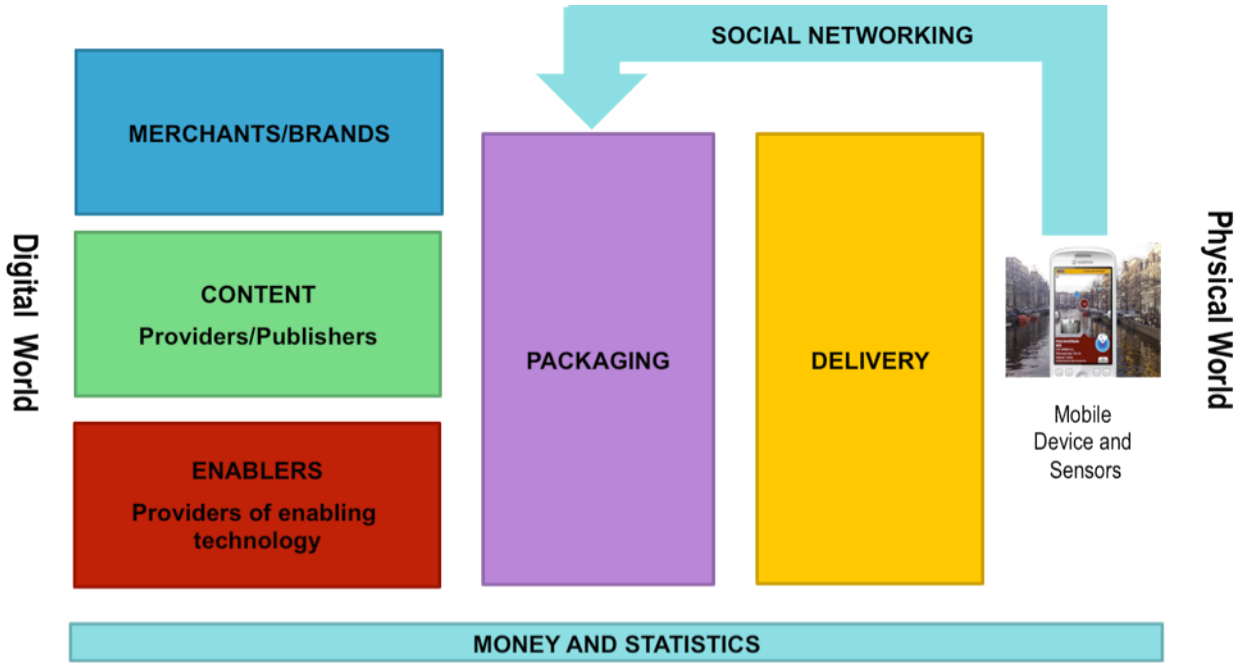
AR Ecosystem Roles

The Mobile AR Ecosystem is composed of companies each occupying one or more of five segments:

- Merchants/Brands;
- Content Publishers;
- Enabling Technology Providers;
- Packaging Companies;
- and Distribution/Discovery Providers.

Each of these segments contributes a valuable role in the process of connecting the physical world and the digital world. As shown in the figure 3, we also see that the user's own content, as it is published to social networks, could be inserted into the system as well, provided that the platform of an application developer can receive the User Generated Content (UGC) through an open API.

Figure 3 - Mobile AR Ecosystem



Source: PEREY Research and Consulting

Table 1 provides a summary of the AR market segments, their business models, and illustrative examples.

Table 1: Mobile AR Ecosystem - Examples of Players

Role in mobile AR value chain	Business Model(s) for the player	Example companies
Merchants/Brands	Paying for advertising to promote engagement with customer, prolong/raise brand awareness and increase sales	H&M, McDonalds, Stella Artois, Starbucks, Volkswagen, Kia, Coca Cola, Walt Disney Co and dozens of others
Content – providers and publishers Creators and publishers of original digital content used to augment a real image e.g. Travel guides, educational publications, listings	Service revenue share or licence fee for content; paying for advertising	Lonely Planet, Esquire Magazine, Yell.com (Yell has also launched its own AR browser building on its role as a content aggregator), newspaper publishers, Twitter (TwittARound, etc)
Enablers – technologies that enable AR at either the server or device end Hardware: cameras, accelerometers, GPS, gyroscopes, solid state compasses, RFID, wireless sensors, head mounted displays; handheld displays; Location technologies – GPS, A-GPS; Software: image registration technologies, recognition technologies,	Product/service sale or end service revenue share Hardware-based – component sales, promotion of mobile device sales Software: free, licensing or revenue share	Hardware: Device manufacturers – Nokia, Sony Ericsson, Apple, Motorola; Sensors – Aero Electronics Operations Specialized hardware (graphics processors, sensors): Qualcomm, Intel Software: Recognition technologies – Google – Goggles; Polar Rose (facial); SREnginez (architecture), Software Development Kits for specialized silicon (Qualcomm AR SDK). Alcatel-Lucent has invested in mobile AR technologies in visual recognition (see its AR vision video here), and spun-off its project a year ago. The company which they acquired called Mobile News Channel (MNC) now has a division called dekaps which contracts with operators for custom projects using AR. UI – 'TAT' The Astonishing Tribe – acquired by RIM.
Packaging – providing the publishing environments to app developers and communities who are then putting the AR app together with content App Developers are also part of the packaging segment of the ecosystem	Service/advertising revenue share; Charging developers for placements Charge to develop, for the end service or ad funded	Platforms: Layar; Mobilizy; metaio, Total Immersion There are thousands of app developers who could be using AR platforms and enablers.
Discover and Delivery - promoting AR to end users, reducing barriers to the discovery (e.g., pre-loading apps), distributing AR applications through app stores	Revenue sharing, driving data revenues, sales of more powerful handsets in bundles with data	Mobile Network operators: Orange, NTT DoCoMo, KDDI Handset manufacturers: Nokia, Samsung, HTC AppStores: Apple, Android Marketplace

AR Browsers

AR browser and platform providers are the leaders in the 'packaging' segment of Figure 3, both aggregating AR content and displaying it in a way that makes it usable for the mass market. Their key role is to mediate the interface between the user's context and the digital data available.

Since 2009, a number of AR browsers have appeared and there are now more than six to choose from, though only three have significant market share. These AR browsers are in and of themselves applications designed with unique user experiences and into which others, the content providers, can publish their data in targeted "layers" or "channels". End users choose the layer or channel they wish to see.

In the case of Layar and Wikitude, the platform is also available to those who seek to develop custom, dedicated apps. The content appears in an AR browser or embedded in a standalone application.

The leading AR platform and AR browser is provided by Layar, a young Dutch company that launched in June 2009. Layar's free AR browser is the most popular with over 3.5 million users as of January 2011, of which a million are active monthly. In addition, Layar's AR browser has been pre-loaded on over 10 M devices to date, making it easy for potentially more subscribers to discover it quickly. The company raised $14 million in its latest round of funding in November 2010.

Another of the top 3 providers, and the oldest, in terms of conceiving of a browser for AR, Mobilizy, provides its Wikitude browser. Launched in the winter of 2008-2009, Wikitude has roughly a million users, but it does not publish monthly active figures. The company has also received outside investment in the 4th quarter 2010, and while it is behind in the AR browser race, the company has taken a different strategy. The Mobilizy team has invested heavily in better understanding and moving its platform to meet the needs of those who will use AR for navigation. The Wikitude Drive application and service for smartphones uses Navteq data to not only show the arrows overlaid on the real world, but also to speak/talk to the user who is driving. Wikitude has also begun, in early 2011, to solicit more developers for its platform, playing catch up with respect to both Layar and metaio in this respect.

The third popular AR browser, Junaio, has around 500,000 users. The Junaio Glue platform is provided by metaio, one of the original AR platform companies that pre-exists the mobile AR frenzy. Metaio, a Munich-based company with offices in the US and Korea, has the distinct advantage of combining both geo-location as a source of context for the user, but also visual recognition. Metaio's image recognition algorithms make its browser suitable for more indoor applications and services than those browsers which rely solely on GPS. Further, metaio's combination of technologies make it attractive for those companies which wish to use mobile AR for interaction with packaging and printed media campaigns without having a dedicated application. Junaio is open and its developer community is growing rapidly.

The key to success for all of these companies is their ability to attract and support developer communities. As of October 2010, Layar had over 5,000 developers, some of which are partners and promoted as such to content owners looking for developers to create layers for them if they can't do it for themselves. Layers can be free or paid for, providing content owners and developers with the chance to monetise their developments.

These aggregators are growing fast and the mobile AR ecosystem is building up around them and appstores, not telcos, so even at this early stage, the potential for telcos to take a complete hold of the platform is limited, unless they outright acquire the companies.

AR Application Examples

Creating AR applications is a specialised activity and requires special tools and skills. Some of the tools are open source, others available to certified developers under a wide range of conditions.

Today, the majority of AR experiences on the desktop are provided to consumers via specialized companies who design special experiences for brands to attract consumer attention. There are also innovative developers who already own databases and choose to use AR as an alternative way to "view" their data. A handful of companies are dedicated to specific AR application segments such as games, tourism services and shopping. And, finally, some creative artists use AR to entertain, provoke and make a name for themselves.

The majority of current mobile AR applications follow the standard free, freemium and occasionally paid for models of the app marketplaces they are being distributed through.

The following are indicative of the types of services that are available for end users to experience AR today.

Table 2: Examples of AR Apps

Service Name	Differentiation	Requirements
VouchAR	Takes the concept of location and store offers to a new level and removes the intrusion of text alerts from shops as you walk by. Using the camera as the sensor trigger, it displays discounts available in surrounding stores, restaurants etc	Android app available in the UK
Nesquik Factory AR Game	Combines AR and gesture recognition in a promotional game for Nesquik. Part of a new generation of advertising	Flash-based and requires a camera
H&M Promotional Vouchers 'GoldRun'- - see here for more	AR game in which users search for and, using their camera and the application, collect virtual objects in order to access discount vouchers	Currently available in the US and targeted at New York with an Android app expected in 2011
Coke Print Advertisement	Using a mobile phone camera as the trigger, a print ad becomes live and provides more information, offers etc. IT doesn't just link to a website but provides relevant and real-time information. See here.	iPhone and Android 'Channel' available in Germany with Metaio's Junaio AR browser
mtrip City Guides	AR city guides that identifies points of interest using the camera of a mobile phone as the sensor trigger (see here)	iPhone and access to iTunes AppStore
WordLens by Visual Quest	Overlays the translation of the English text in Spanish and vice versa	iPhone and access to iTunes AppStore

In terms of the telecom industry's position in the market, device and chipset manufacturers are currently most active, seeing AR as a means to drive differentiation and demand for even more powerful processors and devices.

Qualcomm is the most recognisable of the active players, having acquired a small Austrian development company in early 2010 and launched its own AR SDK in Q3 2010. Its model is to use AR to bolster the sale of its chipsets and although it supports new ways to monetise AR, this is not its major driver. Intel Capital has made a $13.4M investment in Layar as it also perceives AR as driving the requirement for faster processors.

Deutsche Telekom has also spun out a separate business unit to develop heads up displays for AR to be introduced later this year, not something that telcos are likely to do.

Telcos' "toes in the water"

Where some telcos are entering the market, they are doing so as application or software developers, or promoting the services developed by a third party. For example, Bouygues Telecom in France released the first in-house operator-developed mobile AR look up service <Ici Infos> in November 2009 with over 900,000 unique points of interest (POI), while Telefonica has a group in Barcelona R&D which is working on its own visual search technology. NTT DoCoMo offers its smartphone subscribers the intuitive navigation services "chokkan nabi" developed under contract for DoCoMo devices.

However, just as with the broader applications market, third parties are often better placed to create the apps themselves.

In general, AR is moving more quickly than most operators can track. At the AR research community's annual event, the International Symposium for Mixed and Augmented Reality (ISMAR) in October 2010, the announcements and proposals included:

- A system for multi-viewer 3D visualization that is extremely easy and inexpensive to implement using a simple monitor;
- Developments on how to track the user's gaze and resolve the true shape of non-rigid objects (e.g., a paper map surface);
- Developments in the area of real time sensor fusion that increase the reliability of trigger detection;
- The ability to "cover" or disguise the existence of a marker in a video image in real time (this is extremely useful for reducing the end user aversion to markers and increasing the reliability of tracking).

We would argue that telcos are unlikely to corner the market by seeking to develop a key technology. Instead, they should look to leverage their position as the discovery and delivery segment, an essential part of the ecosystem for subscribers to discover many AR experiences. However, while this differentiates telcos from other market segments and generates greater sales of higher margin devices, it doesn't offer great monetization directly from AR.

Alternate Visions of Telcos' Role in AR

AR relies on a suite of technologies that are still in an early stage of development and adoption, and there is neither yet a market winner nor expert consensus on the best role for telcos in AR, so the further analysis and debate of 'what is the best role for telcos in AR' will be a key question in this year's Telco 2.0 Executive Brainstorm and Research programmes.

In our research to date, we have identified three possible roles for telcos:

- As an Accelerator to AR take-up and adoption;
- As an AR 'Platform';
- As an AR 'Data Guardian'.

The telco as an accelerator to AR take-up and adoption

PEREY Research & Consulting sees opportunities for telcos to both accelerate the market development and, at the same time, to enhance their competitive differentiation:

The operator role and potential to add value breaks down as follows:

1. Operators can accelerate the discovery of mobile AR by pre-loading some sample mobile AR services or applications on handsets that they recommend. They may sell more data packages in this fashion.

2. Operators can also send promotional messages to their subscribers that can raise awareness and increase subscriber "discovery" of the AR services in an overcrowded market of offerings. The operator could have some AR services branded with their name/logo.

3. Operators can help increase in-app sales by streamlining transactions for applications (in-app purchases of AR content specific to a place or topic).

4. Operators may elect to purchase an existing mobile AR publishing platform or build a new one from scratch and thereby encourage an ecosystem of content unlike that which they were able to aggregate with ring tones and music in prior "packaging" roles they attempted.

In addition, some leading operators can:

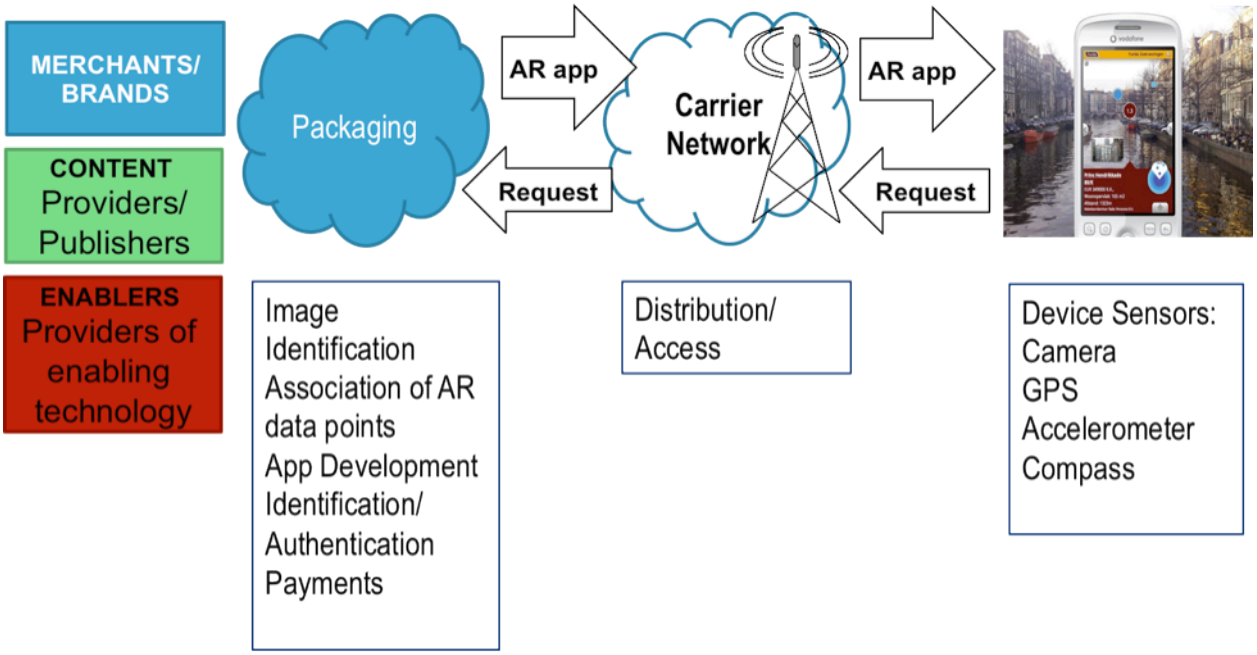
- Develop unique applications which use AR (in some cases with in-house development resources, in other cases outsourcing) and differentiate themselves from competitors;
- And /or encourage development of the AR ecosystem by furnishing core enabling technologies.

Finally, "boosting" AR performance by, for example, providing more rapid or accurate handling of location requests received from mobile AR apps, more rapid and accurate algorithms for identification of objects in the user's visual field, or of sounds in the vicinity. In this fashion, the performance of mobile AR on one network could be superior to that on another provider's infrastructure.

The telco as an AR platform

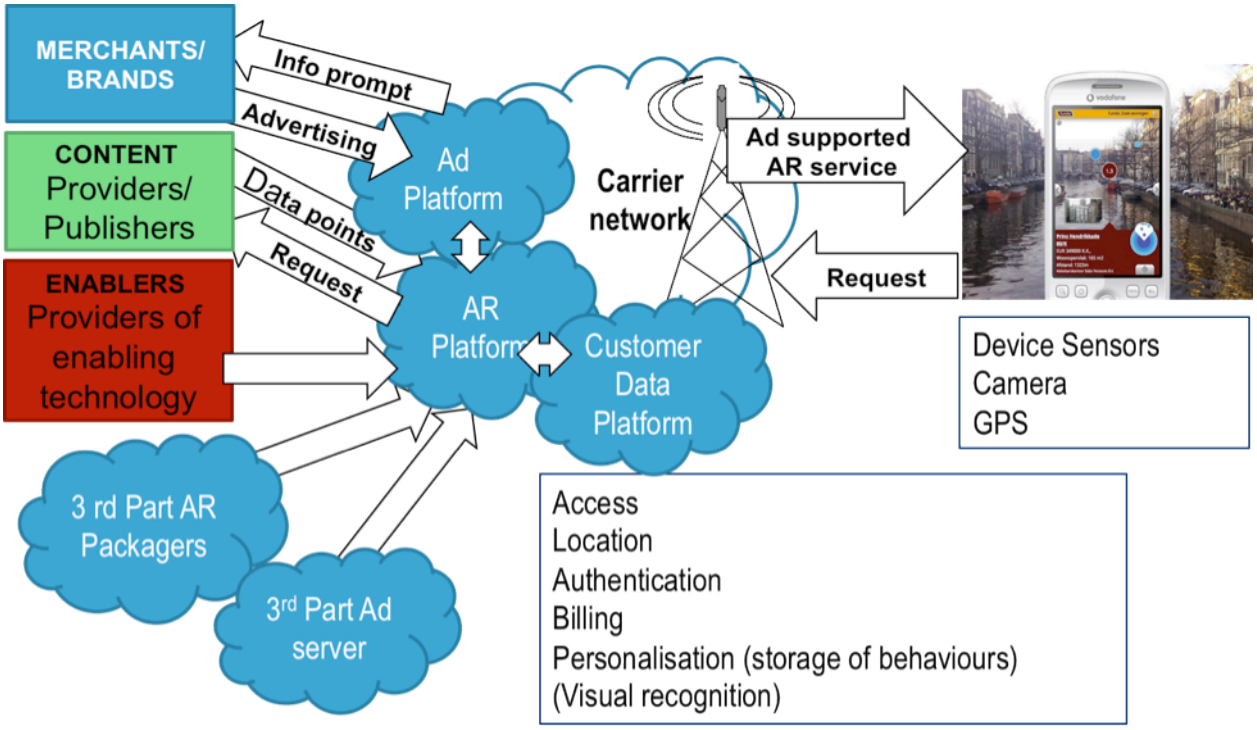
Currently mobile operators have a passive role in the AR value chain which is illustrated below.

Figure 4 - Passive Operator Role in Mobile AR



All the AR platform functions are carried out by third parties but most if not all, could theoretically be performed by a central telco platform as illustrated below.

Figure 5 - Central Operator Role in Mobile AR



However, the required ad and customer data platforms simply don't exist currently, although some are being developed, so this is a view of a world that is some way in the future. Meanwhile, others developers and companies are serving the packaging role and new companies are emerging rapidly to compete in this central packaging role of the ecosystem.

The telco as a data guardian

Pachube, a start-up concentrating on extreme connectivity, also presented at the 11th Telco 2.0 Executive Brainstorm in November. It uses a metadata-based application to create a device, platform and data neutral AR environment into which any sensor can be plugged. Pachube's role has been to create an infrastructure for sharing the data collected which enables third parties to develop apps and build business models on top of it. These are unrestricted but largely based around sharing data with specific groups.

While this could be considered a little way out, what it does open up is a discussion about what will happen with all the data that AR-inspired sensors create. Where will it go? How will it be stored and managed? Who will have access to it? How can it be used? And so on.

In the discussion that followed the presentation it was suggested that users could pay to store their data securely and privately, for access to it to be managed and there's even potential for consumers to charge 3rd parties to access their private data. There are close links here to the World Economic Forum customer data research Telco 2.0 is involved with, as only if a framework is agreed for the usage of customer data will the ecosystems truly develop (see the Telco 2.0 Research Stream here).

Conclusions and Next Steps

Conclusions

1. Augmented Reality has taken a massive leap into the mass consciousness on the back of developments in mobile device and network technology.
2. There is huge potential for AR applications to grow.
3. The current role for telcos is purely one of access and others are taking the lion's share of revenue.
4. Where they are involved in AR telcos tend to focus on technology or on single eye-catching apps.
5. A better route would be to concentrate on intermediary and enabling roles and we have identified three possible approaches so far:
   - 5.1. As an Accelerator to take-up and adoption;
   - 5.2. Platform – provide the complete AR platform;
   - 5.3. Data Guardian – store, manage and protect the data generated through AR for individuals and other entities.

Telco 2.0 Next Steps

Telco 2.0 will continue to investigate and report on the potential for telcos to become the custodians of data and we will also be tracking the development of the Augmented Reality ecosystem.

'Augmented Reality' will be a theme of the 2011 Telco 2.0 Executive Brainstorms and research programme, and Christine Perey, Perey Research & Consulting, the key expert contributor to this analysis, will be working in association with Telco 2.0 at our forthcoming Executive Brainstorms and on further research publications.

About Christine Perey

Christine Perey has worked for more than 20 years in the domain of rich media communications, initially in the area of dynamic media technologies on personal computers; she founded, was the editor and publisher of the QuickTime Forum, a publication for QuickTime developers 1991-1993. When enterprise and wide area networks emerged as a means of distributing rich media created and consumed on personal computing devices, she expanded to provide a variety of services to the companies in the rich media communications industry, and, for over a decade, advocated for the use of videoconferencing and streaming media in enterprise. In 1997, Perey was the author of the *Networked Multimedia Communications (NMC)* report, an analysis and forecast of future trends in multimedia sponsored by Intel, Microsoft and Cisco.

In 2004 research on mobile applications of advanced rich media technologies for consumer markets began to take priority. Since mid-2006, Perey has studied and assisted companies to better understand their opportunities in the domains of Mobile Social Networking and Augmented Reality. Perey has prepared two reports on one of these areas, *Mobile Social Networking: Communities and Content on the Move*, and *Mobile Social Networking: Business, Technology and Mobile Operator Strategies* published by Informa Telecoms & Media in January 2008 and September 2009, respectively.

As consultant and analyst, Perey is an active leader of new industry initiatives (e.g., currently a W3C invited expert to the POI Working Group http://www.w3.org/2010/POI/, past IE to Social Web Incubator Group, and co-chair of the W3C Workshops on AR on the Web held June 2010 and on the Future of Social Networks held in January 2009).

Perey is co-founder of Mobile Monday Switzerland http://www.mobilemonday.ch, and the Swiss Augmented Reality meetup group http://www.meetup.com/ARCH-Swiss-Augmented-Reality/ ARCH is sponsored by PEREY Research & Consulting and open to the public. In mid-2010, Perey formed the International Community for AR Standards http://www.arstandards.org . She is highly active in the community of AR experts, serving in 2009 and 2010 as ISMAR http://www.ismar.net Workshops chair.

PEREY Research & Consulting organizes and conducts meetings for the mobile AR industry and advocates for open and interoperable AR around the world in conjunction with major technology conferences.

PEREY Research & Consulting studies and advises vendors, application providers, research institutes and network operators on the design, launch and operation of a range of mobile augmented reality and user-generated content services. The company prepares analyses, develops reports and coordinates the establishment of new business relationships designed to accelerate the expansion of multimedia and media-rich communities on mobile and converged networks.

Telephone: +41 79 436 68 69, e-mail: cperey@perey.com, URL: www.perey.com.

The Telco 2.0™ Initiative

Telco 2.0™ is a collection of research, brainstorming and consulting services designed to catalyse change in the Telecoms-Media-Technology sector.

- Telco 2.0™ Research & Analysis
- Telco 2.0™ Executive Brainstorms
- Telco 2.0™ Consulting

The Initiative stimulates new ways of thinking about Business Models, Service Portfolios and Technical Architectures.

Created by boutique analyst and consulting company, STL Partners, the Telco 2.0™ Initiative was launched in May 2006 and is supported by the GSM Association, among other organisations around the world.

Since we launched the concept of the 'Two-Sided Telecoms Business Model', the approach has been finding increasing resonance at senior levels in both mature and fast growth markets.

Why does it exist?

Key challenges for strategists who work in or with the telecoms industry are:

- **Overall Strategy**: How is the digital economy evolving, what are the best strategic responses and the most profitable market opportunities?
- **Voice and Messaging**: How best to innovate core service offerings to add value and grow revenues?
- **Data and Broadband**: How to ensure incentives and rewards are better aligned across the [digital content] value chain?
- **New Communications Services**: How can latent telecoms capabilities be better exploited to address new market opportunities?

Conventional Answers are Unsatisfactory

Leading strategists now agree that today's predominant 'one-sided' telecoms business model does not provide sufficient answers to these questions, for telcos or for other players in the digital economy. Something new is needed.

Challenges to the Telecoms Industry

IP has changed the game and many growth markets are maturing rapidly. The lines between industries are blurring and everyone is after the same consumers. This is causing disruption in the telco industry, for operators and their partners. Greater levels of creativity are needed to address the following issues.

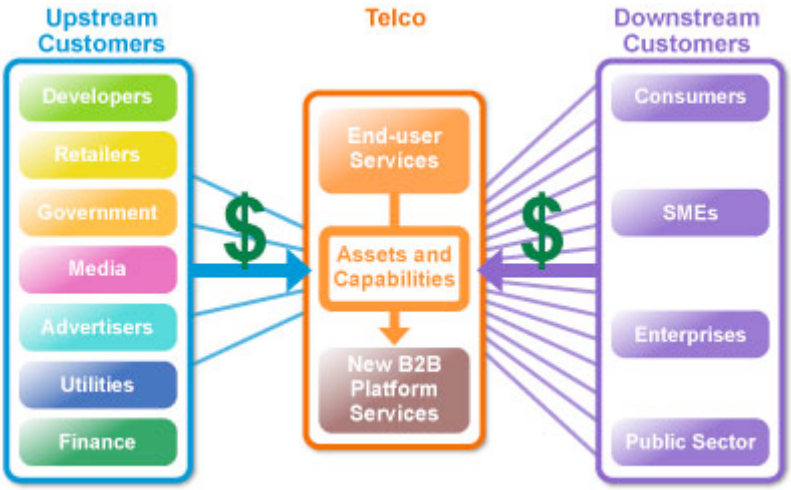
- The vertically integrated Telecoms business model is under attack from all sides: tougher regulation, new technology (most notably VoIP and open spectrum), disintermediatory new entrants, and advancing customer expectations.
- P/E ratios suggest little investor belief in this improving. They have low confidence in 'converged' or triple/quadruple-play bundles providing high returns.

- Operators are making investment decisions in Network & IT, Products & Services, and Mergers & Acquisitions without a clear view of the future.
- 92% of respondents to an STL online survey replied that *'re-thinking the strategic role of the operator'* is a key priority.
- 85% of senior execs said the current telco business model will no longer deliver sufficient growth. (Telco 2.0 Survey, November 2008)
- There is an urgent need for all players in the telecoms value chain to review and renew their business models.

The Opportunity

Fortunately telecom's companies possess a whole host of assets that could be exploited much more to support new, sustainable market growth. The key is for telcos to create open platforms that help other service providers (enterprises, SMEs and government) interact with end-users in more efficient ways than they can today.

Telco 2.0™ 'two-sided' telecoms business model



We call this the 'two-sided' telecoms business model, delivering value to and generating revenue from 3rd party service providers as well as end-users. The 'two-sided' business model has consequences for the design of existing services such as conventional voice, messaging and data/broadband products (e.g. see Voice & Messaging 2.0 "What to learn from - and how to compete with - Internet Communications Services") and also creates opportunities to create new revenues and B2B Platform Services.

Our analysis shows that in 10 years time this new business model could deliver up to 30% growth in annual revenues to operators and dramatically enhance the value of the industry to the wider 'digital economy' (Please see: Future Broadband Business Models "Beyond bundling: winning the new $250Bn delivery game" and The 2-Sided Telecoms Market Opportunity "Sizing the new $125Bn platform services opportunity")

To realise this ambition we need to re-think not only our organisational and technology structures, but also how we collaborate across a wider ecosystem.

How to get involved?

- To start to explore the opportunities in more depth see our reports or attend one of our Executive Brainstorm events
- To access our searchable knowledge base of information, case studies and learning, please see our Executive Briefing Subscription Service here
- To engage and act with the industry we invite Telcos to join the Telco 2.0™ Operators Club and Vendors join the Telco 2.0™ Partners Programme
(email: contact@telco2.net)
- To explore the strategies appropriate to your organisation arising from these developments use our consulting services
- We also use our insights, contacts and experience to help clients evaluate and implement innovative strategies and applications, and to create new business opportunities - email contact@telco2.net
- To keep up to date with the latest news please see our widely read blog or sign up to our newsletter

For more detail, please see the full Telco 2.0™ Manifesto

Who to contact?

Enquiries to: contact@stlpartners.com