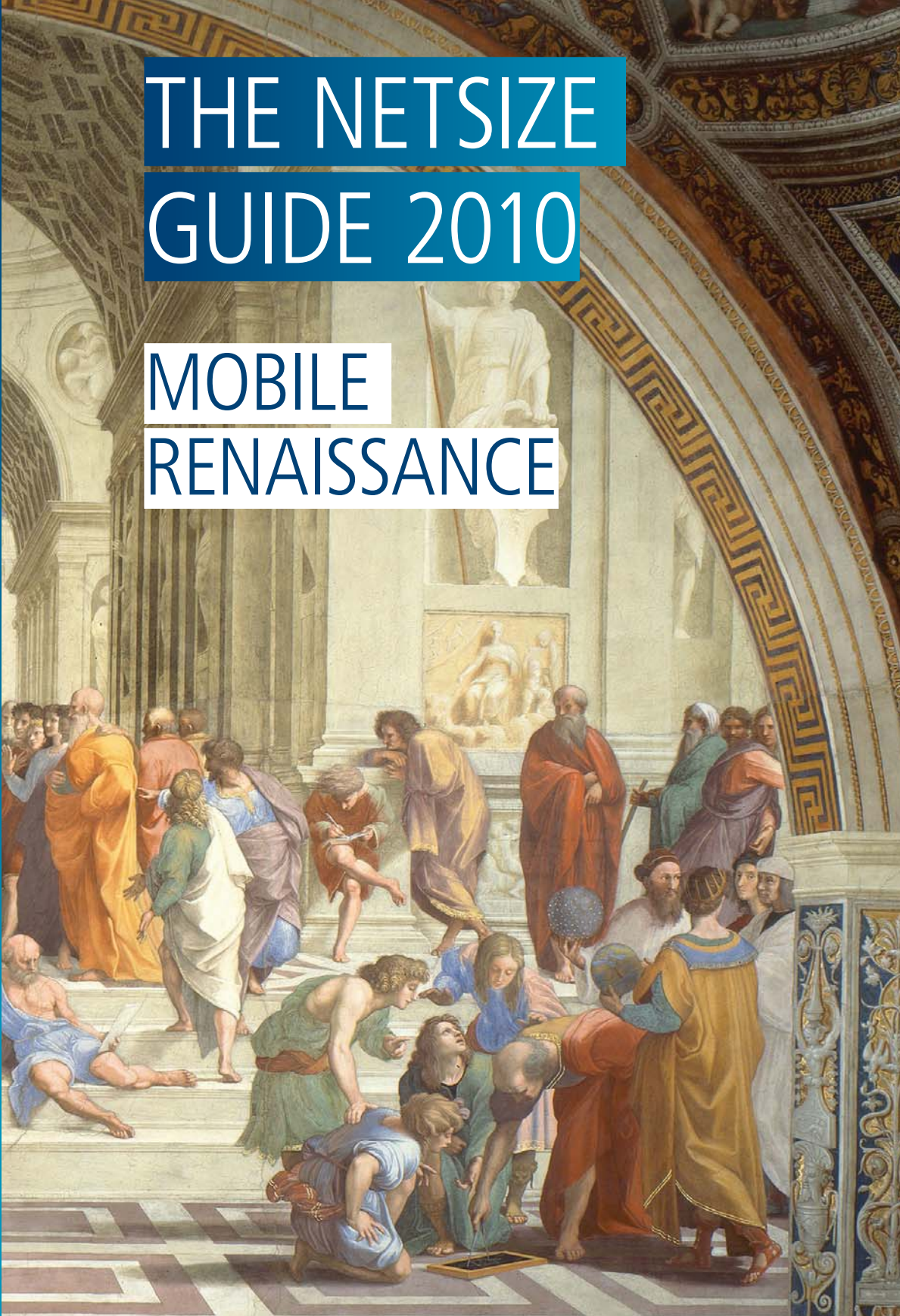


# THE NETSIZE GUIDE 2010

## MOBILE RENAISSANCE



Written by: Peggy Anne Salz on behalf of Netsize

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# SHARE THE WEALTH

In the Old Economy, if something was scarce it was valuable. Executives played the role of gatekeepers, shoring up the boundaries of the company both internally, by creating hierarchies, and externally, by remaining largely unconnected with the outside world. The company was free to function at the center of its universe.

In our century the tables have turned and it's openness and availability that drive value. The more people who have access to a product or an idea the better.

While we may like to think that we are all part of a value chain, the reality is quite different. We are all linked in a value web with stakeholders, shareholders, customers and partners, where collaboration is crucial. In this new ecosystem strength is in numbers and only members of the ecosystem that have the right connections can achieve great things.



Fortunately, the advance of mobile and the tremendous progress of the last year make this transformation possible. In the Netsize Guide we identify the developments that allow people to be perpetually connected, allowing a seamless flow of ideas and benefits to all corners of our society.

Naturally, we begin by recounting the key industry milestones, such as the emergence of application stores, which provide individuals access to software and services they need to manage their lives, their productivity and their ideas.

**Stanislas Chesnais**  
Founder & CEO  
of Netsize

But we didn't stop there. We also surveyed professionals and practitioners for their pick of mobile trends and their views on the future of mobile. Their ideas and insights are part of the final chapter, aptly titled Transformation. In the same chapter we examine the role of mobile in our lives and in our society.

From new services aimed at achieving socioeconomic development goals in emerging markets, to the advance of mobile into new vertical industry sectors and disciplines, to the emergence of Augmented Reality applications that blend the physical and digital worlds around us. It is clear that mobile is the global catalyst for significant change and improvement.

Indeed, mobile allows us to collaborate, communicate, and connect with diverse networks of people, breaking down the walls between cultures, professions and fields of knowledge. Mobile also allows us to share and leverage a wealth of good ideas, involving everyone everywhere in the process.

In my view, mobile is the medium that paves the way for a new Renaissance, unleashing our collective potential and empowering us to affect change for the good.

Read and enjoy!

# TRANSFORM- ATION

AUGMENTED  
REALITY  
FUTURE  
EDUCATION  
HEALTH





The biggest significance of mobile phones as media is that they have increased our closeness to virtual reality.”

Toshinao Sasaki, Japanese writer and net culture guru, 2009.

Mobile in 2010 is TRANSFORMATION: the barriers between the physical and virtual worlds blurs – and both become actionable. The mobile phone becomes the remote control of our lives and an extension of our “selves”.

As the previous chapters illustrate, 2009 saw a subtle yet seismic shift in the role of mobile in our everyday lives. The rise of the application stores, the advance of smartphones and the emergence of a new era of user experience prompted by the emergence of augmented reality services and browsers combined – even collided – to take mobile to a new level.

We no longer think of mobile as a device. It is the device that connects our communications, our experiences and allows us to manage both according to our real-time requirements, personal preferences and current location. It is the device that accepts advertising, conducts commerce and enables a variety of exciting business models we have yet to develop or even dream of. And, of course, mobile is a state of being and a way of life.

### What is the future of mobile?

The Netsize Mobile Trends Survey 2010 reached out to professionals and practitioners for their insights and ideas. Granted, the vast majority of respondents perceive mobile as a communications device first and foremost. However, a significant percentage recognizes that mobile is becoming much, much more.

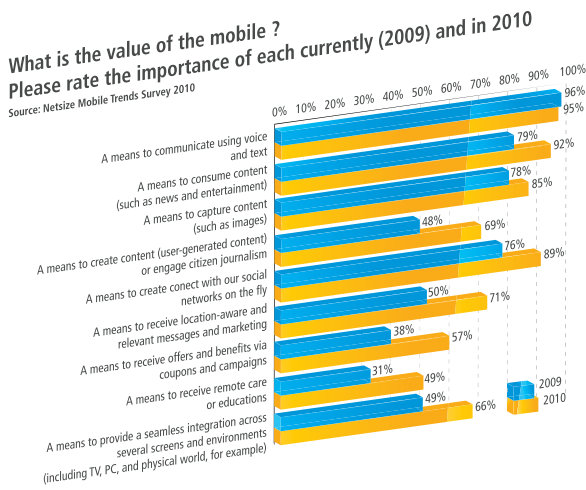
Mobile enables us to capture and consume content; it impacts how, when and where we connect with friends and family; and it links our physical and digital worlds. The result is the emergence of more immersive experiences and more holistic business models, future scenarios we will explore more in this chapter. [See Figure](#)

STANISLAS CHESNAIS



Founder and CEO,  
Netsize

Netsize also asked respondents to offer their vision of mobile and its role in our



lives three years from now. Many answers focused on the services we will likely see cross the chasm (finally!) now that industry conditions and consumer acceptance are more aligned.

Mobile payments will take off, location services will deliver, mobile coupons and bar code schemes will become commonplace, mobile search will unleash the real potential of the Mobile Internet and other industry verticals, such as retail, healthcare and education, will embrace mobile to enhance services and improve our lives.

These are just a few of the trends that top the radar of our survey respondents.

However, respondents to the survey also shared visions that speak volumes about the exciting times ahead.

- “The consumer will be the boss, with communication services and information delivered on-demand and according to real-time requirements.”
- “Mobile will become a means to provide seamless integration across several screens and environments, including TV, PC and the physical world, for example.”
- “Mobile will be our personal link to EVERYTHING!”
- “Mobile is now an identity. My prediction is: mobile will ... become more critical to everyday life.”

And my personal favorite:

- “My mobile device becomes ME, customized to who I am, what I’m into and what I need to do.”

Is mobile a bit like a trusted butler that faithfully delivers what you want – the way you want it –without you really having to ask for it? Or is mobile an extension of our “selves,” allowing us to interface with the world(s) around us?

## (R)evolution

There are no easy answers, but the observations of Mark Curtis, CEO of Flirtomatic, a pioneer mobile flirting service and one of the most popular social mobile services worldwide, provide us with a fresh perspective. [See interview, page 36](#)

During the interview with our author Peggy Anne Salz, Mark developed a thought-provoking analogy between the role of mobile in our everyday lives and the relationship between “daemons” and characters in the fantasy trilogy known as the His Dark Materials series written by English novelist Philip Pullman.

In the first book, *The Golden Compass*, the characters live in a parallel world to ours where all human souls take the form of animal companions called daemons. These small, often-changing animals are lifelong companions. Every person in this fantasy world has a daemon. What’s more, daemons can change form to reflect moods or inner feelings of their owners. The bold and adventurous Lord Asriel, for example, has a snow leopard for a daemon. Severing a character from their daemon is like separating someone from their soul. The bond between the characters and their daemons is a close relationship that can never be broken.

In many ways, Curtis says, this was the role of mobile in phase one in the evolution of our personal mobility. In the last decade, mobile devices, like our daemons, became extensions of our “selves.” We personalized them with ringtones, images and wallpapers. And a raft of reports detailed the feelings of isolation and even depression we felt when we were separated from our mobile devices, unable to receive text messages or connect with our social networks. Based on a series of surveys, interviews and focus groups, market research firm Solutions Research Group concluded that 27 percent of respondents suffered increased levels of anxiety when separated from their mobile phones or the Internet. A further 41 percent suffered occasional anxiety due to communications blackout.

Clearly, our lives and our devices have become inextricably intertwined.

## Reality trip

What is the future of mobile in our lives?

Curtis draws from *The Subtle Knife*, the second book of the series, to offer us an answer. In this novel the “subtle” knife has two sides: one can cut through any known matter and the other can cut into different worlds. Put another way, this knife can cut through the fabric of space-time and open windows between worlds.

In phase two of the evolution of our personal mobility, a phase that begins with 2010, mobile is becoming our multi-functional subtle knife.

We use it to create and enter parallel places, and link between the physical and virtual worlds. With our mobile phones we can step away from the stress of our daily commute to enter personalized social networks, spaces where representations of us (images and avatars) connect with friends and family. Even better if this exchange is geo-tagged, providing us with the necessary bread crumb trail to follow if we want to meet our peers in real-life, visit the places we discuss or just check out the restaurant our communities currently say is all the rage.

And it doesn't stop there. The advance of smartphones – equipped with GPS, compass, video and accelerometers that allow devices to detect and respond to motion – pave the way for an avalanche of Augmented Reality (AR) applications. These applications harness the features and functionalities of advancements in mobile phone technology to merge the physical world around us with information compiled about people and places on the Internet.

It's a brave new world that we can see with new eyes thanks to the range of AR applications in development and on the market. The following interviews with GeoVector and Layar, two leading AR companies, describe the business models and industry drivers that could make augmented reality an integral part of our everyday lives.

As John Ellenby, CEO of GeoVector, a company providing “advanced pointing search” and augmented reality capabilities for location applications, put it: “[Mobile]

usage is no longer just about checking the weather or retrieving information about your bid on eBay. Now it's about discovery and ways to use my phone to find out what's interesting or what has changed." [See interview, page 113.](#)

### New territory

But the future of mobile is not only about expansion into new dimensions that link our worlds together. It is also about the ways emerging regions will harness personal mobility to bridge the "digital divide" and overcome the disparity of access to information and communications technologies that exists between developed and developing nations.

Indeed, the benefits communication can bring to development are overwhelming and encouraging. A recent study by the London School of Business revealed that an increase of 10 mobile phones per 100 people translates into a 0.6 percent percentage point rise in GDP. However, this figure represents only the direct impact. The GSM Association (GSMA), a professional organization that represents the interests of the worldwide mobile communications industry, found that the indirect impact is at least three times as great.

Mobile is also at the heart of work underway at the Massachusetts Institute of Technology (MIT), where researchers within the Media Lab's Next Billion Network are exploring ways mobile can be used to improve life and eradicate poverty. New applications revolve around ways to facilitate mobile banking, improve healthcare and increase literacy rates.

In the following section, Susan Dray, President, Dray & Associates, Inc., walks us through some of the ways emerging markets are using mobile to achieve socioeconomic development goals. In her view, mobile innovation can close the gap between the information "haves" and "have nots" that exists everywhere, not only in Africa, Asia and Latin America.

As she puts it: "The success of mobile in the developing world is linked to the commitment of companies to understand local needs, and translate it into usable and affordable product. The impact of these innovations will be global, providing benefit to all people." [See interview, page 104.](#)

### Vertical shift

Finally, mobile also opens up a new world of new possibilities for a range of vertical industry segments. An obvious success story is mobile marketing; where mobile is reinventing how customers interact with brands and products at store level.

Location search services, targeted and relevant advertising messages and 2D bar code campaigns are just a few of innovations that are turning mobile marketing into mobile shopping.

As James Crawford, Executive Director of the Global Retail Executive Council (GREC) said in a recent interview with Mobile Marketing Magazine: “Mobile retail applications offer retailers of any size solutions that significantly boost operational efficiencies, loyalty and sales. By offering interactivity and immediacy, from communicating shelf talkers to multimedia end cap promotions, the business of in-store, point-of-sale advertising is about to undergo a transformation that will have to be seen to be believed.”

Mobile is also transforming healthcare. According to market research firm Informa, activity in the mobile healthcare sector grew considerably in 2009, driven by interest and investment in services such as tracking, tagging and remote patient monitoring. Notably, the European Union is investing more public funds into remote monitoring and the development of “intelligent environments” using wireless sensor networks.

Another driver comes from the combined efforts of the Rockefeller Foundation, the United Nations Foundation and The Vodafone Foundation, which joined forces at the GSMA’s Mobile World Congress in 2009 to form the Mobile Health (mHealth) Alliance, a partnership that will work to maximize the impact of mobile health, especially in the developing world.

Terry Kramer, Vodafone Foundation Trustee, said in a press statement: “When you consider that there are 2.2 billion mobile phones in the developing world, 305 million computers but only 11 million hospital beds you can instantly see how mobiles can create effective solutions to address healthcare challenges. Mobile technology is providing new hope in the provision and promotion of quality healthcare in a number

of ways, such as accelerating the collection and storage of patient data, training rural professionals and personalizing the way patients receive medical treatment.”

The following section illustrates how the combination of mobile and healthcare can deliver tremendous benefits, such as cost savings for healthcare providers as well as convenience and improved quality of life for patients. We speak with James E. (Jim) Nalley, Co-Founder and CEO of EmFinders, a U.S.-based technology firm that has harnessed mobile to provide new support to caregivers and new freedom to a growing population of patients. [See interview, page 110.](#)

### Enter the “Intersection”

I began this chapter with a discussion of the future of mobile, drawing from a selection of scenarios and use cases I believe provide valuable insight into the many ways mobile will impact our lives and our society.

Indeed, our worlds are combining and colliding, dynamics that will have a profound impact on our collective future.

### What can we expect?

I would like to think that we are on the cusp of a modern-day Renaissance.

Frans Johansson, author of the business book, *The Medici Effect: Breakthrough Insights at the Intersection of Ideas, Concepts & Culture*, argues that breakthrough ideas are found at the intersection of different cultures, occupations, ways of thinking and points of view. Put another way, the Intersection is where we will find an explosion of extraordinary creativity and thought.

In fact, the book takes its name from the intersection that gave us the Renaissance and the remarkable burst of creativity that accompanied it. In the 15th century, the Medici family, a banking family in Florence, funded creators from a wide variety of disciplines. As a result, sculptors, scientists, poets, philosophers, financiers and architects converged upon the city of Florence. Together they forged a new world based

on “intersectional ideas,” ideas that emerge at the intersection of cultures, expertise and mindsets.

The good news is that intersections tend to yield an exponential increase in ideas and concepts. The better news: this explosion of ideas is percolating at a place within everyone’s reach. In Johansson’s view, “the movement of people, the convergence of scientific disciplines and the leap in computational power are increasing the number and types of intersections we can access.”

I would add that for this modern-day Renaissance mobile is the critical factor.

Mobile allows us to collaborate, communicate, and connect with diverse networks of people, breaking down the walls between cultures, professions and fields of knowledge.

Moving forward, mobile is much more than a medium that we can use to link worlds and explore new possibilities. It is the door that opens a multitude of Intersections, where we will find new opportunities, surmount new challenges and gain new insights.

## MIND THE GAP

The mobile revolution has been hailed as the enabling force for emerging markets and developing countries to become more active participants in the global economy. Given the right tools and environment, people can harness mobile technology to leapfrog more developed countries, creating localized content and services that address local problems and issues, and ultimately close the digital divide. Susan Dray has worked as both an internal and external consultant, combining her expertise in interface evaluation, usability evaluation and ethnographic research to help develop solutions that increase benefits to people in emerging markets and the service providers that operate there. She talks about the positive impact of mobile and the ways in which local communities are using mobile tools to achieve socioeconomic development goals.

What is user-centered design (UCD) and what are the benefits, particularly in emerging countries and markets?

Much of the motivation guiding design and development of mobile technology today is ‘techno-centric.’ User-centered design (UCD) begins from a very different premise. If companies are to design products and services that will truly meet users’ needs, they have to start by gaining deep understanding of who their users are, and, most importantly, how the new product or service will fit into

the cultural, social, technical, and physical contexts of the intended users’ lives. Localization – or fitting a product to the users and context of another country – is not simply a matter of translation, adapting the interface to fit local information display conventions, or visual design preferences that are different from those we are used to. We also need to understand how people work and live in other places, so that the localized product will fit into their lives. When we learn about this, we may decide that the very product concept has to change for localization to even be possible. It is very common that early user research in a variety of international markets results in new product concepts. This is equally true for mobiles as it is for PC-based applications.

SUSAN DRAY



President,  
Dray & Associates, Inc.

How has the market changed over the years?

In 2009 we saw a proliferation of people

developing mobile phone content and services that fit their context because they finally have the tools to do it. Some of this driven by the advance of voice-activated services which are becoming ubiquitous and extend mobility to the functionally-illiterate in these regions.

But there is also a new wave of interest and excitement in SMS as more people design more applications that make use of text. Indeed, there is a groundswell of grassroots efforts around the globe to meet local needs with text services that are relevant to the lives of people and improve life in the community, particularly in areas where village residents share a mobile phone.

On one hand, it's about education, healthcare and using mobile to help bring socio-economic stability and sustainability. On the other hand, it's about progress and services such as mobile banking, where Africa leads the world because its people are under-banked and under-served. At both ends of the spectrum, it's fascinating how incredibly creative scarcity can make people.

**From healthcare to banking, the mobile phone is at the center of this innovation. Can you provide some concrete examples?**

Take Ushahidi, which means “testimony” in Swahili, a website that was initially developed to map reports of violence in Kenya after the post-election fallout at the beginning of 2008. Ushahidi's roots are in the collaboration of Kenyan citizen journalists using their mobile phones to capture and report incidents during a time of crisis. This initial deployment was the catalyst for realizing there was a need for a platform based on it, which could be use by others around the world. It has since been used in the DR

Congo and South Africa. In fact, I was in South Africa during the xenophobic riots where Ushahidi was used to map the incidents of violence. It's an exciting project with obvious benefits that continues to grow in scope and impact.

Another example is Soukstel, an SMS service based in the Middle East and East Africa, which uses text to connect users to everything from jobs and internships to humanitarian aid and youth leadership programs. Job seekers can register via SMS with Soukstel, and then, through a series of text messages, enter details about themselves into the system. Whenever the job seeker is looking for a job, they can text ‘match me’ to Soukstel to receive an instant list of jobs that matches the resume stored in the system. The service also helps connect humanitarian agencies with people who are looking for aid.

And let's not forget how mobile is improving healthcare awareness and treatment. In India IFFCO, a service provided by a fertilizer cooperative with over one million members, provides rural Indian farmers voice messages and regular updates about crop and veterinary information and empower them through technology. The voice messages are in local languages, so they are accessible even to illiterate farmers or those who don't speak English and who can't read text messages. In South Africa an impressive project is Cell-Life, which uses mobile phones in the hands of rural HIV/AIDS workers to monitor patient health and reactions to AVRs. The HIV Aids rate in South Africa is over 30 percent of the population, so services that allow healthcare workers to collect symptoms from patients and text those back to the doctor or pharmacist ensure that the right treatment and dosage is given. And in

Malawi, UNICEF has been using cell phones to monitor children for signs of malnutrition using the RapidSMS system that allows UNICEF can rapidly move into areas where malnutrition appears to be imminent.

*These are some amazing success stories. What will ensure that there are more to come?*

I am optimistic because I see signs that companies understand they can not just export their ideas to an emerging market or country. It's about understanding the people and their environment, and the more companies internalize this the more they are going to be able to mail it with an application that, like Cell-Life, is ethnographically-driven at its core.

*What are some key learnings or lessons you can offer?*

Mobile companies have to think locally and tailor services to the local environment. So, developing a basic toolkit and being able to tweak it is important. We also need to do more to educate people in different parts of the world so they can take these basic ideas and services and make them their own, using them to design new technology, new applications and spread brilliant ideas like m-banking. Mobile banking came out of nowhere and now it is everywhere [in the developing world] because it fits the local environment and understands the needs of local people.

The success of mobile in the developing world is linked to the commitment of companies to understand local needs, and translate it into usable and affordable product. The impact of these innovations will be global, providing benefit to all people. Some companies are retrenching due to the recession,

but I am hopeful that these companies will soon realize that – if they really want to have impact – they must have a grasp of the local situation. Nokia and Intel, for example, are companies that understand the importance of local perspective in the creation of mobile technology and services. They also understand that the central position of mobile – the only screen for users in these regions – influences the kind of chipsets and services we will likely need for all mobile phones, in these regions and – ultimately – around the world.

## BROWSE THE WORLD

Advancements in mobile phone technology have cleared the way for a flood of Augmented Reality (AR) applications that merge the physical world with information compiled about people and places on the Internet. One company riding that wave is Dutch-owned Layar. In 2009 it released its reality browser application Layar, this mobile browser shows people what is around them by displaying real-time digital information on top of reality they view through the device camera. On top of the camera image Layar adds content 'layers,' which are the equivalent of Web pages in normal browsers. The platform allows customers, such as businesses, the ability to offer a range of layers, allowing consumers to see houses for sale, popular bars and shops, jobs on offer in the area, and a list of local doctors and ATMs by scanning the landscape. Maarten Lens-FitzGerald discusses the ways AR enhances reality and paves the way for real business models.

Augmented Reality has been around for almost 20 years, but mobile AR exploded last year, when penetration of smartphones equipped with GPS systems, compasses and accelerometers increased. What level of interest are you seeing?

In the week that we launched the iPhone app we had over 100,000 downloads and we served over a million augmented views to the world. Currently, there are over 1,500 developers and over 300 layers have been published.

How do you make money on Layar?

It's free for the user and it's free for the content provider or developer. Where we make money is placement. To understand this we have to understand the user experience. Starting up the Layar application automatically activates the camera. The

embedded GPS automatically knows the location of the phone and the compass determines in which direction the phone is facing. Each partner provides a set of location coordinates with relevant information which forms a digital layer.

There will be lots of layers, just as there are Web pages. The problem will be discovery. We address this by allowing companies to participate in our Pay for Prominence program. When users start Layar, it starts up in

MAARTEN LENS-FITZGERALD



Co-founder & VP of  
Distribution and Marketing,  
Layar



the Favorites list, which is like Bookmarks on your Web browser. Those positions are for sale. The same goes for the Featured section, a section where companies can pay for placement to reach the more advanced users who come back.

**How do you make these layers relevant to me and my context?**

What we serve in the Favorite and Featured sections is all based on your region. If you're in the U.S. you won't see the Dutch layers, for example. So, based on where you are, you select a layer and we send the request through our server to give you the relevant content. If you open up the Trulia layer to find homes for sale, you will be shown houses around your location.

How do you see your pay for placement model evolving? Will you harness personalization or targeting?

That is how it will develop. What we do now is help content owners get on top of the stack of layers, much in the same way that Google has AdWords. We will have premium layers where companies can pay to add something to a layer relevant to their offer.

In the future, the browser will know who you are, and that you're ready to go out, for example. Based on this the top layers you see will be layers about places to go, a lot like restaurant review guides. Some of these listings will be paid for by the restaurant owners or businesses who want to appear in the layer,

the same way they advertise on Web pages, for example.

**You focus on advertising in this example. Is that the big growth opportunity?**

It's for the businesses that need to provide to their customers information right here, right now. I'm looking for a house for sale, so show me one. But it's not just about real estate; it's about goods and services nearby in the real world. Where is the bus station? Where can I get a taxi? Where can I get a bite to eat? Any business that has to get this information out to us can benefit from AR. And to enhance this we have added the ability for businesses to provide AR experiences complete with 3-D objects and interactivity.

**AR is a nascent industry. What is the value chain and how do you work with other players in your ecosystem, such as operators and brands?**

We're in for great ride and, as an industry, we'll see come change and consolidation. In the end there will only be one or two companies that have the browser and the platform, and will grow from there. I see that happening and within the next six months.

How the value chain is shaping up? Actually, it's not a chain; it's a web and it's all connected. On one hand, we have the users and we're working on a better user interface to satisfy them. An example of this is our 3-D release, for which we also need new 3-D content and the content developers.



On the other hand, we have the device manufacturers that we talk to in order to get pre-installation deals and also ensure their devices work well with our software, and vice versa. Then we also talk with the carriers about where we can get pre-installed and have a unique offering with Layar.

**What is your vision for what AR can enable and how that will impact our lives moving forward?**

An experience that is very core to AR is the ability to walk around and experience other worlds and walk around in a city the way it was a century ago, for example. That kind of storytelling will enable the creation of immersive experiences. It's easy to imagine the benefit to education. It will be like being able to not just read a book, but actually visualize it. This is why we added 3-D and interactivity.

AR will also be a boost to vendor relationship management, putting the individual in control of the information they will accept based on their needs. Put another way, AR will allow people to issue a 'Request For Proposal,' which businesses can answer.

Let's say you're looking for a table for four in a Mexican restaurant. You put that

information out and people are only then allowed to see your profile and to reply to you using AR. So, a restaurant owner might pop up in front of you, saying, 'hey, I've got a table and we have good food – so take a look at the reviews here on the Web and then come on over.' If you end up going to that restaurant, then we might get a percentage of that deal. That's a model we're looking at. We're also looking at ways to benefit organizations such as the Heart Foundation in Holland. In time for Valentine's Day we will make it possible for people to buy and display a 3-D heart in front of the house where their loved one lives, for example. The money will go to charity and people who walk around the city will see all these hearts placed by people who are expressing their love.

## FINDING NOT TRACKING

Mobile is at the core of an increasing number of healthcare services and solutions, allowing hospitals and doctors to monitor patients at a distance. EmFinders has taken a different approach. The U.S.-based technology firm has harnessed mobile to provide new support to caregivers and new freedom to a growing population of individuals with Alzheimer's disease, autism, and a range of cognitive and developmental disabilities. The aim is to facilitate the rapid location and recovery of wandering or missing adults and children. EmFinders achieves this through EmSeeQ, which combines a small, watch-like, wireless device without buttons or a screen, and a location service that uses triangulation through the cellular network – and with 9-1-1 emergency response systems - to accurately determine a person's location. James E. (Jim) Nalley talks about the central role of mobile in tomorrow's medical and emergency services.

**What does your service deliver and what is the response so far?**

We are seeing a tremendous amount of interest from law enforcement, and the main attraction is the service saves lives and a great deal of money, time and effort in the process. As our population ages, Alzheimer's disease is going to strike a large percentage of that population. There are roughly 5.3 million diagnosed cases in the United States right now. Add children who have autism – that's one in 110 -- and individuals with Down

syndrome, all people that have cognitive and developmental disabilities, and we're talking about an impaired community of around 10 million individuals.

Many of these folks really can't use a mobile phone, but we need to give them something like a mobile device that gives them some freedom. It's also important that these devices give some peace of mind to the caregivers and their families to ensure that – if the impaired person wanders off – then we can recover them quickly. Our goal since we started has been to take the search out of search and rescue missions. The company is getting some great traction and we're in discussions with some major hospitals and long-term care facilities that are looking to buy multiple units.

JAMES E. (JIM) NALLEY



Co-Founder and CEO,  
EmFinders

**What is your main selling point?**

It's around delivering peace-of-mind, safety,



and convenience to our end-customers, the impaired individuals and their caregivers, and improving cost savings for everyone else. There are many ways mobile technology can be used to help save real dollars. A typical search and rescue operation can cost a local municipality anywhere from \$15,000 to \$25,000. You have to remember you may have helicopters in the air and multiple squad cars and K9 units looking for these individuals on the ground.

But if the individual has an EmFinders unit on their body, that recovery process takes one police officer driving to that location to pick them up and take them home. There's no additional cost to the police department, so we're helping save hundreds of millions of dollars in that process alone.

#### What is the benefit to your end-customers?

It's about personal mobility and giving these impaired people and their families the freedom they haven't had before. We're hearing back from our customers that we're making it possible for them to go on vacation for the first time in years because now they don't have to be worried that their mom or dad or child is going to wander off and not be able to be found again.

We also integrate directly into the 9-1-1 system. We're the only unit out there that

does that and this allows the police departments and dispatchers to control the recovery process, taking the responsibility to track and act as a middle person off of the caregiver. Location information is delivered directly to 9-1-1 operators and doesn't float over the Internet, which we know is not the most secure place for data.

The experience for the user and the caregiver is positive because the device is a water-resistant, durable lightweight product that the impaired individual can wear all the time. And our charge cycle is seven days, so our device lasts longer than others out there that require people to recharge every day or every other day. We also send automatic alerts when the battery is low.

You are sending alerts, but you could use text to encourage a two-way conversation with caregivers or even pursue a more mobile CRM strategy. Are you exploring these options?

CRM is a growth opportunity. But first we're trying to gauge what the conversation should be with caregivers. Right now, we focus on low battery alerts and we send periodic emails to ask caregivers to update their loved ones' information. As the child who has autism child ages, for example, their description is going to change. We ask the caregiver to provide information, so we can

provide support.

We can also gather and share information about the individual and communicate that to the caregiver with permission and to law enforcement and emergency workers in the event of a search and rescue. This information can be medical information like whether the potential wanderer has diabetes or is on medication. This information can also be set up at the level the caregiver wants and updated as needed. I see that we will evolve as we learn more about what information and level of interaction the caregiver wants.

But we are also looking at other opportunities. If we could move this technology into other arenas to prevent kidnapping, for example, then you start to understand where all this can go. We don't track people, we find people. That's the big difference. I don't need to know where they are all the time. When something or someone is missing, then we want to recover them. We are not tracking the individual all the time, just when we are needed. It's not Big Brother watching, it's not an invasion of privacy.

**Are you planning to expand into other areas and countries?**

It's possible and we are looking at becoming more international. Of course, there are some network enhancements that probably need to be made to provide better accuracy at the network level to transport that location information. That's one reason why we chose GSM versus CDMA technologies. GSM is an international system, so there is some real opportunity to expand our offer. After all, there are some 150 million people with Alzheimer's in the world today. It's a big number and it's only going to get bigger.

**Tracking technology is nothing new. Why the new interest in using mobile to deliver healthcare services?**

We're just starting as an industry to understand what mHealth is and the services we should offer. A lot of companies have gone out and tried to build the best mouse trap, building better technology without ever asking the caregivers if it's what they really want or need. A lot of this innovation has missed the mark.

Many in the mobile industry had a 'build it, they'll buy it' mentality, which isn't the case anymore because this isn't a mobile phone. These devices are single-purpose-driven devices that provide a service to a certain group, such as the population of individuals with Alzheimer's disease. This is the trend we are seeing in the marketplace and I think this trend is going to continue and that we'll see more mobile devices being made to serve a specific purpose.

## POINTING TO PROFITS

GeoVector, an industry pioneer headquartered in San Francisco, has been inventing, developing and fielding innovative pointing and Augmented Reality (AR) capabilities for mobile devices since 1991. Since then the company has experienced much success in Japan, where it launched the first commercial AR offering on the KDDI network with the help of local partners. In 2009 GeoVector released its first application for the iPhone and Android platforms aimed at the U.S. and European markets. The World Surfer application does more than hyperlink the real world; it also provides an attractive vehicle for marketers to connect with consumers on the go. John Ellenby talks about the company roadmap and the future outlook for more immersive mobile marketing.

GeoVector has a long track record in directional searching and AR.

Please walk me through some of the milestones and key learnings you can share.

We provided a commercial service in Japan beginning in 2006. As you know, this is a technology-savvy market. But it's also a market where users are concerned about user-friendliness and personal privacy. They want to have a service that's 24/7. More importantly, it should be easy to use and useful. The Japanese will also not put up with spam. So, if the phone grunts out or delivers some message like 'lovely lattes here' when you pass a coffee shop, that's a service that they will kill immediately – and with good reason.

What we have learnt from Japan is that there is a requirement for carrier-grade services, offering up-time, privacy and security. Our operations in the U.S. and Europe, where we have launched World Surfer, leverage our

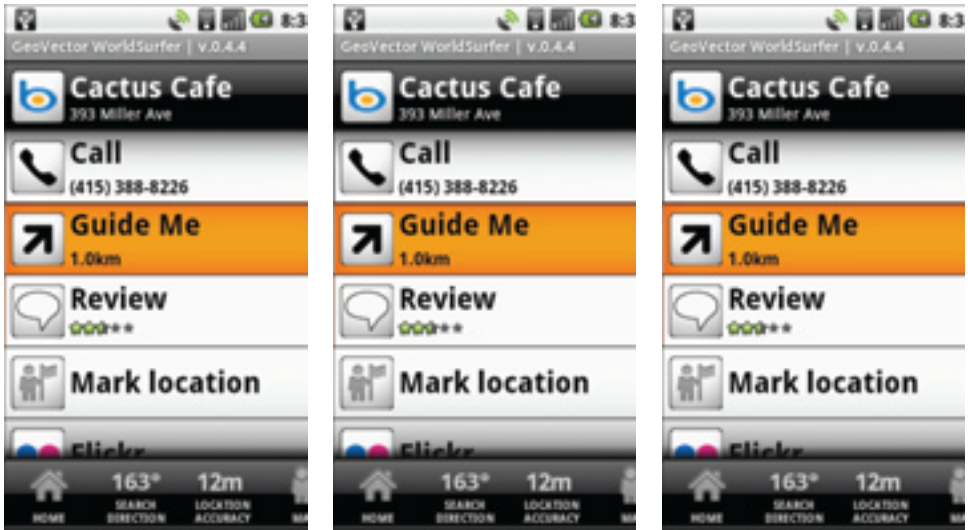
experience in Japan.

The World Surfer is a product that brings local search applications together with pointing and Augmented Reality to a variety of handsets, not just top-of-the-line smartphones. We're interested in reaching the middle-grade phones, if you like, and so are businesses and brands. So, we're trying to position ourselves as a highly-reliable service provider with an imaginative, easy-to-use and secure product that can be provisioned and be made available on a large variety and volume of phones.

JOHN ELLENBY



CEO, GeoVector



How does combining pointing and Augmented Reality add value to the service? And what is the end-user experience?

Accurate pointing underpins the service. It knows which way the user is pointing the phone and delivers the user information along the vector that the phone is pointing, hence the company name GeoVector. That information can be visualized in a variety of ways. We can visualize it as lists. We can visualize it on a compass. And we can show the things that are in that direction as well as the things that meet your criteria.

So, we can display this as a list. But it can also be shown in graphics, which is what World Surfer does. In addition, we have the ability to visualize information in other ways that are covered by our patents that harness various kinds of Augmented Reality. In fact, Release 2 of our World Surfer will have augmented reality as a part of that visualization, allowing users to retrieve information in camera view. This will also make entertainment content very engaging.

Can you provide an example of how entertainment fits in?

Let's take the example of a billboard

advertisement for a movie. You point the phone at the billboard to receive some related content on your phone, as well as the times the movie is playing at a nearby theater. It's also easy to imagine that one of the leading characters in the movie joins you on the device screen and guides you – and you are in the form of an avatar on the screen – to the theater. As you know, one of our co-founders is from Pixar, so our company has a strong connection to animated entertainment and the scenario I described is not too far away.

What are the key business drivers?

I think the timing is right because the devices are available. Another driver is the strong interest we are beginning to see from advertisers. They are beginning to produce more imaginative content and campaigns for mobile. I'm excited about this development because these advertisers are going to bring considerable creativity and imagination to this space and produce some very engaging content.

A third factor is the willingness of people to use data services. But usage is no longer just about checking the weather or retrieving information about your bid on eBay.

Now it's about discovery and ways to use my phone to find out what's interesting or what has changed.

We've had positive feedback from users of World Surfer and people say it's actually rekindled their interest in the world around them. They use it to find out more about the area they're in, and this also represents an extraordinary opportunity to the merchandiser, the advertiser or the enterprise that wishes to serve them at that place and meet their needs. Moving forward, more of these services will be triggered through pointing and they will be personalized services available to you if you're willing to identify yourself to them. That's where the offer and the infrastructure that we've created in Japan comes in to provide people privacy and security, making them feel comfortable about identifying themselves to companies that want to reach out to them.

#### What kinds of services do you support now and what services do you envision?

In the U.S. Papa John's [pizza] and Starbucks are featured on our World Surfer application on the iPhone and Android platforms. Users can click the Papa John's or Starbucks channel and interact with the brands on several levels, including obtaining a guide to the nearest location and coupons. In the case of Starbucks this could facilitate the ordering and paying process, which beats lining up for service.

So, instead of standing in line and having to say, 'I want a double latte with a cinnamon twist and a cinnamon bun,' you pre-order it by pointing at the location of the coffee house. As you come closer it's ready for you. This is what is happening now and what we'll see more of in the future. Consumers will

be able to do more than ever – order things they way they like them, access information they need and even buy books from Amazon related to the landmark where they're standing –all this and all at the point of action.

#### What do you expect in 2010 and beyond?

I expect the industry to experience massive growth. There will be more money invested to promote and provision these pointing and Augmented Reality services, and we'll see major carriers and portals offering them as well. This will happen because of the obvious value they offer to advertisers, enterprises and the venture capital companies the industry needs to get this started.

For GeoVector it will be an exciting year. We already partner with NEC and Mapion in Japan and we're interested in partnering with other companies on a revenue share basis. Advertising will be another focus. I am excited by the number of advertising agencies that are speaking with us because, to me, that's a sign that we have a real winner here.

## READ MY MIND

Many companies offer tools and technology that will allow people to capture and share experiences with their mobile phones. However, U.S.-based Evernote has something much more ambitious in mind. It has developed a mix of technology and services to help users create and maintain an external brain. Put simply, Evernote's technology allows consumers to capture information in any environment using whatever device or platform they find most convenient. More importantly, Evernote makes this information accessible and searchable at any time, from anywhere. Since its launch in June, 2008, Evernote has released native versions of its software for Windows, Mac, Web, iPhone, Android, BlackBerry, Palm Pre, and Windows Mobile. Phil Libin talks about the role of mobile and what can happen when people have instant access to all their memories.

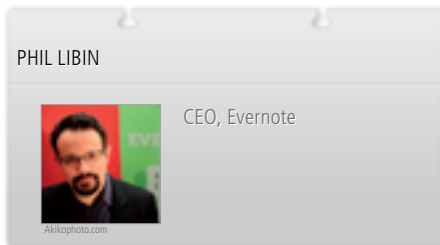
Evernote's stated ambition is to help us create and maintain an external brain. What does this mean and how do you facilitate this?

The 'Ever' in Evernote is all about everywhere and forever. We offer a lifestyle application for our customers to use forever, without worrying about the device, synchronization, copying, migrating and things like that. They also don't have to worry about remembering stuff because Evernote gives them a perfect memory.

We figure that everything that happens to

you in your life can be broken down into two parts: the stuff that happens to you while you're sitting in front of a computer screen and the stuff that happens when you're elsewhere. When you're on your PC we make it simple for you to highlight whatever it is you want to remember – a section of a web page, a document, an email or anything else – and then hit one button to capture it. You can think of it as a universal clipping service. It captures the text, the images, the links, and sends them off to your Evernote account.

The rest of the time your mobile device becomes your universal brain extension. You can just take out your cameraphone and snap a picture of what you want to remember and it automatically goes to Evernote. There your pictures, audio, text, web clips – whether they're from a phone or a desktop – are all synchronized onto our servers, where we index them by time, date, location, and tag





them. You can search and find what you need and we make all this information available to you in Evernote, which you can access through any computer or phone.

*Capturing content is one part of what we do. But we also share with friends and family. Is there a social aspect to your service?*

We do let you share notebooks with people, but that's a relatively minor feature of Evernote. The choice not to focus on sharing was intentional because we wanted to be unlike every other Web 2.0 app that launched two years ago; we wanted to not be social. We decided not to target the extroverted market of people that just care about what their friends are doing; we focused on the two-thirds of the population whose primary concern is work, school, hobbies and what's in their head. As a result, our users tend to be older professionals. The more information-centric, introverted market was, by definition, large and under-served. That's where we saw the opportunity and the money.

*How many users do you currently have and how do you generate revenues?*

We have a growth rate that's faster than social

apps such as Twitter. We are set to hit 2 million users before our 18-month anniversary. Twitter and Skype, which unlike Evernote are social and viral, took much longer to get to 2 million users.

We have a really simple business model. Our business model is we're going to make a service that's going to be used forever by hundreds of millions of people. We let people use it for free, without putting any time limits or big restrictions on usage. That gives users enough time to realize that it's worth paying \$5 a month for a premium subscription. We're a straight premium play; we make money based on people converting to the premium version. The premium subscription gives you a few more features, such as general file attachments and a bigger allotment of new notes per month, but our goal is to make the free version good enough for 99 percent of our users.

Our conversion rate to premium goes up the longer people use the service. In the first month it's only a half of one percent. But after a year it's 2 percent, so 2 percent of all the people who sign up this month will be paying us 12 months from now. We only have about a year and a half of data at this

point, but I can say that conversion is more than 6 percent, which is startling.

Having all my memories also allows you to recommend content and even advertising based on what I captured and what I think is important. Do you have ambitions to mine this data?

We don't want to show you ads and recommendations because we think it would just detract from our core mission. We also don't do data mining because it would require us to set up very comprehensive permissions and privacy policies.

However, I do see the great potential for using people's memories in Evernote as a platform upon which to build additional services. In fact, since we launched our API about a year ago, we have over 600 third-party developers currently creating Evernote apps. Some of these are about contextual recommendations and I know of one company that's writing a plug in that allows users to identify the wine a user is drinking and make suggestions of other wines based on that. Of course, the user has to give permission to the company first before it can deliver these recommendations.

What is the competitive landscape?

Our goal isn't to be better than anyone else; our goal is to be this great electronic memory. Going back to the wine recommendation application, we are seeing a lot of small companies that do some very smart things on the Evernote platform. We promote them and we do revenue-sharing on premium customers they bring to us. We see that as more than a way to get more of our functionality to our users: it's an interesting way to turn potential competitors into partners.

What are the exciting trends in 2010 and beyond?

I can tell you the trends I didn't get right. When I started at Evernote just over two years ago we had three viable platforms for smartphones: Blackberry, Windows Mobile and Symbian S60. I figured it would go from three to two, but it's actually grown to ten due to the advance of platforms including iPhone, Android and Palm Pre. The multiplication of mobile platforms is probably the biggest expense for us at this point.

On the positive side, another trend I got wrong - but I'm happy I got it wrong - is the new role of mobile operator in all of this. The carrier used to be the major roadblock that you had to overcome. But developments like iPhone and Android have weakened the carriers' grip, removing that obstacle as we move into 2010. In response, the carriers have become much more eager to innovate and much easier to deal with for a small company.



# SPECIAL THANKS

Netsize would like to thank all the people who have collectively worked together in producing this guide.

## Interviewees

Paul Berney (Mobile Marketing Association), Suhail Bhat (Mobile Entertainment Forum), Jonathan Bulkeley (Scanbuy), Olivier Cécoura (SFR), Stanislas Chesnais (Netsize), Andreas Constantinou (VisionMobile), Mark Curtis (Flirtomatic), Dimitri Dautel (Havas Digital Mobile), Christopher David (Sony Ericsson), Susan Dray (Dray & Associates, Inc.), Scott Dunlap (NearbyNow), John Ellenby (GeoVector), Ian Henderson (Sony Music Entertainment), Jamie Gavin, Alistair Hill (comScore), Diana LaGattuta (Nokia NAVTEQ), Valérie Itey (Universal McCann), Maarten Lens-Fitzgerald (Layar), Phil Libin (Evernote), Chiel Liezenberg (Innopay), Jon Mew (Internet Advertising Bureau), Patrick Mork (GetJar), Jim Nalley (EmFinders), Rimma Perelmuter (Mobile Entertainment Forum), Christophe Romei (Memodia), Francesco Rovetta (PayPal Mobile), Elisabeth Trochet (UGC S.A.), Sienna Veit (Marks & Spencers Direct), Mark Wächter (MMA Germany & BVDW Section Mobile)

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# ABOUT GEMALTO

Netsize is a subsidiary of Gemalto.

Gemalto (Euronext NL 0000400653 GTO) is the world leader in digital security with 2008 annual revenues of €1.68 billion, and 10,000 employees operating out of 75 offices, research and service centers in 40 countries.

Gemalto is at the heart of our evolving digital society. The freedom to communicate, travel, shop, bank, entertain, and work – anytime, anywhere – has become an integral part of what people want and expect, in ways that are convenient, enjoyable and secure.

Gemalto delivers on the growing demands of billions of people worldwide for mobile connectivity, identity and data protection, credit card safety, health and transportation services, e-government

and national security. We do this by supplying to governments, wireless operators, banks and enterprises a wide range of secure personal devices, such as subscriber identification modules (SIM), Universal Integrated Circuit Card (UICC) in mobile phones, smart banking cards, smart card access badges, electronic passports, and USB tokens for online identity protection. To complete the solution we also provide software, systems and services to help our customers achieve their goals.

As the use of Gemalto's software and secure devices increases with the number of people interacting in the digital and wireless world, the company is poised to thrive over the coming years.



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[www.gemalto.com](http://www.gemalto.com)

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security to be free

## About the Netsize Guide

The Netsize Guide is a comprehensive annual industry report, documenting the state of the global mobile content and services market. Drawing on in-depth research and exclusive interviews with industry executives and opinion-makers, it provides professionals an essential snapshot of the developments that have taken place and the trends that matter.

This year we identify the case studies, business models and future scenarios that illustrate the profound impact mobile is having on all aspects of our daily lives and our global society. From new services aimed at achieving socioeconomic development goals in emerging markets to the advance of smartphone features that support Augmented Reality applications that merge the physical and digital worlds around us to the advance of mobile into new vertical industry sectors and disciplines, it's clear that mobile is the catalyst for significant change and improvement. More importantly, mobile moves us a giant step closer to a new Renaissance.

The Netsize Guide features:

- 28 interviews with industry senior executives at leading companies including EmFinders, Evernote, Flirtomatic, GeoVector, GetJar, Havas Digital Mobile, Layar, Marks & Spencers, NearbyNow, Netsize, Nokia NAVTEQ, PayPal Mobile, Scanbuy, SFR, Sony Ericsson, Sony Music Entertainment, UGC, Universal McCann; with analysts and consultants from comScore, Informa Telecoms & Media, Dray & Associates, Innopay, Memodia, and VisionMobile; and with industry associations including Bundesverband Digitale Wirtschaft, Internet Advertising Bureau, Mobile Entertainment Forum, and Mobile Marketing Association.
- Exclusive results from a worldwide survey of more than 1,000 mobile communications industry professionals from 67 countries.
- Mobile telecommunications data covering 41 countries, and including the market value of mobile content and third-party offers available for services such as mobile messaging, mobile entertainment and mobile payment.

## About Netsize

Netsize, a Gemalto company, is a leading mobile communications and commerce enabler. Netsize solutions include Mobile Messaging, with SMS and MMS delivery in 200 countries; Mobile Payment through operator-based billing (Premium SMS, MMS and WAP) in 28 countries; and Mobile Content Management platforms with publishing & editing tools to manage messaging services and mobile Internet portals. Netsize manages more than 60 million mobile transactions per month for 800 customers worldwide, including Fortune 500 companies. With 180 employees in 10 offices worldwide, Netsize provides both robust technical infrastructure and marketing expertise to support this successful deployment on a global scale.

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