


Erik Kruse and Michael Björn on
the consumer impact



How being connected changes our lives

The adoption of fixed broadband is fundamentally changing what it means to be connected. Consumers use the internet at speeds that, just a few years ago, were available at only the best-connected sites and were shared by hundreds or even thousands of users.

 **THE "ALWAYS-ON" NATURE** of broadband is likely to have even more fundamental and far-reaching consequences. Subscribers are getting used to having access to everyone, and information about everything, all the time.

The fixed cost per month for access gives people cost control. The sheer accessibility and improved performance have eliminated the frustrating experiences many users initially had with the internet: the World-Wide Wait is history – broadband is here to stay.

» My feelings went from hate to deep love. I was really fed up with dial-up because it took hours to download anything and I could only look at a few pages at a time. «
MONICA, 19, ITALY

While a mobile phone is perceived as a very personal item, broadband is associated with the household, and with a socket in the wall. In multiple-person households, where one stationary computer provides broadband access for several people, the perception that broadband is for the household rather than the individual is even more common.

Users comparing their behavior before and after broadband talk of a definite increase in computer use. The longer you're online, the more your behavior changes, the more you adapt, the more

likely you are to be in an always-on environment – and that is more likely to accelerate the change in your behavior.

» Since we got broadband, the computer is always on. We play music, download films and go online to MSN all the time. «

JIMMY, 18, SWEDEN

» I stay up late playing net games. I leave it on the whole time – it's always connected, so it's left on standby. «

KENTARO, 24, JAPAN

Broadband users communicate more online and consume more media. For teenagers, communication is the most compelling aspect of the computer. Communicating with friends through instant messaging and social-networking sites – communities – is the only way to stay "in the loop." Communication remains the most important function, even if teenagers also indulge in other activities, such as consuming media content and downloading. For older users, on the other hand, internet use and communications are based more on e-mail.

There is also a significant difference between how narrowband



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and broadband users allot time on the computer. Narrowband use is batched; a narrowband user tends to say:

“OK, I have a couple of things I’ve got to do today. I’ve got to find out when the movie starts at the cinema, check the Yellow Pages to find the nearest dry-cleaner, and write an e-mail.”

So they batch those activities. They go online, do all their tasks at once, and then go offline. But with broadband, users are “always on” and use of the internet becomes integrated into their daily lives. They might still want to do the same things – find out when the movie starts, find the nearest dry-cleaner, and so on – but they do it when they want. They don’t batch their online tasks because they don’t have to.

While communication is the key function of the internet, younger broadband users, in particular, also consume significantly more media – downloading movies and music, and watching short videoclips. Big deal, some may think: so they watch poor-quality home videos on Youtube.com and download movies illegally – they will stop when they grow up. But this behavior is already irreversibly changing TV. Young broadband users take it for granted that they themselves decide when to watch something, rather than following program schedules.

Mobile broadband

While fixed broadband is becoming an everyday, always-on experience indoors, the parallel change outside the home is, of course, driven by mobile phones. And the key driver for this is also communication. With SMS, the mobile phone is already “always on.” And just as with the stationary computer at home, school or work, this mobile communication is bound to spill over to media consumption.

However, as end users are introduced to the idea of mobile broadband, reactions become more complex. Although people are

positive about the opportunity for increased freedom, they also see that the time slots available during a normal day are too short to make spontaneous use of a laptop with mobile broadband feasible. As a result, current laptop-based mobile broadband use is often planned – an obvious restriction when compared with the mobile phone, which can be used spontaneously as soon as there is an available minute.

Concept: Introduction of broadband

Consequences for the household:

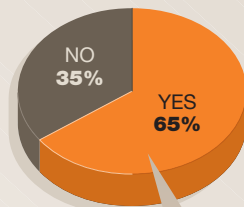
- The computer is always on
- Members of the family spend more time in front of the computer
- Films and music are downloaded more often
- People communicate more online
- It has become natural for people to use the computer for all kinds of information searches, payments, listening to music, communication and so on
- Family members argue over time spent on the computer.

Ericsson ConsumerLab interviewed 31,000 consumers of all ages in 25 countries around the world (*see source 1*), and found that a full 65 percent always take a mobile phone with them when leaving the home (if you consider only those who actually have mobile phones, this figure reaches 90 percent). On the other hand, when we asked the most advanced internet users (*see source 2*) in the most advanced age-groups (15-39), in three of the most advanced countries (US, UK and Japan) about their laptop use, the figures pointed strongly in the opposite direction: while 80 percent of people had used a laptop at home, only 20 percent said they had ever used one out on the town.

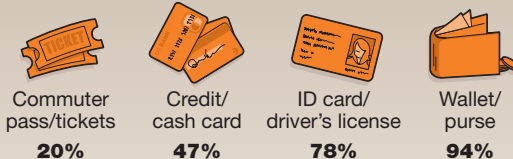
Laptops are definitely attractive and most people would like to

The most important things

Do you always carry a mobile phone with you when leaving the home?



What other things do you most commonly carry in your pockets and handbags?



Mobile broadband

Situations or places where mobile broadband could be used on a laptop.



In the home: Appealing to be able to use the laptop everywhere in the flat, house, balcony or garden.



On vacation: At the summer house, visiting family and friends. But not all want to be reached during precious freetime.



Commuting: If the journey is longer than 45 minutes.



Traveling: Obvious situations are on a train or at an airport.



In a hotel: It is convenient to be able to connect easily and with no extra cost.



In public places: Older people are hesitant, whereas younger people are more open to the possibilities.

have one, but the main reason is not outdoor mobility. The laptop is seen rather as an interior-design item: it is more attractive than a stationary computer; you can hide it away, it does not take up a lot of space and you can carry it to and from work or college and home. Furthermore, a laptop at home enables people to be flexible in their own environments: indoor mobility is one of the main advantages of the laptop.

» I can move it around my apartment and work in whichever room I want. «

HEATHER, 34, US

» It's convenient to have a laptop at home. I can lie in bed and chat online while listening to music or watching TV at the same time. But it's quite heavy, so I only take it out with me when I'm going to a friend's to study, or when I go to visit my grandfather, so I can listen to music. «

TINA, 18, SWEDEN

The need for laptop internet access while on the move is reduced further by the mobile phone's ability to provide access to e-mail and web-browsing, and supplying a "good enough" content experience until the laptop user reaches a location with fixed broadband. And with mobile broadband (rather than GPRS), the mobile phone's ability to do all those things so much better will further reduce the need to pull out the laptop when moving around.

So, if we are looking at the short-term future, mobile broadband is a twofold proposition: several vertical markets of people with specific mobile-computing needs, and a huge horizontal market of everyone with a mobile phone.

Vertical markets with specific mobile-computing needs, which we have measured in 11 countries, (*see source 3*) include:

- Business travelers (4 percent of sampled population)
- Super-mobile blue-collar workers (7 percent of sampled population)
- Field staff (4 percent of sampled population).

If we instead look at the horizontal short-term market for mobile phones, we see two tantalizing mobile broadband propositions, which we may call:

- The world in your hand
- Your hand in the world.

The world in your hand

While business travelers are a relatively distinct group, commuters are a huge and multifaceted group: a full 70 percent of people (*see source 3*) commute on a daily basis. Furthermore, commuters are the people who show the greatest interest in mobile-internet-related services such as listening to music, watching movies, consuming news and sports content, playing games and so on.

The commute is one of those typical in-between situations where you may not be able to use a laptop but where you have more time to focus attention on your mobile phone.

However, as commuters' content experience with the mobile

phone improves, the "always-on" habit becomes mobile. And just as with fixed broadband, users start pushing the boundaries in terms of where they use their broadband.

In the home, the first step was to liberate the laptop from the socket in the wall to get indoor mobility; for the commuter, the first step will be to liberate content use from sitting down with the phone on the train to standing up with the phone in the train station. From there, the "always-on" experience will gradually move out onto the streets. A parallel liberation of the "always-on" experience will occur from the other mobile-broadband starting points that we have already mentioned, such as hotels and coffee shops.

As part of this process, we will see end-user-driven demand for convergence both of functionality and form between mobile phones and laptops. We do not know – and cannot know – exactly what device will predominate, since it will be determined by how end users invent and reinvent mobility, but we can say two things for certain:

- Communication will remain the key functionality. In other words, it will be first and foremost a phone, although it ultimately won't look anything like a phone as we know it.
- It will be small enough to carry while being capable of delivering a rewarding content experience. A possible reference point could be the ultra-mobile PC (UMPC) that we are already seeing on the market, but most likely much smaller, thanks to new technology such as 3D displays.

We do not know exactly when this will happen. Three years from now? Five years? It is hard to say. But when we stop talking about "fixed" and "mobile" broadband, we will know that it has happened. Broadband will just be there – everywhere.

Your hand in the world

Let us go back to the 31,000 consumers of all ages in 25 countries around the world, of whom 65 percent (*see source 1*) always carry a mobile phone when leaving the home. What other things do they most commonly carry in their pockets and handbags? The respondents answered as seen in diagram "*The most important things.*"

This list is probably not very surprising. Why? Because we can recognize all the items – they are all things we need when we are away from home.

But consider the fact that we use these things to connect to infrastructures in society. Just as the PC at home is our tool for connecting to the infrastructure we call the internet, the commuter pass is the tool that connects us to the transport system and the morning train; the credit card connects us to our banks; the ID card connects us to our workplaces (for those who need ID to get into the building); and the cash in our wallets connects us to that morning cup of Starbucks coffee.

In the future, we will use our mobile phones to do all those things – and more. We know that, because we asked our advanced group of internet users (*see source 2*) in the most advanced age-groups (15-39), in three of the most advanced countries (US, UK and Japan). And what do they want? See illustration "*Future mobile broadband.*"

That the Japanese are interested comes as little surprise. They



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already have all of these functions in their mobile phones. As an example of “instant product info,” you can point your mobile phone at the individual barcode on the package of any hamburger from McDonald’s in Japan to connect to the internet and find out how many calories the burger contains, wherever and whenever you like (although before you eat it would probably be best). And as of



May this year, 36 percent of all Japanese phone owners (see source 4) had some kind of mobile wallet in their phones (for tickets, commuting and instead of cash) – and a whopping 69 percent were satisfied with the service.

However, the real surprise is the fact that consumers in the US and the UK are just as interested, although they have had no hands-on experience of any of these services.

Some may protest that, although interesting, this scenario seems to have little to do with mobile broadband. But think again: what other than mobile broadband, in your mobile phone, could connect every conceivable object on this planet to the internet? And it will do so instantly and reliably, for anyone in any country in the world, and cheaply, since everyone is buying the phones anyway.

Some may also argue that this could be done with GPRS, and that mobile broadband is not needed. We would respond that this just enhances the argument for mobile broadband: you can start today with whatever cellular connectivity people have, and just keep on enhancing the services as bandwidth goes up.

A movie ticket on the mobile phone – GPRS.


A movie ticket with the movie trailer – mobile broadband.

A coupon for the latest and greatest corkscrew at your local grocery store – GPRS.

A coupon for the latest and greatest corkscrew that shows you how to use the darn thing – mobile broadband.

All the specs for the fantastic BMW you are drooling over at the motor show – GPRS.

A simulator that lets you drive the BMW every day until you finally get the loan from the bank – mobile broadband.

But end users will not only drive BMW simulators. They will drive demand for broadband everywhere – and in the process, they will reinvent the way we live. 

Future mobile broadband

This is what our advanced group of internet users in the most advanced age-groups (15–39), in three of the most advanced countries wants:



Instant product info: By pointing your mobile-phone camera at a barcode on an ad or a product in a store, you instantly get connected to an information site about the product.

Total **48%** US **46%** UK **50%** Japan **48%**



Tickets: The ability to use your mobile phone in place of a ticket at concerts, cinemas and on buses.

Total **52%** US **44%** UK **51%** Japan **61%**



Commuter pass: Having your commuter pass in your phone, so you do not have to pull out your wallet or purse every time you enter a bus or subway.

Total **48%** US **39%** UK **48%** Japan **56%**



Company ID card: Having your company ID in your phone, instead of a separate badge that you always have to wear.

Total **39%** US **34%** UK **39%** Japan **42%**

Source: Ericsson Consumer&Enterprise Lab

SOURCES:

1. Ericsson C&E Lab Fundamental Module -06; 25 countries globally; 31,000 respondents.
2. C&E Lab Mobile Web In-Depth Module -06; 3 countries (UK, Japan, US); 1550 advanced internet users aged 15-39.
3. C&E Lab Infocom Module -06; 11 countries (UK, Germany, Spain, Sweden, China, Japan, Brazil, US, India, Russia and Mexico); 16,000 respondents.
4. www.felicanetworks.co.jp/about/report/200609.html; May 2006 Japan; 13,583 respondents; mobile phone users (in Japanese).

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