

Femtocell from NEC

A Comprehensive End-to-End Solution for a Dynamic Growth Market



Strategic Business, Cost and Network Benefits for Operators



Growing Demand for High-Speed Mobile Broadband

“While the strong upward curve of SMS volumes continues, perhaps a more telling headline number is the penetration of mobile internet usage and multimedia messaging (MMS). We are really starting to see a much greater variety of mobile data volumes. New devices, competitive data tariffs and wider content choice means it has never been easier for users to send an email, take a picture or access Internet content. This is a very important set of indicators.”

Mike Short, Chairman,
Mobile Data Association

Demand for 3G mobile voice and data services is accelerating. According to Portio Research, the non-voice Value Added Services (VAS) continue to grow with forecasts showing the worldwide market to be worth a quarter of a trillion USD by 2012.

However, a large proportion, up to 70-80%, of non-voice services and around 30% of voice services originate indoors. Such high indoor usage could limit the potential growth and revenue opportunities because of the inherent problems with 3G technology penetrating buildings.

The 3G technology uses a high bandwidth RF signal which attenuates rapidly due to absorption by the building walls and materials resulting in low 3G signal strength available to users indoors thus impacting the end user experience and the mobile usage indoors.

With a large proportion of mobile users inside buildings, it is vital for operators to improve the 3G coverage and capacity indoors.

Increasing the macro network capacity to cater for indoor users raises serious cost and environmental issues, so the challenge is to find a way to deliver bandwidth-hungry services indoors, cost effectively at competitive prices.

An effective solution will make the 3G mobile a high-quality, low-cost channel for delivering high-speed data services indoors, creating true personal high-speed broadband.



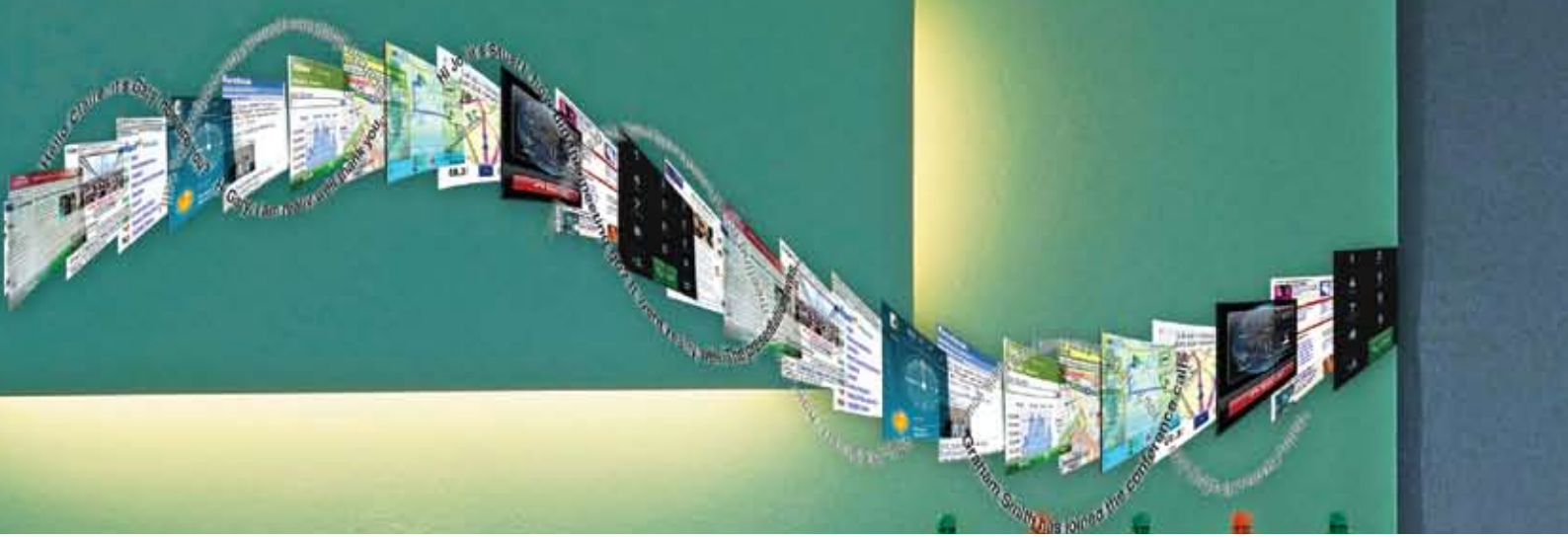
The NEC Femtocell Solution - Low-Cost Service Delivery and Massive Business Opportunity

The NEC Femtocell solution comprising of a 3G access point, Femtocell gateway, access point management and provisioning system, offers a cost-effective alternative for carriers and operators to provide dedicated 3G coverage and capacity indoors in both the residential and enterprise segments of the market.

Coupled with a unique service platform and the data offload capability in the access point along with the availability of the subscriber's presence information when indoors, the NEC Femtocell solution offers a massive business opportunity for operators to innovate new services for subscribers when indoors

The NEC Femtocell Difference

- Leadership in Femtocell development
- Multiple operator trials worldwide
- True plug and play solution
- Committed to standards
- Comprehensive end-to-end portfolio
- Complete range of support services



Strategic Benefits for Operators

Reduced Delivery Costs

The NEC Femtocell solution allows operators to provide 3G coverage and dedicated capacity indoors in a cost-effective way. The solution reduces the cost of service delivery by using customer broadband for backhaul (existing or part of bundling) and other customer assets such as the site for deployment and power.

Increased Network Capacity Without Upgrades

The NEC Femtocell solution provides the means to offload bandwidth-hungry data to the Internet. This eliminates the need for a major core network capacity upgrade to cope with increased data uptake through the Femtocell network. Because the NEC Femtocell solution removes indoor sessions from the macro network, this provides the equivalent of a capacity increase in the network, which will be vital in coping with the growth of emerging bandwidth-intensive mobile data services.

Simple Plug and Play Deployment

Deployment is simple for both consumer and operator. Consumers simply plug in an Ethernet cable and insert the SIM card. The unit self-configures after a short time, depending on the environment and the NEC Femtocell solution constantly optimises itself for reliable, high-quality performance.

From the operator's perspective, the self-configuring device becomes part of the network seamlessly, reducing the requirement for additional network planning and optimisation and speeding up deployment.

Platform for Maximising Network Revenue and Margin

With the growing uptake of mobile data services, the NEC Femtocell solution represents an important strategic platform enabling operators to take advantage of growing demand by creating an improved user experience. Commentators believe that uptake of new mobile data services indoors will also accelerate the growth of outdoor mobile services, enabling operators to maximise margin from their available network capacity.



Towards More Competitive Tariffs

Lower service delivery costs mean that operators have the opportunity to offer mobile voice tariffs that are competitive with the fixed line voice. Tariffs are more attractive with a single, combined bill for all services that bundles broadband, fixed voice and mobile services. The combination of cost-effective mobile broadband service delivery and the low cost of the Femtocell network will help operators to offer affordable home zone pricing without cannibalising macro network revenues. This will help to improve operator margins across the board.

Strategic Gateway for Delivering New Services

The NEC Femtocell solution enables a new business model of fixed-mobile convergence and innovative bundling of fixed and mobile services.

As well as the short-term revenue opportunities from the uptake of current mobile data services, the solution provides a gateway for delivering future added-value services to indoor users.

Operators can partner with content providers to develop innovative new services, strengthening customer loyalty even further.

Planning for the Future

Because, the NEC Femtocell is designed to open standards, it will be easier for operators to plan for the future, launching news services and applications, as well as adding new users and increasing capacity with minimal investment or disruption.

More Choice for Customers

The NEC Femtocell solution enables customers to enjoy a better mobile experience with access to a growing range of services, including voice, presence, mobile TV, mobile video, multimedia messaging, email, Internet browsing and mobile data.

With a growing range of content and services, operators can segment the market and offer customers tailored packages with customised tariffs, making it easier to attract new customer and retain existing ones.

Increased Customer Stickiness

The NEC Femtocell solution provides some operators with a low-cost opportunity to improve customer retention by addressing the issues of indoor coverage and capacity.

The combination of attractive services and competitive tariffs makes it easier to attract new customers as well as strengthening relationships and growing revenue from existing accounts.



Compelling Customer Propositions

The Femtocell Solution enables operators to offer compelling propositions from residential consumers to enterprise customers.

“When 70-80%, of mobile services are used indoors, and around 30% of mobile calls originate in the home, Femtocell offers major growth and revenue opportunities in residential and business markets.”

“Femtocell offers the enterprise new levels of flexibility, mobility and productivity for office or home-based workers.”



Dad

It's great having all these services on the mobile and even better that I get one bill for everything. It's really cheap so I've saved a lot of money since the switch, but I'm not telling everyone. Now I don't mind my daughter's endless phone calls and my son's life on the Internet. And I get to use my own phone - at last!



Mum

What a relief. Now they're all happy and there's no more family arguments. All four of us are able to use the service at the same time, so we can all talk and surf as much as we like. Why can't somebody do the same for television?



Residential Customers

Daughter

My brother's gone into Internet hibernation. He says that the downloads and uploads are fast and he's worked out that it costs the same as his PC, what a nerd. It's great because I can talk to my friends all night without the family hassling me. I want to get mobile TV next if I can persuade dad to let me upgrade the handset.





Homeworker

I work for a large corporation from home. Femtocell means an improved mobile service in my home which means I can access head office data, services & applications the same as if I was in the office. This definitely improves communications & gives me far greater flexibility in the way I work. It also enables me to contribute in an effective way to the corporations success.



Enterprise Customers

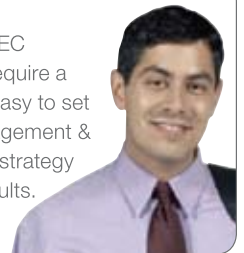
CEO

We have a mobile workforce of 50-60 employees & we have several satellite offices. We now have guaranteed coverage in all of our offices which increases productivity & means employees can go from one site to another with great ease. It is great to be able to empower our employees with the right mobile tools, where ever they are working.



CFO

The good news is that the NEC Femtocell solution doesn't require a massive investment. Being easy to set up & requiring minimal management & support it is a cost-effective strategy that consistently delivers results.





Why NEC?

Leadership in Femtocells

NEC is leading the Femtocell market with several lab and live operator trials in Europe and in other parts of the world. NEC's track record of successfully rolling out complex embryonic technology worldwide, together with our class-leading Femtocell solution makes NEC the partner of choice for operators planning to enter this market.

NEC is a leading supplier of 3G UTRAN and radio network design and optimisation services, pioneering the way with its LTE development. This strong track record in WCDMA technology has positioned NEC as a leading player in the emerging Femtocell marketplace.



Find out more

For more information, please send a request to femtocell@eu.nec.com

End-to-End Solutions

NEC provides a complete end-to-end standards-based Femtocell solution to operators that includes the 3G access point, Femtocell gateway and associated access point and gateway management systems. As well as a complete portfolio of proven Femtocell products, we provide a full range of services to help operators design, plan, operate and manage Femtocell networks. NEC's proven processes and procedures will reduce time to market, lower deployment risk and improve current and ongoing performance throughout the network lifecycle. Build, Operate and Transfer is key to NEC's professional services allowing operators to focus on their core competencies while benefiting from NEC's global expertise.

Track Record of Innovation

- We have a history of opening up tomorrow...
- We are the world's number one microwave provider
- We were first to develop and deliver optical fibre networks
- We supplied the world's first digital TV transmitters to the UK
- We deployed the first 3G network in the world
- We created the world's biggest gateway system for I-Mode, a wireless internet service
- We are a preferred supplier for the digital TV switchover and have implemented Europe's first rollout
- We created new IP Core Networks enabling unprecedented service applications such as "Push To Talk"
- We have new packet transport network technologies which are powering next generation networks, today
- We're preventing Spam over IP with our new VoIP SEAL™ technology



Contact us

For more information or to arrange a meeting please email femtocell@eu.nec.com

NEC UK

NEC House, 1 Victoria Road,
London, W3 6BL, UK

T: +44 (0)20 8993 8111

F: +44 (0)20 8992 7161

www.nec.co.uk

NEC Corporation

7-1 Shiba 5 Chome
Minato-ku, Tokyo 108-8001

Japan

T: +81-3-3454-1111

F: +81-3-3798-1510

www.nec.com