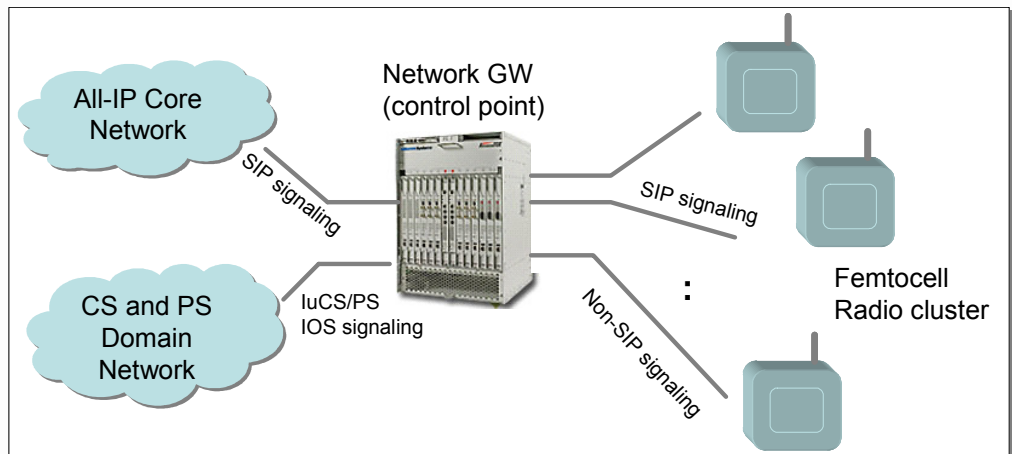


IntelliNet Femtocell Controller

Ubiquitous coverage – indoors and outdoors – with one number access has been an elusive goal for generations of wireless technologies. The proliferation of wireless broadband in the unlicensed mobile spectrum showed great potential, but the challenges with dual-mode handsets have compelled the search for new solutions. Femtocells offer the promise of using the existing handset base, improving indoor cell coverage and reducing backhaul costs. Innovation is adding momentum to the concept. With solutions ranging from clean sheet designs to the leveraging of existing macro and micro cell technology, femtocells are becoming a practical reality.

With evolving standards and building on embryonic business cases, the task of constructing a complete end-to-

end solution can be daunting. The fundamental challenge is that femtocells in a home access point configuration are deployed in very large cluster sizes. In order to derive a greater value of services from these elements than being mere backhaul devices, it is essential to have



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- Control plane software only solution for OEM platform integration
- Pre-standards Iu based solution towards the access with RANAP and SCTP support which will be upgraded to Iuh upon standardization
- Standards based Iu-PS, Iu-CS and Gn network interfaces
- Robust field tested solution in over 20 carrier network trials
- Currently delivered on carrier grade Sun Netra 240 platforms but can be integrated on to customer's platform of choice
- Easy to integrate management solution provided by a north bound SNMP interface and a browser GUI for configuration and management
- Active/Standby redundancy architecture that can be integrated with any redundancy framework

centralized control. The femtocell access points need to have the capability to deliver a converged service paradigm. This requires an intelligent control element which can communicate with a large cluster and interface with the core network. It needs to be a more than an aggregator or a simple access gateway.

Building solutions with SIP interfaces or tunneling to Generic Access Network controllers are good options. But does that solution interwork with your existing network technology – CDMA for instance? On the other hand, if you are looking to leverage your existing assets and extend the BTS and RNC to a smaller form factor, can all the components be retrofitted?



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In order to keep the femtocell radio design lightweight and cost effective, it is essential that control be delegated to another network entity. Having a flexible network access gateway gives the options of doing intermediate processing, thereby making the radio side leaner and taking off the pressure on the core network. The current generation of core network elements, such as the MSC, cannot support a large number of endpoints. Until IMS networks are widely deployed, it is essential that the femtocell gateway controller be able to present the femtocell network with a single network appearance and serve as a proxy to the network. Further, since it controls a large cluster, it must be able to stand up to high-availability standards. It must also have enough intelligence to be able to locate and route to the right endpoints.

Scalability is a key attribute of the femtocell network and the gateway controller must be able to support it. It is also essential that the femtocells are managed from a single control element, including their configuration and software updates. Finally, it is desirable that the femtocell gateway controller has a seamless evolution path from the current network technology to an all-IP network.

IntelliNet Technologies provides the expertise to harness our open-platform (Linux/Solaris based) in an Intel/Sun/ATCA form factor to build the network gateway suitable for your architecture. IntelliNet is currently delivering a highly-scalable gateway controller for a leading UMTS vendor. IntelliNet's Azaire range of products provide the solutions to authenticate and secure both control-plane and bearer. IntelliNet has also helped a partner build a GAN controller for UMA networks. In addition, IntelliNet has delivered control solutions in the in-building wireless space for TDMA and GSM solutions over the last decade. Talk to us to see how we can help you leverage your existing radio assets to build a powerful femtocell network.

Core Expertise. Fast Delivery. Controlled Costs. Exceptional Results

At IntelliNet, we partner with our customers to develop custom product solutions that help them deliver new revenue-generating products and services, improve operational efficiencies, and reduce costs. Our customers include the world's leading network equipment suppliers, software developers, and hosted service providers. We work closely with them to understand their requirements and anticipate how our products and services can best meet their needs.

We combine wide-ranging software experience, peerless understanding of industry dynamics, and meticulously detailed software processes to deliver market-leading solutions. We can augment a customer's in-house development team with specialized expertise, or we can assume complete responsibility for a project from requirements definition to system verification - freeing up our customer to focus on other priorities. We are particularly experienced in the areas of roaming and mobility, convergent billing, 3G/4G fixed mobile convergence (FMC), advanced messaging, location-based services (LBS), and the IP Multimedia Sub-system (IMS).



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