Qualcomm’s New Small Cell SoC to Address Capacity Demands

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Qualcomm today announced its new FSM90xx system-on-chip (SoC) for home/neighborhood and small business small cells.

The FSM90xx uses the same LTE functionality from the FSM99xx, its larger cousin announced last year and currently available. The new SoC is based on 28nm technology in order to drive down power consumption and total cost. The FSM99xx are expected to begin sampling during the second half of 2014.

Qualcomm Atheros Staff Product Manager Puneet Sethi said the primary reason behind the new SoC is to help meet the demand for network capacity. He described Qualcomm’s new small cell SoC as an “inside out” deployment, as opposed to outdoor and large venue small cells.

That approach is more cost-effective, Sethi said, because the small cell can leverage the existing power and backhaul typically available indoors within homes and small to medium businesses. The cable, fiber or DSL running to a home could be used for backhaul as could the enterprise network within a business.

“We believe the economics of this model is so compelling that operators can’t ignore it as they start adding capacity to their wireless networks,” Sethi said.

The FSM90xx is geared toward service providers but its designed simply enough so subscribers could deploy it much like any other residential gateway, access point or router.

For all use cases Qualcomm bakes in its UltraSON software in order to detect/estimate backhaul quality and tune the parameters of the small cells according to the backhaul specifications. The software also prevents interference with other small cell deployments.

If customers can easily deploy Qualcomm’s small cell SoCs and, in doing so, boost coverage and capacity for providers’ wireless networks, there’s a chance operators could see fit to subsidize that sort of residential or small business deployment.

Sethi said he couldn’t predict whether operators would reward small cell deployments, but he said the value of such deployments is changing.

“The value has significantly increased from being a coverage play to now serving as a cost-effective way to provide capacity,” Sethi said. “There are incentives for operators to get these deployed in large numbers and one of the ways to do that is to incentivize consumers by subsidizing small cells.”

Source URL (retrieved on *10/23/2014 - 4:45am*):
http://www.wirelessweek.com/news/2014/06/qualcomm%E2%80%99s-new-small-cell-soc-address-capacity-demands