



# Sine of the Times

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## State of the baseband – the fight continues for number two

As most of our readers know, we suggested last August, that Qualcomm would see little LTE baseband competition in 2014. In short, Mobile World Congress only reinforced this viewpoint. In Barcelona, we met with most of the merchant baseband players and a number of industry contacts across the mobile device landscape, and what is increasingly clear to us, is that this year the fight will be for a foothold, in hopes to make a play for meaningful LTE volume, and the second spot in LTE, behind Qualcomm in 2015. While we once argued that Mediatek was the clear number two behind Qualcomm (they remain the strong #2 in overall mobile modem unit volumes and profitability), in LTE this point has been muddied a bit by the progress of a few others and what we feel are challenges for Mediatek (though we do continue to believe that in 2015, Mediatek will likely be the #2 unit leader in low-end LTE, behind QCOM).

For their part, Qualcomm issued a bevy of press releases at the show. The company was demoing a Category 6 baseband, the 9x35, and also announced the Samsung S5 win, with their Snapdragon 801 SOC. Our checks indicate that Qualcomm will gain market-share in Samsung's top model (~50% of the S4 by our estimates, going to ~70-80% of the S5). The company also announced the Snapdragon 600 series, with a 64-bit octa-core processor running on ARMv8 architecture. The 600 series will integrate Qualcomm's third generation baseband, with Cat 4 LTE capabilities. The announcement underscores Qualcomm's strategy to waterfall their technology, bringing LTE modem capabilities further down market, increasing the hurdle for other merchant vendors looking to make an inroad into the market. There was also announcement on the front end, but we discuss this later with the assessment of the industry moves being made here.

On the LTE baseband side, Qualcomm continued to press its lead, with others making announcements but few showing signs that they would make real progress in terms of LTE unit volumes this year. Mediatek, which we still considered Qualcomm's greatest threat, made their LTE announcement weeks ago. At the show, they announced a win with Alcatel for their dual chip, LTE solution. We feel volumes will likely be light for this model given Alcatel's position in handsets. And despite the announcement a few weeks ago of Mediatek's integrated LTE solution, our checks indicate that this chipset would only be shipping in handsets from Chinese-based OEMs in late 2014; developed world LTE volumes would only come in 2015. And LTE with carrier aggregation (LTE-Advanced) is a ways-off – 2015 is a best-case scenario. While there is potential that Mediatek could see decent LTE volume in developing markets exiting CY 2014 – the company highlighted their target market, the "Super-Mid" (\$79 - \$399), in a new marketing campaign – Qualcomm and others will be busy challenging them here as well. In short, while we do not discount Mediatek in the least, we do think they are further away than their recent press releases would have most believe.

Another major player, one that has been knocking on the door for some time, is Intel. Our checks indicate that the company did win an LTE SKU with the S5 (remember that in the S5, as in the S4, they will also be in the 3G only version as the modem with the Exynos AP, but 3G volumes in the S5 will be lower than they were with the S4). It is our understanding that this will be dual-chip solution, with separate Cat-6 LTE chip and 3G/2G modem, and will only be available in a limited market, which we understand to be with a carrier in Germany. We believe winning a slot in the S5 is encouraging, as it is