U.S. Outdoor and Indoor DAS Forecast, 2015 – 2020: *Still going with growth ahead*

Market Study
Third Quarter 2016

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Abstract

DAS began years ago with passive systems, donor antennas and coaxial cable. Today's DAS may look a bit different – with remote units, fiber, maybe even a CPRI connection or a small cell as the radio source, but the function is unchanged. That is, provide coverage inside a building (iDAS) or in an outdoor area (oDAS).

Most venues that need DAS – stadiums, hotels, airports, etc., – already have it. *iG*R believes that the market for oDAS is a fading market because "RRH as small cells" provides a similar level of coverage/capacity with better future flexibility (moving toward baseband hoteling and/or CRAN). Also, mobile operators need coverage/capacity in different places in an urban/metro area so, as compared to indoors where shared antennas enable lower costs, that same model may not work quite as well.

*iG*R splits the DAS market by indoor and outdoor and then further divides the indoor market into commercial buildings and residential (multiple dwelling units or MDUs). *iG*R's oDAS forecast grows out of its "outdoor small cell" model and report while its iDAS forecast grows out of its "indoor small cell" model and report. This report highlights the DAS-specific portions of those models and reports. The commercial building segment is where *iG*R believes most of the DAS growth will occur over the next five years.

This report provides a brief overview of the different types of small cells, including DAS, and the goals around future iDAS and oDAS deployments. The report then provides an explanation of the methodology used to create the actual iDAS and oDAS forecasts, both for nodes and DAS systems.

Key questions addressed in this report include:

- What is an outdoor small cell? What are metrocells, RRHs and oDAS?
- What is an indoor small cell? What are femtocells, picocells and iDAS?
- What is a DAS?
- Why do the mobile networks need iDAS and oDAS?
- How does DAS fit into operators' evolving networks?
- What are the issues with deploying DAS in the U.S.? How do these issues impact the number of small cells in the market?
- What is the role of CPRI with iDAS and oDAS?
- How is DAS changing/evolving?
- Where are DAS nodes most likely to be located? What's their role?

Who should read this report?

- Mobile operators
- Infrastructure OEMs
- Small cell product and solution vendors
- Backhaul service providers and equipment OEMs
- Financial analysts and investors.