

LTE Carrier Aggregation: The Panacea to the Spectrum Problem?

Market Study
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LTE Carrier Aggregation: *The Panacea to the Spectrum Problem?*

A Market Brief

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iGR
12400 W. Hwy 71
Suite 350 PMB 341
Austin TX 78738

Table of Contents

Abstract	1
Executive Summary	3
Methodology	5
What is Carrier Aggregation?	6
Inter-band and Intra-band CA	6
Figure 1: Inter-band and Intra-band Aggregation	7
CA Terminal Considerations	7
Figure 2: Uplink and Downlink Communications	8
CA Roaming Issues	9
What is the Current State of Standards Related to Carrier Aggregation?	10
Table 1: 3GPP Releases 8 – 12 Standardization and Commercialization Schedule	10
Who are the Players in CA?	12
Table 2: Carrier Aggregation Players	12
How Will Carrier Aggregation Impact Current Technology and the Mobile Market? ...	13
Spectrum	13
Market timing	13
Roaming	13
Contiguous vs. Non-contiguous	14
Operator strategies	14
SWOT Analysis: Carrier Aggregation	15
Figure 3: SWOT Analysis	16
What is the Outlook for Carrier Aggregation?	17
The Next 12-24 Months and 24-48 Months	17
Table 3: Outlook for Carrier Aggregation, 12-24 Months	17
Table 4: Outlook for Carrier Aggregation, 24-48 Months	18
LTE Vendor Profiles	19
Alcatel-Lucent	19
Figure 4: Alcatel-Lucent Wireless Packet Core	20
Cisco	21
Figure 5: Cisco V2oLTE CSFB and SMS	23
Ericsson	24
Huawei	26
Nokia Siemens Networks	28
Samsung Electronics	32
ZTE Corporation	33

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Handset and Devices Vendor Profiles	36
Acer, Inc.....	36
Alcatel One Touch (TCL Communication).....	37
ASUS.....	38
Blackberry	39
HTC.....	41
Huawei	42
LG Electronics	44
Motorola Mobility	45
Nokia Corporation	46
Novatel Wireless, Inc.	48
Pantech Wireless, Inc.	49
Samsung Electronics	50
Sierra Wireless.....	52
Sony Mobile Communications.....	53
ZTE Corporation	54
Definitions	57
General.....	57
Device Types.....	57
Services	58
Network Technology.....	59
About iGR	64
Disclaimer.....	64

Abstract

The next significant step in the evolution of LTE-A networks will be the deployment of Carrier Aggregation (CA), which allows for a more efficient use of available licensed spectrum. Small pieces of spectrum, which alone are not sufficient to support an LTE channel, are available in multiple bands – CA allows these ‘left overs’ to be ‘glued’ together into a larger spectrum block suitable for LTE.

iGR anticipates that by the end of 2013, there will be over 150 LTE-Advanced (LTE-A) networks operating in approximately 70 countries world-wide in preparation for the arrival of many new devices that will utilize these new networks. As innovative as these new devices are, much work remains to be completed until the mobile operators provide sufficient spectrum to support these devices.

Spectrum acquisition and management is a huge problem that is clamoring for a quick solution. *iGR* believes that in the next several years there could be approximately 20 separate and distinct LTE-A bands in use globally, very few of which will have 20 MHz of spectrum available. CA may be a potential solution to the spectrum problem, but it will likely not be totally realized until the end of this decade.

This report provides an introduction to Carrier Aggregation and discusses the implications for the mobile industry, as well as timing for potential implementation.

Key questions addressed:

- What is Carrier Aggregation?
- What are the standards relating to Carrier Aggregation?
- How does Carrier Aggregation work?
- What is inter-carrier and intra-carrier CA?
- What are the implications for mobile networks of CA?
- What are the mobile device issues for CA?
- What are the strengths and opportunities for CA in the mobile market?
- What are the weaknesses and threats for CA in the mobile market?

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- Who are the likely mobile infrastructure OEMs and device vendors impacted by CA?

Who should read this report?

- Mobile network operators
- Mobile infrastructure OEMs
- Mobile device OEMs
- Financial analysts and investors.

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