



DIVISION OF
CORPORATION FINANCE

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

April 23, 2012

Via E-mail

Gregory Q. Brown
Chief Executive Officer
Motorola Solutions, Inc.
1303 East Algonquin Road
Schaumburg, IL 60196

**Re: Motorola Solutions, Inc.
Form 10-K for the Year Ended December 31, 2011
Filed February 15, 2012
File No. 001-07221**

Dear Mr. Brown:

We have reviewed your response letter dated April 13, 2012 and your filings and have the following comment. Please provide us with the requested information so we may better understand your disclosure.

Please respond to this letter within ten business days by providing the requested information or by advising us when you will provide the requested response. If you do not believe our comment applies to your facts and circumstances, please tell us why in your response.

After reviewing the information you provide in response to this comment, we may have additional comments.

Valuation and Recoverability of Goodwill, page 54

Goodwill, page 106

1. We note your response to comment six from our letter dated April 2, 2012. It appears that in the "Segment Analysis" discussion, you indicated that certain technology groups or businesses are operating segments under ASC 280. Thus, it would appear that each would constitute a reporting unit. In this regard, clarify for us how your conclusion under "Determination of Reporting Units" that you only have two reporting units (Government and Enterprises) is consistent with your preceding analysis on operating segments. Please advise us or revise.

Please file all correspondence over EDGAR. You may contact Kathryn Jacobson, Staff Accountant, at 202-551-3365 or Robert S. Littlepage, Accountant Branch Chief, at 202-551-

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3361 if you have questions regarding comments on the financial statements and related matters. Please contact Jonathan Groff, Staff Attorney, at 202-551-3458 or me at 202-551-3810 with any other questions.

Sincerely,

/s/ Robert S. Littlepage for

Larry Spigel
Assistant Director