



DIVISION OF
CORPORATION FINANCE

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

July 13, 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 June 14, 2012 and your filing 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.

Form 10-K for the Year Ended December 31, 2011
Valuation and Recoverability of Goodwill, page 54
Goodwill, page 106

1. We note in your response to comment 3 your explanation of your assessment of the economic factors considered when concluding on the aggregation of the components of your operating segments in accordance with the guidance in ASC 350-20-55. However, we remain unclear regarding your basis for aggregating the iDEN business with the other technology groups included within your Enterprise segment. In this regard, we note iDEN sales are declining while the other operations within the Enterprise segment appear to be experiencing increasing sales. Please further explain to us why you consider the iDEN infrastructure business to be economically similar to the other technology groups aggregated within the Enterprise operating segment. As part of your response, tell us the extent that you typically bundle products and services from the other technology groups with the iDEN infrastructure business in order to provide an integrated solution to your customers. Also,

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specifically tell us the nature and amount of revenue that you anticipate will be lost by the other technology groups aggregated within the Enterprise operating segment as a result of the shut-down of Sprint's iDEN network, if any.

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 202-551-3361 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 Spirgel
Assistant Director