



DIVISION OF
CORPORATION FINANCE

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

Mail Stop 3720

December 12, 2006

Via U.S. Mail and Fax (011 44 1293 767994)

Mr. Eric Hutchinson
Chief Financial Officer
Spirent Communications PLC
Spirent House
Crawley Business Quarter
Fleming Way, Crawley
West Sussex RH10 9QL
United Kingdom

RE: Spirent Communications PLC
Form 20-F for the fiscal year ended December 31, 2005
Filed June 29, 2006
File No. 1-15206

Dear Mr. Hutchinson:

We have reviewed your filing and have the following comments. We have limited our review to only your financial statements and related disclosures and do not intend to expand our review to other portions of your documents. Please address the following comments in future filings. If you disagree, we will consider your explanation as to why our comment is inapplicable or a future revision is unnecessary. Please be as detailed as necessary in your explanation. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure. After reviewing this information, we may or may not raise additional comments.

Please understand that the purpose of our review process is to assist you in your compliance with the applicable disclosure requirements and to enhance the overall disclosure in your filing. We look forward to working with you in these respects. We welcome any questions you may have about our comments or on any other aspect of our review. Feel free to call us at the telephone numbers listed at the end of this letter.

Spirent Communications PLC Form 20-F for the Fiscal Year Ended December 31, 2005

Selected Consolidated Financial Information, page 6

1. Please refer to your heading, "Other information." Revise to place "Material one-time items," "Goodwill impairment," "Share-based payment," and "Operating profit before material one-time items, goodwill impairment and share-based payment" under this heading after the basic and diluted (loss)/earnings per share information.
2. We note your line item, "operating profit and return on sales before material one-time items, goodwill impairment and share-based payment" here and on page 33. We also note your line item, "Return on sales" on page 33. Please provide disclosures required under Item 10 of Regulation S-K.

Intangibles amortization and goodwill impairment under International Financial Reporting Standards ("IFRS"), page 32

3. We note your disclosure that the expected revenue decline in the Service Assurance division is likely to necessitate further goodwill impairment at the interim stage. Tell us and disclose why you believe the goodwill is not currently impaired.

Year ended December 31, 2005 Compared with the Year Ended December 31, 2004
Taxation, page 45

4. Please tell us and disclose in more details the factors that contributed to the release of the provisions that resulted in the 2005 tax credit.

Pension fund, page 51

5. Please tell us and disclose in more detail nature of the reserves to which the deferred tax asset was written off.

Share Capital and Reserves, page F-8

6. Please tell us and disclose in greater detail the basis for the cancellation of the share premium account and capital redemption reserve. In addition, tell us and disclose your accounting for the special non-distributable reserve.

Note 33. Reconciliation of Operating (Loss)/Profit to Cash Generated from Operations,
page F-83

7. We note that you begin your reconciliation of cash flows from operating activities with operating (loss)/profit rather than net profit. Please tell us how your presentations comply with paragraph 18(b) of IAS 7.

Note 2 - Research and Development Costs, page F-11

8. We note that intangible assets arising on your various product development projects are recognized if, along with the other criteria, it is probable that the asset created will generate future economic benefits. Please tell us specifically how these costs met the criteria under IAS 38 for capitalization. Also, tell us how you were able to distinguish the research phase from the development phase.

Note 12 – (Loss)/Earnings per Share, page F-44

9. We note your use of adjusted earnings per share as a performance measure. Please provide disclosures required under Item 10 of Regulation S-K. See question 11 of our frequently asked questions regarding the use of Non-GAAP financial measures available on our website at <http://www.sec.gov/divisions/corpfin/faqs/nongaapfaq.htm>.

Note 37 – IAS 19 “Employee Benefits”, page F-89

10. Please tell us in more detail and disclose the two different approaches that are permitted by IAS 19 for the recognition of actuarial gains and losses. Tell us and disclose specifically which method you have chosen.
11. Please tell us how the requirement to accrue additional expense for holiday pay resulted in a credit to the income statement.

Note 39(i) – Goodwill and Other Intangible Assets, page F-104

12. We note that you undertook an independent valuation of the Service Assurance division which resulted in a goodwill impairment charge under IFRS. While you are not required to refer to this independent valuation, when you do, you should also disclose the name of the expert and include the consents of the expert if the reference is made in a 1933 Act filing. If you decide to delete your reference to the independent valuation, you should revise to provide disclosures that explain the method and assumptions used by management to determine the valuation. Revise to comply with this comment in future filings.
13. Please tell us how you determined that the Service Assurance division was the cash-generating unit.

Note 39(j) – Discontinued Operations, page F-110

14. We note that you announced the proposed disposal of the HellermannTyton Division in December 2005. Further, we note that on December 15, 2005 the Board accepted a formal offer from funds controlled by Doughty Hanson & Co Limited to purchase this division. Please tell us in more detail why your disposal qualified as discontinued operations under IFRS 5, including whether the disposal plan required approvals of the Board and/or shareholders. If the disposal plan required approvals of the Board and/or shareholders, tell us why it is appropriate to present the division as discontinued operations under IFRS. If the disposal plan did not require approvals of the Board and/or shareholders, tell us why it is not appropriate to present the division as discontinued operations under US GAAP. We understand that the disposal was not presented as discontinued operations under US GAAP because the sale of the division required shareholder approval.

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Please respond to these comments within 10 business days or tell us when you will provide us with a response. Please furnish a letter that keys your responses to our comments and provides any requested information. Detail letters greatly facilitate our review. Please furnish your response letter via EDGAR. Please understand that we may have additional comments after reviewing your responses to our comments.

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filings to be certain that the filing includes all information required under the Securities Exchange Act of 1934 and that they have provided all information investors require for an informed investment decision. Since the company and its management are in possession of all facts relating to a company's disclosure, they are responsible for the accuracy and adequacy of the disclosures they have made.

In connection with responding to our comments, please provide, in writing, a statement from the company acknowledging that

- the company is responsible for the adequacy and accuracy of the disclosure in the filings;
- staff comments or changes to disclosure in response to staff comments do not foreclose the Commission from taking any action with respect to the filings; and

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- the company may not assert staff comments as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

In addition, please be advised that the Division of Enforcement has access to all information you provide to the staff of the Division of Corporation Finance in our review of your filings or in response to our comments on your filings.

You may contact Bob Carroll, Staff Accountant, at (202) 551-3362 or Dean Suehiro, Senior Staff Accountant at (202) 551-3384 if you have questions regarding comments on the financial statements and related matters. Please contact me at (202) 551-3810 with any other questions.

Sincerely,

Larry Spigel
Assistant Director