SPIRENT COMMUNICATIONS PLC Form 6-K June 15, 2006

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

FORM 6-K

REPORT OF FOREIGN PRIVATE ISSUER PURSUANT TO RULE 13a-16 OR 15d-16 UNDER THE SECURITIES EXCHANGE ACT OF 1934

For the month of May/June, 2006

SPIRENT COMMUNICATIONS plc

(Translation of registrant's name into English)

Spirent House, Crawley Business Quarter, Fleming Way, Crawley, West Sussex RH10 9QL, UK.

(Address of principal executive offices)

Indicate by check mark whether the registrant files or will file annual reports under cover Form 20-F or Form 40-F.

Form 20-F X Form 40-F.....

Indicate by check mark whether the registrant by furnishing the information contained in this Form is also thereby furnishing the information to the Commission pursuant to Rule 12g3-2(b) under the Securities Exchange Act of 1934.

Yes No X

If "Yes" is marked, indicate below the file number assigned to the registrant in connection with Rule 12g3-2(b): 82-

Spirent Communications plc announces that on 18 May 2006 it purchased from JPMorgan Cazenove Limited 1,000,000 Spirent Communications plc ordinary shares at an average price of 42.8058 pence per share. The purchased shares will be held as treasury shares. Following the above purchase, Spirent Communications plc holds 4,000,000 Spirent Communications plc ordinary shares in treasury, and has 966,366,853 Spirent Communications plc ordinary shares in issue (excluding treasury shares).

Spirent Communications plc announces that on 25 May 2006 it purchased from JPMorgan Cazenove Limited 100,000 Spirent Communications plc ordinary shares at an average price of 43 pence per share. The purchased shares will be held as treasury shares. Following the above purchase, Spirent Communications plc holds 4,800,000 Spirent Communications plc ordinary shares in treasury, and has

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965,685,508 Spirent Communications plc ordinary shares in issue (excluding treasury shares).

Spirent Communications plc announces that on 30 May 2006 it purchased from JPMorgan Cazenove Limited 90,000 Spirent Communications plc ordinary shares at an average price of 44.5 pence per share. The purchased shares will be held as treasury shares. Following the above purchase, Spirent Communications plc holds 4,890,000 Spirent Communications plc ordinary shares in treasury, and has 965,595,508 Spirent Communications plc ordinary shares in issue (excluding treasury shares).

Spirent Communications plc announces that on 6 June 2006 it purchased from JPMorgan Cazenove Limited 1,000,000 Spirent Communications plc ordinary shares at an average price of 44.8849 pence per share. The purchased shares will be held as treasury shares. Following the above purchase, Spirent Communications plc holds 5,890,000 Spirent Communications plc ordinary shares in treasury, and has 964,719,008 Spirent Communications plc ordinary shares in issue (excluding treasury shares).

Spirent Communications plc announces that on 7 June 2006 it purchased from JPMorgan Cazenove Limited 500,000 Spirent Communications plc ordinary shares at an average price of 45.375 pence per share. The purchased shares will be held as treasury shares. Following the above purchase, Spirent Communications plc holds 6,390,000 Spirent Communications plc ordinary shares in treasury, and has 964,219,008 Spirent Communications plc ordinary shares in issue (excluding treasury shares).

Spirent Communications plc announces that on 8 June 2006 it purchased from JPMorgan Cazenove Limited 500,000 Spirent Communications plc ordinary shares at an average price of 44.6627 pence per share. The purchased shares will be held as treasury shares. Following the above purchase, Spirent Communications plc holds 6,890,000 Spirent Communications plc ordinary shares in treasury, and has 963,719,008 Spirent Communications plc ordinary shares in issue (excluding treasury shares).

Spirent Communications plc announces that on 9 June 2006 it purchased from JPMorgan Cazenove Limited 500,000 Spirent Communications plc ordinary shares at an average price of 45.7635 pence per share. The purchased shares will be held as treasury shares. Following the above purchase, Spirent Communications plc holds 7,390,000 Spirent Communications plc ordinary shares in treasury, and has 963,219,008 Spirent Communications plc ordinary shares in issue (excluding treasury shares).

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Spirent Communications plc announces that on 14 June 2006 it purchased from JPMorgan Cazenove Limited 2,500,000 Spirent Communications plc ordinary shares at an average price of 36.8267 pence per share. The purchased shares will be held as treasury shares. Following the above purchase, Spirent Communications plc holds 9,890,000 Spirent Communications plc ordinary shares in treasury, and has 960,895,507 Spirent Communications plc ordinary shares in issue (excluding treasury shares).

Signatures

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

____LUKE THOMAS_____

(Registrant)

Date 15 June 2006

By ____/s/ Luke Thomas_____

(Signature)*