SECURITIES AND EXCHANGE COMMISSION

Washington, D. C. 20549

FORM 8-K

Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

Date of Report (Date of earliest event reported): January 7, 2004

PRIMUS TELECOMMUNICATIONS GROUP, INCORPORATED

(Exact name of registrant as specified in its charter)

Delaware

(State or other jurisdiction of incorporation)

0-29092

(Commission File No.)

54-1708481 (IRS Employer Identification No.)

1700 Old Meadow Road, Suite 300, McLean, VA 22102

(Address of principal executive offices and zip code)

Registrant's telephone number, including area code: (703) 902-2800

Item 5. Other Events.

A. Proposed Private Placement of Notes.

On January 7, 2004, Primus Telecommunications Group, Incorporated (the "Company") issued a press release (the "Press Release") announcing that its direct and wholly owned subsidiary, Primus Telecommunications Holding, Inc. (the "Issuer"), intends to offer, subject to market conditions and other factors, \$200 million of senior notes ("Notes") due 2014. The net proceeds are intended to be used to satisfy and discharge all of the Company's outstanding 9⁷/8% senior notes due 2008 and the 11¹/4% senior notes due 2009 and the remaining net proceeds are intended to be used to repay or repurchase other long-term obligations or for working capital and general corporate purposes.

The full text of the Press Release is provided below:



Contact: John DePodesta Executive Vice President PRIMUS Telecommunications Group, Incorporated (703) 902-2800 jdepodesta@primustel.com

PRIMUS TELECOMMUNICATIONS ANNOUNCES \$200 MILLION SENIOR NOTES OFFERING

McLean, Virginia—January 7, 2004—PRIMUS Telecommunications Group, Incorporated (Nasdaq: PRTL, "PRIMUS" or the "Company"), today announced that its direct and wholly owned subsidiary, Primus Telecommunications Holding, Inc. ("Issuer"), intends to offer, subject to market conditions and other factors, \$200 million of senior notes ("Notes") due 2014. The net proceeds are intended to be used to satisfy and discharge all of the Company's outstanding 9⁷/8% senior notes due 2008 and the 11¹/4% senior notes due 2009 and the remaining net proceeds are intended to be used to repay or repurchase other long-term obligations or for working capital and general corporate purposes.

The Notes will be general unsecured obligations of the Issuer and be fully and unconditionally guaranteed by PRIMUS Telecommunications Group, Incorporated.

The offer will only be made to qualified institutional buyers pursuant to Rule 144A and Regulation S under the Securities Act of 1933, as amended (the "Securities Act"). The Notes will not be registered under the Securities Act and may not be offered or sold in the United States or to a United States person absent registration or an applicable exemption from registration requirements.

This press release does not constitute an offer to sell or the solicitation of an offer to buy any security and shall not constitute an offer, solicitation or sale in any jurisdiction in which such offering would be unlawful.

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PRIMUS Telecommunications Group, Incorporated (NASDAQ: PRTL) is a global facilities-based telecommunications services provider offering international and domestic voice, Internet, data and

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hosting services to business and residential retail customers and other carriers located primarily in the United States, Canada, Australia, the United Kingdom and western Europe. PRIMUS provides services over its global network of owned and leased transmission facilities, including approximately 250 points-of-presence (POPs) throughout the world, ownership interests in over 23 undersea fiber optic cable systems, 19 carrier-grade international gateway and domestic switches, and a variety of operating relationships that allow it to deliver traffic worldwide. PRIMUS also has deployed a global state-of-the-art broadband fiber optic ATM+IP network and data centers to offer customers Internet, data, hosting and e-commerce services. Founded in 1994, Primus is based in McLean, VA. News and information are available at PRIMUS's Web site at www.primustel.com.

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Statements in this press release concerning the proposed offering, and intended uses of proceeds thereof, constitute "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. Such statements are based on current expectations, and are not strictly historical statements. Factors and risks that could cause actual results or circumstances to differ materially from those set forth or contemplated in forward-looking statements include, without limitation: changes in business conditions; fluctuations in the exchange rates of currencies, particularly any strengthening of the United States dollar relative to foreign currencies of the countries where we conduct our foreign operations; adverse interest rate developments; fluctuations in prevailing trade credit terms or revenues due to the adverse impact of, among other things, further telecommunications carrier bankruptcies or adverse bankruptcy related developments affecting our large carrier customers, the possible inability to raise additional capital when needed, or at all; the inability to reduce, repurchase, exchange or restructure debt significantly, or in amounts sufficient to conduct regular ongoing operations; changes in the telecommunications or Internet industry; adverse tax rulings from applicable taxing authorities; digital subscriber line, Internet and telecommunications competition; changes in financial, capital market and economic conditions; changes in service offerings or business strategies; difficulty in migrating or retaining customers, including former Cable & Wireless customers associated with our recent acquisition of this customer base, or integrating other assets; difficulty in providing voice-over-Internet protocol services; changes in the regulatory schemes or requirements and regulatory enforcement in the markets in which we operate; restrictions on our ability to follow certain strategies or complete certain transactions as a result of our capital structure or debt covenants; risks associated with our limited DSL, Internet and Web hosting experience and expertise; entry into developing markets; the possible inability to hire and/or retain qualified sales, technical and other personnel, and to manage growth; risks associated with international operations; dependence on effective information systems; dependence on third parties to enable us to expand and manage our global network and operations; dependence on the implementation and performance of our global asynchronous transfer mode + Internet protocol communications network; adverse outcomes of outstanding litigation matters; and the outbreak or escalation of hostilities or terrorist acts and adverse geopolitical developments. As such, actual results or circumstances may vary materially from such forwardlooking statements or expectations. Readers are also cautioned not to place undue reliance on these forward-looking statements which speak only as of the date these statements were made. We are not necessarily obligated to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise. You are advised, however, to consult the discussion of risks and uncertainties under "Management's Discussion and Analysis of Financial Condition and Results of Operations-Liquidity and Capital Resources-Short and Long-Term Liquidity Considerations and Risks"; and "-Special Note Regarding Forward-Looking Statements" contained in our quarterly report on Form 10-Q for the period ended September 30, 2003, as filed with the Securities and Exchange Commission.

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B. Additional Information Concerning this Report.

The information contained in this Current Report on Form 8-K is neither an offer to sell nor a solicitation of an offer to buy any of the Notes. The Notes to be offered will not be registered under the Securities Act of 1933, as amended (the "Securities Act"), or applicable state securities laws and may not be offered or sold in the United States absent registration or an applicable exemption from the registration requirements of the Securities Act. The information contained in this Current Report on Form 8-K is also not an offer to purchase, a solicitation of an offer to purchase, or a solicitation of an offer to sell securities, with respect to the Company's outstanding $9^{7}/8\%$ senior notes due 2008 or the $11^{1}/4\%$ senior notes due 2009. Nor should anything in this current report be deemed to constitute notice of redemption of the $9^{7}/8\%$ senior notes due 2008 or the $11^{1}/4\%$ senior notes due 2009. Such redemption shall only be effected pursuant to a notice of redemption in accordance with the terms of the indentures governing the $9^{7}/8\%$ senior notes due 2008 and the $11^{1}/4\%$ senior notes due 2009.

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.

PRIMUS TELECOMMUNICATIONS GROUP, INCORPORATED

Dated: January 7, 2004

By: /s/ NEIL HAZARD

Name: Neil Hazard Title: Chief Operating Officer and Chief Financial Officer

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QuickLinks

Item 5. Other Events.

PRIMUS TELECOMMUNICATIONS ANNOUNCES \$200 MILLION SENIOR NOTES OFFERING SIGNATURE