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 of the Securities Exchange Act of 1934

> December 21, 2007 Commission File Number: 333-142287

NXP B.V.

(Exact name of registrant as specified in charter)

The Netherlands

(Jurisdiction of incorporation or organization)

60 High Tech Campus, 5656 AG, Eindhoven, The Netherlands (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

Yes o

Yes o

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(1).

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(7).

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

Yes o

Name and address of person authorized to receive notices and communications from the Securities and Exchange Commission

> Dr. Jean A.W. Schreurs 60 High Tech Campus 5656 AG Eindhoven — The Netherlands

This report contains a copy of our press release entitled "NXP Semiconductors to Acquire GloNav", dated December 21, 2007.

Exhibit

Press release, dated December 21, 2007 1.

SIGNATURES

No x

No x

Form 40-F o

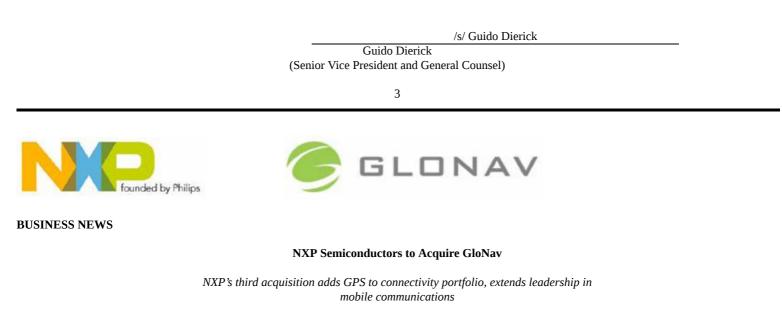
No x

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 at Eindhoven, on the 21st day of December 2007.

NXP B.V.

/s/ Frans van Houten

Frans van Houten (President and Chief Executive Officer, Chairman of the Board of Management)



Eindhoven, The Netherlands and Newport Beach, Calif., U.S.A., 21 December, 2007 — NXP Semiconductors, the independent semiconductor company founded by Philips, announced it will acquire GloNav Inc., a US-based fabless semiconductor company developing single-chip solutions for global positioning systems (GPS) and other satellite navigation systems. NXP will purchase the company for US\$85 million in cash plus up to US\$25 million in cash contingent upon GloNav reaching certain revenue and product development milestones over the next two years. The transaction will give NXP immediate access to market-proven GPS products and technology. The deal is expected to close in the first quarter of 2008, subject to regulatory approvals.

"This is the second major acquisition that we have made this year to strengthen our Mobile and Personal Business Unit that quickly adds complementary technologies to our existing portfolio and meets our customers' demands for innovative products. We are a leader in cellular system solutions. Combining GloNav's GPS expertise with NXP's FM Radio, Bluetooth, USB and NFC leadership, enables us to offer a broader connectivity suite to the mobile phone market," commented Frans van Houten, Chief Executive Officer, NXP Semiconductors.

By 2010, approximately 40 percent (some 560 million) of mobile phones will be equipped with the GPS feature. "We already turned the cell phone into a multimedia wallet," Frans van Houten commented. "It's only natural that we also want to use our mobile phones to navigate and to find local goods and services. GPS integration allows us to create these and many more interesting and dynamic features, continuously enriching the cell phone in our pocket," added van Houten.

"Becoming part of NXP allows us to achieve the required scale in innovation, and opens up many new markets and customers in order to exploit the significant market potential for GPS. Our engineers are excited to become part of ambitious leadership projects in state-of-the-art technologies and to join their expertise to one of the leaders in cellular system solutions," commented Bill McLean, GloNav's Chief Executive Officer. "We will have access to NXP's impressive customer base, which includes all the leading handset and device manufacturers."

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GloNav has approximately 50 employees and contractors at locations in the US, UK, Ireland, and Taiwan. They will join NXP's Mobile and Personal Business Unit.

GloNav has a significant intellectual property portfolio and over 20 years of technology heritage in developing silicon-based GPS solutions. Through this acquisition, NXP will be able to access GloNav's single chip and 90nm capability to establish a strong presence in the fast growing GPS market in both personal navigation devices and mobile phones, and further strengthen its capability to offer functionally rich, integrated cellular solutions for its mobile customers.

About NXP Semiconductors

NXP is a top 10 semiconductor company founded by Philips more than 50 years ago. Headquartered in Europe, the company has 37,000 employees working in more than 20 countries and posted sales of EUR 5 billion in 2006. NXP creates semiconductors, system solutions and software that deliver better sensory experiences in mobile phones, personal media players, TVs, set-top boxes, identification applications, cars and a wide range of other electronic devices. News from NXP is located at www.nxp.com.

About GloNav Inc.

GloNav Inc., headquartered in Newport Beach, Calif., is a fabless semiconductor company developing global positioning system (GPS) and other satellite navigation technologies and products. The company has the longest heritage of GPS technology in the semiconductor industry — more than 20 years — and leverages this into the highest-sensitivity, lowest-power and fastest time-to-first-fix (TTFF) semiconductor solutions available for the wireless handset and mobile consumer electronics device markets. GloNav is funded by European based venture capital firm, Atlantic Bridge Ventures. Visit us online at www.glonavgps.com.

GloNav's financial adviser is Arma Partners LLP and its legal adviser is Wilmer Cutler Pickering Hale and Dorr LLP.

- ENDS -

Forward-looking Statements

This release may contain certain forward-looking statements with respect to the financial condition, results of operations and business of NXP and certain plans and objectives of NXP with respect to these items. By their nature, forward-looking statements involve risk and uncertainty because they relate to events and depend on circumstances that will occur in the future and there are many factors that could cause actual results and developments to differ materially from those expressed or implied by these forward-looking statements.

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