Technology Report, Enterprise Software

In This Issue: Palantir, MongoDB, Inc. (formerly 10gen)

Palantir

- Data analysis software developer founded by Peter Thiel and Stanford computer scientists
- Gained traction by aiding U.S. government agencies in fighting terrorism
- Growing rapidly; reportedly seeking funding with valuation up to $8 billion

MongoDB, Inc. (formerly 10gen)

- Database software company founded by DoubleClick veterans; developed open-source platform MongoDB
- Technology enables cheaper scaling and faster operation of large databases
- Valued at $500 million as of May 2012; largest vendor of NoSQL-based database management software
Palantir

Palantir Technologies is an enterprise analytics firm that develops software to organize and analyze very large sets of data (big data). The company was founded in 2004 by former PayPal employees Peter Thiel and Nathan Gettings, along with Stanford computer scientists Joe Lonsdale and Stephen Cohen. Palantir’s platform can be used to carry out temporal, geospatial, relational, and statistical analysis through a single interface that allows a user to find relationships that are otherwise difficult to detect. Palantir was conceived as an alternative application for PayPal’s fraud-detection software – its team subsequently spent three years reconstructing and refining the data analysis software to fight terrorism. The firm offers two products currently, one for government organizations and another for financial services firms.

The founders gained initial traction through In-Q-Tel, the investment branch of the CIA and one of the company’s first investors. The CIA was Palantir’s first customer and spread word of its effectiveness for law enforcement agencies and other government entities. The software’s power, affordability and intuitive interface made it desirable to both users and decision-makers.

**Technology**

Palantir’s software analyzes and organizes data from multiple sources to enhance the capability of human analysts through intelligence amplification (IA), also known as cognitive augmentation or machine augmented intelligence. The platform is not a predictive analytics tool and does not replace human problem-solving; rather, the software presents relationships within the data in meaningful ways to aid analysts in drawing conclusions and making decisions. This is done typically through visualizations such as charts, graphs and maps. The company uses a customized implementation of Hadoop open-source data analysis software to explore both structured and unstructured data. This technology therefore can be applied across a broad range of organizations and address a wide array of issues; such a ubiquitous and scalable solution offers an attractive, cost-effective alternative to companies and government departments that would otherwise need to make sizable capital investments and dedicate significant time and resources toward building analytical systems from scratch. The company divides its technology into two offerings – Gotham for government entities and Metropolis for financial services. Palantir’s software can be deployed and operational in a few days and the company provides free training to clients. The firm dispatches “forward deployed engineers” in place of a sales force so that Palantir can establish a greater knowledge base of understanding on a customer’s needs and build strong client relations. Palantir’s technology lead stems partly from its ability to procure top-level engineering talent. The firm’s relationship with Stanford University coupled with its high-impact mission makes it one of the most desirable tech employers in the country.

**Financials**

Palantir has released very little information on its financials. In a 2011 interview with *Forbes* CEO Karp claimed that the company generated well over $80 million in 2010 with positive cash flow. He also stated that revenue had tripled annually since 2008, suggesting that 2009 saw between $27 million and $30 million, and 2008 sales stood between $9 million and $10 million. *Fortune* estimated that the company topped $100 million in sales for 2011; *Forbes* believes that 2012 revenue approached $300 million, and will grow to nearly $450 million for 2013. Karp has disclosed that Palantir operates at a loss, but it may turn profitable in 2014.

The company has received seven rounds of venture funding including investments from SAC Capital, Allen & Co., Tiger Global and In-Q-Tel. Our calculations peg total funding at $321 million.

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million, although Forbes believes total funding is over $500 million (Forbes). Palantir’s most recent round in May 2012 valued the company at approximately $4 billion. According to several sources including Forbes, the company is currently seeking funding with a valuation range between $5 billion and $8 billion. This concurs with a Quora post from co-founder Joe Lonsdale in January 2013 in which he suggests that investment groups had shown interest in the company at a $7 billion to $8 billion valuation (via Quora). Management is considering an initial public offering, although no timeframe has been given.

Market

A report from Transparency Market Research estimates the “Big Data” market to be worth approximately $8.85 billion globally for 2013 with 40% CAGR through 2018. However, the term “Big Data” has no agreed-upon definition and industry experts differ in opinion of which technologies and services to include under its umbrella. We believe that the Business Intelligence category of enterprise software presents a more accurate representation of Palantir’s total addressable market. Gartner Research estimates this segment to be worth $14.1 billion globally for 2013, up from $13.1 billion in 2012. Gartner projects that Business Intelligence Software will grow between 7.2% and 7.4% annually, with a value of $18.65 billion by 2017. Palantir is positioned well within the space as government and financial services are expected to be two of the three fastest growing sectors (healthcare being the third). The company’s opportunities within the foreign government sector may become limited abroad however as U.S. agencies may prohibit the firm from interacting with international governments due to Palantir’s access to domestic confidential information.

Palantir has primarily targeted government entities and financial organizations; the firm’s first commercial customer was JPMorgan, referred to Palantir by another client, the New York Police Department. 60% of revenues now come from commercial clients, most of which involve financial services. The software’s origins as a fraud-detection tool help these companies identify financial crime; however, the technology also enables banks and lenders to accurately predict defaults, foreclosures and other negative events. JPMorgan employees claim that the bank has saved hundreds of millions of dollars by using Palantir’s software in this way (via Forbes).

The company is exploring innovative applications within other verticals, such as pharmaceutical research and development. In February 2013 Palantir published a report detailing a procedure that uses a modification of its Gotham product to find connections between data sets created by disparate research teams. Palantir believes the strategy can combine publications and private research to mitigate risk and improve critical decision-making activity across pharmaceutical pipelines. Penetrating this market enables Palantir to gain entrée into the healthcare sector, a high growth area over the next several years.

Competition

Palantir competes squarely against custom data aggregation and analysis systems created by IBM, Booze Allen and Lockheed Martin. Palantir’s ability to process both structured and unstructured data pits the company against providers of Hadoop analysis software, including Cloudera and Hortonworks. These firms have limitations in their offerings for visualization of data, an area wherein Palantir excels.

Leadership

Noted entrepreneur and investor Peter Thiel is a co-founder of Palantir and the Chairman of the Board. Thiel co-founded PayPal and was one of the first outside investors in Facebook; he invested about $40 million in Palantir and currently owns about 12% of the company (according to Forbes). Although CEO Alex Karp, who attended Stanford Law School with Thiel and owns approximately 10% of Palantir (via Forbes), has no formal technical training, he is known to be a brilliant problem solver with a gift for explaining Palantir’s complex technology in understandable terms. Karp’s connections to wealthy investors in Europe produced small amounts of seed money for the firm during its early phases. Co-founder Nathan Gettings, Palantir’s Chief Technology Officer, is a former Stanford computer scientist who also founded RoboteX, which designs security robots for use by first-responders in uncertain or unsafe situations. Peter Thiel is also a backer of RoboteX and Alex Karp is a director.
MongoDB, Inc. (formerly 10gen)

MongoDB, Inc./10gen is an enterprise software developer and service provider that created the MongoDB database management platform. MongoDB is an open-source system built on a “NoSQL” architecture that allows organizations to store, organize and access large amounts of data using low-cost hardware consisting of distributed, commodity servers. Data can be accessed quickly, enabling enterprises to make critical decisions on a real-time basis.

MongoDB/10gen founders Dwight Merriman and Eliot Horowitz had become frustrated with the cumbersome nature of managing large data sets with relational database management systems (RDBMSs) while the two were at DoubleClick, which Merriman had founded in 1995. The specialized hardware required was expensive and processing and accessing the data was slow, hindering the performance of applications that relied on the data. The two began developing MongoDB in 2007 and released the software under an open-source license (GNU Affero General Public License) in 2009. In 2010 version 1.4 was released as a commercial-ready product.

Technology

Over the last several years, NoSQL has become a popular term to describe distributed databases (often open source) that were not relational and could encompass other access methods in addition to SQL (i.e., “Not Only SQL”). These databases are well suited to address database market niches not well suited for traditional relational databases. Technically, these use cases often involve scalable write-access to large datasets distributed across a large number of low-cost commodity servers, and the management of large amounts of unstructured or semi-structured data. NoSQL databases are seeing traction in several use cases, including web content management, mobile and social applications, and clickstream analysis.

MongoDB is arguably the best-known technology in the emerging NoSQL document-oriented (i.e., semi-structured) database market. To allow for large databases to scale using inexpensive commodity servers while allowing flexible data structures, MongoDB stores data as documents with dynamic schemas and partitioning collections of documents (i.e., “sharding”) across distributed database instances. We believe this architecture enables greater flexibility in designing and scaling applications, and greater throughput elasticity and speed as large volumes of content are added to the system, as compared to traditional RDBMSs. By offering a flexible database design that enables better scalability as applications grow, MongoDB also circumvents misalignments between SQL-driven RDBMSs and application servers that often lead to costly application reimplementation and database redesign.

Although NoSQL databases can provide superior flexibility and performance for a variety of uses, they also have disadvantages. For gains in simplicity, flexibility, performance velocity and horizontal scaling, NoSQL eliminates many features that are inherent in standard relational databases. Data consistency and durability are sacrificed for the sake of speed and scalability through optimized key-value stores that ease retrieval, and these tradeoffs have raised concerns regarding NoSQL-based platforms: namely, inadequate security in many enterprise level distributions that are gated by only basic measures such as firewalls and Secure Socket Layers (SSLS). MongoDB/10gen has addressed several security concerns with its latest release (MongoDB 2.4) which includes Kerberos authentication and role-based privileges.

Business Model

Because MongoDB is open-source, MongoDB/10gen generates revenue from services related to its distribution. The company charges clients a subscription fee that grants customers access to training, support and security packages, as well as MongoDB/10gen’s commercial version of the system called MongoDB Enterprise. We believe the firm has about 600 enterprise customers, including well-known names such as Goldman Sachs, MetLife, Disney, Intuit, Craigslist and Viacom. The typical cost to clients is $5,000 annually per server (Forbes).

MongoDB/10gen’s decision to make MongoDB open-source was critical; it meant sacrificing exclusive control of a valuable product and forgoing a portion of potential future revenue. However, we think this move is helpful in gaining broad adoption of a new and different technological paradigm. By putting the software in the hands of various developer teams, MongoDB/10gen spread the cost of added development and marketing across an open-source ecosystem, enabling MongoDB/10gen to compete more effectively against offerings from large companies with extensive marketing and development resources such as Oracle and IBM. To enhance awareness and adoption of the platform, MongoDB/10gen partnered with EdX to provide free MongoDB education to developers. The program had 47,000 enrollments as of January 2013 (via mongodb.com).
Financials

MongoDB/10gen does not release revenue figures, although management has disclosed that the company has grown at a rate of 50% quarterly for the previous five quarters. *Forbes* estimates that the firm will generate “a few tens of millions this year [2013].”

Precise funding is unknown; the values of two investments made in 2012 were not disclosed. According to *TechCrunch* the latest round brought total funding to $81 million, but the source of this calculation was not given. MongoDB/10gen’s most recent valuation of $500 million came from the $42 million Series E investment in May 2012. After 15 months of continued growth, the firm is likely worth substantially more today. Union Square Ventures was MongoDB/10gen’s first outside investor and participated in the first five funding rounds. Other repeat investors include Flybridge Capital Partners and Sequoia Capital.

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*Valued at $500 million

Market

We estimate the market for enterprise database management systems was worth approximately $30B in 2012, with the large majority of this market consisting of RDBMS using Structured Query Language (SQL) for accessing data. We estimate Oracle holds 44% share of the RDBMS market, followed by Microsoft at 22%, IBM at 20%, and a host of much smaller players (SAP/Sybase, Teradata, others). Relational databases emerged in the 1970s as a superior alternative to older hierarchical or network databases for storing and accessing structured data for decision-support and transactional applications, through their use of simple, non-procedural SQL and their separation of database structure from the physical implementation of data storage.

We estimate that the NoSQL market will have a value of $66.25 million in 2013, based on industry projections by *451 Research*. Wider adoption of the technology is expected to expand revenues rapidly at 82% CAGR, resulting in $215 million in 2015. MongoDB/10gen CEO Merriman believes much of the company’s growth will come from corporations increasing investment in predictive analytics. According to Merriman, only 13% of all corporations employ market analytics to anticipate customer behavior. With near-instantaneous data access, companies can influence buying decisions at multiple points of customer interaction, till the last minute at point of purchase. As more enterprises seek to unlock the value of large, unstructured datasets, Merriman believes that MongoDB/10gen’s speed and low cost will make it a favorite of new buyers.

Competition

According to *451 Research* MongoDB/10gen is the largest company to offer NoSQL products exclusively. The second largest is four-year-old Couchbase, which has received $31 million in funding including multiple investments from Accel Partners. The company is the original developer of the Couchbase project, an open-source database platform similar to MongoDB. Couchbase claims notable customers such as AOL, Zynga and Salesforce.com. DataStax has experienced rapid success with its Apache Cassandra software. The three-year-old company serves 300 customers (including 20 from the Fortune 100) with 120 employees, and received $45 million in a Series D round in July 2013 for total funding of $83.7 million (via *CrunchBase*). Six-year-old Basho has experienced slower growth than other competitors, but tends to generate more revenue per customer. The evolution of the database market structure and the role of NoSQL databases (and MongoDB in particular) in this market evolution is a topic on which reasonable people can differ. On one hand, we think the database market has the potential to become more fragmented, especially as the volume and variety of data increases, pressuring “one size fits all” enterprise DBMSs optimized for structured data. Any pendulum swing away from enterprise DBMS standardization could potentially benefit NoSQL databases, while also benefiting special-purpose database appliances, columnar data stores, and Hadoop-based data management technologies. However, this evolution is likely to be gradual, and we don’t expect to see the wholesale rip and replacement of enterprise-class
RDBMSs any time soon, due to their maturity for managing transactional data and a generally poor ROI argument for replacing database management systems for existing applications. More debatable is whether one data management technology (or vendor) emerges as dominant for next-generation use cases, or instead the market for big data management develops as a collection of disparate market niches for a diversity of use cases. We are more inclined to the latter view, with a prominent spot for Hadoop’s HDFS as a foundation for file management and incremental opportunity for special-purpose databases as they find their most suitable market niches.

Leadership
Chairman and co-founder Dwight Merriman has founded several technology companies including digital marketing service DoubleClick; he later sold the company to Google for over $3 billion. Recently he helped found online financial publication Business Insider and web-based fashion retailer Gilt Groupe. Max Schireson was appointed CEO in January 2013, after a two year term as company President. Previously Schireson, who enrolled at UC Berkeley at the age of 14, was COO at MarkLogic after spending nine years with Oracle. Co-founder and Chief Technology Officer Eliot Horowitz co-founded ShopWiki in 2005. Prior to that he worked for Merriman as a software developer at DoubleClick, where he won the company’s coding tournament in 2004. Horowitz graduated from Brown University where he developed unique algorithms for mapping and navigation software. Chief Financial Officer Sydney Carey has held CFO positions at TIBCO, Autonomic Networks and Pacific Broadband Communications. She is also a board member at Bazaarvoice.
**Last Week’s News**

**Twitter hires away Google sales executive, adds relevant headlines to tweets**
Twitter hired former Google media sales head Jennifer Price to lead sales efforts of Twitter’s TV ad products. Ms.Price plans on expanding the sales team and possibly marketing to video game developers. Twitter will also add “related headlines” to tweets that have been embedded in articles at news outlets, enabling users to go into greater depth on a developing story. ([TechCrunch](http://www.techcrunch.com)) Twitter: 4/13

**TaskRabbit launches in five markets, service now available in fifteen cities**
On-demand outsourcing service TaskRabbit is expanding operations to five additional cities in the U.S.: Atlanta, Dallas, Houston, Philadelphia and Washington, D.C. The roll-out increases the company’s footprint by 50% to 15 cities. TaskRabbit has 15,000 trained workers signed up to handle short-term work at users’ request; it expects to add 1.25 million customers in 2013. ([TechCrunch](http://www.techcrunch.com)) TaskRabbit: 12/12

**StreetEasy bought out by Zillow for $50 million**
Zillow will acquire home sales/rental website StreetEasy for $50 million. Seven-year-old StreetEasy has 1.2 million monthly visitors and provides information on real estate sales and leasing in New York City, Philadelphia and Washington, D.C. The company will continue operations as a separate brand and use the new capital to enhance offerings and grow its audience. ([TechCrunch](http://www.techcrunch.com))

**Uber’s discount service UberX banned in Washington, D.C.**
New regulations from the DC Taxicab Commission will make Uber’s new low-cost service illegal within city limits. UberX, which uses small, high-MPG cars rather than luxury sedans, was introduced in the city just two weeks ago. The company’s black-car service had previously been outlawed in Washington, D.C., but was approved by the city council last year. Uber has promised to fight the decision. ([VatorNews](http://www.vatornews.com)) Uber: 8/12

**Cleversafe receives $55 million in funding**
Nine-year-old Chicago-based data storage provider Cleversafe, which markets low-cost storage devices to Big Data firms, will use the capital from its fourth funding round led by New Enterprise Associates to develop offerings and expand into new verticals. Cleversafe has received a total of $91.4 million in venture backing to date; New World Ventures also participated in this latest round. ([VentureBeat](http://www.venturebeat.com))

**Birst raises $38 million in Series E round**
Business intelligence software provider Birst received $38 million in venture capital from Sequoia Capital, Northgate Capital, Hummer Winblad and DAG Ventures, bringing the company’s total funding to $84 million. One of several business intelligence software startups to receive funding in recent months, including Tidemark, GoodData and Domo, Birst plans to bring its hybrid cloud/on-premise service to Europe, Asia and the Middle East. Its customers include American Express, Cisco and Samsung. ([AllThingsD](http://www.allthingsd.com)) GoodData: 5/13

**Stripe partnering with Kabbage to make frictionless loans to e-tailers**
Payment processor Stripe and web-based lender Kabbage will connect to provide more complete financial services to small businesses. Kabbage provides working capital financing to small businesses, primarily online retailers; by bundling its services with Stripe’s the company can speed approvals for short-term loans by leveraging customers’ payment histories.

**Twitter’s Vine video app reaches 40 million users**
Despite competition from Facebook’s Instagram Video, Vine tripled its customer base from 13 million users in May 2013. The growth was fueled partly by the application’s release on Android operating systems in early June. Twitter did not reveal what proportion are active users. ([Engadget](http://www.engadget.com)) FB: 7/13 Twitter: 4/13

**SugarCRM receives $40 million funding from Goldman Sachs**
A significant investment from Goldman Sachs will accelerate the company’s growth in Asia and build out development teams. This contribution brings the nine-year-old CRM software developer’s total funding to $119 million. CEO Larry Agustin disclosed the company is planning on an IPO but did not offer a timeframe. ([VentureBeat](http://www.venturebeat.com)) SugarCRM: 4/13
**Powa gets $76 million in first funding round**
Previously financed through $20 million provided by CEO and founder Dan Wagner, the London-based startup received a large investment from an undisclosed source in its first external solicitation. Powa makes credit card readers for mobile devices; it has also been working on an integrated mobile payments-based e-commerce platform that leverages augmented reality innovations. Users can photograph products that Powa identifies via image recognition and visual search technology to facilitate online purchases. The firm competes with Stripe, Square and eBay’s PayPal. (VentureBeat) EBAY: 7/13 Square: 6/13 Stripe: 7/12

**JustFab and ShoeDazzle merging, will hold 15% share of 18-35 female demographic**
The combined company possesses 33 million total members and 15% of the footwear market in the 18-35 female demographic, making it the largest fashion commerce player in the world. The brands will remain separate but share resources for improved economies of scale, combining for an estimated $400 million in revenue for 2014. The firm’s lone competitor in the space will be BeachMint’s ShoeMint brand. (TechCrunch) BeachMint: 8/13

**Vevo signs deals with Apple and Samsung for online music video channel**
A joint venture between Sony and Vivendi, music video distributor Vevo will provide a 24–hour channel plus on-demand content available through Apple TV and Samsung smart TVs. The move diversifies Vevo’s content away from YouTube as the company must share up to nearly 50% of ad revenue with Google, which it recently sold a 10% stake to. About two-thirds of Vevo's streams are viewed on YouTube currently. (WSJ) GOOG: 7/13 Vevo: 7/12

**Box Inc. increases free storage to 10GB, adds entry-level 100GB plan**
The cloud storage provider now offers a 100GB plan to small businesses for $5.00 monthly and a higher 10GB cap on free storage, giving the company a five-tiered pricing scheme. Box focuses on enterprise and boasts 180,000 customers with expectations of 100% revenue growth in 2013. The company competes against Dropbox, Google's Drive and Microsoft's SkyDrive. (TechCrunch) GOOG: 7/13 Box: 4/13 Dropbox: 2/13

**Maker Studios acquires online video site Blip**
The acquisition gives Maker Studios its own online video player, enabling distribution of its video content independent of YouTube. Google takes a healthy portion of ad revenue generated through its videos, leading many content providers to diversify away from the platform to improve margins. Maker acquired Blip using stock and cash and plans to maintain it as a separate brand. GOOG: 7/13

**Nextdoor launches mobile app on Android**
Local social network Nextdoor introduced its Android analogue three months after launching an iPhone app. Mobile applications account for 20% of the network’s content and have improved traction for the service, which includes 18,000 neighborhoods and is growing about 3% weekly. Mobility enables the service to act as a community watch, with users alerting each other of potential threats. Nextdoor: 2/13

**Uber receives $361.2 million from Google Ventures, TPG Capital and Benchmark Capital**
The investment applies a pre-money valuation of $3.5 billion to the car-hailing service. Google Ventures was the largest participant, contributing $258 million and exhausting 86% of its annual capital allocation. The Series C round was divided into two levels, with Google and Benchmark receiving C-1 preferred shares at $142.54, and TPG purchasing C-2 preferred shares at $114.03. Reports indicate that Google CEO Larry Page was instrumental in the agreement (AllThingsD) GOOG: 7/13 Uber: 8/12
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Covered Companies Mentioned in this Report (priced intra-day August 27, 2013)

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Neutral: Expect the total return of the stock to perform in-line with the median total return of the analyst’s (or the analyst’s team) coverage universe over the next 6-12 months.

Underperform: Expect the total return of the stock to underperform relative to the median total return of the analyst’s (or the analyst’s team) coverage universe over the next 6-12 months.

The Investment Ratings are based on the expected performance of a stock (based on anticipated total return to price target) relative to the other stocks in the analyst’s coverage universe (or the analyst’s team coverage).*

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<tbody>
<tr>
<td>Outperform: 54%</td>
<td>Outperform: 15%</td>
</tr>
<tr>
<td>Neutral: 41%</td>
<td>Neutral: 1%</td>
</tr>
<tr>
<td>Underperform: 5%</td>
<td>Underperform: 0%</td>
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The Distribution of Ratings is required by FINRA rules; however, WS’ stock ratings of Outperform, Neutral, and Underperform most closely conform to Buy, Hold, and Sell, respectively. Please note, however, the definitions are not the same as WS’ stock ratings are on a relative basis.

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Wedbush Equity Research Disclosures as of August 28, 2013

<table>
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<tr>
<th>Company</th>
<th>Disclosure</th>
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<tr>
<td>eBay</td>
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<td>Facebook</td>
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</table>

Research Disclosure Legend
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2. WS managed a public offering of securities within the last 12 months.
3. WS co-managed a public offering of securities within the last 12 months.
4. WS has received compensation for investment banking services within the last 12 months.
5. WS provided investment banking services within the last 12 months.
6. WS is acting as financial advisor.
7. WS expects to receive compensation for investment banking services within the next 3 months.
8. WS provided non-investment banking securities-related services within the past 12 months.
9. WS has received compensation for products and services other than investment banking services within the past 12 months.
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