

# PEREGRINE SYSTEMS

DEVELOPS GROUNDBREAKING  
IT MANAGEMENT SOFTWARE  
IN PARTNERSHIP WITH ELDER RESEARCH

Peregrine Systems advanced to the forefront of the IT management industry by partnering with Elder Research data mining and software development experts to develop its DecisionCenter software. IT executives can now accurately predetermine how changes made to staff and infrastructure resources will affect business.

## INDUSTRY

- » IT Management

## BUSINESS NEED

- » Design a product to determine optimal IT staffing for very large organizations

## SOLUTION

- » Built DecisionCenter software to simulate and optimize the effects of potential changes within an organization
- » Technical and business objectives exceeded on time and within budget
- » DecisionCenter tool helped lead to the company's acquisition by HP

## BENEFIT

- » Enabled IT executives to accurately determine business impact of staffing and infrastructure resources changes

## BUSINESS NEED

Peregrine Systems decided to develop software that would combine data mining, simulation, and optimization to deliver a new echelon of services and features to the IT management marketplace. They envisioned groundbreaking software that would support "what-if" scenarios to help CIOs determine in advance how staffing and infrastructure changes would affect their businesses.

The idea was to enable management to optimize their company's IT environment through the use of predictive software, a long-overdue change from the "reactive" approach then widely practiced. Peregrine's product would enable management to be proactive in implementing decision-making software that could actually learn from real and simulated input, as opposed to merely reflecting unalterable past events. The concept, which Peregrine would name DecisionCenter, proved revolutionary, and some industry analysts believe it played a key role in HP's 2005 decision to acquire Peregrine.

## KEY CHALLENGES

Before the project had a name, and long before HP knew of its existence, Peregrine had to find someone who could bring their concept into reality. Senior level executives knew they had a difficult challenge ahead, one that demanded a level of expertise offered only by top practitioners in the field. The project required a team of data mining professionals and software developers who could accomplish something as yet unknown in the industry. Elder Research was a natural choice. "Plenty of firms claim to do data mining," stated one top level executive who worked with Elder Research on an earlier project. "In my experience, Elder Research offers the total package: excellent credentials, strong statistical and data mining skills, the initiative to anticipate and act upon our needs, critically compelling and concise verbal and written communications, strong client management skills, and a bias for action."

"Elder Research was instrumental in developing key concepts in our approach to data mining for the DecisionCenter project. Because they work as a team, they were able to identify the right person for the job. Elder Research brings a wide range of experience to the table that would be difficult to find in a single hire."

Barbara Newton,  
Principal Engineer,  
Peregrine Systems

## Contact Us

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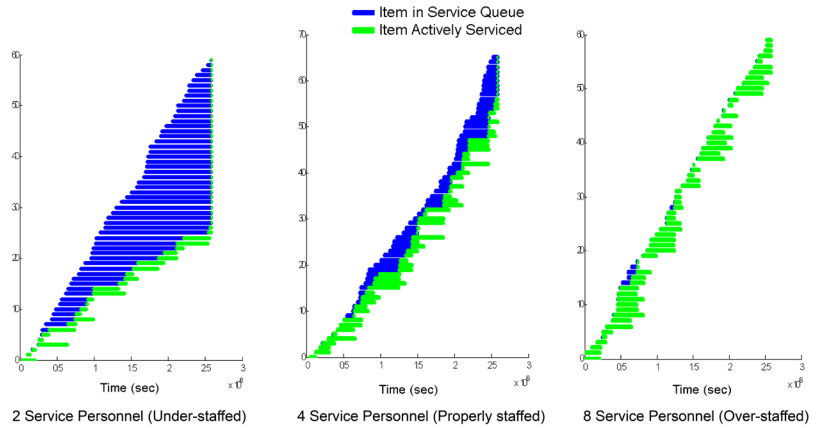
## Office Locations

Charlottesville, VA  
Washington, DC  
Baltimore, MD  
Raleigh, NC  
London, UK

# THE SOLUTION

Researchers and engineers at Elder Research were primed for the type of challenge posed by Peregrine. Working directly with Peregrine executives and engineers in San Diego, Elder Research developed a Java library that would become the DNA of DecisionCenter.

This library, codenamed the "Analytic Engine" by Peregrine, captured data from Peregrine's existing database products and simulated and optimized the effects of changing staffing levels, organization structure, hardware, software, and service levels. This effort leveraged Elder Research's existing experience in the areas of data mining, discrete event simulation, and simulated annealing to quickly deliver a solid solution.

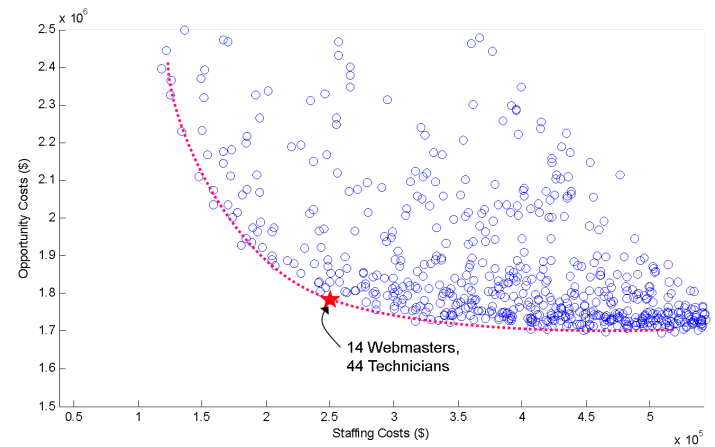
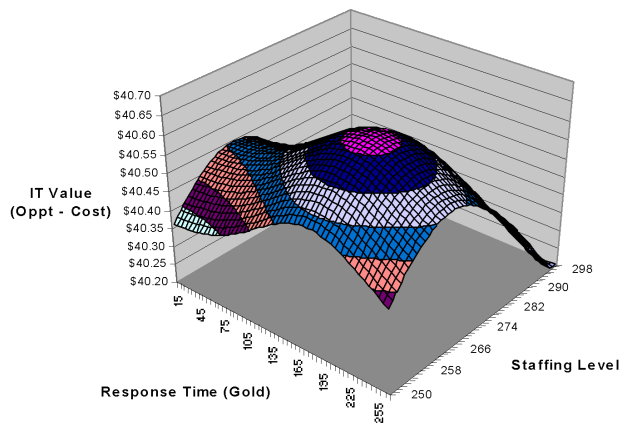


Elder Research used simulations to predict real-world complex behavior calibrated to known scenarios such as staff cost versus response time for service personnel.

# RESULTS

With the help of Elder Research's creativity and technical expertise, the challenging development goals for DecisionCenter were met on time and under budget. According to Tom Tobin, former VP of Product Development at Peregrine and originator of the DecisionCenter project, "Elder Research's experience in financial and marketing analytics gave them the ability to solve our complex optimization problems from a unique perspective and helped Peregrine establish thought leadership in our market."

Shortly after Peregrine's 2005 announcement of plans to unveil its revolutionary new software, HP announced its decision to acquire Peregrine and with it, DecisionCenter. Industry analysts in early 2006 predicted that Peregrine's contribution of DecisionCenter alone would lift both HP's image as well as its management software portfolio. In line with predictions, HP reported significant increases in sales of the OpenView software suite by the 2nd quarter of 2006.<sup>1</sup>



Determining the optimal staffing solution required decisions across many dimensions (pink area shows the optimal operating point for a given set of constraints).

The "efficient frontier" of optimal solutions. The boundary of solutions defines the set of operating points which are potentially most efficient.

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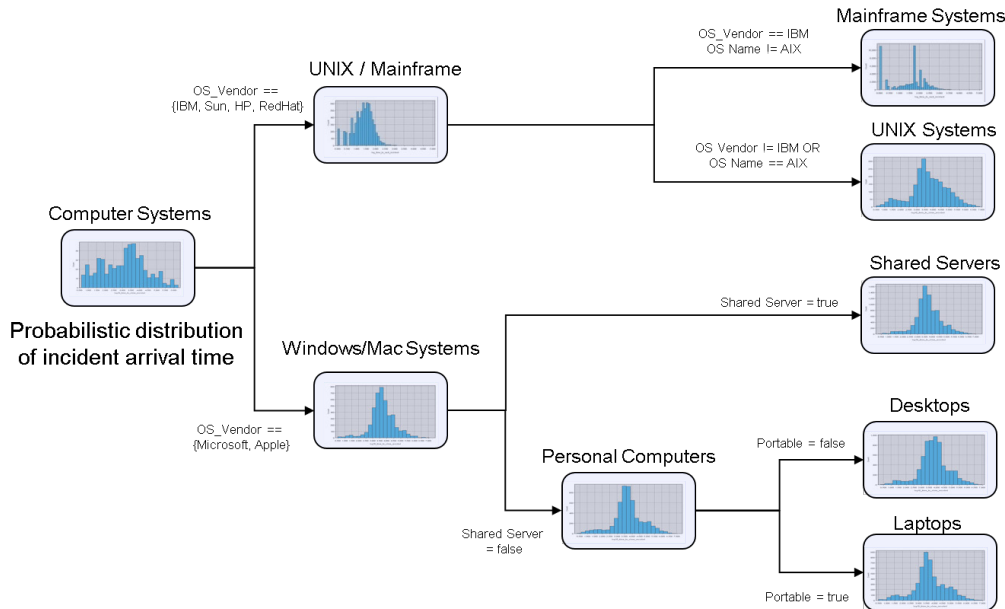
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## CUSTOMER INFORMATION

Peregrine Systems, previously based in San Diego, California, was acquired by HP in late 2005. One of the most experienced IT management vendors in the market, Peregrine developed enterprise software solutions in the asset management, change management and help desk markets.



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Tom Tobin,  
Former VP of  
Product Development,  
Peregrine Systems

Asset Class determination enabled prediction models based on specific variables.

## CITATIONS AND RELATED ARTICLES

<sup>1</sup> HP Reports Second Quarter 2006 Results  
<http://www.webcitation.org/5LVApjTWK>

“HP Buys Peregrine with Eye on Enterprise Management By Keith Regan,” E-Commerce Times, September 19, 2005.  
<http://www.webcitation.org/5LVAmy0U7>

“Peregrine Details Optimal IT Vision,” Computer Reseller News, Dan Neel, June 13, 2005.  
<http://www.webcitation.org/5LVAfaTPf>

“HP Earns High Marks from Independent Research Firm for IT Asset Management Software,” HP Press Release, August 4, 2006.

<http://www.webcitation.org/5LVAckAvO>

“The Real Story about HP’s Software Offerings”  
<http://www.webcitation.org/5LVAZUz05>

## ABOUT ELDER RESEARCH

Elder Research is a recognized leader in the science, practice, and technology of advanced analytics. We have helped government agencies and Fortune Global 500® companies solve real-world problems across diverse industries. Our areas of expertise include data science, text mining, data visualization, scientific software engineering, and technical teaching. With experience in diverse projects and algorithms, advanced validation techniques, and innovative model combination methods (ensembles), Elder Research can maximize project success to ensure a continued return on analytics investment.

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