



Search News & Quotes Sub

HOME BUSINESS MARKETS INDIA WORLD TECH OPINION BREAKINGVIEWS MONEY SPORT & LIFE PICTURES VIDEO



Warren Buffett Tells You How to Turn \$40 Into \$10 Million
[Read More](#)



It's never too early or too late to start saving for retirement.
[Find Out More](#)



Our toolkit helps you understand the essentials of estate planning.
[Get our free kit.](#)

Synopsys' CODE V Enhances Aspheric Lens System Design

Tue Mar 15, 2011 6:30pm IST

* Reuters is not responsible for the content in this press release.

0 COMMENTS |

Synopsys' CODE V Enhances Aspheric Lens System Design

Available from Synopsys as part of its acquisition of Optical Research Associates, CODE V Version 10.3 is now generally available

Highlights:

- Support for Q-type aspheric surfaces that deliver superior cost control and manufacturing benefits
- Enhanced surface conversion capabilities
- Efficient new algorithm for automatic determination of optimum locations for aspheric surfaces in the lens system
- Built-in aspheric constraints to control slope and sag during design optimization

PR Newswire

MOUNTAIN VIEW, Calif., March 15, 2011

MOUNTAIN VIEW, Calif., March 15, 2011 /PRNewswire/ -- Synopsys, Inc. (Nasdaq: SNPS), a world leader in software and IP for semiconductor design, verification and manufacturing, today announced the availability of enhancements to its CODE V® optical design and analysis software. CODE V 10.3 delivers new design and analysis capabilities that enable optical designers to more easily take advantage of the unique image quality and cost benefits that aspheres offer.

Aspheric surface shapes are used to help reduce or eliminate imperfect or blurred images in optical systems. While surfaces with spherical shapes are easier to make, many more spherical surfaces are generally needed to reduce image blurring compared to aspheric surfaces. This means that an aspheric lens can be used to replace multiple spherical lenses, thereby creating a device that is smaller, lighter and potentially less expensive.

"Developments in optical fabrication and metrology are making the use of aspheres in optical design more cost effective," said George Bayz, vice president and general manager of the Optical Solutions Group at Synopsys. "A key to achieving these cost savings is ensuring during initial design phases that the aspheres can be manufactured as designed. CODE V 10.3 delivers capabilities that help designers add aspheres to a system with the confidence that their designs will be both manufacturable and within budget."

"The new aspheric design tools in CODE V helped me simplify an existing design while maintaining the required image quality," said Jim Cornell, senior optical designer, Corning

MOST POPULAR

MOST SHARED

1. [India hikes rail fares ahead of new budget](#)
20 Jun 2014
2. [Siblings of Duchess of Cambridge reach final leg of U.S. bike race](#)
2:54am IST
3. [U.S. lawmakers seek to honour Modi with address to Congress](#)
12:20am IST
4. [UPDATE 1-CDC anthrax scare raises worries in U.S. Congress about lab safety](#)
5:23am IST
5. [Facebook website returns to service after crash](#)
19 Jun 2014

THE FUTURE OF FINANCE STARTS WITH YOU.

[Learn how](#)

Follow Reuters

[Facebook](#)

[Twitter](#)

[RSS](#)

[YouTube](#)

RECOMMENDED VIDEO



(GRAPHIC IMAGES) ISIL claim to kill hundreds ...



Bond girl turns musical actress for 'Made in D...



Monkeys force residents to be priso...



Iraq targets insurgents in Mosul, ISIL moves ...

Advanced Optics. "In particular, the program's fast, efficient surface conversion and optimization capabilities resulted in an improved system with fewer aspheric elements."

Support for Q-type Aspheric Surfaces

CODE V 10.3 adds support for new native aspheric surfaces based on mathematical formulations recently published by Dr. G.W. Forbes of QED Technologies. These Q-type aspheric surfaces offer many advantages over traditional polynomial-based aspheres for lens design optimization and tolerancing. For example, the Q-type surfaces can be more easily constrained during optimization to improve manufacturability and reduce cost. In addition, CODE V's fast wavefront differential tolerancing feature supports tolerancing on Q-type polynomial coefficients, which is useful for evaluating system performance and manufacturability.

Enhanced Surface Conversion Capabilities

CODE V's enhanced surface conversion capabilities make it easy to switch back and forth between the Q-type formulations and traditional aspheric surface representations. This allows designers to harness the power of the new formulations while maintaining compatibility with established fabrication processes.

Asphere Expert Tool

CODE V's Asphere Expert tool saves users time and effort by automatically finding optimal asphere locations in the lens system. The tool uses a unique, highly efficient algorithm that takes into account both aspheric slope departure limits and weighted constraints when computing recommended aspheric surface locations. Users have the option to convert selected surfaces to aspheres and optimize the resulting system for best final performance.

Built-in Aspheric Constraints for Design Optimization

New built-in optimization constraints in CODE V allow users to directly control the sag or slope variations of Q-type aspheres to maintain manufacturability of the lens system. For example, these constraints give users the ability to prevent the production of designs where the sag of the aspheric parts is too large for interferometric testing, and to ensure that designs do not require removal of an excessive amount of material during polishing phases. In addition, a new macro function allows aspheric surfaces to be evaluated and optimized for testability using ZYGO's VeriFire Asphere interferometer metrology system.

Availability

The CODE V 10.3 release is available now and can be obtained by emailing info@opticalres.com.

About CODE V

Formerly an Optical Research Associates (ORA®) product, CODE V is an optical engineering and design software solution that supports the optimization, analysis and tolerancing of image-forming optical systems and free-space photonic devices. ORA is now part of Synopsys, Inc. For more information visit <http://www.synopsys.com/Tools/OpticalDesign>.

About Synopsys

Synopsys, Inc. (Nasdaq:SNPS) is a world leader in electronic design automation (EDA), supplying the global electronics market with the software, intellectual property (IP) and services used in semiconductor design, verification and manufacturing. Synopsys' comprehensive, integrated portfolio of implementation, verification, IP, manufacturing and field-programmable gate array (FPGA) solutions helps address the key challenges designers and manufacturers face today, such as power and yield management, system-to-silicon

Sponsored Financial Content



Warren Buffett Tells You How to Turn \$40 Into \$10 Million *Motley Fool*

How much should you have in your 401k based on your age? *Personal Capital*

A review of the bright long-term outlook for Asia *Aberdeen Asset Managers*

Our toolkit helps you understand the essentials of estate planning. *Wells Fargo Advisors*

Don't buy a stock unless Zacks says it's a Strong Buy *Zacks*

trust women
18-19 NOVEMBER 2014 - LONDON

SAVE 25% TODAY

BUY YOUR TICKET ▶

verification and time-to-results. These technology-leading solutions help give Synopsys customers a competitive edge in bringing the best products to market quickly while reducing costs and schedule risk. Synopsys is headquartered in Mountain View, California, and has approximately 70 offices located throughout North America, Europe, Japan, Asia and India. Visit Synopsys online at <http://www.synopsys.com/>.

Synopsys, CODE V and ORA are registered trademarks of Synopsys, Inc. All other trademarks or registered trademarks mentioned in this release are the intellectual property of their respective owners.

Editorial Contacts:

Sheryl Gulizia
 Synopsys, Inc.
 650-584-8635
sgulizia@synopsys.com

Lisa Gillette-Martin
 MCA, Inc.
 650-968-8900 x115
lgmartin@mcapr.com

SOURCE Synopsys, Inc.

More From Reuters

- [Chinese official shot dead in Tibetan area](#) | 18 Jun
- [CORRECTED-CDC anthrax scare conjures up real Friday the 13th nightmare](#) | 20 Jun
- [TREASURIES-Prices fall as weak TIPS auction weighs](#) | 20 Jun
- ['Consequences' for Spain after exit - Del Bosque](#) | 18 Jun
- [World peace declining after long post-WWII improvement: study](#) | 18 Jun

Sponsored Financial Content



- [How much should you have in your 401k based on your age?](#) *Personal Capital*
- [Keep up-to-date with the world's ever changing investment landscape](#) *Aberdeen Asset Managers*
- [Warren Buffett Tells You How to Turn \\$40 into \\$10 Million](#) *Motley Fool*
- [Our toolkit helps you understand the essentials of estate planning.](#) *Wells Fargo Advisors*
- [Don't buy a stock unless Zacks says it's a Strong Buy](#) *Zacks*

From The Web

Sponsored Content by Taboola



[Leaked: Apple's next smart device \(shocking\)](#)
The Motley Fool



[Do-it-yourself Free Testosterone Solution](#)
Nugenix



[Vladimir Putin Called: He Wants His Warships](#)
Fortune.com



[How Wealthy People Use Credit Cards To T...](#)
Next Advisor Daily



[Little Known Way to Pay Off Mortgage](#)
Lifestyle Journal



[10-Million Square Foot Tech Base Revealed](#)
Money Morning



[Better Think Twice About That Mortgage ...](#)
The Easy Loan Site



[10 Exciting New Cars for 2014](#)
InsiderCarNews.com

Comments (0)

This discussion is now closed. We welcome comments on our articles for a limited period after their publication.

[Back to top](#)

Reuters.com [Business](#) | [Markets](#) | [India](#) | [Technology](#) | [Opinion](#) | [Money](#) | [Pictures](#) | [Videos](#) | [Site Index](#) | [Mobile](#)

Legal [Bankruptcy Law](#) | [California Legal](#) | [New York Legal](#) | [Securities Law](#)

Support & Contact [Support](#) | [Corrections](#)

Connect with Reuters [Twitter](#) [Facebook](#) [LinkedIn](#) [RSS](#) [Newsletters](#)

About [Privacy Policy](#) | [Terms of Use](#) | [AdChoices](#) | [Copyright](#)

Thomson Reuters is the world's leading source of intelligent information for businesses and professionals.

Our Flagship financial information platform incorporating Reuters Insider

An ultra-low latency infrastructure for electronic trading and data distribution

A connected approach to governance, risk and compliance

Our next generation legal research platform

Our global tax workstation

[Thomsonreuters.com](#)

[About Thomson Reuters](#)

[Investor Relations](#)

[Careers](#)

[Contact Us](#)

Thomson Reuters is the world's largest international multimedia news agency, providing investing news, world news, business news, technology news, headline news, small business news, news alerts, personal finance, stock market, and mutual funds information available on Reuters.com, video, mobile, and interactive television platforms. Thomson Reuters journalists are subject to an Editorial Handbook which requires fair presentation and disclosure of relevant interests.

NYSE and AMEX quotes delayed by at least 20 minutes. Nasdaq delayed by at least 15 minutes. For a complete list of exchanges and delays, please click here.