



a presentation for

MIT ENTERPRISE FORUM

June 2002

George G. Mueller - Chairman & CEO

Light
your
colorful
mind

Outline

- My Background
- Color Kinetics Overview
- Challenges & Methods for Winning in the Marketplace

My Background

- 32 years old from an entrepreneurial family in Michigan
- Carnegie Mellon University (CMU)
 - Dual major in Electrical and Computer Engineering, Fine Art minor
 - Researched in the CMU Field Robotics Center
 - CMU Business School – left to start Internet Securities (ISI) in 1994
- ISI: 240 people in 19 countries. Acquired by Euromoney
- Raised 9 rounds of private equity and venture capital (\$65+M)
- 5 business school case studies on ISI and Color Kinetics
- 6 US Patents, over 80 filings pending

A Quote...

“If you had it as a kid it’s an appliance and if it was developed since then it’s technology.”

Market Opportunity

- US illumination (bulb, tube and fixture) market estimated to grow from \$22 billion in 2000 to \$26 billion in 2005
- In addition, ancillary markets such as power supplies and controllers also represent multi-billion dollar markets
- Rapid market penetration*
 - 20% of all illumination by 2010
 - 90% of all illumination by 2020

* Source: Arthur D. Little study for U.S. Department of Energy

Color Kinetics

- Founded in 1997; Leader in Intelligent Solid State Illumination Technologies
- Creator of Chromacore® a patented technology which generates millions of colors and colored lighting effects via microprocessor-controlled red, green and blue LEDs
- Dominant intellectual property position
 - 8 US Patents; 80+ filings pending
- Provide products and solutions to market through own brand, private label, OEM and licensing
- \$48M in private equity financing
- Projected 2002 revenues of \$30+ million

Color Kinetics–Technology

- Key benefits of our technology include:
 - Microprocessor controlled intelligence
 - Simple networking of illumination systems
 - Easy reproduction of Color (>16.7 million colors)
- Based on LED technology:
 - 100,000 hours source life ⇒ 11.4 years of use
 - Low power consumption ⇒ Lower energy costs
 - Low heat output ⇒ No heat damage
 - No moving parts ⇒ Virtually no maintenance
 - No UV emissions ⇒ Safe for artwork and fabrics

Core Markets

- Initially targeted Theater & Entertainment
- Later moved into Retail & Visual Merchandising
- Recently entered Commercial & Residential Architecture, Consumer Products and OEM

COMPLEX

SIMPLE

**THEATRICAL/
ENTERTAINMENT**

RETAIL/ENTERTAINMENT

**VISUAL
MERCHANDISING**

**COMMERCIAL
ARCHITECTURE**

RESIDENTIAL

- Professional
- High Involvement
- High \$\$\$
- Specialized

- Consumer
- Simple to use
- Mass market

CORE MARKET FOCUS

Winning in the Marketplace

- **CK Customers:**

Disney, Saks Fifth Avenue, Sony Loews, Nine West, Macy's, NYS Bridge Authority, Ernst & Young, W Hotels, Rainforest Café, Northwest Airlines, Ford, Volkswagen, Marriott Corporation, Sands Casino, Royal Caribbean, Harrah's, Limited Too, Brookstone, Metropolitan Museum of Art, General Motors

- **CK Retailers:**

Target, Toys "R" Us, Discovery Channel Stores, Radio Shack, Spencer Gifts, National Record Mart, Martha by Mail, Newbury Comics, Electronics Boutique, REI, Sam Goody, Longs Drugs

- **CK Awards:**

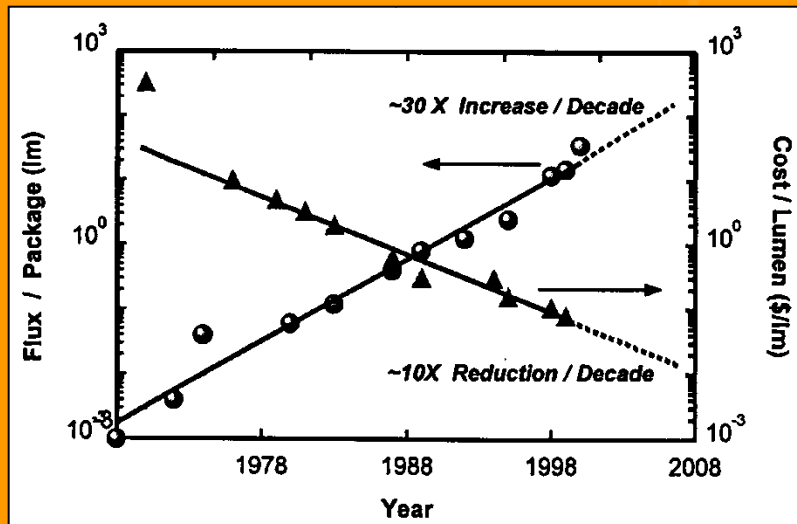
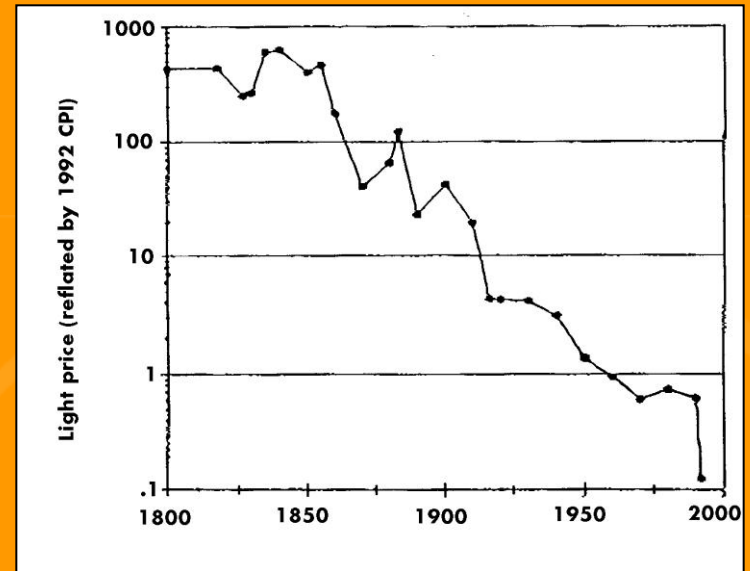
Smithsonian – Permanent Exhibit
2002 MIT Tech Review TR100
D&T New England Fast 50 – Rising Star
Finalist, E&Y Entrepreneur of the Year

CK's Future

- World-wide Lighting Market = \$40 B to \$60 B.
- Electric lighting consumes about 20% of the electricity used in US buildings.
(2001: US Department of Energy)
- Solid State Lighting can create a new lighting industry of over \$50 B/year worldwide.
(2001: Optoelectronics Industry Development Association Tech Roadmaps)
- Estimated that by 2025 SSL could reduce the global amount of electricity used for lighting by 50%.
(2001: Optoelectronics Industry Development Association Tech Roadmaps)

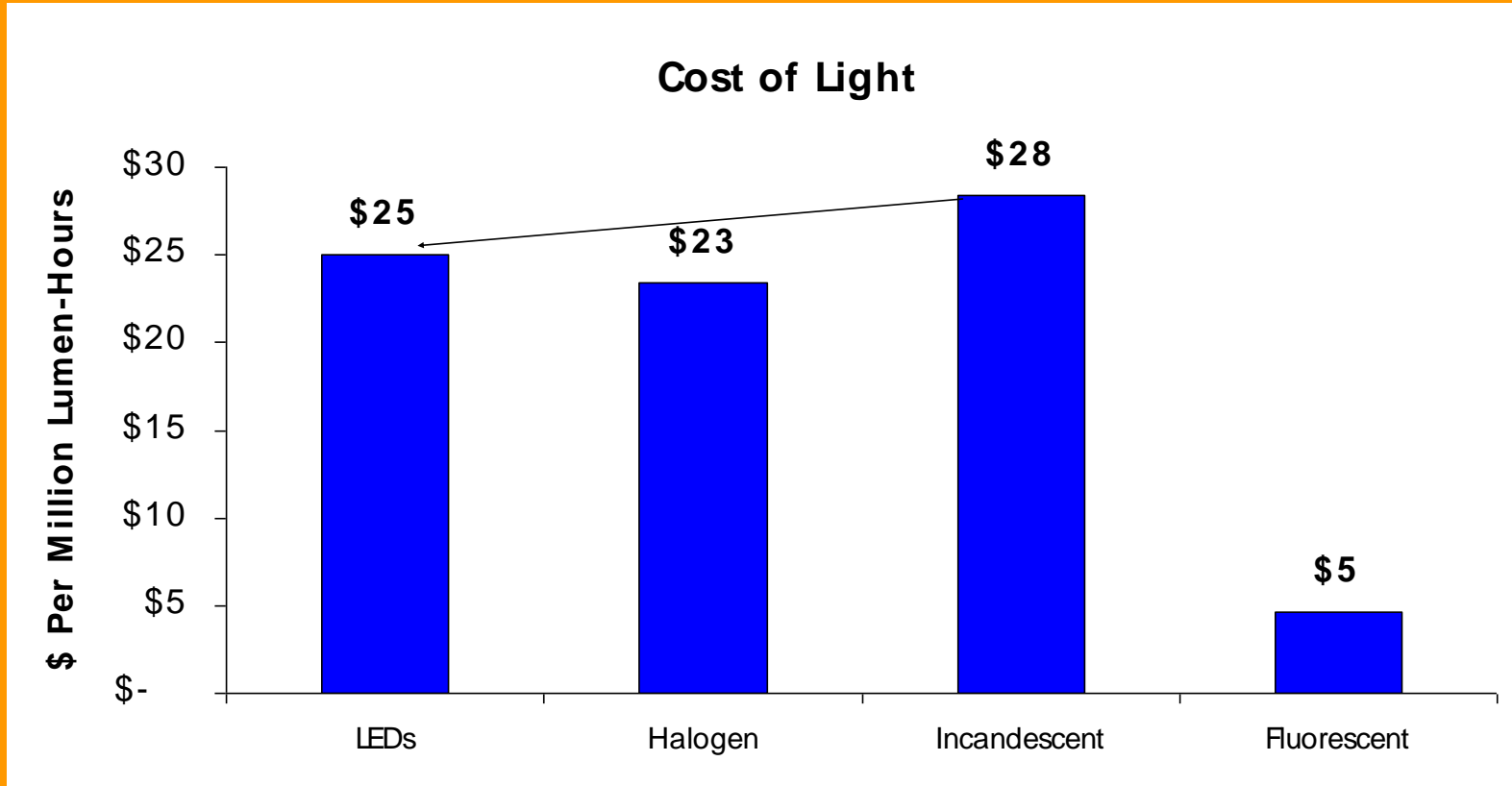
History of Lighting Innovation

- Between 1800 – 1992, there has been a 900x decrease in the cost of light.¹ Major shifts have occurred with the introduction of new, disruptive technologies that replaced incumbent technologies.



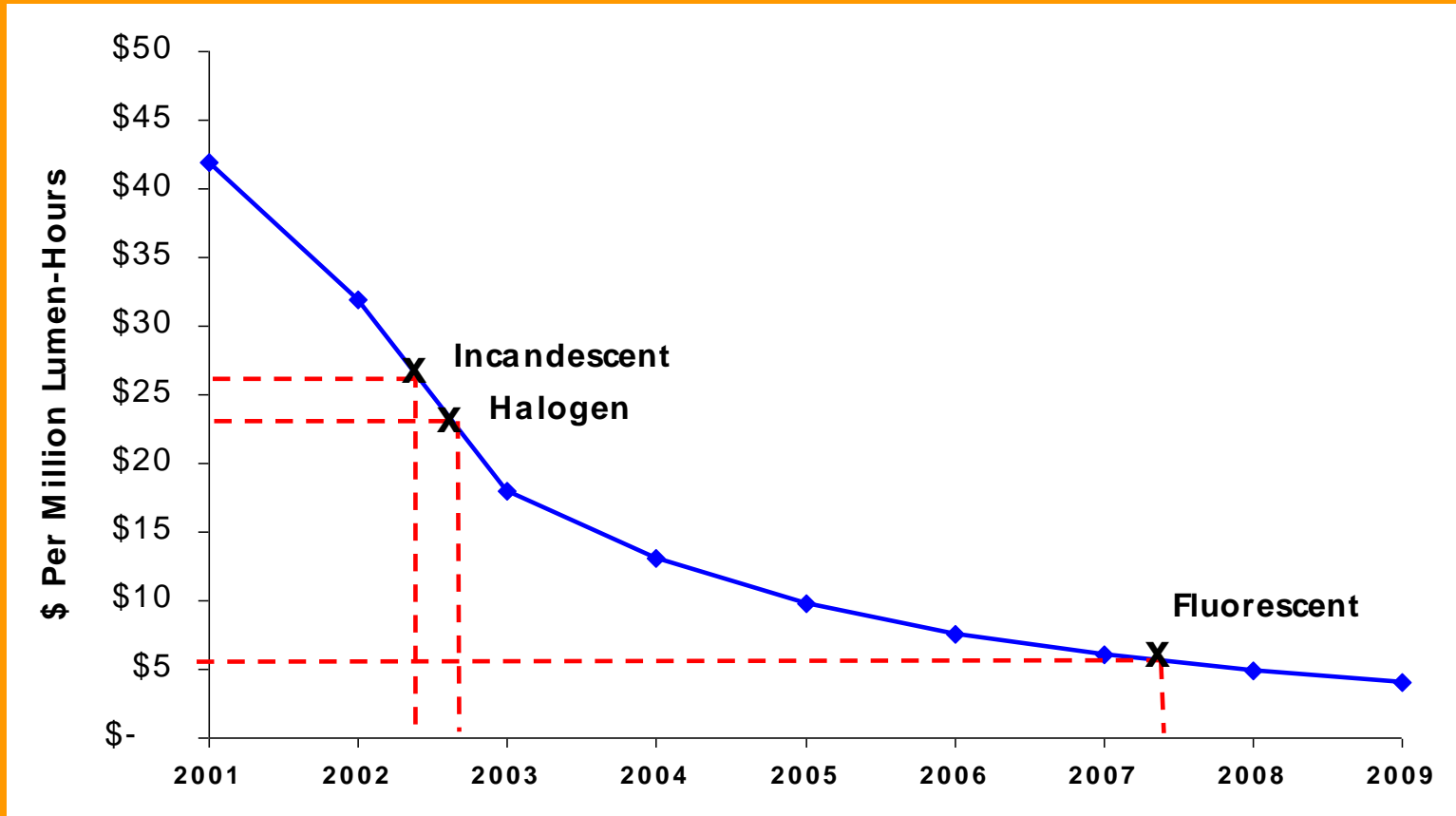
- Over the last 4 decades, there has been a 1,000x increase in the output (in lumens) of LEDs.
- Flux per package increased at 30x/decade, cost/lumen decreased at 10x/decade.² This trend is accelerating!

Cost Of Light



- LED Fixture Assumptions: 500 lumens, 48W, 75K hour life & MSRP \$300
- Fluorescent does not include ballast costs
- For All: \$0.10/kWh and \$15 per hour replacement labor

Projected Cost of Light



- Gas & Glass bulbs only without ballasts and fixtures
- LEDs performance and price as per trends & 75k hour life.
- \$0.10/kWh and \$15 per hour replacement labor

Developing a niche in a market with significant competition

- Color Kinetics competes in a big industry with billion \$ players. (GE, Philips, Osram Sylvania)
- Lighting is a commodity market – it's slow and boring with little technology advancement. It's filled with “Brass, Gas and Glass” companies.
- Speed is imperative.
- Intellectual property is key. Own the future market space.
- Start in a market segment where the industry giants are least likely to go and with customers that they can afford to lose.

Marketing a Disruptive Technology

- Revolutionary change = opportunity
- Disruptive technologies are discredited by the professionals, therefore education is imperative.
 - You have to become an evangelist and educate the market through intensive marketing efforts. Tradeshow, seminars, press.
- “Cross the chasm” in a market where there are early adopters who will buy your beta technology.
 - Listen to the early adopters for product feedback and guidance.
 - Latch on to “champions” assist them in communicating to the market.
 - Get industry professionals talking: Influence the influencers.

Sales and Positioning Challenges

- Focus on smaller market segments where you can learn and make mistakes, then leverage successes to enter new markets.
- Start with a direct sales approach as only you and your company know and are passionate enough to bring to market something new.
- For a totally new technology, market education is key
 - Re-define the rules / metrics of competitive comparison
 - People resist change. Customers resist change. It's human nature to say "no" first.
 - Educate customers to "yes".

Summary

- Solid State Lighting (SSL)
 - Breakthrough technology in the lighting market
 - Disruptive technology
 - Color Kinetics is leading the way
- Selling and Marketing a Disruptive Technology
 - Professionals discredit new technologies
 - Market Focus
 - Education
 - Direct Sales
 - Intellectual Property
 - Entrepreneurial Speed

Here's to a bright & colorful future!

“Success is getting what you want, but happiness is wanting what you get.”

Thank You!

