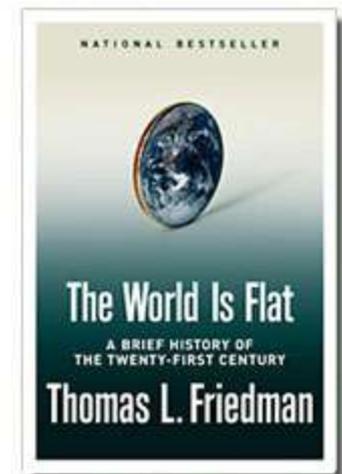


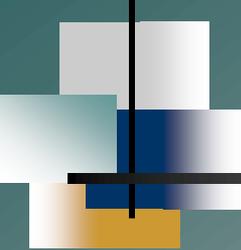
# Succeeding in a Flat World

Presented at the  
AIAA Career Enhancement Workshop  
January 2007

# Credit to Sources

- This presentation summarizes the arguments and writings of Thomas L. Friedman
- AIAA does not stand to profit from this promotion, we just thought it was a good book and want to share...
- Purpose of presentation
  - To inspire AIAA members to learn more about the emerging global marketplace
  - To introduce concepts of flat world and apply to the aerospace industry
- See last slide for where to find additional information

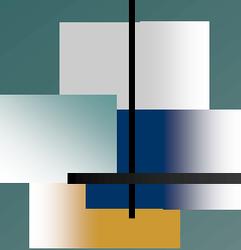




# What is a “Flat World?”

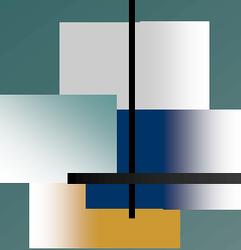
- Phrase made popular by Thomas L. Friedman
  - Author of “The World is Flat, A Brief History of the Twenty-First Century”
  - Foreign affairs columnist for NY Times
- The Flat World Defined
  - Global, web-enabled platform
  - Multiple forms of sharing knowledge and work
  - Irrespective of time, distance, geography and increasingly, language

**The global economic playing field is being leveled**



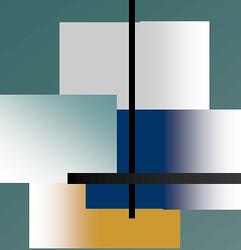
# The Three Great Eras of Globalization

- 1492 – 1820 Globalization 1.0
  - Exploration and colonization drive success
  - Countries think globally to thrive
- 1820 – 2000 Globalization 2.0
  - Collaboration between international companies
  - Companies must think globally to survive
- 2000 – Present Globalization 3.0
  - Individuals and small groups globalize
  - Driven by diverse group comprised of all nationalities



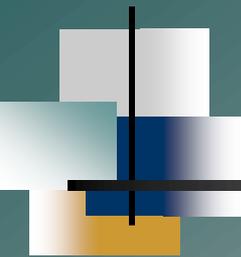
# Discussion Topics

- How the world became flat
  - Everyday examples
  - The 10 World “Flatteners”
  - The Triple Convergence
  - The Quiet Crisis
- What this means to us
  - Impact on jobs
  - Becoming an “untouchable”
  - Taking advantage of the flat world
- Where to learn more



# Everyday Examples

- Jet Blue Reservation System
  - Retirees and housewives take airplane reservations from their homes
- McDonald's Call Center
  - Drive-thru customers across the country give their order to a worker in Colorado Springs
- Indian Technicians and Engineers
  - Read X-rays, write software, provide administrative support to US companies from Bangalore
- Chinese Workers and Technicians
  - Japanese speaking Chinese workers provide backroom support to American and Japanese companies



# The 10 World Flatteners

## 1 11/9/1989: Berlin Wall came down

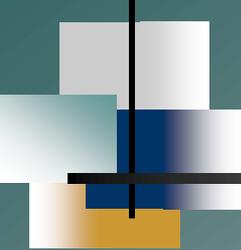
- Worldwide balance of power shifted to free markets
- Each outbreak of freedom stimulated another outbreak

## 2 8/9/1995: Netscape IPO

- Sparked the dot com boom and over-investment in fiber optic cable (connected the world)
- Dot com bust made cost of using fiber optic cable virtually free
- First commercial browser, invigorated internet use

## 3 Workflow Software Developed

- Software and standards developed that allow people to work together
- Created a global platform that enabled collaboration



# The 10 World Flatteners

## 4 Open-Sourcing

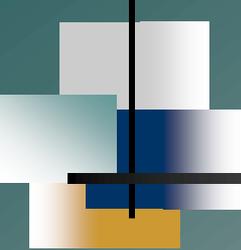
- Self-organizing collaborative communities
- Free code written by individuals and shared openly
- Peer review provides rewarding gratification

## 5 Out-Sourcing

- Any service, call center, business support operation, or knowledge work that can be digitized can be sourced globally
- Opportunity to seek cheapest, smartest, most efficient providers
- Invigorated by Y2K computer date crisis (India)

## 6 Off-Shoring

- Companies move entire factory or operation offshore to foreign country
- Same product produces in same way with cheaper labor, lower taxes, etc.
- Invigorated by China joining the World Trade Organization (Dec 2001)



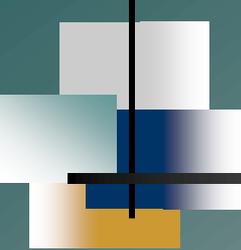
# The 10 World Flatteners

## 7 Supply-Chaining

- Wal-Mart pioneered global supply chain efficiency
- Wal-Mart trucks deliver products to stores, pick up goods from manufacturer on return to distribution center
- An item is purchased in Wichita, KS and another one is instantly produced in Beijing
- Prediction of hurricane causes specialized products to be shipped to affected stores (Pop Tarts, toys, beer)

## 8 In-Sourcing

- Logistics giants take control of customer supply chains
- UPS provides internal logistics support for other companies
- Toshiba laptops sent directly to UPS where a UPS employee repairs it and return ships to customer



# The 10 World Flatteners

## 9 Informing

- Search engines (Google, Yahoo!, etc) provide universal access to information
- Individuals empowered to find information

## 10 Steroids

- Wireless, VoIP, file sharing that enhance the collaboration tools
- Digital, mobile, virtual and personal technologies explode

# The Triple Convergence

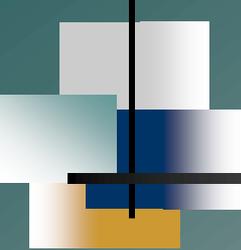
Vertical (command and control) value-creation model

All 10 flatteners converged in 2000  
and worked together to create the flat world

Horizontalization – Emergence of management  
practices and infrastructure to boost productivity

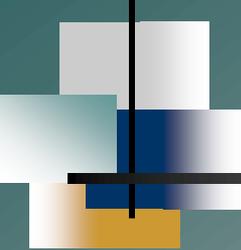
India, China, and former Soviet Empire  
are joining the Flat world (300 million people)

Horizontal (connect and collaborate) value-creation model



# The Quiet Crisis

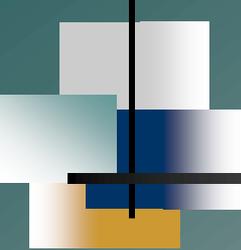
- Friedman argues that the US is in a “quiet crisis” caused by 3 issues
  - The Numbers Gap
    - US is no longer producing adequate number of educated workers and engineers
    - India and China overshadow US demographically
  - The Ambition Gap
    - Americans believe they are “entitled” to certain jobs
    - Some companies believe productivity higher in other countries
  - The Education Gap
    - US education system is not preparing young people for new types of work
    - Funding levels for education are inadequate



# Impact on Jobs

- Three types of jobs in current market
  - Fungible Jobs
    - Repetitive and skill-based work
    - Easily digitized and not tied to a particular location
    - Easily outsourced
  - Anchored Jobs
    - Must be performed in a particular location
  - Value-add Jobs
    - Require specialized skills and knowledge
    - Knowledge must be across a number of disciplines and deep

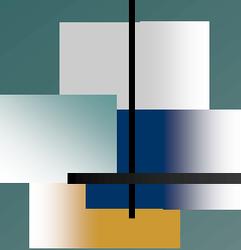
**The individual worker is responsible for managing his or her own career, risks, and economic security**



# Becoming an “Untouchable”

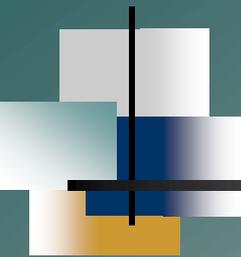
- Four types of workers in current market
  - Special Workers
    - Special people like sports stars, movie actors, etc.
  - Specialized Workers
    - Work cannot be outsourced
    - Skills in high demand and not fungible
  - Anchored Workers
    - Tied to a specific location
  - Really Adaptable Workers
    - Constantly acquire new skills, knowledge, expertise
    - Look for unique and creative components of job

**Untouchables are people whose jobs cannot be outsourced, digitized, or automated**



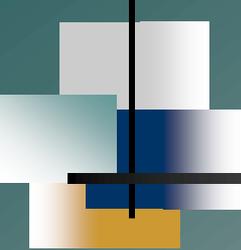
# Help Wanted Ads in a Flat World

- Great Collaborators and Orchestrators
  - Collaborating within and between companies
  - Managers who can work in 24/7 supply chains
- Great Synthesizers
  - Putting disparate and unusual things together
  - Example: Search engines require mathematicians and marketing experts
- Great Explainers
  - Ability to explain complex concepts with simplicity
- Great Leveragers
  - Optimizing the interface between people and machines



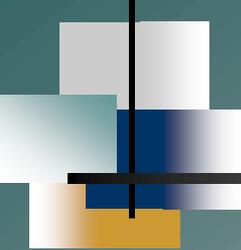
# Help Wanted Ads in a Flat World

- The Great Adapters
  - Employees must be adaptable and versatile
    - Specialists have deep skills and narrow scope
    - Generalists have shallow skills and broad scope
    - Versatilists apply depth of skill to widening scope through constant learning and growing
- The Green People
  - Industry of creating renewable energies and environmentally sustainable systems will grow
  - Three-billion people in China, India, and former Soviet Empire are joining the flat-world – will create more demand for energy and products
- The Great Localizers
  - Local businesses will still drive majority of jobs
  - Successful people will understand global infrastructure and adapt to local needs and demands



# Taking Advantage of a Flat World

- Utilize information resources
  - AIAA Electronic Library, other internet sources
- Utilize international network
  - Colleagues at Universities, industry partners
  - International members at AIAA conferences
  - Look for opportunities to learn from and collaborate with others
- Become Really Adaptable
  - Never stop learning
    - Participate in continuing education events
    - Conduct research, write a paper for AIAA Journal or Conference
  - Build a global network
    - Participate in AIAA conferences, section meetings, etc.
    - Become a member on an AIAA Technical Committee
    - Find a mentor
  - Take control of your own career



## Where to Learn More

- “The World is Flat – A Brief History of the Twenty-First Century” by Thomas L. Friedman, 2005.
- MIT Lecture by Thomas Friedman, May 16, 2005, available at the MIT Open Course website
- “The Untouchables: Finding the New Middle” by Thomas Friedman, available at [www.thesmarttechie.com](http://www.thesmarttechie.com)



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