

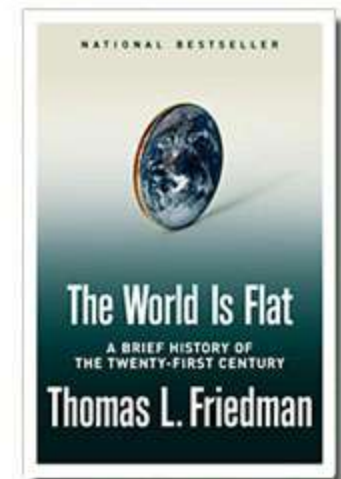


Succeeding in a Flat World

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



The World's Forum for Aerospace Leadership

