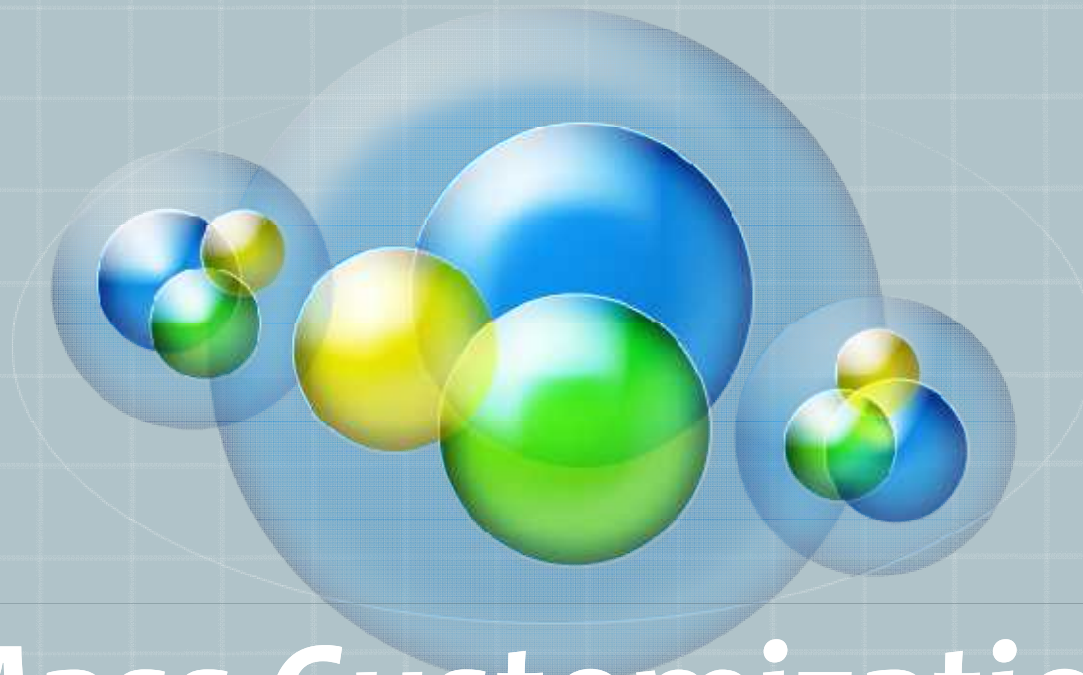




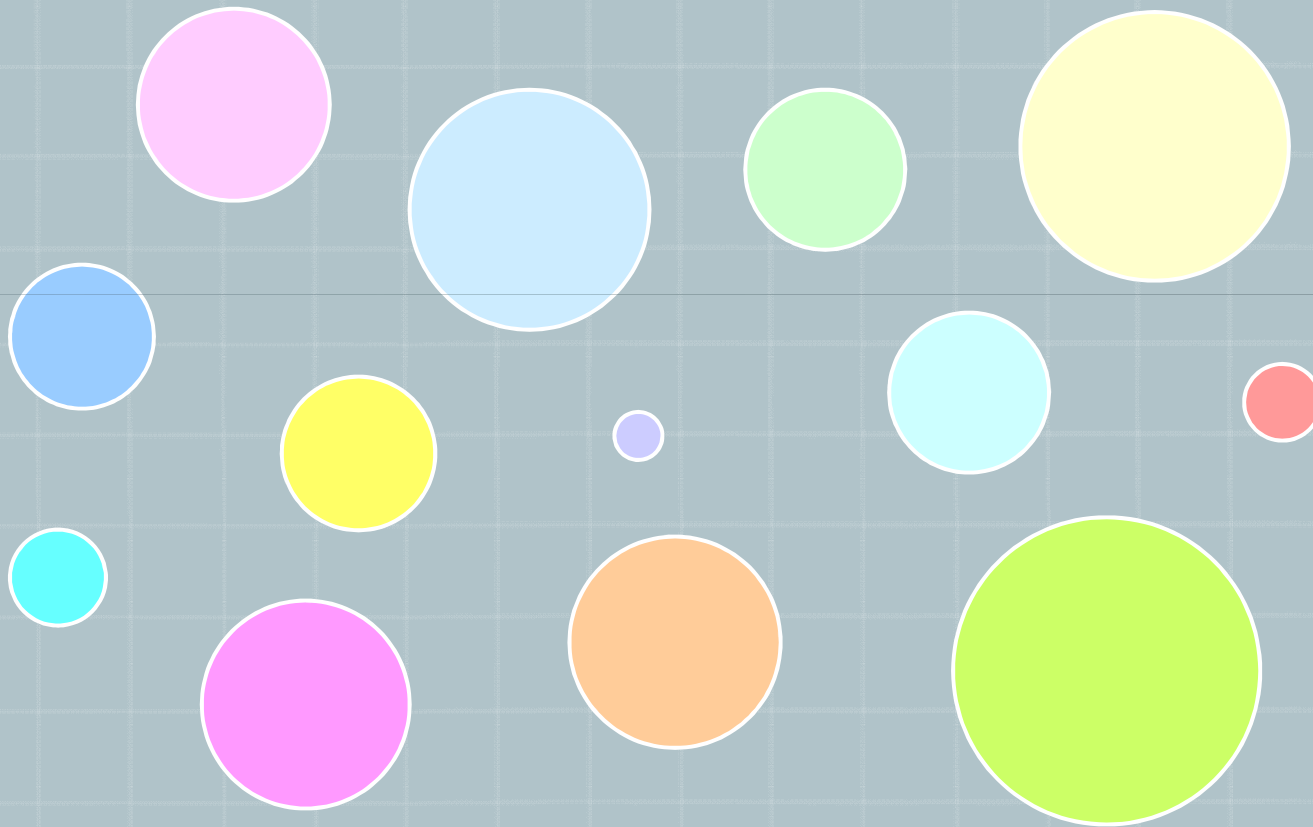
Mass Customization, Winter? Or Spring?

Mitchell M. Tseng

Hong Kong University of Science and Technology

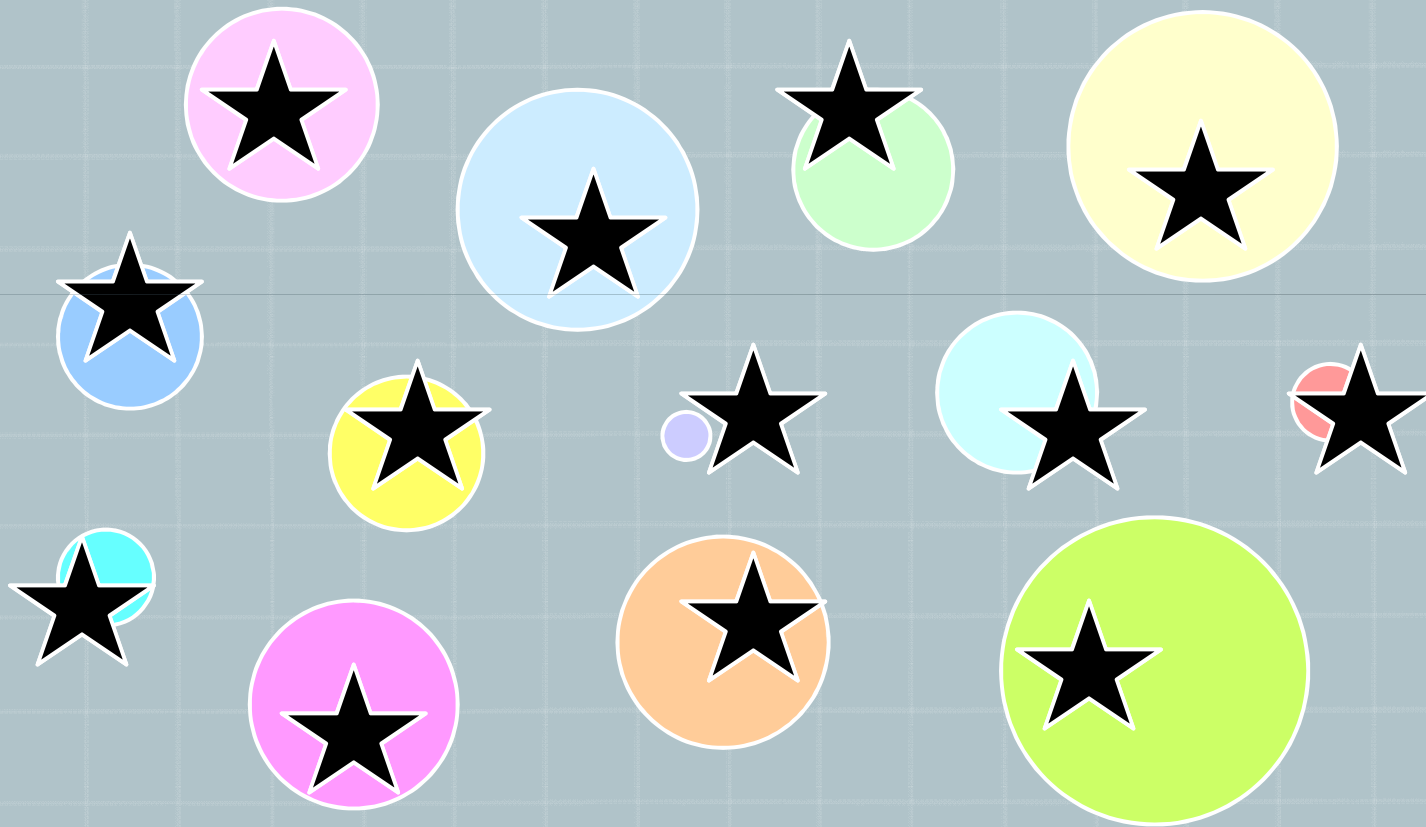


Customers are different





Mass produced products



There Are No Average Customers

-  Increase customer segmentation by offering more product variety
-  Put pressure on design departments to shorten time to market in order to respond to dynamic market changes

Mass customization



Mass Customization

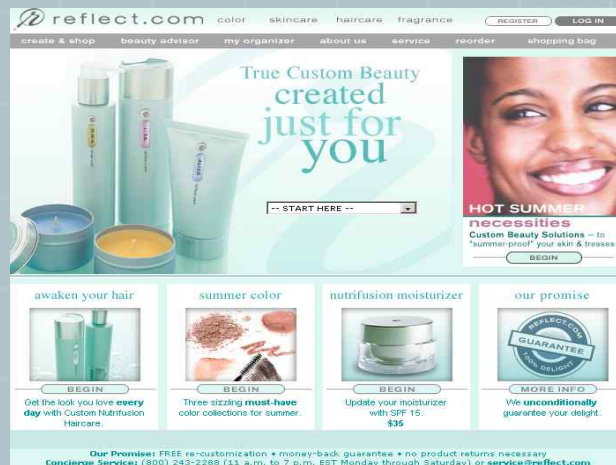
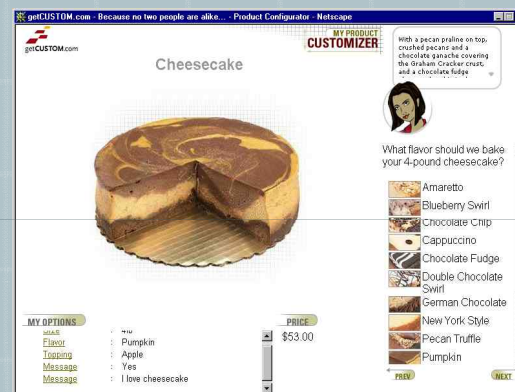
Provide products and services to **best** meet **individual** customer's needs with **near** mass production efficiency

Tseng & Jiao 1996

Winter?



Some unsuccessful cases of mass customization



In the mean time more start up companies in customized product.



Successful cases



Cafepress:



Established in 1999;



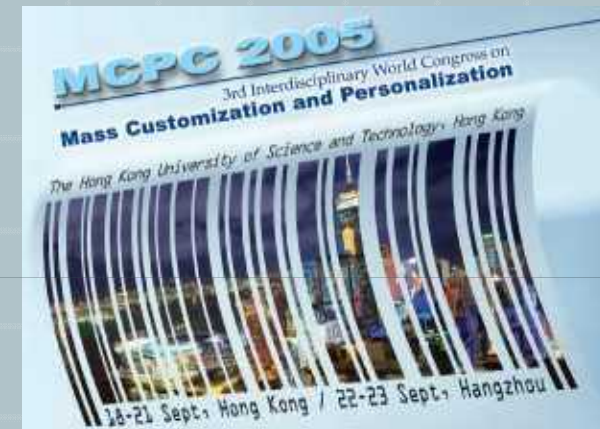
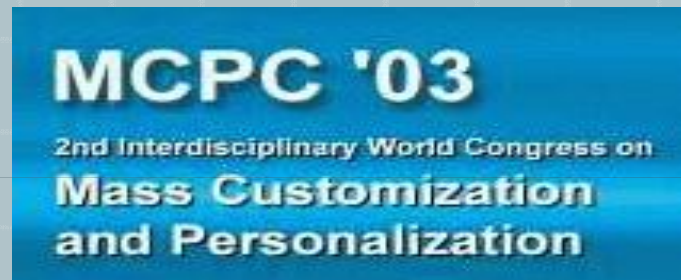
IPO on 3/30,2012 on NASDAQ (PRSS);



Zazzle:



Ranked within top 50 of world most valuable start up



Spring? Winter?

-  Number of papers on MC doubles in the last decade
-  Product variety continues to increase
-  With the maturity of social media, expressing self becomes an increasingly important need;

Do you think mass customization is a fairly new hype?



- The first emperor of China, Qin Shi Huang, commissioned a vast terracotta army to protect his mausoleum
- The army consisted of 7.000+ soldiers
- The emperor wanted the soldiers to be diverse in appearance to reflect the uniqueness of soldiers in real armies

Mass customization has existed as practice since 210 B.C.

Source: Jane Portal and Qingdao Dan, The First Emperor: China's Terracotta Army, British Museum Press, 2007

Increase Size of Crowd to Meet the Scale of Economy



Configuration

			Build Your Own
			
Latitude E6410 Advanced performance plus Intel vPro manageability	Latitude E6410 Superior performance and advanced collaboration	Latitude E6410 Superior performance, Intel vPro manageability, advanced collaboration and integrated security	Latitude E6410 Build Your Own Determine the exact configuration and options that meet your requirements
Select & Buy	Select & Buy	Select & Buy	Customize & Buy
Processor Intel® Core™ i5-520M w/ Turbo Boost Technology (2.4GHz, 3M cache)	Processor Intel® Core™ i5-540M w/ Turbo Boost Technology (2.53GHz, 3M cache)	Processor Intel® Core™ i5-540M w/ Turbo Boost Technology (2.4GHz, 3M cache)	
Operating System Genuine Windows® 7 Professional, No Media, 32-bit	Operating System Genuine Windows® 7 Professional, No Media, 32-bit	Operating System Genuine Windows® 7 Professional, No Media, 32-bit	
Display 14.1" WXGA Widescreen Anti-Glare LED Display (1280x800)	Display 14.1" WXGA Widescreen Anti-Glare LED Display (1280x800)	Display 14.1" WXGA+ Widescreen Anti-Glare LED Display (1440x900)	
Memory 4.0GB 1333MHz DDR3 SDRAM	Memory 4.0GB 1333MHz DDR3 SDRAM	Memory 4.0GB 1333MHz DDR3 SDRAM	
Graphics Intel® HD Graphics	Graphics Intel® HD Graphics	Graphics NVIDIA® NVS 3100M 512MB*	

Select Components

1. COMPONENTS
2. SERVICES & SUPPORT
3. REVIEW SUMMARY



Latitude E6410 Build Your Own
Starting Price **\$1,204.00**

[Print Summary](#)

Latitude E6410 Build Your Own
Starting Price **\$1,204.00**

[Print Summary](#)

[Continue](#)

SYSTEM OPTIONS

Processor

Intel® Core™ i5-520M (2.4GHz, 3M cache) with Turbo Boost Technology

[Help Me Choose](#)

- ☒ Intel® Core™ i5-520M (2.4GHz, 3M cache) with Turbo Boost Technology [Included in Price]
- ☐ Intel® Core™ i5-540M (2.53GHz, 3M cache) with Turbo Boost Technology [add \$50.00]
- ☐ Intel® Core™ i7-620M (2.66GHz, 4M cache) with Turbo Boost Technology [add \$120.00]
- ☐ Intel® Core™ i5-560M (2.66GHz, 3M cache) with Turbo Boost Technology [add \$50.00]
- ☐ Intel® Core™ i5-580M (2.66GHz, 3M cache) with Turbo Boost Technology [add \$100.00]
- ☐ Intel® Core™ i7-640M (2.80GHz, 4M cache) with Turbo Boost Technology [add \$170.00]
- ☐ Intel® Core™ i3-380M (2.53GHz, 3M cache) with Turbo Boost Technology [subtract \$50.00]
- ☐ Intel® Core™ i5-460M (2.53GHz, 3M cache) with Turbo Boost Technology [subtract \$25.00]



Operating Systems

Your system does not come with an operating system recovery disk. For an additional cost, you may select a recovery media disk if desired. Operating system options described as "No Media" do not include a recovery media disk. If there is no recovery media disk option here, please go to the system recovery section below.

Genuine Windows® 7 Professional, 32-bit, no media

[Help Me Choose](#)

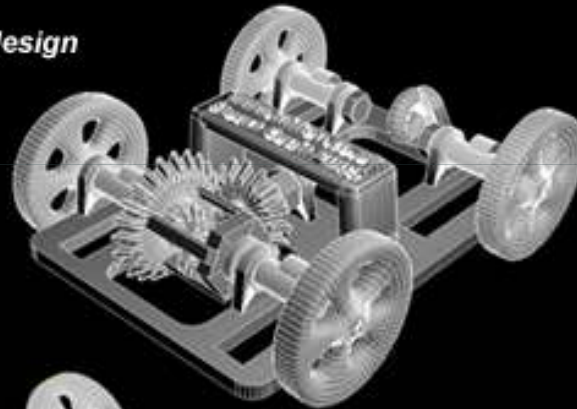
- ☒ Genuine Windows® 7 Professional, 32-bit, no media [Included in Price]
- ☐ Genuine Windows® 7 Professional, 64-bit, no media add \$0.00

On demand manufacturing, 3 D printing

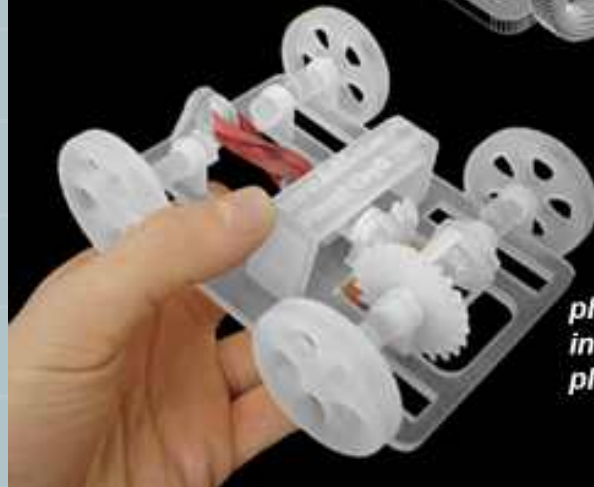
Create physical plastic models from your 3D design in a matter of hours with our 3D printing service bureau: ThingLab

idea > design > 3D model

original 3D design



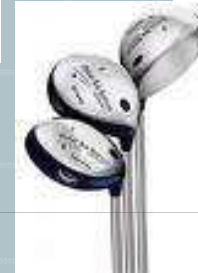
InVision XT 3D printer



*physical model
in strong, versatile,
plastic material*

www.thinglab.co.uk
thinglab
from INITIATION





Customized Apartment

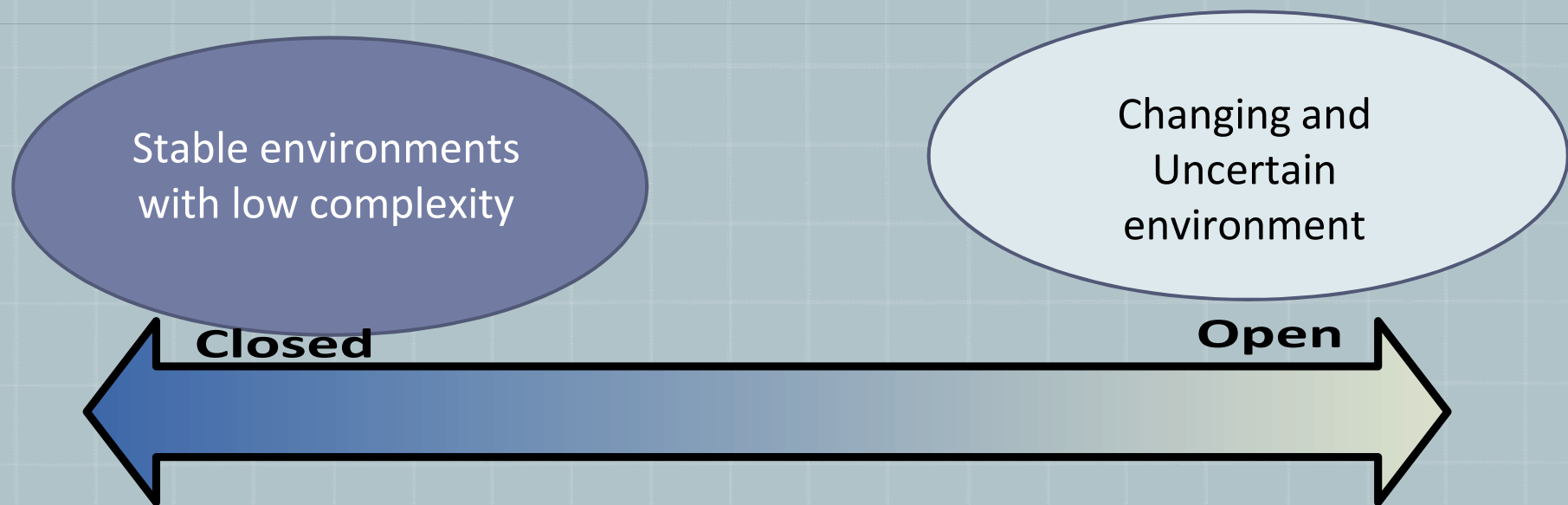


Mass Customization

- 🌐 Meeting customer needs closely is always right thing to do
- 🌐 MC can come in as software, adaptive customization, identity-relevant designs; made to order
- 🌐 MC will take different forms in different products
- 🌐 Low entry barrier: Low technology barrier, Low licensing barrier.
- 🌐 Consumers acceptance on design their own: will customers spend effort on some intangible features?

Open Systems

- Continuously interacts with environment.
- Information, energy, or material transfer into or out of the system boundary.



Open Systems

- Open source software has achieved success since its emergence in early 1980s.



- Can open systems extends from software to physical product field.

Open Innovation



Kellogg's



Open Customization

- a working definition

A paradigm that motivates people to participate, to create, to learn, to acquire, and to recover in providing goods and services to fulfill individual needs, not only products, but also the process of producing, with fair competition.

Tseng

Re-think Manufacturing

-  Manufacturing is not only doing it efficiently, meeting customers needs is as important
-  Manufacturing is extending from products to services but also the joy and dignity of doing the work
-  Opportunity—open systems platforms for everyone to participate, to create, to learn, to acquire, to produce and to recover



Tseng@ust.hk