



# A Glimpse of the Future: Technology Trends

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# Trend 1: Always-on Connectivity Will Make the Internet Integral to People's Lives

## Today

- The world is more connected

### Online penetration:

Europe—43%, U.S.—71%, Asia—14%

33% of online Europeans and 30% of online North Americans have **broadband**

### Mobile phone

**penetration:** Europe—96%, U.S.—80%, Asia—27%

## By 2018

- World blanketed by 125x faster connectivity
- **Always-on, lifelike information on any device, anywhere**
- **Billions of Internet devices** will accomplish mundane tasks in the background, making people's lives easier and more productive



Sources: IDC, 2006; OVUM, 2006; Pew Internet, 2008; Cisco IBSG, 2008



# Trend 1: Examples

## By 2013

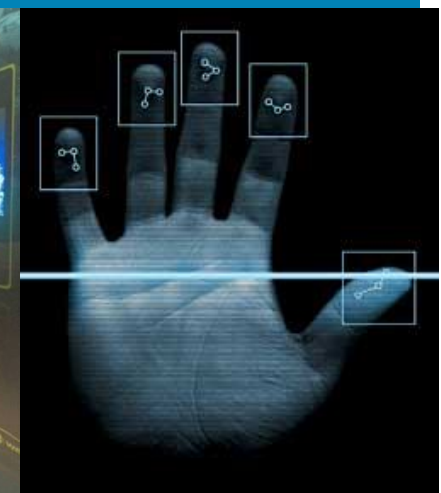
- **Table surfaces will be commonly used as Internet interfaces**
- **Consumers will scan bar codes with mobile devices** to receive product information and make purchases

## By 2018

- **Consumers will interact with wall-embedded screens for information, advice, and transactions**
- **Home / car access will work with biometric “keys.”** Homeowners can manage who has access



Source: Cisco IBSG, 2008



## Trend 2: Intelligent Information Will Change Consumer Behavior

### Today

- Search engines provide 14.5 billion searches per month worldwide
- **53% of online searches use Google**
- 21% of U.S. online users participate in discussion boards, 12% post ratings / reviews, 11% comment on blogs, and 7% publish their own blogs

### By 2018

- Searches will provide "perfect information" due to the **Semantic Web** and event processing using metadata
- **Searches will return personalized, "one-click" solutions**
- Wisdom of crowds and peer communication will have the greatest impact on customer buying decisions

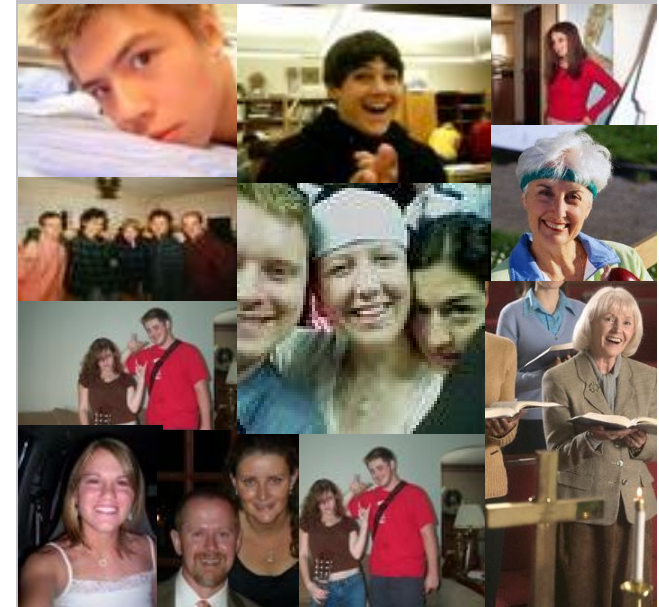


FIND WHAT YOU NEED.

Google Search

I'm Feeling Lucky

[Advanced Search](#)  
[Preferences](#)  
[Language Tools](#)



Sources: Comscore, 2008; Forrester Research, 2007; Cisco IBSG, 2008



## Trend 2: Examples

### By 2013

- Consumers can receive personalized recommendations and offers based on previous purchases and items viewed
- Banks will offer cash flow optimization accounts that make recommendations to maximize financial results

### By 2018

- On request, the Semantic Web will organize a party by inviting people, booking a venue, and arranging food
- A cancer patient will connect with the best specialist, latest research, and support groups



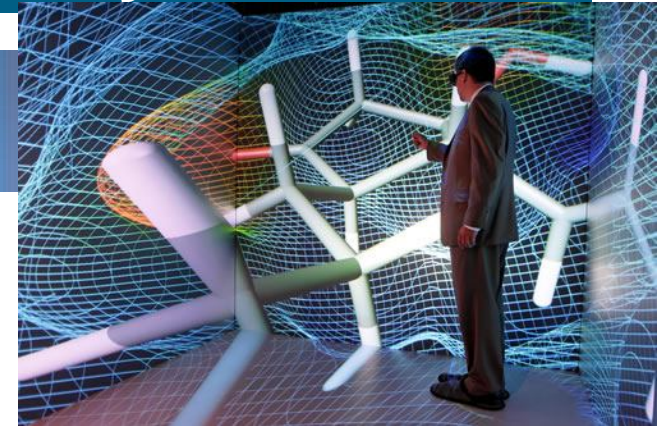
## Trend 3: Richer Interactions Will Engage Customers in More Meaningful Ways

### Today

- **Virtual reality is a reality with companies and consumers using sites like Second Life**
- Massively multiplayer game, World of Warcraft, has 10 million subscribers (5.5 million in Asia)
- **Organizations such as IKEA, Sears, and ABN Amro use virtual assistants to help customers**

### By 2018

- **People will interact with objects and machines using voice, gestures, and touch**
- Immersive interactions enabled by Cisco TelePresence, holographics, robotics, AI, haptics, virtual reality, and other technologies will create rich experiences
- **Avatars will routinely carry out daily tasks**



Source: Cisco IBSG, 2008

## Trend 3: Examples

### By 2013

- **High-definition home video-conferencing with touch-to-connect capabilities**
- Voice, gesture, and touch control of household equipment such as TV, curtains and oven



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### By 2018

- Store robots will help find products, give demos, and provide valet service
- Avatars will book travel, schedule deliveries, and pay bills
- **Social networking will be real-time, high-definition, and remote**



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## Trend 4: Simple, Intuitive Devices Will Become Main Way Consumers Interact

### Today

- **Mobile devices are rapidly becoming a primary vehicle for interactions with people and information**
- Adoption is increasing exponentially due to increased capabilities, improved services, and lower costs

### By 2018

- Customers will shift seamlessly between devices and screens to complete tasks
- Consistent interaction models will allow customers to use new services effortlessly
- **Many devices will be wearable**
- **Mobile computing power will be 50 times greater, and screens will be so cheap, they'll be everywhere**



Source: Cisco IBSG, 2008



## Trend 4: Examples

### By 2013

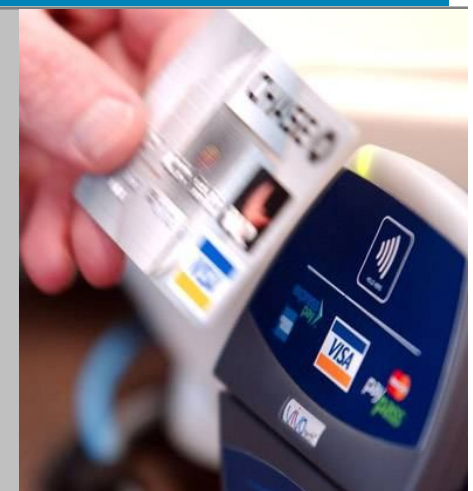
- Customers will interact with screens and shop windows
- **Customers will be able to buy a book from Amazon without using a keyboard**
- **People will use handheld devices for secure, “contactless” purchases**

### By 2018

- **Wearable computers will convert speech in order to pay bills, make appointments, and shop via the web**
- Technology novices will use mobile devices to easily shop for groceries that are then delivered to their homes



Source: Cisco IBSG, 2008

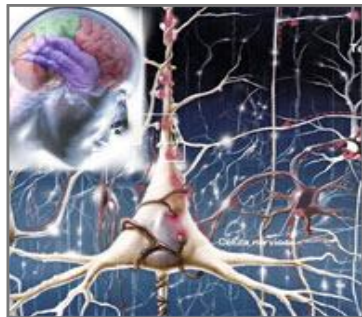


# New Ways to Interact: Brain-Machine Interfaces

## The ultimate integration

October 2004

A 25-year-old quadriplegic connected to a computer plays the computer game Pong, just by using his thoughts, via 100 tiny sensors implanted in his brain



April 2005

PlayStation maker Sony Corp. is granted a patent for beaming sensory information such as smells, sounds, and images, directly into the brain



March 2008

**IDIAP Research Institute in Switzerland, has carried out a series of successful trials in which users have been able to maneuver a wheelchair around obstacles and people using brainpower alone.**



Sources: CNN, USA Today, KurzweilAI.net; Cisco IBSG, 2006-2008



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