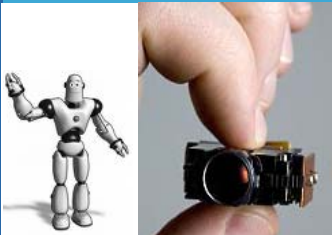


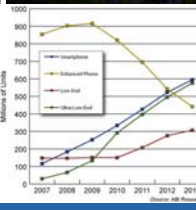
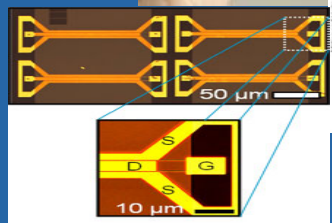
# The new era of opportunities and change in business & society

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 Advisory Services  
 PricewaterhouseCoopers LLP  
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 FEI, October 22, 2009

Media



Nano



Researchers at the University of Toronto have made a record-performance semiconductor device simply by painting a liquid containing nanoparticles onto a piece of glass. The work represents the first "wet" semiconductor device to outperform conventional chips. Photodetectors are used in digital cameras, night vision and security systems and fibre optic communications.

Gold electrodes are patterned on a glass slide.

Intriguingly, nanoparticles.

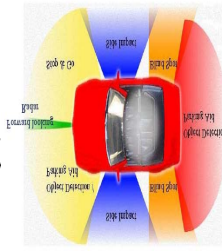
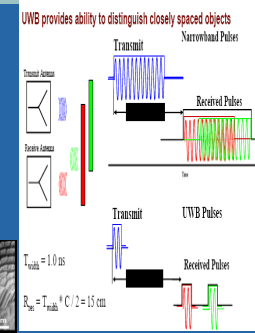
A drop of solution containing light-sensitive nanoparticles is placed on the glass slide.

The droplet then spreads across the surface while the solvent evaporates. The layer of particles remaining on the glass results in a smooth continuous semiconductor film.

Tech

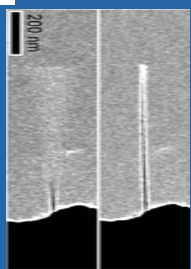


Emerging

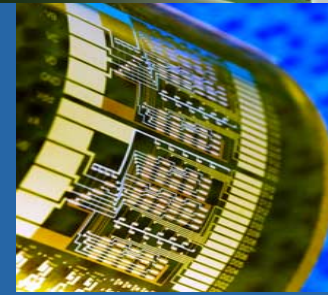


2012

Digital



Maybe



Why



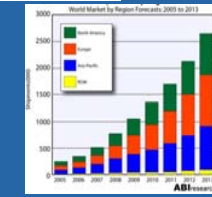
When

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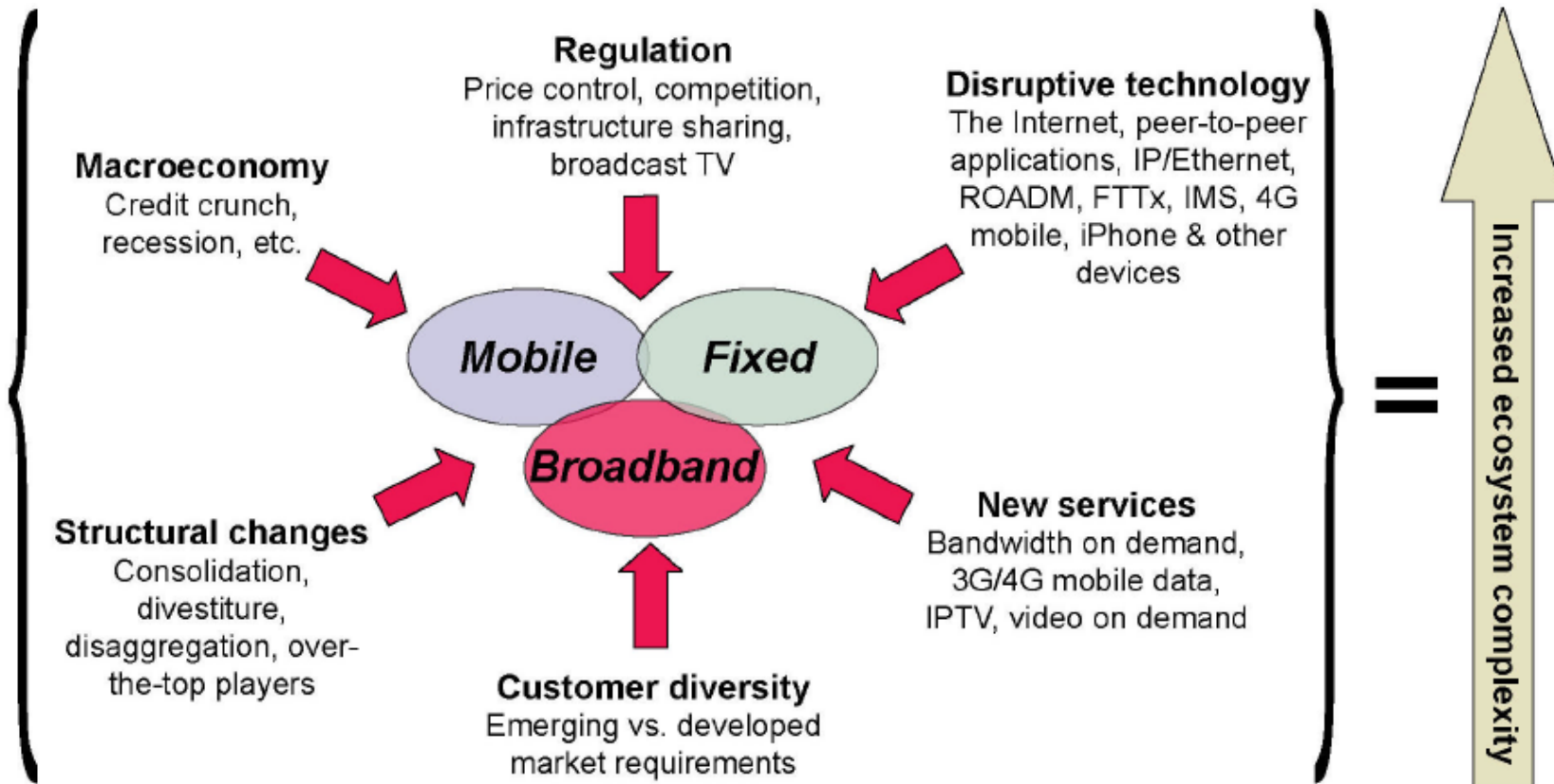
)

Later Now

\$



# The Technology Ecosystem – what's important



Source: Ovum

# Emergence – new era for society and business

“Emergence is .... when you have millions of parts (people) interacting in relatively simple ways. Some higher-level structure or intelligence appears, usually without any master planner”.

*Stephen Johnson, author of “Emergence”, in O’Reilly Network : An Interview with Stephen Johnson, 2002*

*The age of Ubiquitous Participation (UP!)\**

*A WHOLE NEW WORLD of*

*CONVERSATION and PARTICIPATION*

*The Medium is the M**a**ssage – Marshall McLuhan*



# ***The future in business and society is UP!***

- *Social networking and collaboration;*
- *Open source everything;*
- *Search becoming discovery;*
- *Geographical and time boundaries disappear;*
- *New business opportunities;*
- *Flatter management structures;*

*Greater demands on company C-Suite for*

***INNOVATIVE LEADERSHIP***

# Technology enablers of Ubiquitous Participation (UP!)\*

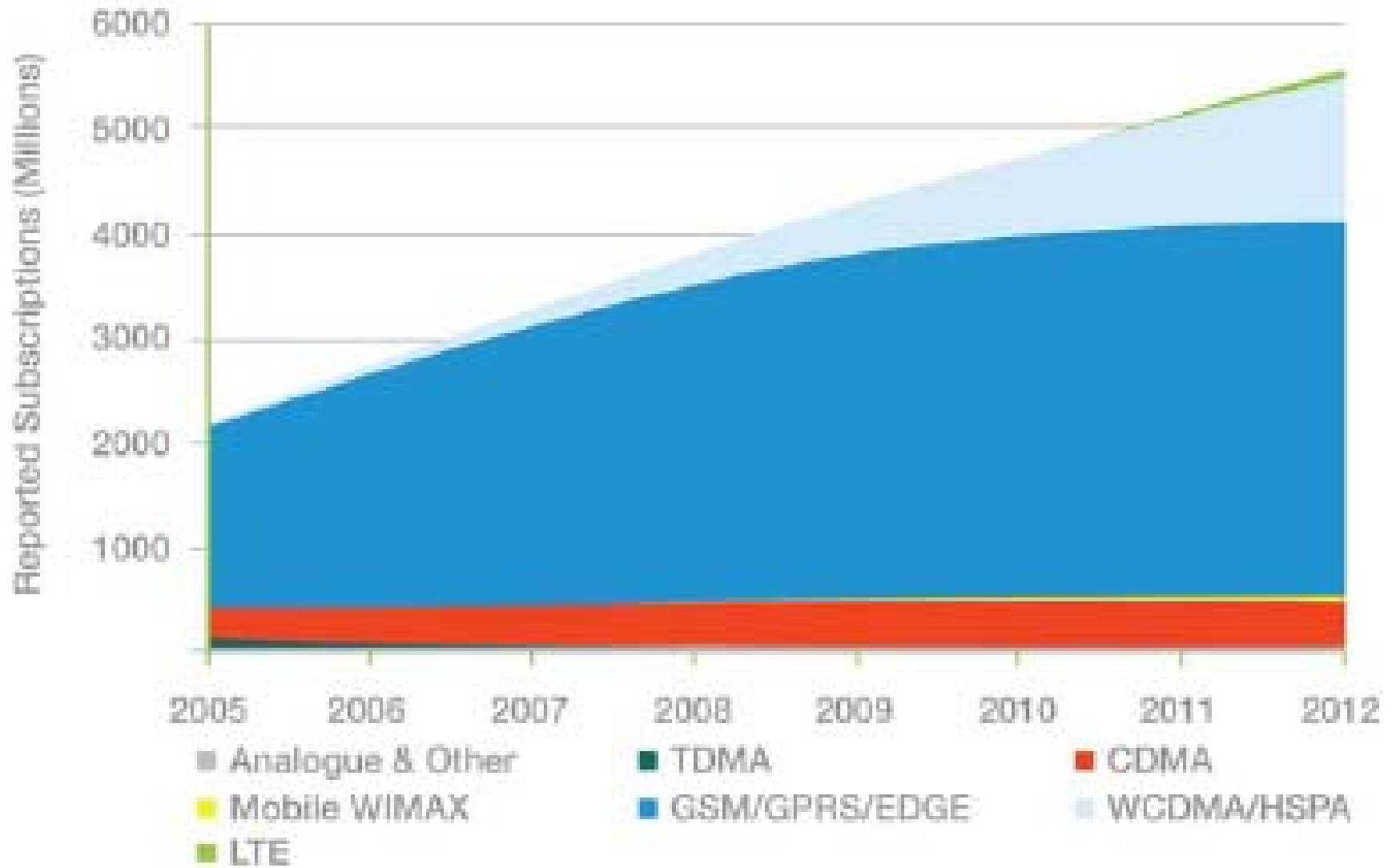
- Wireline broadband (Ethernet; DSL);
- WiFi hotspot places;
- High-speed Cellular (3G; 3G+HSPA) – ever advancing;
- LTE (4G cellular) – LTE “to take over”;
- FTTH – only a matter of time;
- WiMAX – will this catch on in a big way?;
- Laptops (Notebooks), Sub-Laptops (Ultra-Portables), Smart Phones, Netbooks, Palmtops, Interactive/Web TV.

\* PwC defined concept

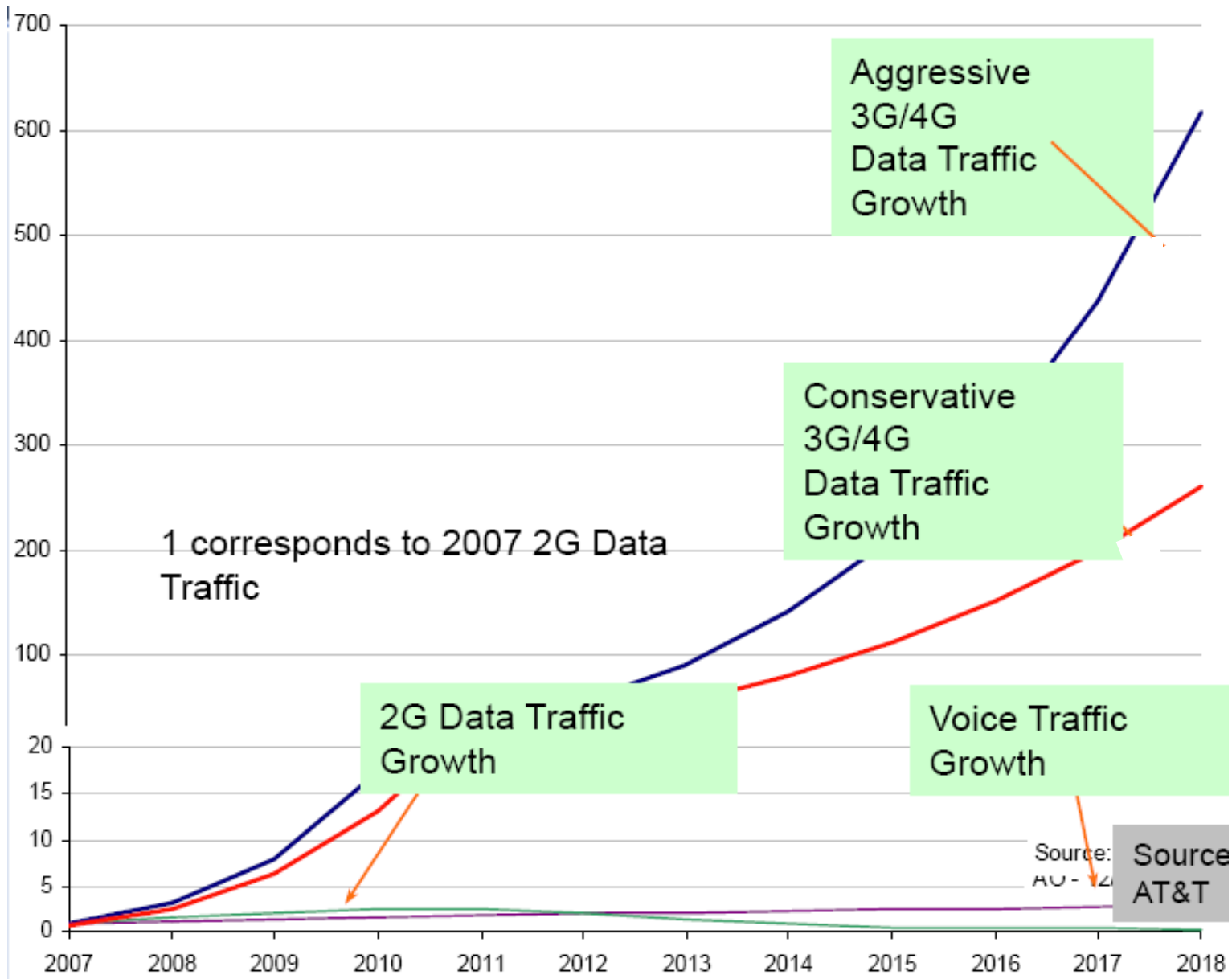
## Technology enablers Cont'd – short-range

- Bluetooth;
- NFC (“kissing” cards and cellphones) – UK “Oyster Card”;
- Cameras in cellphones;
- Projectors in cellphones.

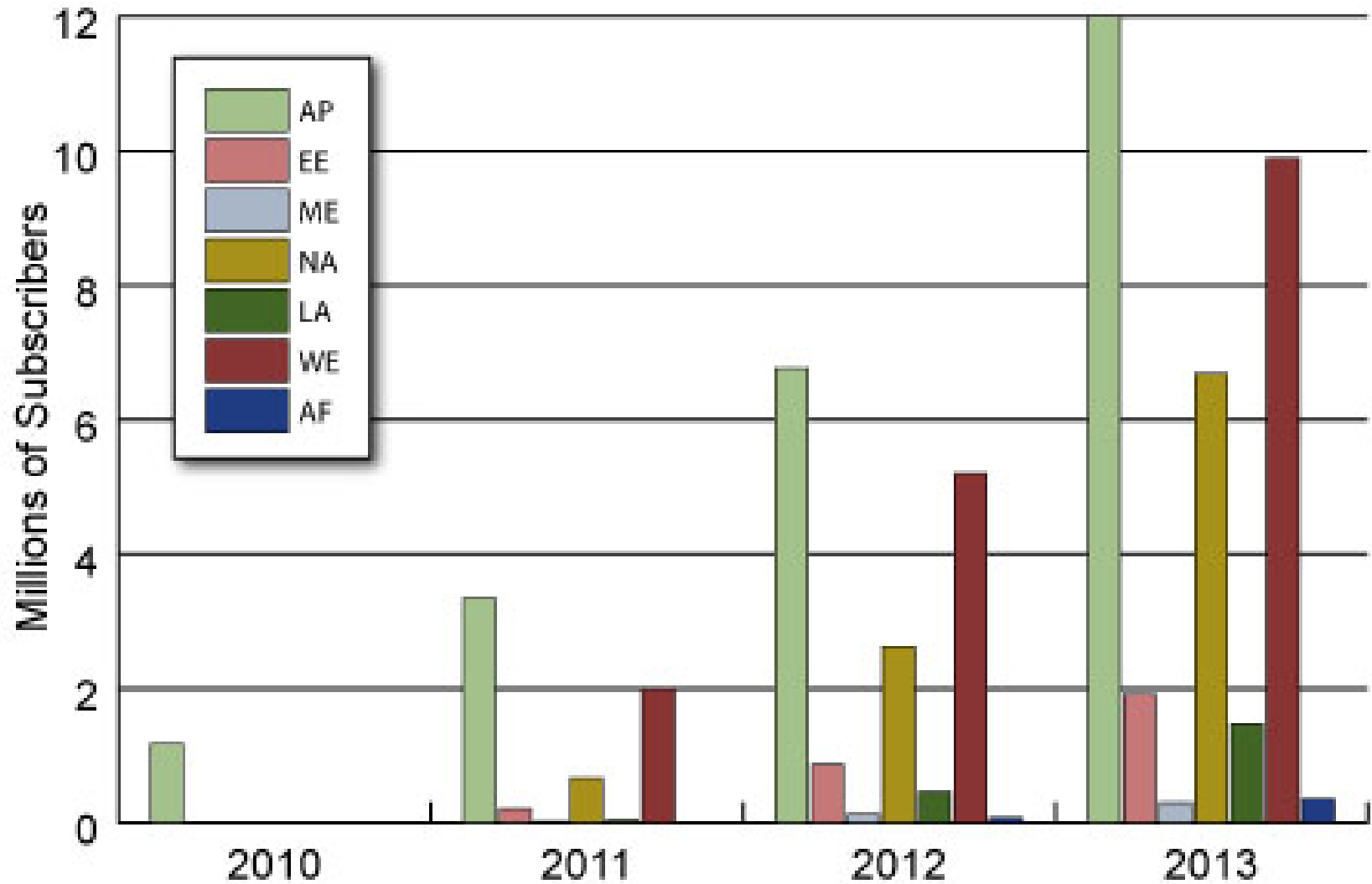
# Mobile subscribers by Technology



# Where data traffic is going...UP!



# LTE 4G high-speed wireless subscriber forecast



(Source: ABI Research)

## Why the smartphone is special

- Small, easy to use, multimedia, multifunction, powerful;
- 3G plus enhancements, high-speed almost world wide;
- “Intimate device”;
- Ideal for UP!

## Samsung projector phone



Includes touchscreen and five megapixel camera

Texas Instruments (TI) demonstrated the handset – which uses its digital light projection (DLP) chipset – at Mobile World Congress in Barcelona, Spain, on February 16, 2009

Paper alive! Paper to webpage with 2D barcode & smartphone



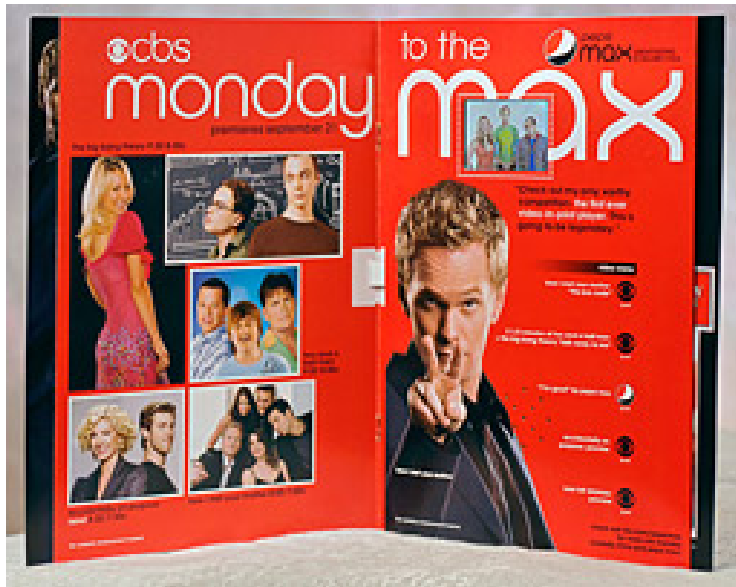
# Augmented Reality will find its niche with Smartphones



# Mobile microscopes



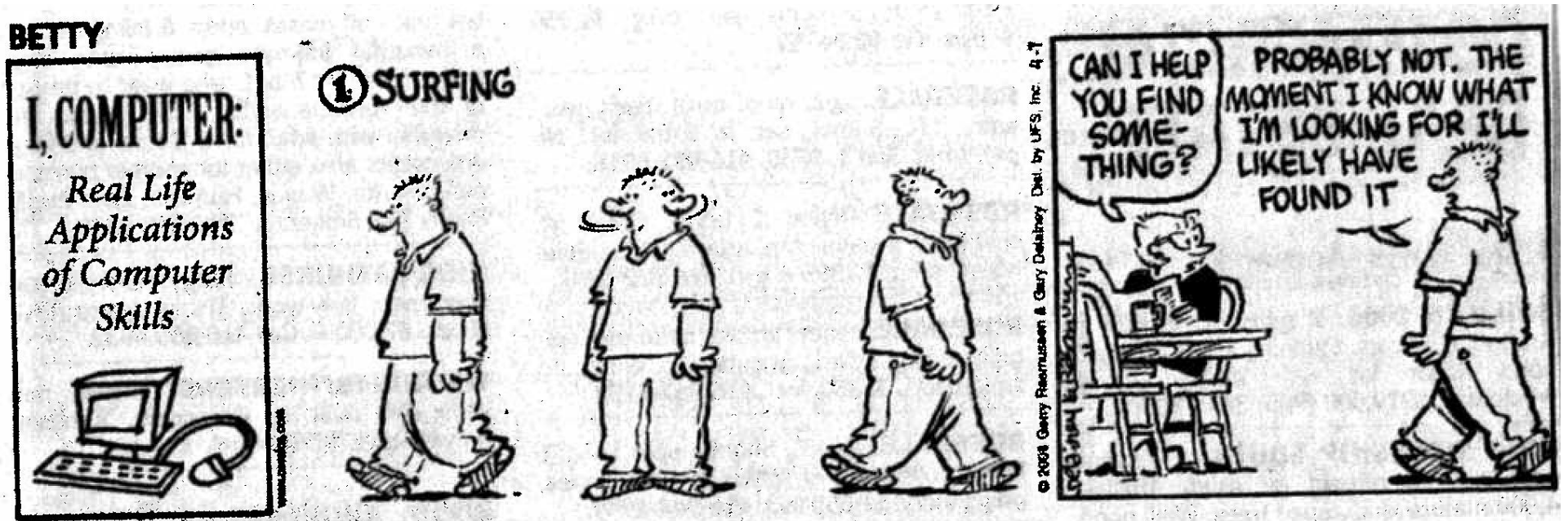
# Magazines alive!



- CBS and Pepsi tout 'Monday to the Max' in a video ad in some copies of Entertainment Weekly.

\* PwC defined concept

# The need for discovery!



Globe and Mail

PwC sees a better answer: *We help you discover\**

## Emergence of the Selfsumer\* – at home and work and on-the-go

- The ‘Selfsumer’ **discovers** information, knowledge, advertising and workplace content and products from multiple sources;
- The Selfsumer uses Internet search, review websites, social networking and collaboration tools;
- The executive, employee, patient is a Selfsumer;
- The company/supply-chain buyer is also a Selfsumer;
- Selfsumer: The Ubiquitous Participant;
- *DHJ prediction:* Selfsumers: The new Business Leaders.

\* PwC defined concept

## Effect of iPhone on eBay sales

- From mid 2008 to September 2009, \$400m in sales and bids;
- Even a Lamborghini for \$350 000.

## UP! auditions

- Videos of persons performing "Internet Symphony No. 1," written for YouTube by *Crouching Tiger, Hidden Dragon* composer Tan Dun, and a "talent video";
- Judges from the London Symphony, San Francisco Symphony, New York Philharmonic, Hong Kong Philharmonic;
- YouTube members voted;
- Winners announced on March 2, 2009;
- Prize? New York for a "music summit" with conductor Michael Tilson Thomas at Carnegie Hall on April 15.

# Tacit knowledge

- What's in our heads and in our personal space;
- “We know more than we can tell”<sup>\*</sup>;
- “We know more than we know how to tell”<sup>\*\*</sup>;
- Q: How to access tacit knowledge?
- A1: “All Life is Meeting – connecting – relating”<sup>\*\*\*</sup>
- A2: Social networking and collaboration.

*\* Michael Polanyi, 1966*

*\*\* DHJ 2009*

*\*\*\* Martin Buber, 1878 - 1965*

# New meaning for ROI in advertizing and sales

- Return on *Intention*\*.

\* *PwC defined concept*

Turn on to intentions – using emotional involvement

**CLICK LINK BELOW IN SLIDE SHOW MODE for VIDEO:**

<http://www.youtube.com/watch?v=jkEw1rsBUak>

# PwC sees new UP! - based business model in digital media era

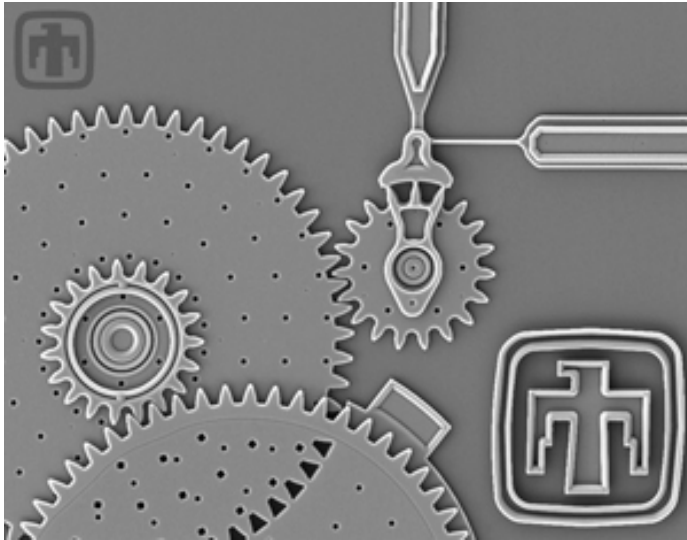
	<b>UP!* market – customers &amp; employees, all ages</b>
<b>Delivery platforms</b>	<b>High-speed; Ubiquitous; Multimedia; Smart; Easy-to-use</b>
<b>Advertising and Business models</b>	<b>Word-of-multimedia* Capturing buyer's <i>intention to purchase</i>; Enabling the Selfsumer*; Enterprise social networking and collaboration; Unstructured information and tacit knowledge; 3D and augmented reality</b>
<b>Value resides in</b>	<b>Understanding and serving the Selfsumer*</b>

## Greater Log-In security

- Add behavioural patterns added to passwords\*.

\* *Delfigo Security*

## MEMS and MOEMS → NEMS and NOEMS rising



- gyroscopes, micro-mirrors, RF, micro-probes, pressure sensors IR sensors, micro-fluidics, micro-coolers, micro-optical switches.

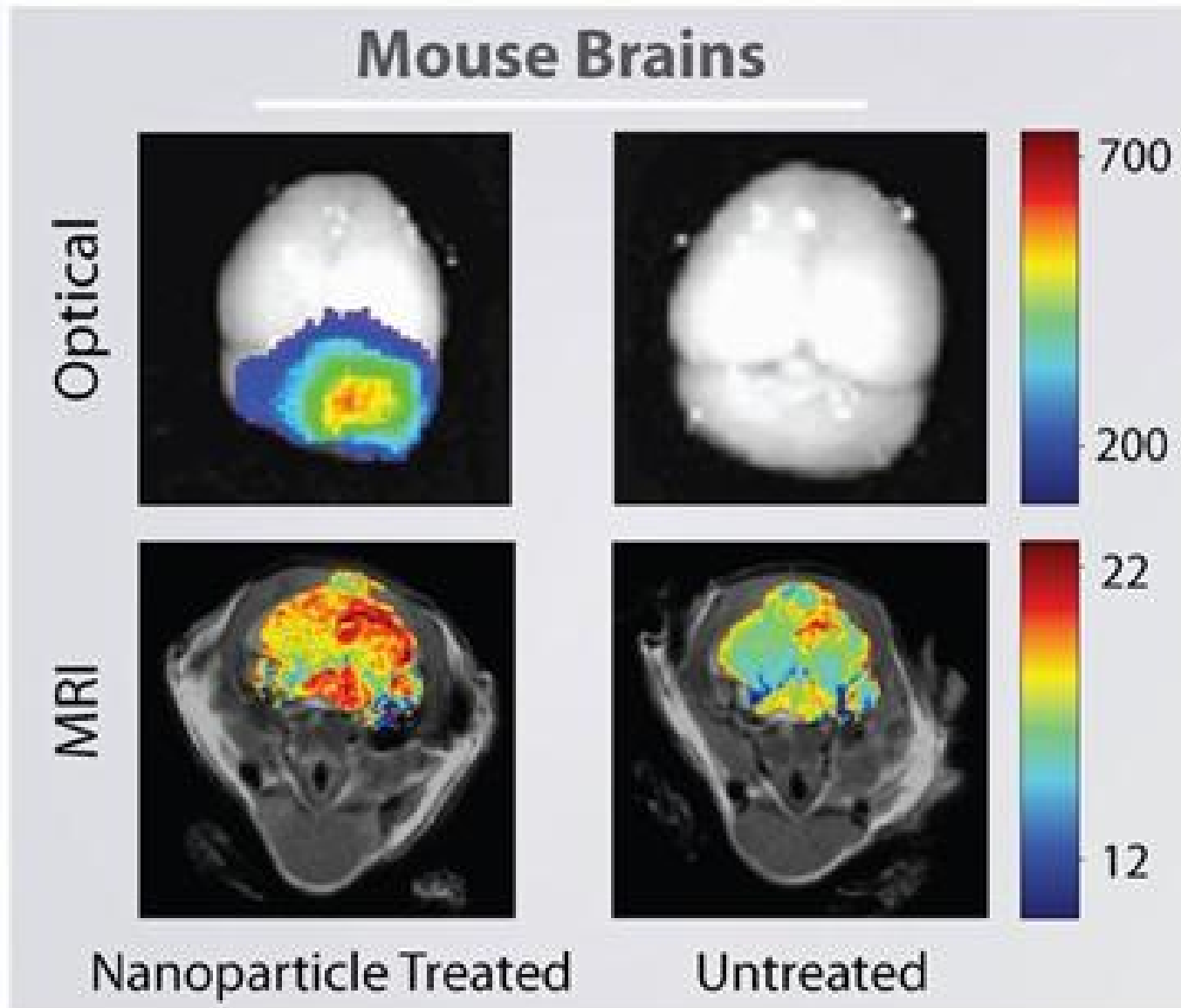
*Sandia National Labs.*

# Black and Blue Boxes for aircraft status reporting

<http://www.amscanada.com>



# Nanoparticles for contrast



Computers, robotics, 3D-vision, sensors, adaptive control

**CLICK LINK BELOW IN SLIDE SHOW MODE for VIDEO:**

<http://www.youtube.com/watch?v=W1czBcnX1Ww>

# The beginning, not the end!

**Q & A**

***and***

***...thank you!***

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