A Pause for A Thought:
it was said in 1979…

"Today's car differs from those of the immediate post-war years on a number of counts. It is cheaper, allowing for the ravages of inflation, and it is more economical and efficient... But suppose for a moment that the automobile industry had developed at the same rate as computers and over the same period: how much cheaper and more efficient would the current models be? If you have not already heard the analogy the answer is shattering. Today you would be able to buy a Rolls-Royce for **£1.35**, it would do three million miles to the gallon, and it would deliver enough power to drive the Queen Elizabeth II. And if you were interested in miniaturization, you could place half a dozen of them on a pinhead."

---- Christopher Evans *The Mighty Micro* (1979)
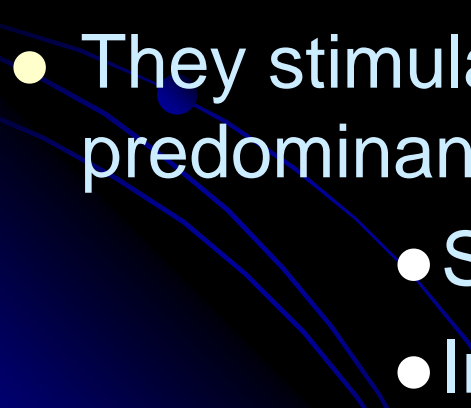
Innovation vs Culture

Media • Media Technology • Man

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Being Entertained

- Art and Entertainment have been part of human development;

- They have been evolving along with the advancement of technology;

- They stimulate our sensory systems by predominantly:
  - Sound;
  - Imagery.
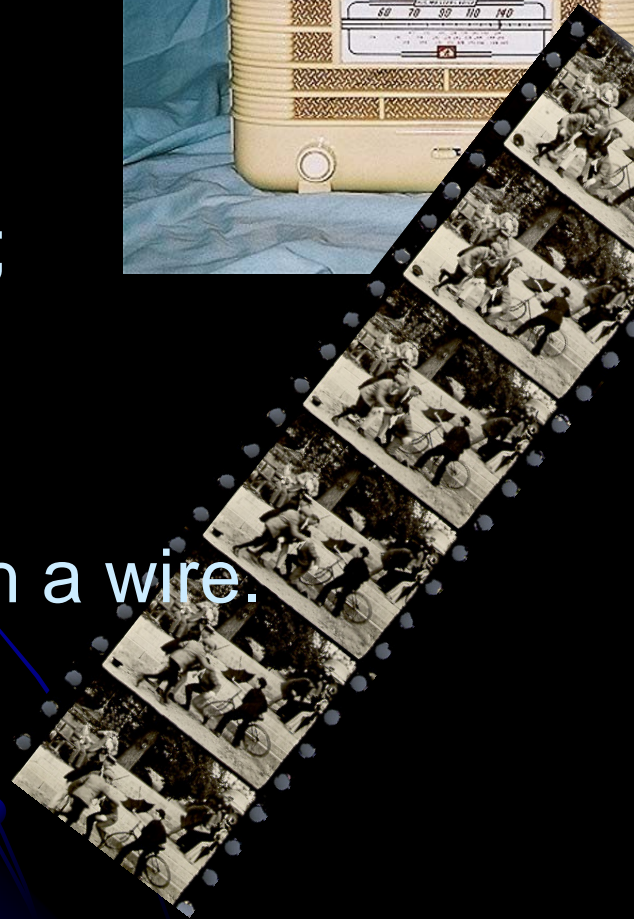
Media Platforms:

What has technology brought us with?

Traditionally we have

- Books, newspapers, magazines;

- Films: cinemas;

- Radios;

- TVs;

- Phones: good old telephones, mobile phones.

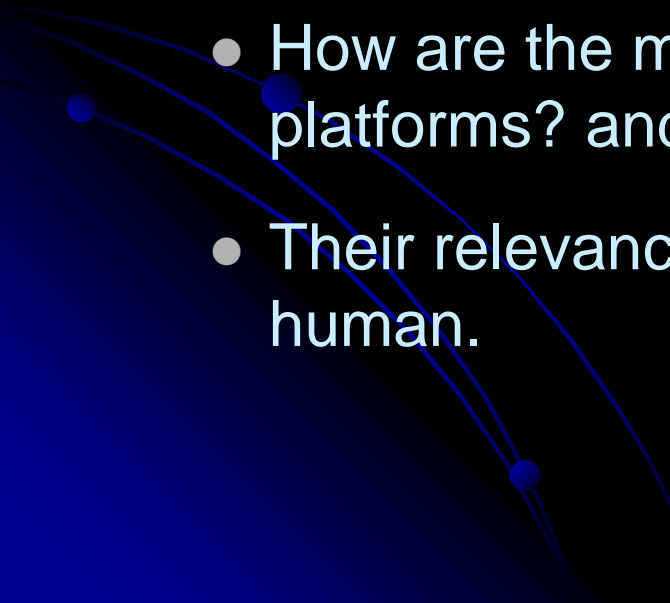# Five Most Successful Media Platforms

- Paper;

- Radio;

- Television;

- Films;

- Phone with a wire.

Why and How?

Technologically these platforms are certainly not high, but, why are they so successful?
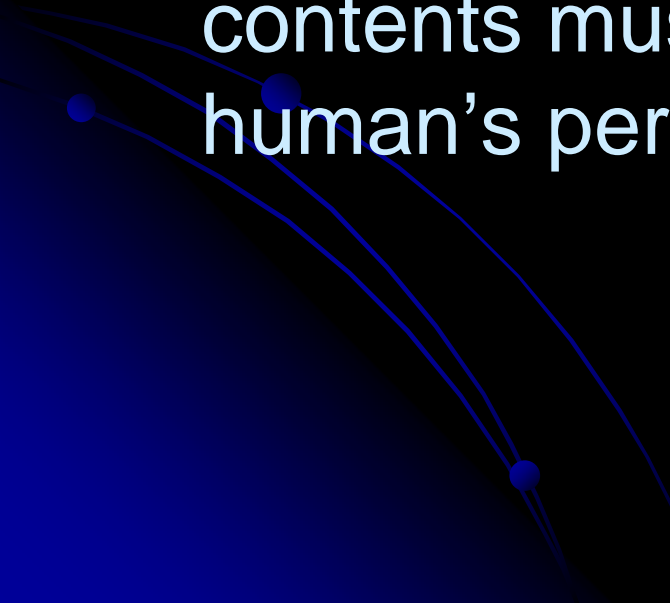
To answer this, we must understand:

- How do we use these media platforms?

- How are the media contents presented on these platforms? and

- Their relevance to the *physical characteristics* of the human.

The Importance of Dimension and Resolution

- Humans have a finite **dimension**.

- Humans can only perceive things within a range: **resolution**.

- In media system and content designs, we must follow the two basic principles:
  - Maximum perceptive comfort;
  - Least cognitive effort.

Maximum Perceptive Comfort

Perceiving media contents is normally a leisure or intellectual activity which demands a *maximum level of comfort* in the perceptive process; that is, the media contents must be delivered *well within* human's perceptive range.

Least Cognitive Effort

- Perceiving media contents should require the *least cognitive effort*, which would leave the brain more time and energy to interpret (*appreciate*) the contents -- the audience would leave the cinema and demand a refund if the pictures are *hard* to see.

- Neglecting the human factor will result in failure in business and unsustainable technological development.

The Factor of HDHR

All the five successful media platforms satisfy the two essential *human factors:*

HDHR

(Human Dimension and Human Resolution)

Human Resolution

Human's perceptive ability is limited by resolutions within which media contents can be perceived to a degree.

Primarily we are dealing with two such resolutions:

- Audio signal (HZ and magnitude)
- Visual signal (HZ, magnitude, and phase)

New Media Platforms:
More Gadgets

We are now in an era of ever changing digital gadgets of varied dimensions and resolutions:

- PCs, notebooks, PDAs, and palm (hand-held) PCs;

- Games: Xbox, PlayStation, N-gage, etc.

- Cameras:
  - Traditional: Nikon F5
  - Digital: Nikon D3, Canon 5D, Canon 300D
  - Miniature: Canon IXUS, Nikon CoolPix SQ…

- DVcams: Sony, Panasonic, Sharp…

Features of New Media

- Multimedia, multifunction media platforms
  - Computers,
  - Wireless, mobile devices

- Interactivity:
  - Video/Web games;
  - Human-machine interface;
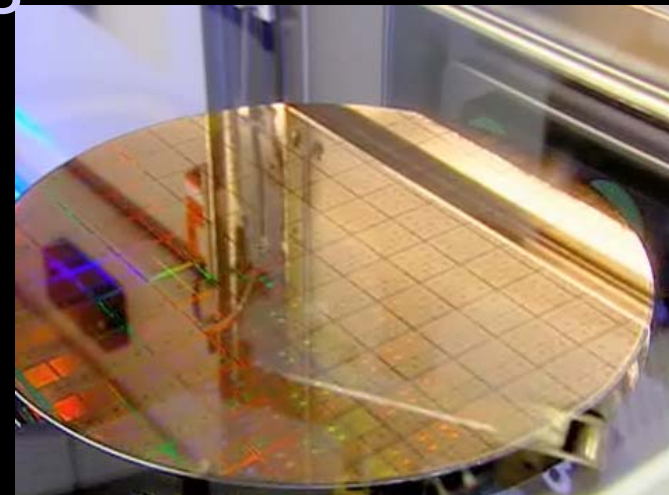 - Virtual environments

Apple iPhone with a 3.5in screen
promises to do just about anything
that you do on your computer, plus of
course, being pocket sized…

oh, yes, almost forgot,
a shaver, a beer bottle, and
a money machine (*woo*, very attempting!),
that is, if you believe it….

Features of New Media

- High-speed internetworking
  - The Internet;
  - Wireless communications

- High-speed, high-capacity memory
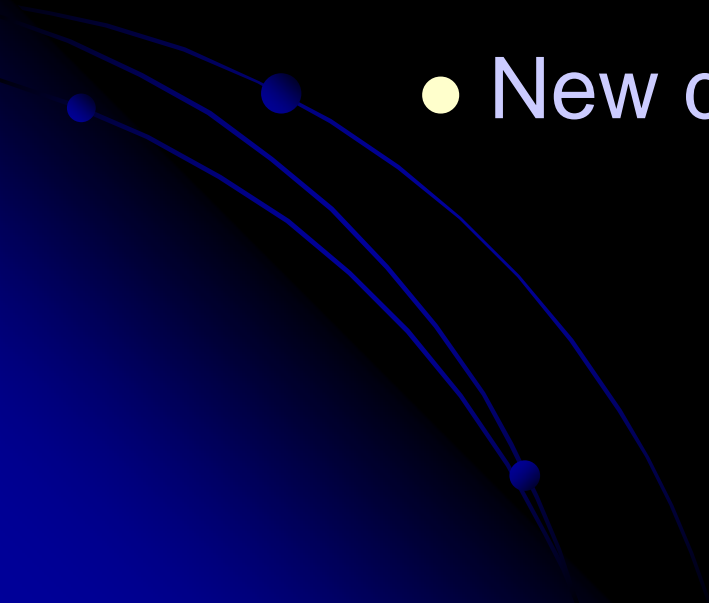
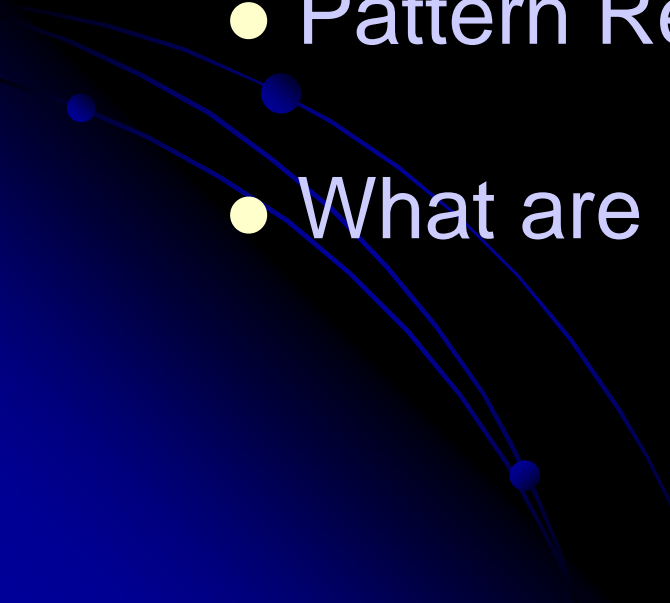- High-speed microprocessors

Features of New Media

- New displays

- New audio/video formats

- Artificial Intelligence in media systems and productions

- Virtual, intelligent avatars

- Mass media participation

Virtual Reality Lab

a world leader lab in real time virtual humans

How far have we gone *technically*?

- Computing Speed;

- Communications networks;

- Memory devices;

- New display devices.

How far have we gone *technically*?

- Wireless Standards: WAP, Bluetooth, IEEE 802.1x, etc.;

- Artificial/Machine Intelligence;

- Pattern Recognition techniques;

- What are missing in all these?

Portability, Mobility and Perceptibility

Portability and mobility of media devices are the result of our desire for

- pervasive accessibility to media contents and information;

- being connected all the time any where;

- creating and manipulating media contents.

But, we are limited by

- our perceptive ability and physical dimension.

Portability, Mobility and Perceptibility

- Portability and mobility require that all devices be made small and light enough for people to carry;

- However, small devices will result in low resolution that makes it harder for people to perceive the delivered media contents; which leads to

  Unsustainable/unviable business and market, which is one of the essential challenges in the new media era.

Mobility vs Utility

- Numerous mobile devices have been rushed to the market everyday;

- All seem to claim doing miracles:
  - Phone;
  - SMS;
  - Games;
  - Camera;
  - Browser;
  - A PC too…
  - 除了针灸…except acupuncture!

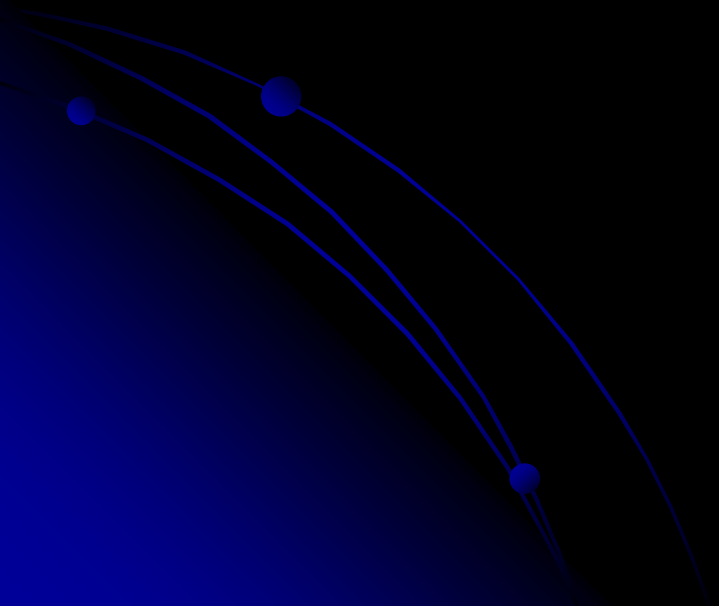- Are they really that useful? You be the judge!

All-in-One Gadgets?

It was predicted that by the end of 2005, U.S. consumers would have trashed some 130 million cellphones and another mountain of old PDAs, MP3 players, and game consoles.

To solve this problem some researchers have proposed to build a wireless multimedia device whose hardware and software can be easily altered or upgraded so it never becomes obsolete and can do everything in just one gadget.…
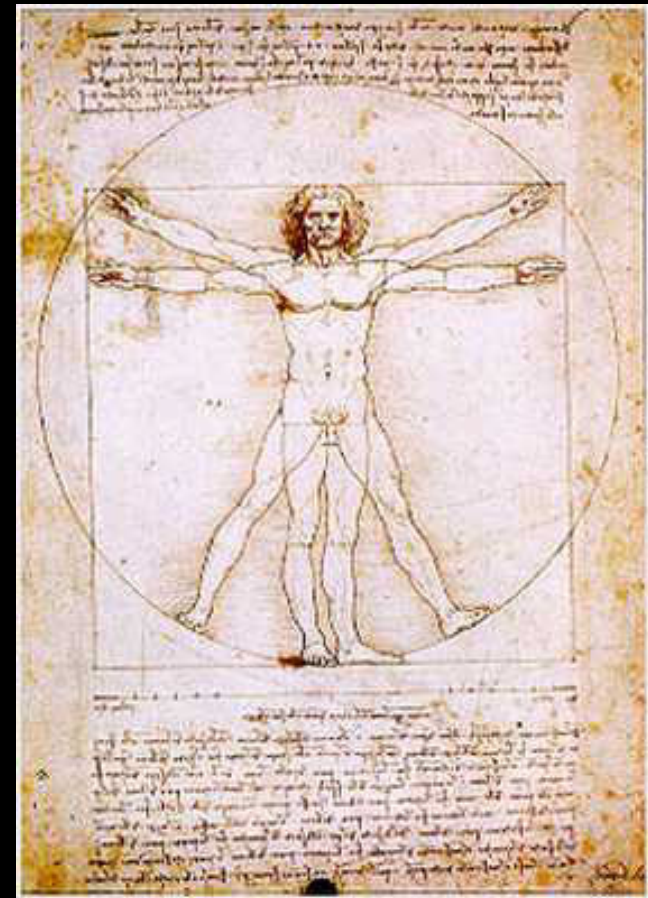
Epilogue

(后语)

What are we missing here?

- Where is the media content?

- How to make the user *pay*?

- No more a single "*Killer Application*" as that for telephone, broadcasting radio, and TV; *that era has long gone!*

- The power of a public data network is its ability to support *many applications*.

Are We Entertained?

- In all the excitement, one important thing has to be considered: **Human Resolution and Human Dimension** (**HRHD**).

- Without appropriate **HRHD**, media systems and contents will not be able to deliver the promised entertainment/information value; think about watching a movie from a mobile phone.

Time to Think

- **Terminal Velocity**: Technologically we are at the final stage of speed as according to Moore's law, in the next few years, the chip will hit the physical limit.

- **Terminal Coverage**: We are now able to reach virtually anywhere and anyone on the Earth--the world is completely covered.

Time to Think

"... we no longer live in a modern era, but in a new Middle Ages whose characteristics we cannot yet make out. ..... The era lies before us does not allow for short-term predictions, and to speak of a new Middle Ages is to speak equivocally at best. If the future sees the ultimate triumph of technico-scientific reason, even accompanied by the weak correctives which sociology can devise, the new Middle Ages will be nothing but a new barbarousness. But in such a case it would be wrong to speak of them as 'medieval,' for the Middle Ages were not merely barbarous, nor were they bereft of science or devoid of art. To speak of a new Middle Ages, then, could seem a far from pessimistic hypothesis to the man who does not believe that the thread of reason can unwind ad infinitum; and yet an entirely new barbarousness is possible, a stifling and distortion of the very idea of civilization and culture."

Remember the Renaissance followed the Middle Ages.

Time to Think

- During the last decade, technology has been running faster than we could think.

- With the stabilization of processor speed (physicists still try hard, but it's unlikely that we will see more advancement in the horizon) in the next decade, we will have time to contemplate and create to unleash the full potential of the technology.

- I'd think that the stage has been set for a
  ## *New Renaissance*

  *this time we must take our **natural environment** into serious consideration because we are running out of it faster than we think.*