

Communications Based Ecosystems

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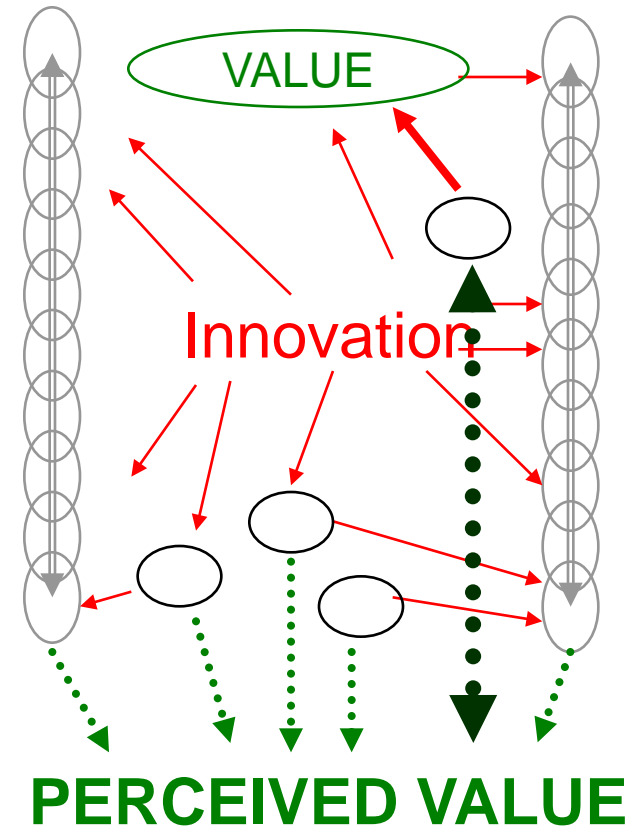
OVERVIEW

- ▶ **The shift**: from Value Chains to Ecosystems
- ▶ Technology Evolution and its **Impact** on Business
- ▶ Infrastructures towards a **Utilities** Paradigm
- ▶ Me and my cell phone in the **next** decade
- ▶ A few examples:
 - Internet *with* things
 - The Digital Home
 - Digital Shadow

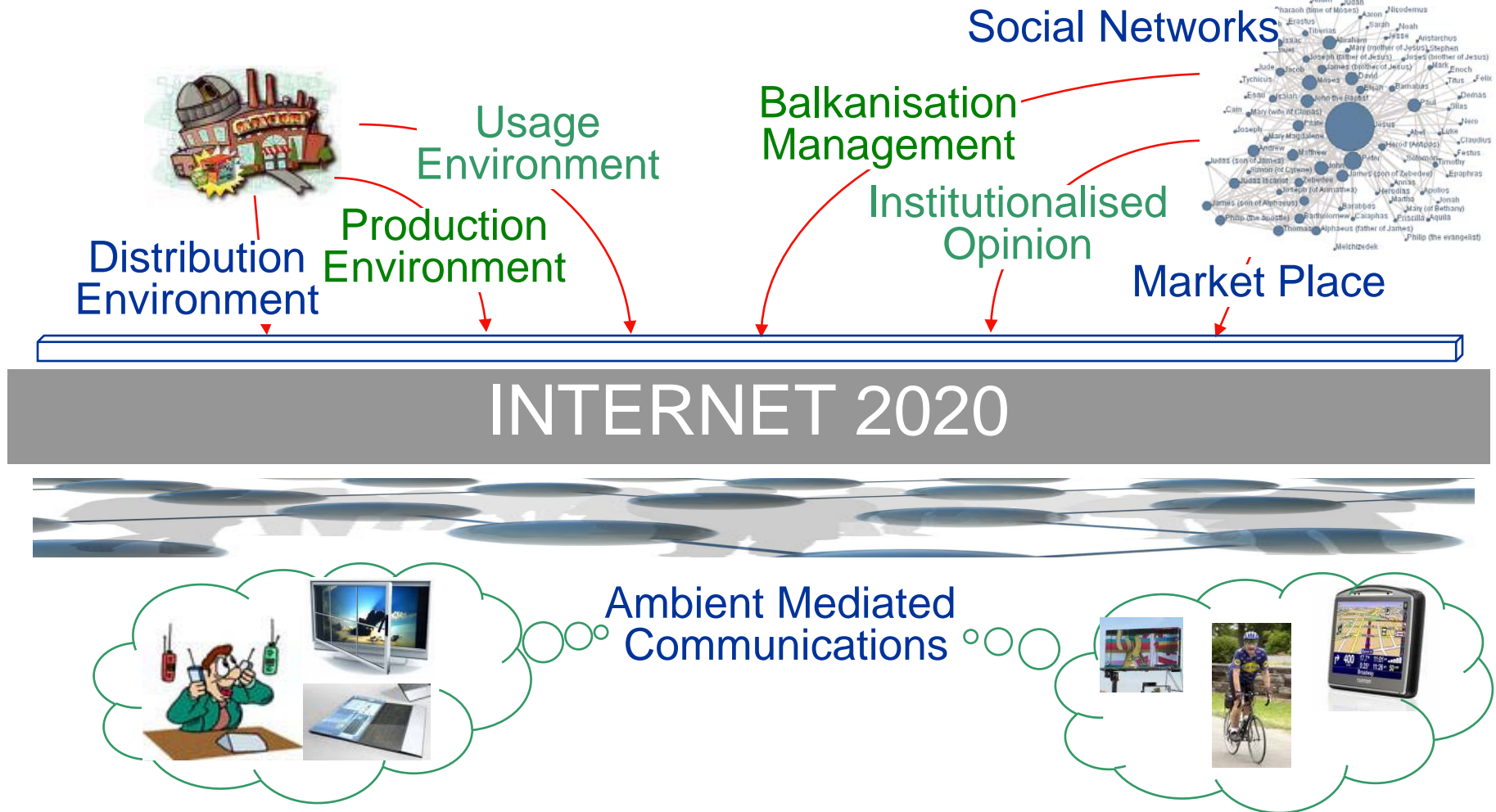
From VALUE CHAINS to ECOSYSTEMS

NOW ... Next Decade

- ❖ **Out of field Innovation**
- ❖ **Marginal-No Control of Depl.**
- ❖ **Mashed Value Creation**
- ❖ **Intermediation Advantage**
- ❖ **Competition is on biz Models**



INTERNET 2020 – MY VISION



TECHNOLOGY EVOLUTION AND IMPACTS ON THE BIZ MODELS

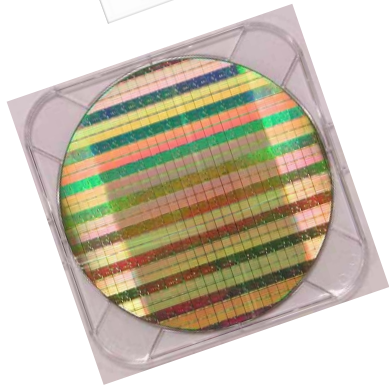


2 TB by 2012, WiFi Embedded
10+ TB by 2012, in the home
Information is here

TECHNOLOGY EVOLUTION AND IMPACTS ON THE BIZ MODELS



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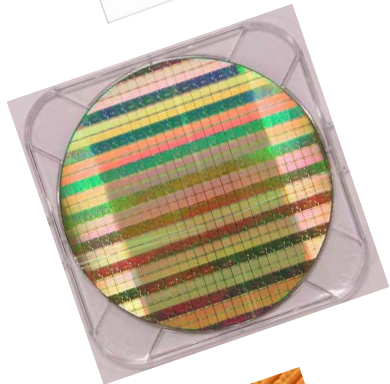


20 nm, nW, Optics and Radio Embedded
Printed electronics <0,001c per mm²
Connected Objects

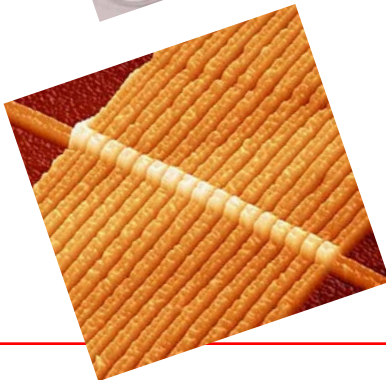
TECHNOLOGY EVOLUTION AND IMPACTS ON THE BIZ MODELS



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20 nm, nW, Optics and Radio Embedded
Printed electronics <0,001c per mm²
Connected Objects



4 nm beyond 2020, carbon based
Memristors
“Experienced” objects

TECHNOLOGY EVOLUTION AND IMPACTS ON THE BIZ MODELS

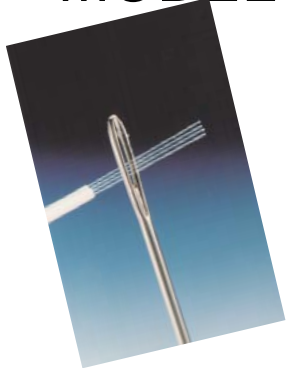


1 Gbps in every home

10 Mbps everywhere

Bandwidth is no longer a constraint

TECHNOLOGY EVOLUTION AND IMPACTS ON THE BIZ MODELS



1 Gbps in every home
10 Mbps everywhere

Bandwidth is no longer a constraint



Terminals create local networks

Store and forward managed by the terminal

Terminals get the upper hand (on the network)

TECHNOLOGY EVOLUTION AND IMPACTS ON THE BIZ MODELS



4/8 k screens - ultra HD

Haptic Interfaces, gesture recogn.

Being there, presence, immersion

TECHNOLOGY EVOLUTION AND IMPACTS ON THE BIZ MODELS



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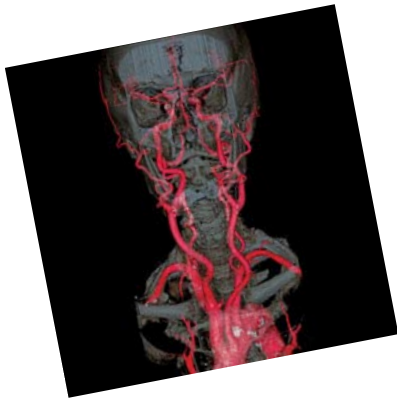


Image recognition

Image understanding

Third party service components

TECHNOLOGY EVOLUTION AND IMPACTS ON THE BIZ MODELS



Variety of sensors
Flexibility, integration, local data processing
Context awareness

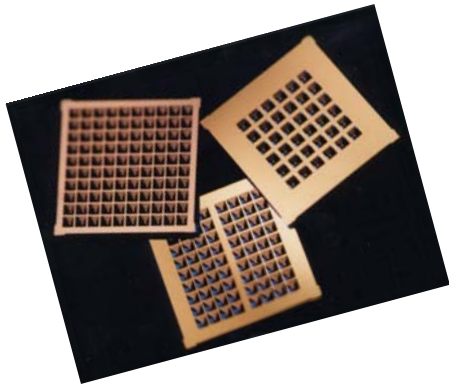
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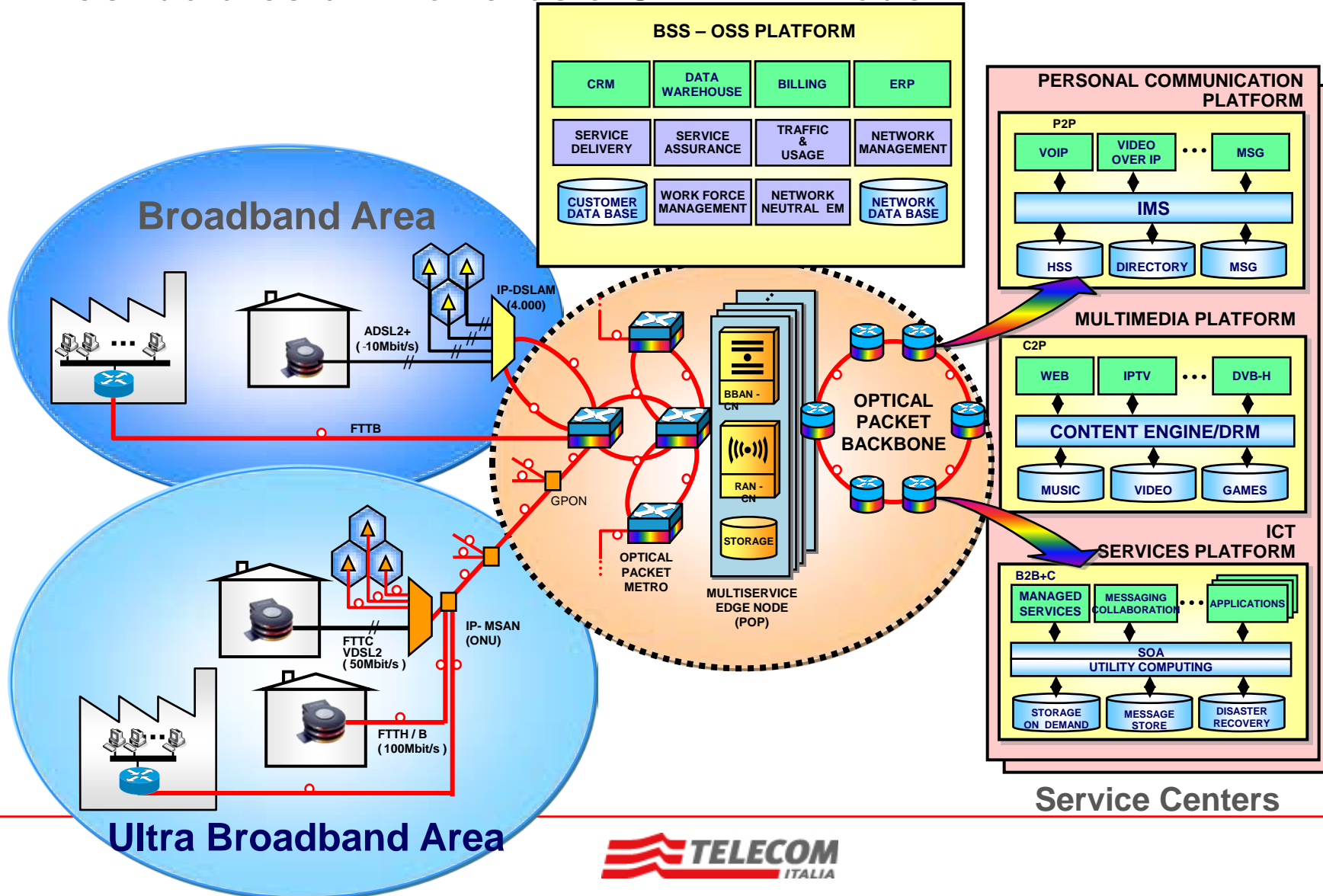


Micro actuators

Wireless connection, local awareness

Autonomic Systems

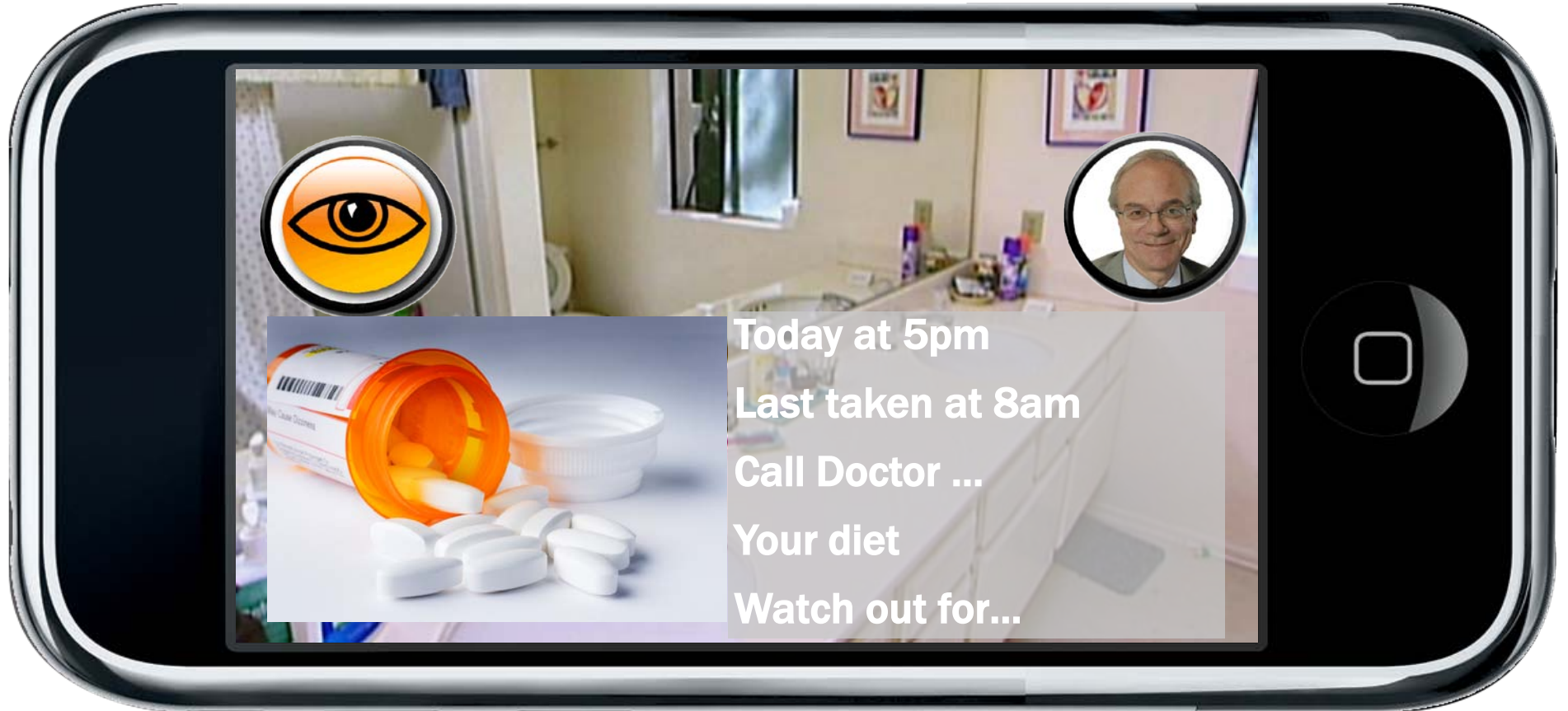
Infrastructures drift towards a UTILITY model



INTERNET *with* THINGS

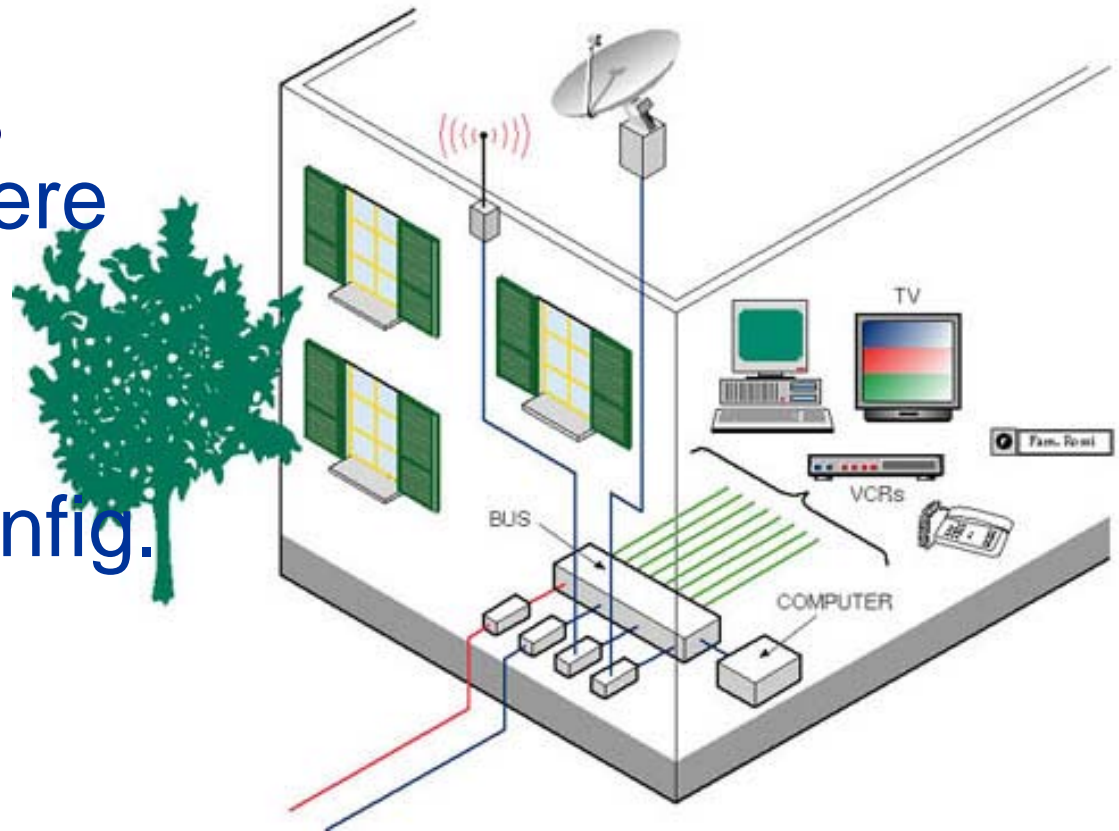


INTERNET *with* THINGS



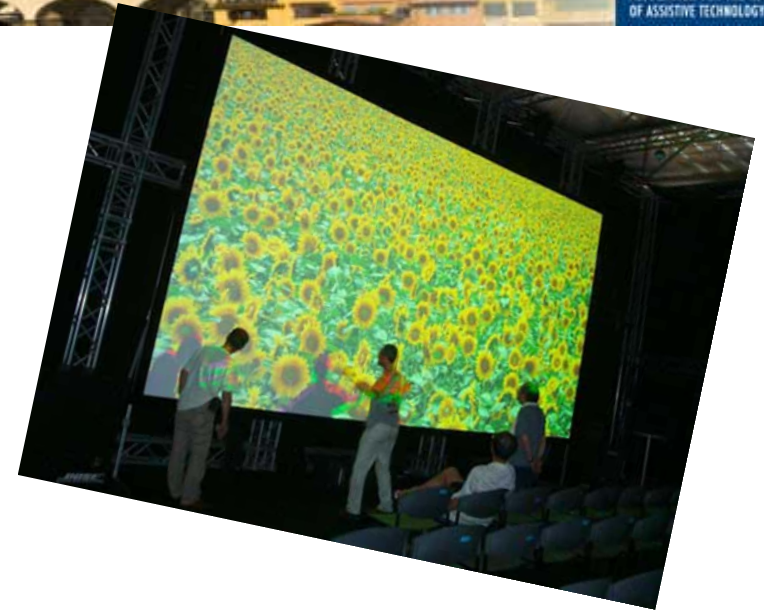
The DIGITAL HOME

- Ambient Awareness
 - Sensors everywhere
 - Smart materials
 - Profile oriented behavior
 - Self inventory, Config.
 - Robots

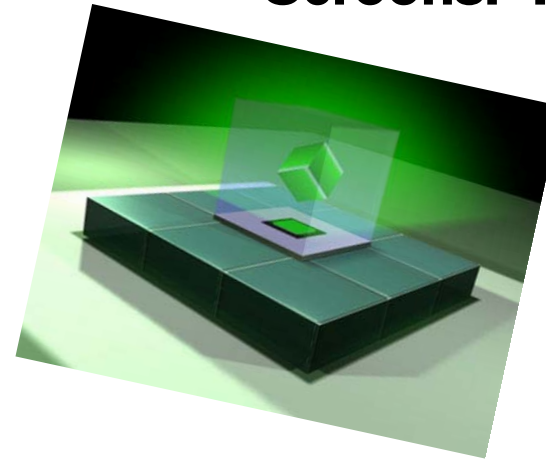


The DIGITAL HOME

- Ambient Awareness
- Being here, being there
 - Sense of presence
 - Multisensoriality
 - Social Communication



Screens: 4k >> 8k



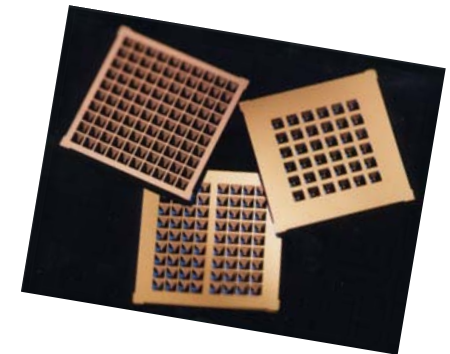
Holography

The DIGITAL HOME

- Ambient Awareness
- Being here, being there
- Well Being
 - Smart Drugs
 - Smart Diets
 - Micro Climate
 - Funct. Gym



Lung Cancer Sensor



**Autonomic Drug
Dispenser**

The DIGITAL HOME

Life in Bits

- Ambient Awareness
- Being here, being there
- Well Being

- Digital Shadow
 - Sustained Memory
 - Evolving profile



Magic Mirror

DIGITAL SHADOW



DIGITAL SHADOW



Communications Based Ecosystems

Thanks

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