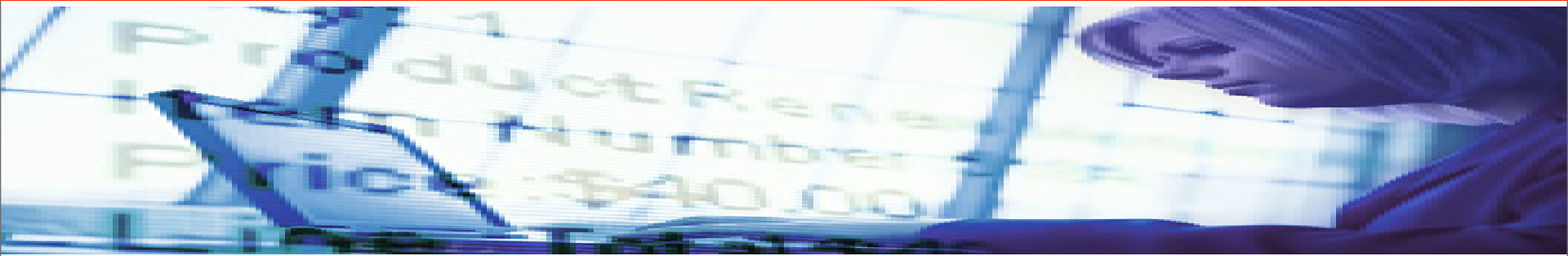


The Future of Telecommunications



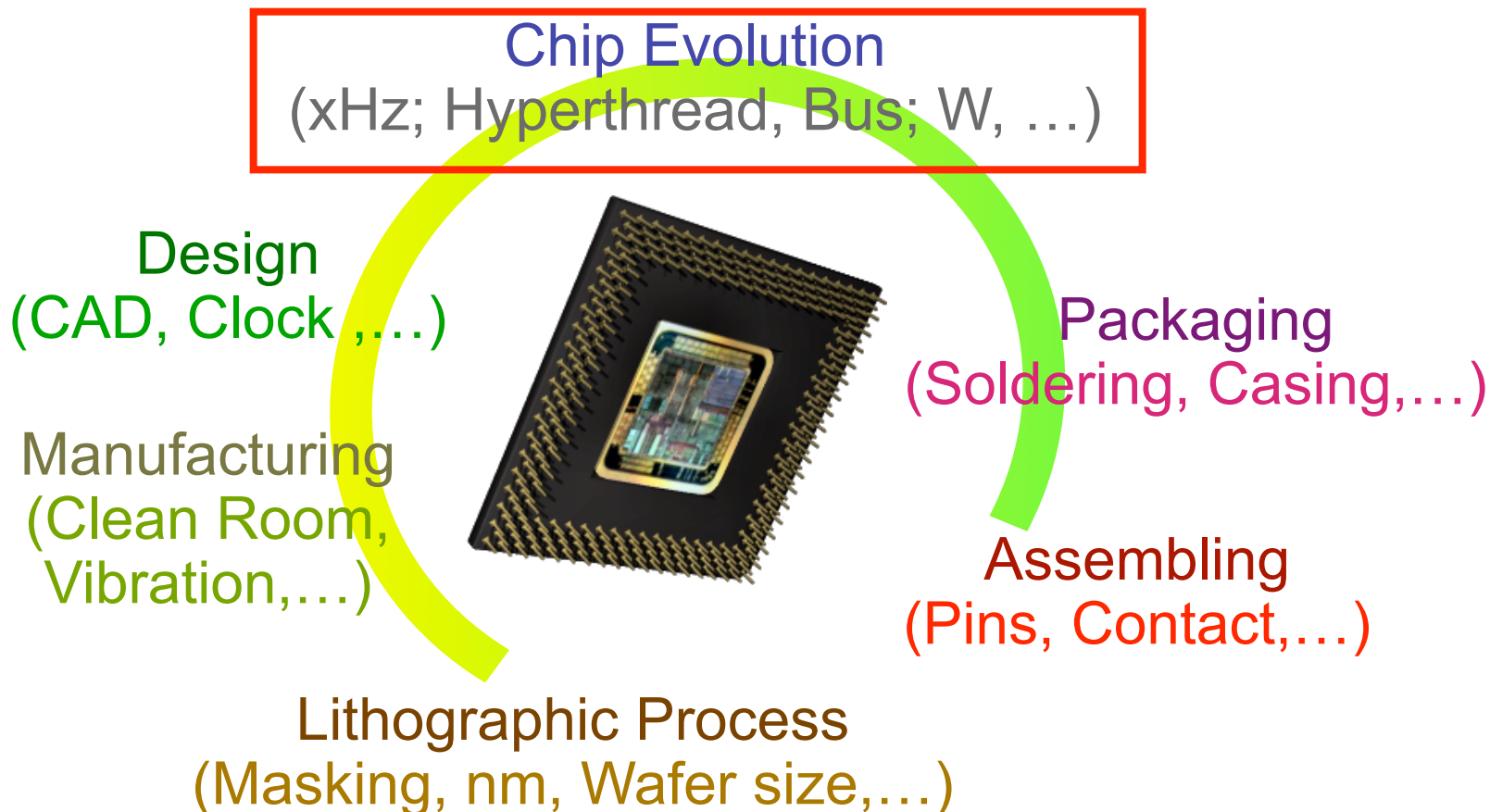
A Changing Environment

Let's look around
Disruptions ahead



Business Transformation

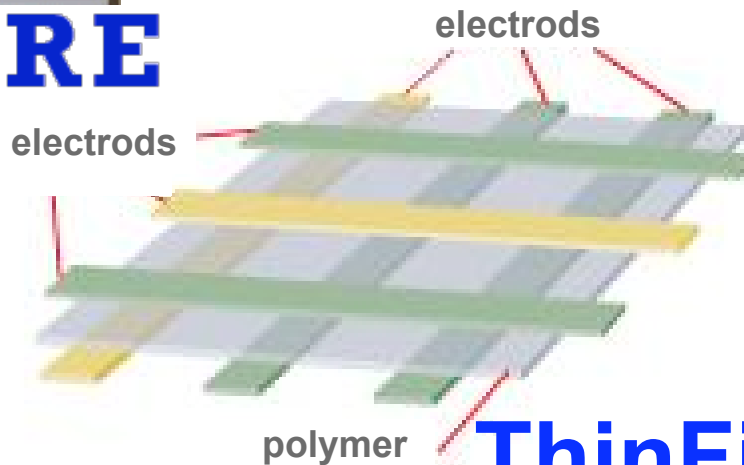
What is a Technology?



The Storage Growth



OPTWARE



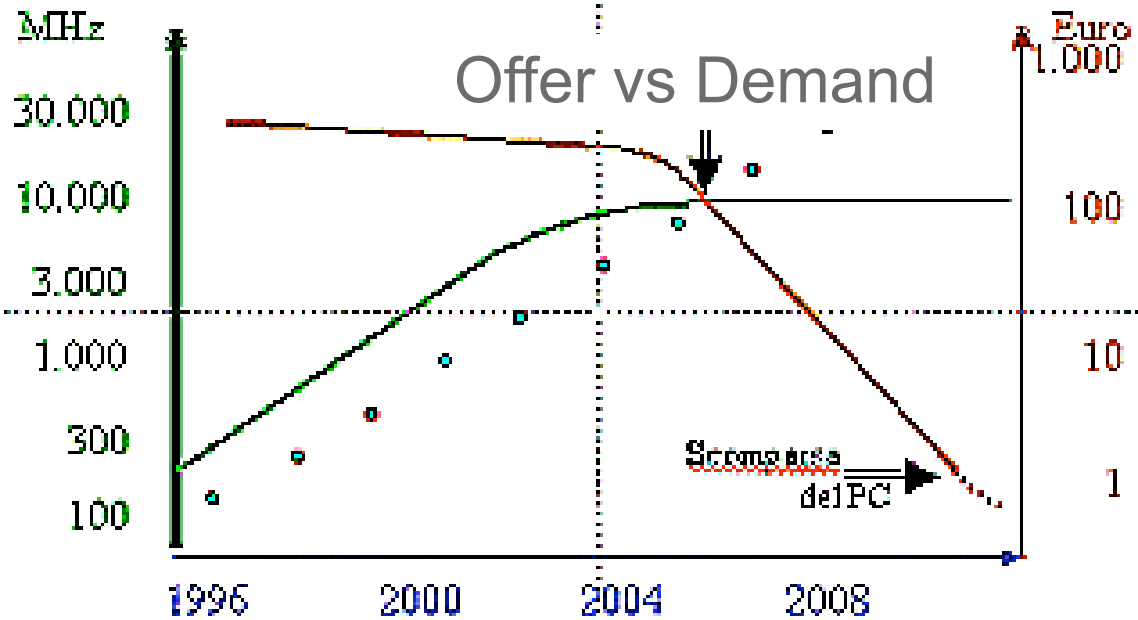
ThinFilm

The growth of the processing power

The Terascale Computing System
Pittsburgh Supercomputing Center



The CELL

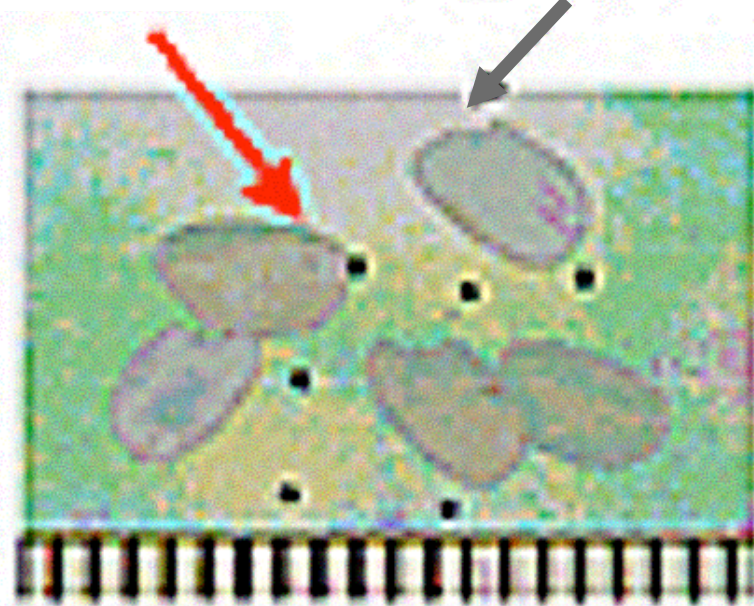


The growth of sensors



Microchip

A grain of rice



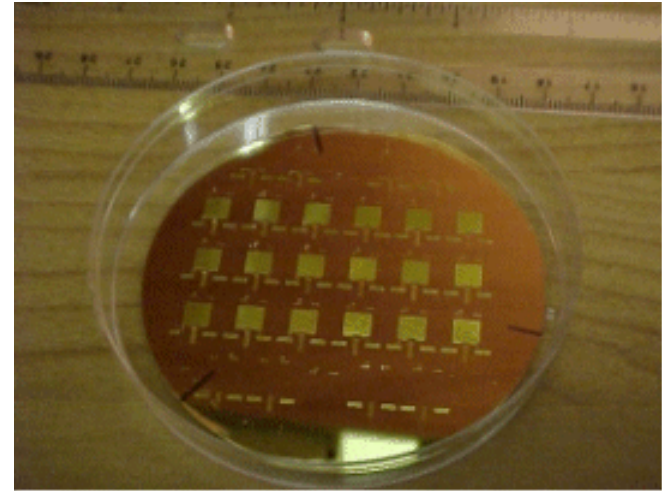
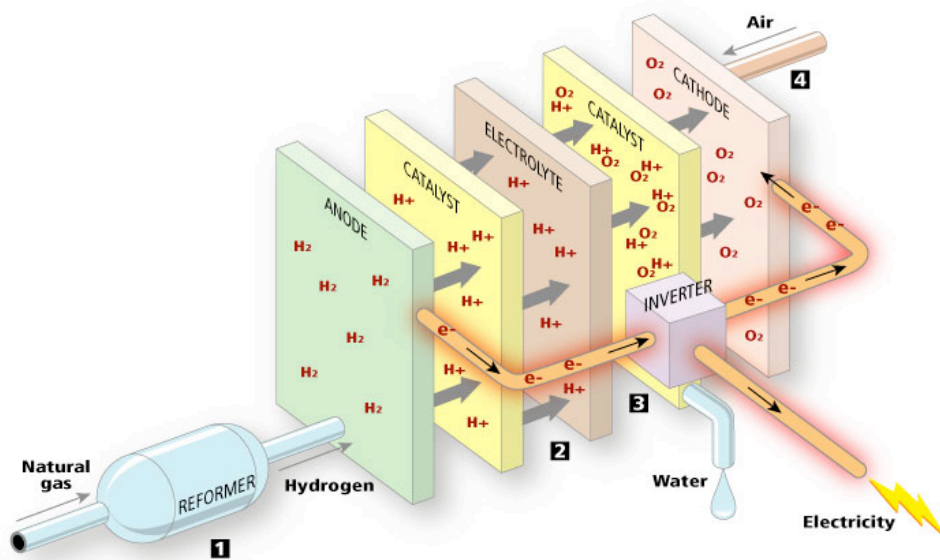
The growth of image based communications



The growth of image based communications



The (slow) growth of “powering”

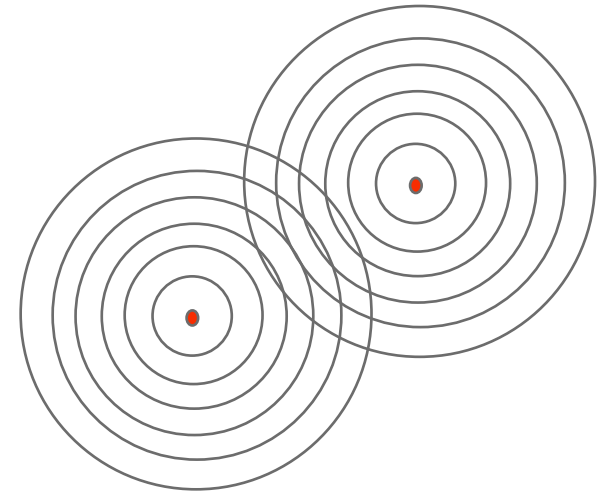


The growth of connectivity

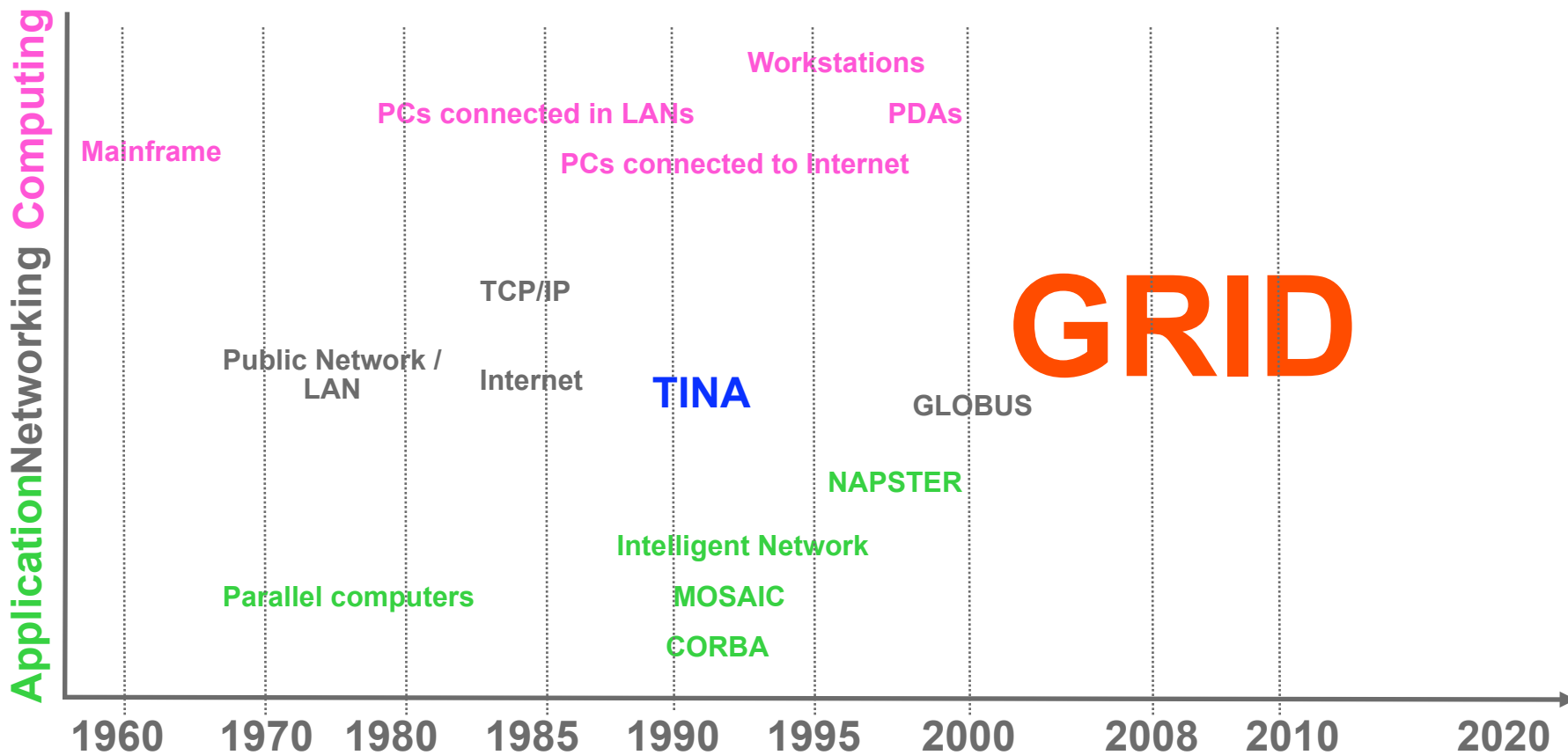


UWB

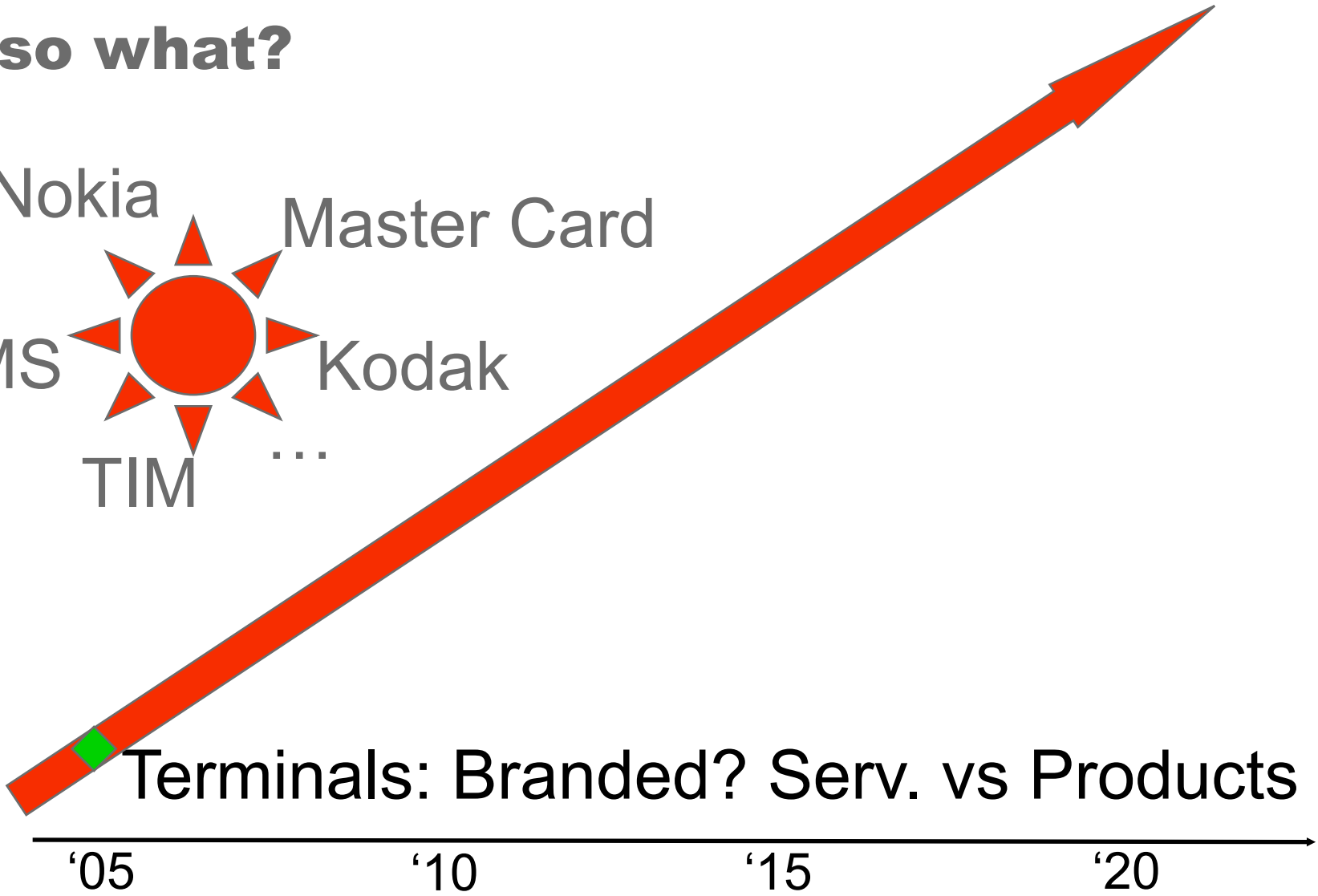
$$C = W \log\left(1 + \frac{P}{N_0 W}\right)$$



Peer to Peer at the nth power



...so what?



Terminals: Branded? Serv. vs Products

...so what?



Shorter life cycle

Terminals Branded? Serv. vs Products

'05

'10

'15

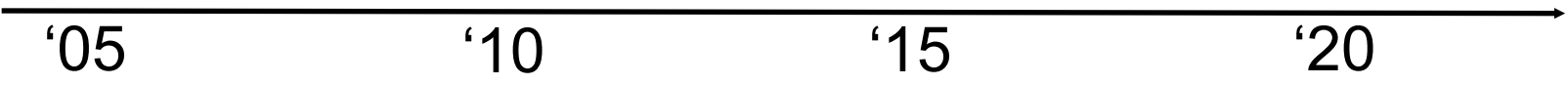
'20

...so what?

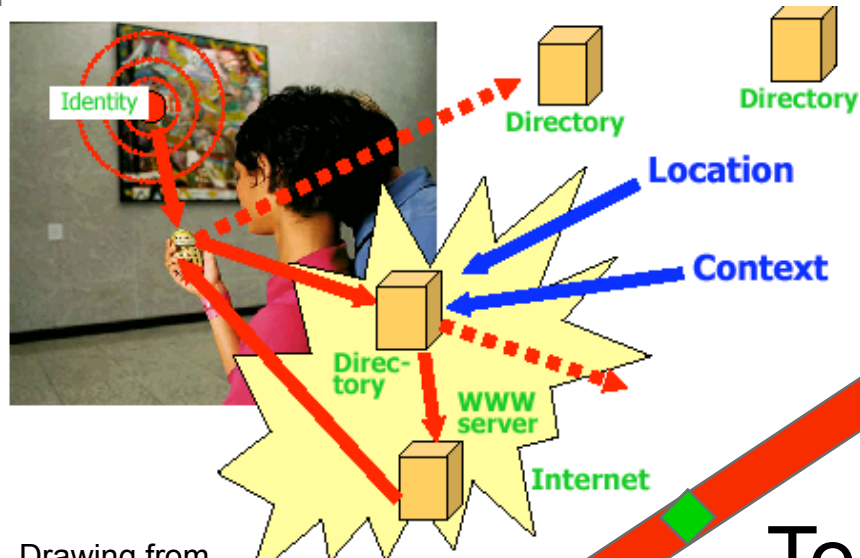


Terminals as ... gateways
Shorter Life Cycle

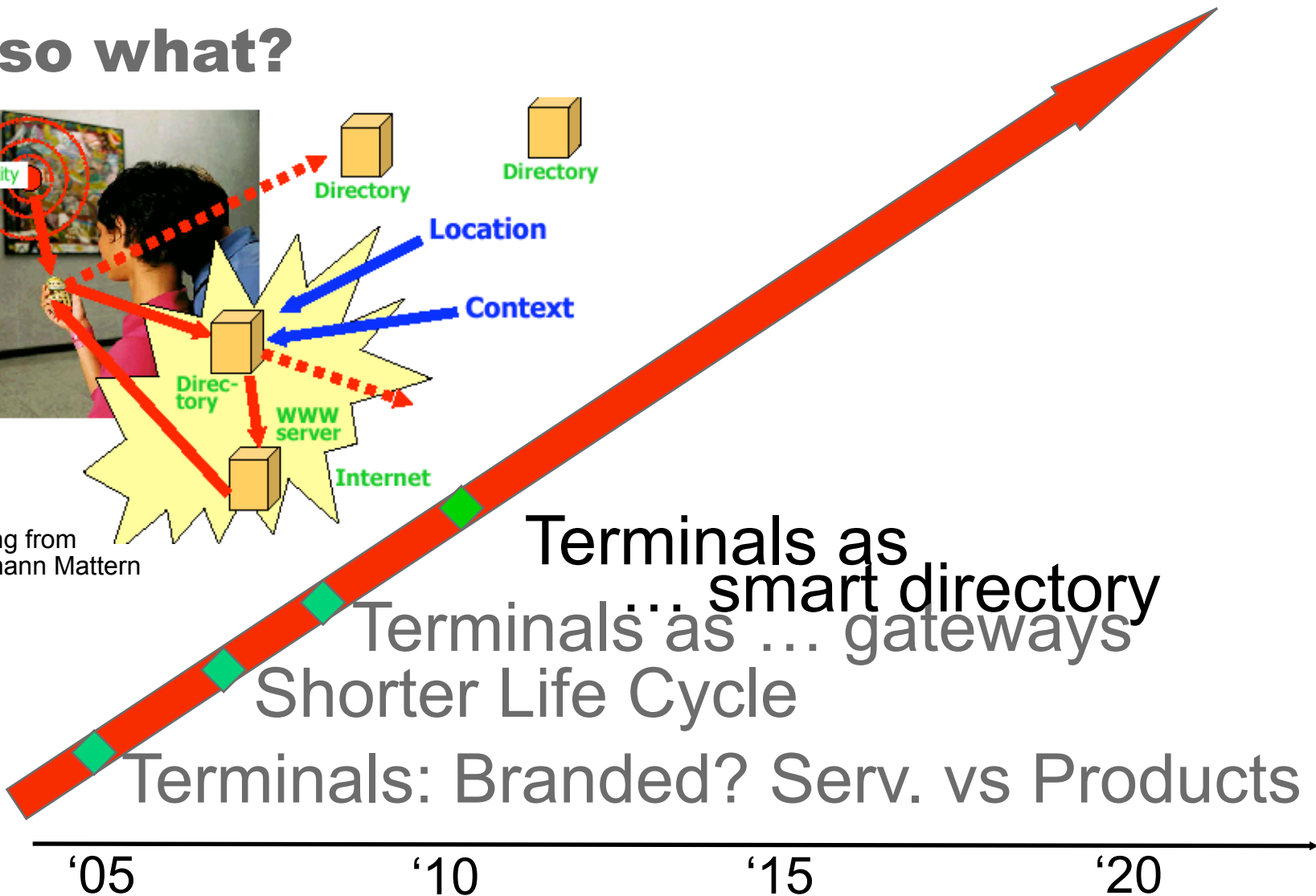
Terminals: Branded? Serv. vs Products



...so what?

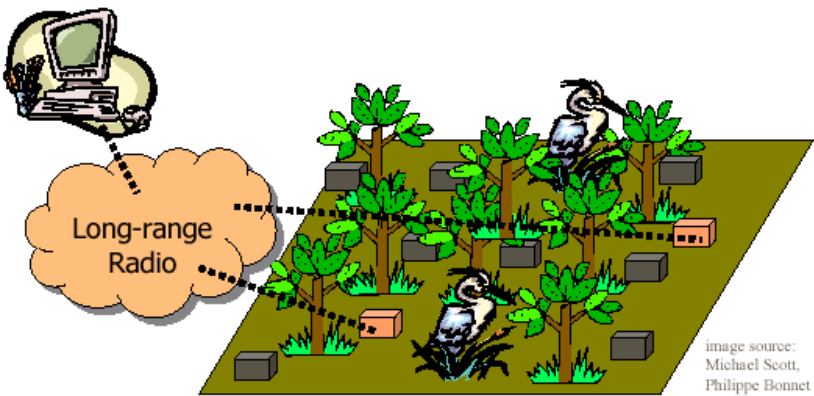


Drawing from Friedmann Mattern



Terminals as smart directory
Terminals as ... gateways
Shorter Life Cycle
Terminals: Branded? Serv. vs Products

...so what?



<http://birds.cornell.edu/>

image source:
Michael Scott,
Philippe Bonnet

F. Ma. 56

Terminals as
network
nodes

Terminals as
smart directory
gateways

Shorter Life Cycle

Terminals: Branded? Serv. vs Products

'05

'10

'15

'20

...so what?

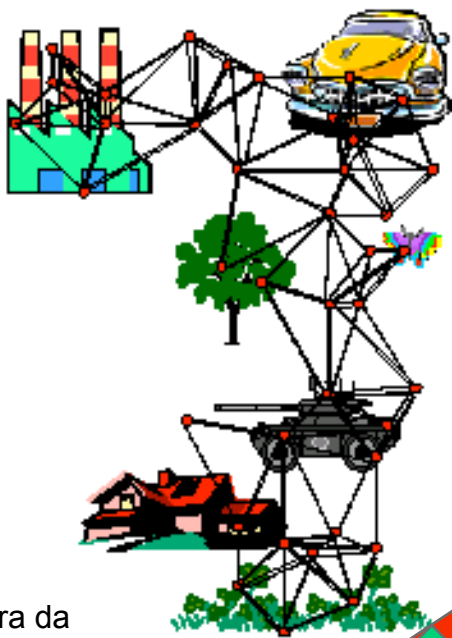
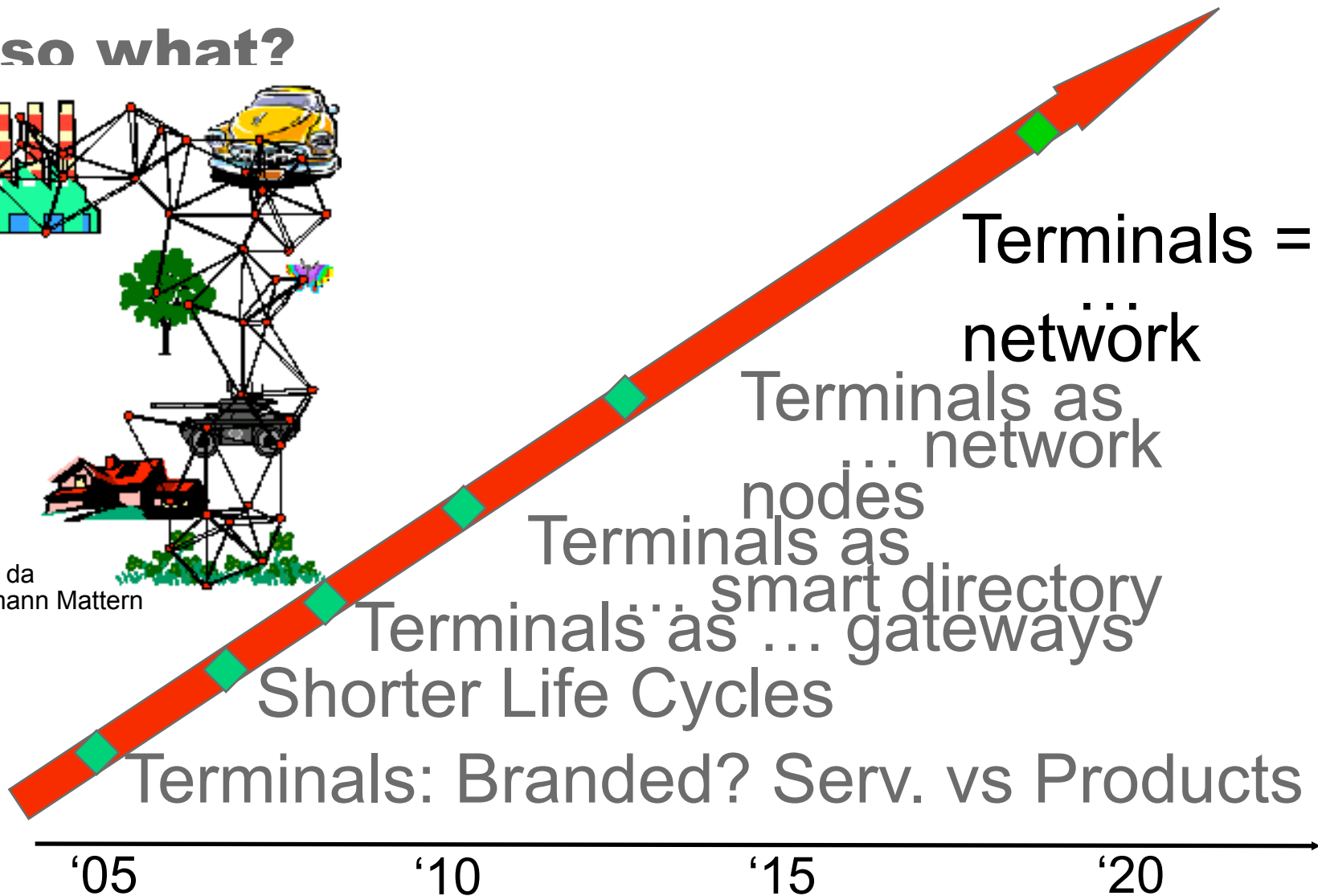


Figura da
Friedmann Mattern





Disruptions: Unlimited Bandwidth *(on wireless)*

- ∅ Measuring vs perceiving Bandwidth
- ∅ Fixed lines – Backbones – local loop
- ∅ Wireless – untethered connectivity
- ∅ Local storage



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Disruptions: Unlimited Bandwidth *(on wireless)*

∅ Technological Enabling Factors

- § Advances in theoretical studies on propagation
- § Terminals as network nodes
- § Cognitive Radio
- § Software Radio
- § Mesh Networks



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Disruptions: Unlimited Bandwidth (*on wireless*)

- Ø Technological Enabling Factors
- Ø Market Driven Factors
- § Need for ubiquitous connectivity
- § Emergence of a variety of local operators
- § Great variety in traffic demand



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Disruptions: Unlimited Bandwidth *(on wireless)*

- ∅ Technological Enabling Factors
- ∅ Market Driven Factors
- ∅ Industry Impact
- § Incumbent Mobile Operators
- § New Mobile Operators
- § Service and Product industry
- § Regulatory Framework



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Disruptions: Unlimited Bandwidth *(on wireless)*

- Ø Technological Enabling Factors
- Ø Market Driven Factors
- Ø Industry Impact
- Ø Market Sectors Affected
- § Wearable Devices
- § Any Mobile Object
- § Healthcare
- § Education
- § Environment monitoring
-



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To know more....

<http://fistera.jrc.es>

<http://fistera.telecomitalia.com>



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To know more....

<http://fistera.jrc.es>

<http://fistera.telecomitalia.com>



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The Future of Telecommunications

