Changes in Telecommunications and Biz Paradigms in this Decade

| Roberto SARACCO | Telecom Italia – Future Center |
| roberto.saracco@telecomitalia.it |

OUTLINE

- When getting better is for the worse
- The Future is no longer what it used to be
- Technology keeps evolving...so what?
- Business at the time of Ecosystem
- My cell phone in 2015
When Getting Better is for the Worse

Coase Ceiling

MARKET SPACE

Coase Floor

ORGANIZATION

When Getting Better is for the Worse

ECOSYSTEMS

Coase Ceiling

MARKET SPACE

Coase Floor

ORGANIZATION

ECOSYSTEMS
Positioning Options for a Network Operator

- **Service Provider**
  - Ecosystems of services

- **Service Enabler**
  - Overlay networks of autonomic components

- **Bit Carrier**

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Surfing your pond? Looking for new Oceans?

Research and Innovation to:

1. Decrease cost – Optimize investment
2. Increase Revenues expanding offer & Mkt Share
3. Enter new Market Spaces EMBEDDED COMMUNICATIONS

<table>
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<th>Evolution over time</th>
<th>Revenues</th>
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IEEE

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The Future is no longer what it used to be

- Predictable Future: Technology Leads
  Market Leads
- Few Innovators, Big Investment
  Innovation Everywhere, Affordable
- Scarce Resources, Efficiency wins
  Abundance, Simplicity wins
- Network (Infrastructure) leads Innovation
  Terminals lead Innovation
- Scale factor dominates Production
  Customization and Flexibility win
- If you want something, you pay for it
  If you look around ...
  you get a better deal

The Future is no longer what it used to be – Standards...
The Future is no longer what it used to be – Infrastr. vs Infrastructures

Overlay Networks

Private Networks

Other Networks (e.g., Mesh)

IPv4

IPv6

AS1

AS2

AS3

Technology keeps evolving. So What?

2 TB by 2012, WiFi Embedded
10+ TB by 2012, in the home
Information is here
Technology keeps evolving. So What?

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

20 nm, nW, Optics and Radio Embedded
Printed electronics <0.001c per mm²
Connected Objects
Technology keeps evolving. So What?

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

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 keeps evolving. So What?

1 Gbps in every home
10 Mbps everywhere
Bandwidth is no longer a constraint
Technology keeps evolving. So What?

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 keeps evolving. So What?

4/8 k screens - ultra HD
Haptic Interfaces, gesture recogn.
Being there, presence, immersion
Technology keeps evolving. So What?

4/8 k screens - ultra HD
Haptic Interfaces, gesture recogn.
Being there, presence, immersion

Image recognition
Image understanding
Third party service components
Technology keeps evolving. So What?

Variety of sensors
Flexibility, integration, local data processing
Context awareness
Technology keeps evolving. So What?

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

Micro actuators
  Wireless connection, local awareness
  Autonomic Systems

Technology keeps evolving. So What?

Statistical data processing, metadata
  Semantics structures
    Value shifts from information to relations
Technology keeps evolving. So What?

Statistical data processing, metadata
Semantics structures
Value shifts from information to relations

Cloud based data processing, storage
Razor thin margins, commodity model
Cloudy future for the cloud, cloud at the edges?

Technology Roadmaps Impact on Demand

Upstream Bandwidth
Presence
Fading Bndr Real vs Virt.
Here and Now
Personal Identity

Devices Terminals
Real Life Interfaces
Display
Processing
Storage
Image Recog
Handheld

AI
Context Awareness
Seamless Communicat.
Massive Automation
Data Resilience
Zero Cost High Quality

Fibre
Radio
Robotics
Security
Biometrics
Energy
The long, thin tale

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Ecosystems are born: The Apple Apps Store
Ecosystems are born: The Apple Apps Store

Ecosystems are born: Androids and the Others
Is there a Biz Opportunity (for us) in an Ecosystems’ World?

60 Ml E of Apps Revenue for Apple
5.700 Ml E for TIM

1.000.000.000 No of Apps download in 9 months - World
20.000.000.000 of cell phone calls in 9 months - Telecom Italia, Italia

Is there a Biz Opportunity (for us) in an Ecosystems’ World?
Is there a Biz Opportunity (for us) in an Ecosystems’ World?

- What is the Integral of the “tale”?
- Do we know how to solve it?
Ecosystems Enablers: Seeds

Identity
Authentication
Localization
Profiling

Maps

Objectives:
- Identification of new biz opportunities in “telecom enabled” ecosystems
- Future Telecommunications Showcase

The Future Centre
5 of 1 leading 3 engaging 10 networking with 100

Weekly
- brainstorming new ecosystem
- ecosystem presentation on site

Monthly
- ecosystem report
- engaging the players – open event

HY-Milestone
- Report: new biz models for new ecosystems
- Event: Partnering for competition

YE-Milestone
- Report: Opportunities, Challenges to get there
- Event: The fabric for the future

Business at the time of Ecosystems
Evolving Next Generation Business Models

OBJECTS

Techonologies

Municipal.
Tourist Ag.
Product Pr.
Content Pr.
Individ.WK
Comm.WK

Aggregators

Platforms
Srv.Aggr.
Track/V.A

CONNECT.V.

Serv.Prov.

META Data C.
Stat.MeaningE.
Pers.Aggreg.
Ambient Creat.

Regulations

Detection Systems

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Playing the Ecosystem Game: Future Industrial Districts
Playing the Ecosystem Game: Future of Retail
Evolving Next Generation Business Models

Telecommunications 2015-A user view

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Evolving Next Generation Business Models

Munich, December 5th 2008

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Telecommunications 2015 - A user view

The vineyard
Wine tasting
Buy!
Your diet
Wine History

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Thanks

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