



Ubiquitous Networks Societies: The Case of the Italian Republic

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The views expressed in this paper are those of the author and do not necessarily reflect the opinions of the ITU or its Membership.



Background and objectives

Italy has been chosen by the ITU as an ideal Case Study candidate because of its rapid growth of telecommunications in the past few years.

Two Case Studies have been produced:

- Ubiquitous Network Societies: The Case of the Italian Republic
- Bridging the Gap: Taking Tomorrow's Network into Today – The Case of the Italian Republic

Provide an overview of the current state of the art in the ICT and explore the implications of a future Italian Ubiquitous Network Society

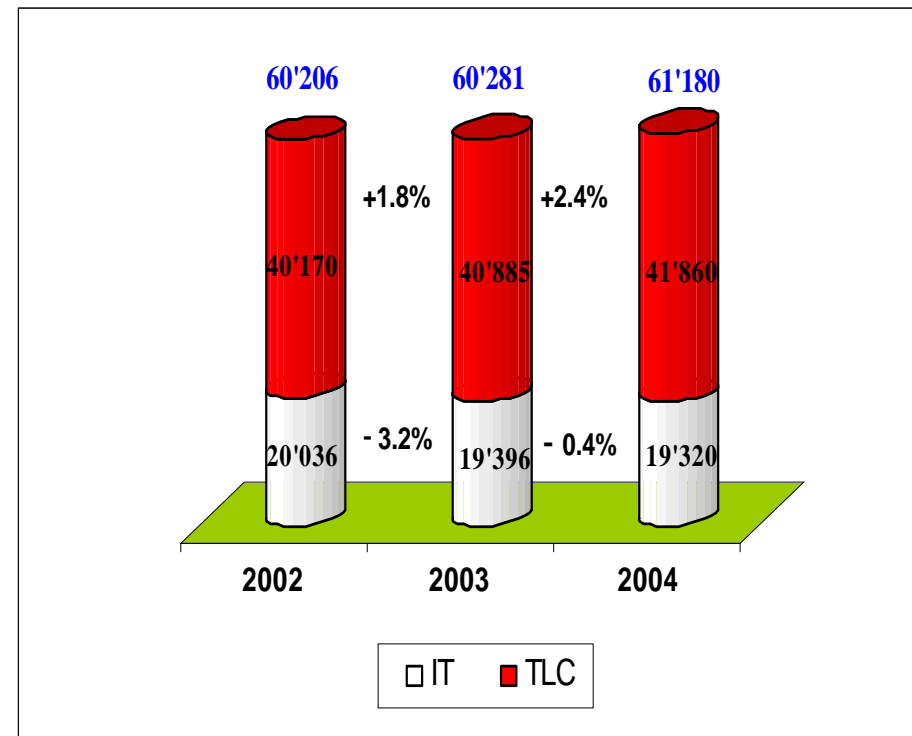


ICT Market

The real change toward Ubiquitous

Three driving forces...

- High penetration and technological leadership in mobile telephony
- Accelerated growth and increased penetration of broadband wireline access
- The final planned phasing-in of digital terrestrial TV, which will completely replace analogue TV by end-2006





The path to Italy's Ubiquitous Network Society

Implementing solutions in line with the ubiquitous computing paradigm

Any place

- The capacity to access and use a specific ICT service through different access technologies and physical devices

Any time

- The service must be "always on"

By anyone and anything

- Enabling the use of a wide variety of non-PC equipment, such as cell phones, car navigation equipment and RFID, in addition to desktop and laptops.



The Italian Government supports the Ubiquitous Society

The Italian Government is committed to making Italy a leader of the digital age

- Modernizing the country through the widespread use of new information and communication technologies
- Boosting the country's competitiveness by accelerating the spread of the online economy and developing a model of the information society

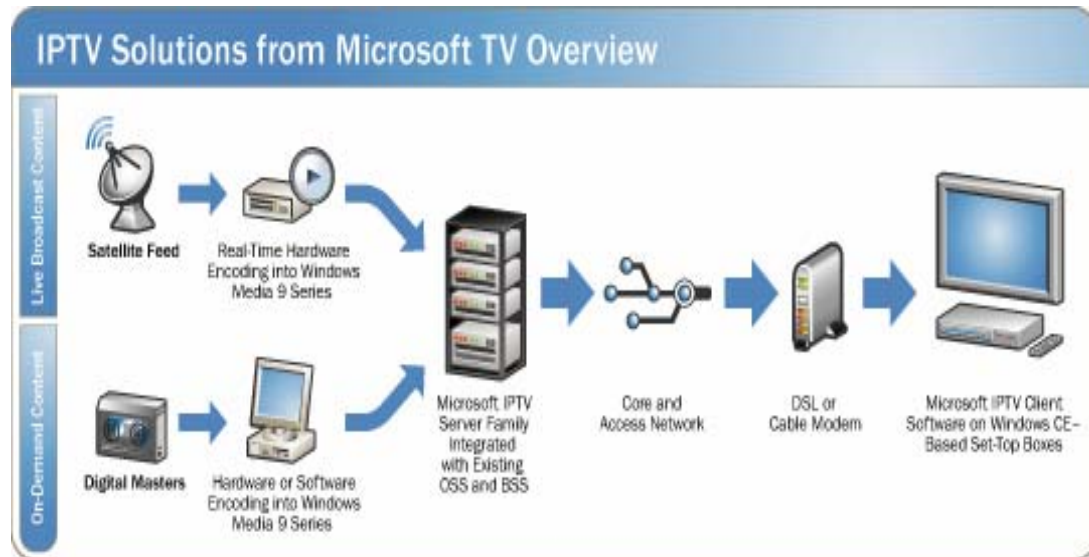


Towards Ubiquitous Services: where we are now?



Broadband Applications

TV and Cinema
over ADSL



Broadband on the
train

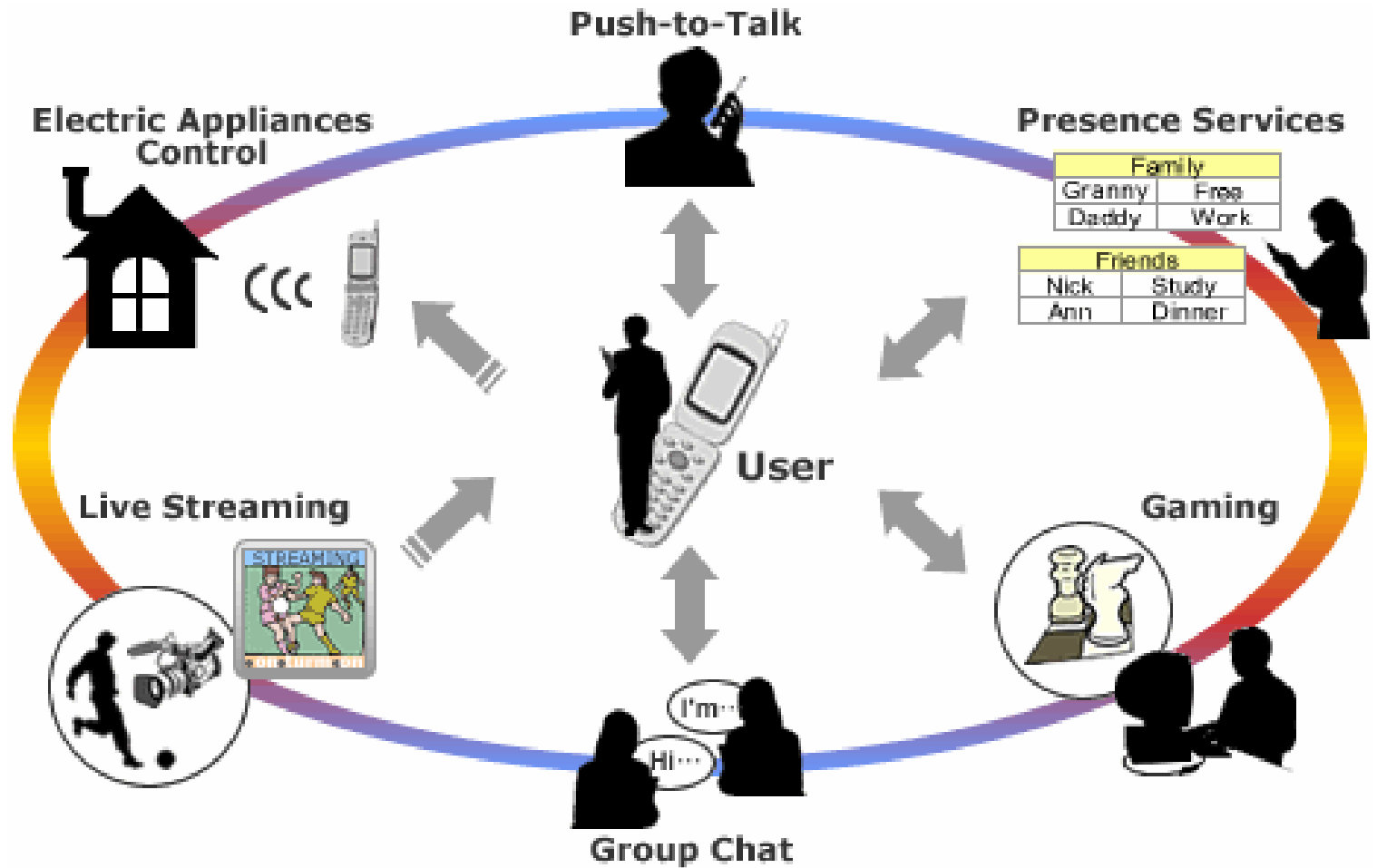


Mobile Computing

- The Italian Mobile market is ready to be Ubiquitous
- Italy currently ranks first in Europe with more than 4 million UMTS subscribers
- Interesting applications include
 - M-payment (parking reservation and payment)
 - Mobile TV
 - M-Government services



Mobile Computing





Digital TV

2004 has seen the take-off of digital TV in Italy

The screenshot shows the Rai 24 news channel interface. At the top, it displays the channel logo, the date 'SAB 04 GIU 2004', and the time '11:38:46'. Navigation tabs include 'NOTIZIE', 'FOTO', 'EDICOLA', and 'LIBRI'. The main content area features a news anchor on the left and a news text block on the right. A headline reads 'Cina e Russia: più tempo per gli ispettori ONU'. Below the headline, there are sections for 'Medio Oriente: Si al piano di disimpegno unilaterale da Gaza, Sharon: "Vie entro marzo 2005"', 'Cinema: Oggi alle 10,30 i funerali di Nino Manfredi a Piazza del Popolo', and 'Primo Ucciso in Arabia: giornalista della Bcc... o un collega'. At the bottom, there are icons for 'PROGRAMMI', 'SONDAGGI', 'INFO', 'METEO', 'TRAFFICO', and 'EXIT'. Callouts point to various elements: 'News text' points to the anchor's name, 'Headlines (newspaper, web)' points to the main headline, 'News related Pictures' points to the anchor's image, 'Programme schedule' points to the 'PROGRAMMI' icon, and 'Surveys, opinion polls' points to the 'SONDAGGI' icon.

- ACI (Automobile Club)
- Post office
- National portal
- Regional portal

A collage of four digital TV service screens. The top screen is the ACI (Automobile Club) interface, showing options like 'Calcolo Bolle', 'Dove pagare', and 'Poste italiane'. The middle screen is the Post office interface, showing 'Prodotti Postali e BancoPosta', 'Ufficio Postale', and 'Controllo Spedizione'. The bottom-left screen is the Italia Utile interface, showing 'Servizi', 'Piemonte Emozioni', and 'Call Center 800-656-646'. The bottom-right screen is the Rai 24 interface, showing 'Italia Utile News', 'Domande e Risposte', and 'Conferma Rai TV'.

Planned switch over: end-2006?



Public Utility Services

Relevant investments (in particular by the Public Administration) in the area of integration and convergence

Experimental phase for t-government services

- Electronic Identity Card
- National Services Card





Wireless

Expansion of Wi-Fi in Italy

- A large number of licenses issued
- Map of hot-spots (finally released)
- R&D entities interested in the potential of wireless

Some proof of concepts toward convergence:

- Motorola and TIM co-design, deploy and support a hybrid Wi-Fi system to provide wireless Internet and intranet access using TIM's existing user authentication solution (SIM-based authentication).
- The Ugo Bordononi Foundation (FUB) and Cisco Systems experimented with a Wi-Fi multi-operator infrastructure, which is a wireless network where different services (of different operators) are provided, using the same hotspots and access points.



Domotics

Home appliances used to provide services via different technologies and communication media

Four Italian companies AEM, Bticino, EuroMilano and Fastweb have joined forces to build the first domotic residential area, in Milan.





RFID

Enabling factors:

- Price reduction (up to 10 US cents for RFID tags)
- More reliability and efficiency



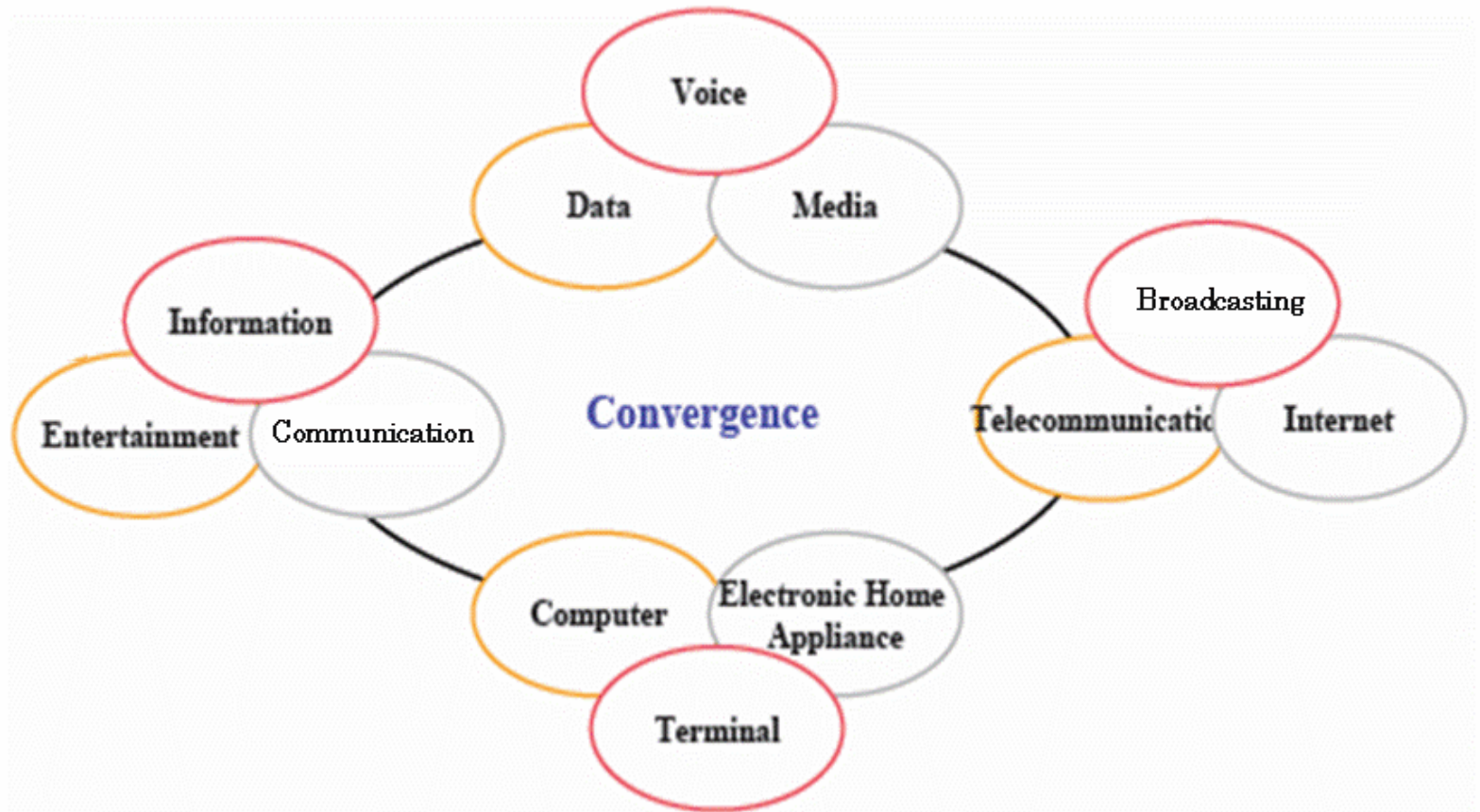
VeriChip: Technology
that cares

Merloni implements
RFID on its home
appliances as proof of
concept





Convergence is the real challenge ...





Are we ready to realize the
Ubiquitous Networks Society in
Italy?

Yes!



Thank you

The full case study (52pp) is available at
<http://www.itu.int/tnt>

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