

Market Places for Future Internet Services

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[http://rivoluzioneverde.wordpress.com/2008/02/25/
presto-i-farmers-market-anche-in-italia/](http://rivoluzioneverde.wordpress.com/2008/02/25/presto-i-farmers-market-anche-in-italia/)



What is IIT-CNR?



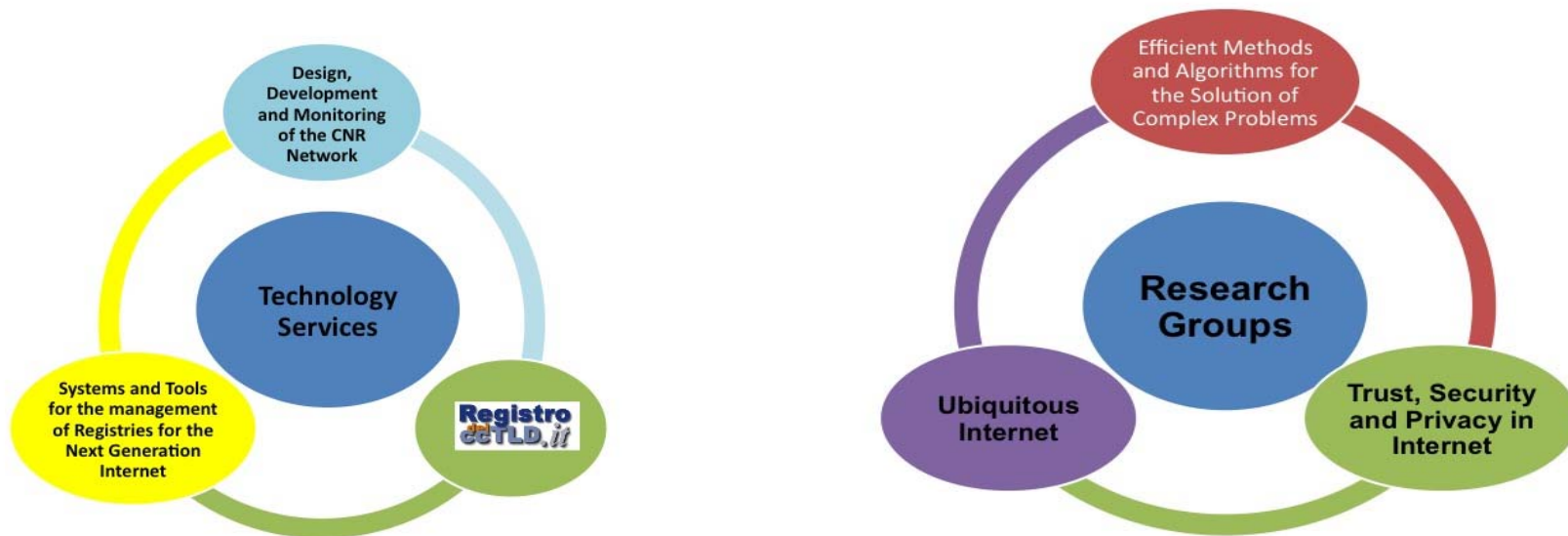
- CNR is the largest Italian public research organization for science and humanities.
- IIT is a research unit of CNR based in Pisa.
- **Mission: Carry out research, development, technology transfer and training in the fields of information and communication technologies and computational science** (In line with the strategy of the: CNR ICT Department + EU FP7).
- Annual Budget: 12M Euro (11 M Euro for Services, 1 M Euro for Research projects) in 2008.
- Personnel: 160 (50 “Research”, 110 “Services”).



What do we do?

Consolidate expertise in models, algorithms, protocols and systems for:

- ❖ High-Speed, Mobile and Pervasive Networks
- ❖ Trust, Security and Privacy
- ❖ Advanced Web Technologies + Computational Economics



What do we offer?

- Experience from EU projects:
- **Active**: MEMORY, VPH, KYOTO, SOCIALNETS, CONSEQUENCE, EU-MESH.
- **Completed**: GRIDTRUSTS, 3MS, BIONETS, HAGGLE, SENSORIA, COMBSTRU.
- **Strategic Position** in the Italian Internet Ecosystem due to the Registry of .it domain names.
- **Ideas**: FI PPP should promote Internet Based Market Places as a **catalyst** for the economic and social forces of innovation.

Three Test Scenarios

- Smart energy grids: Integrate decentralized energy generation with a support ICT architecture needs a marketplace to share and trade services (energy, but also information, sw, market predictions). **Should future decentralized electric power market auction be more like Google Adwords auctions?**
- Transport, Mobility and Logistics in an Urban environment. Car sharing services, enhanced navigation, on-demand public transport are all amenable to be shared and traded in an Internet based Marketplace. **Observable marketplace trends could lead to better public/private offer of logistics and transport by detecting and servicing valuable hotspots.**
- Multimedia Content Management. 3D content and very high quality video by prosumers will need a Marketplace for sharing, trading, and quality evaluation. **Re-use of high quality UGC as a new form of design and art (e.g. an enriched user-fed Google Street view)**

Why Market Places for Internet Services?

- Do not re-invent the wheel: Outsource
- Rent before Buying
- Use before Building
- Test before Using
- What is the right price for a e-service?
- Can I get a better service from someone else?
- Will the e-service I buy be up-to-standard?
- What if I change my mind?
- Always look for better offers
- Follow, on demand, the customers' taste
- Deliver Just-in-Time Internet Services.
- Uniform paying mechanisms.
- Allow SME to enter the market and create synergies

Overall schema

<http://www.jimcarroll.com/weblog/archives/pictures/2008Advertiser-cover.jpg>



www.tiffany.com/.../photo/customer_service.jpg



Service Blocks Providers

Advertisers

MaPIS Search Engine

<http://tbn2.google.com/..../uploads/2008/11/barack-obama-mac-user.png>

Users



Resource Blocks providers



<http://www.renci.org/.../resources/computing/ocracoke-b.io>

Innovative features of MaPIS

Mapis - Basic Concepts

- Auction-based pricing of e-services.
- Similarity Searching based on Service Profiles.
- Uniform payment schemata
- Mechanisms incentivating the use of standard service profiling.
- Clustering of services (re-packaging)
- Detection of critical services in the service eco-system
- Coping with peak performance requirements.

Mapis – Service Search Engine

- Query: service profiles
- Items: Services
- Links: Sponsored/Not Sponsored.
- Pricing: Auction-based
- Complex profile matching
- Brokerage needed
- Quality measured both pre/post delivery.