

The European Future Internet Initiative (EFII)

SECOND USAGE AREA WORKSHOP

(Brussels, Belgium, 21 - 22 June 2010)

“Position paper”

Türk Telecom Group



(1) What use case and scenario in your area would you consider the most appropriate and representative one for large-scale experimentation with the Future Internet platform to be built starting from 2013 (please refer to the documents referred to on the above websites for inspiration)?

As Türk Telekom (TT) group, we believe that Future Internet plays critical role for achieving the objective of `Providing the European citizen and industry with better and smarter services and applications that keep, extend in time, or enhance their quality of life and business`. Being a telco operator, the four main topics of Future Internet (Smart Energy Grids, Health, Transport, Content Management) fall within the borders of our research areas. Nevertheless, in our opinion, the most appropriate and representative one for large-scale experimentation with the Future Internet platform to be built starting from 2013 is Health.

Health care is a strategic area that we focus as a growth segment not only in Turkey but also in the world. According to the OECD studies, the number of people over 50 will rise by 35% between 2005 and 2050; the number of people over 85 will triple by 2050. Again, according to the OECD estimations, by 2020, the number of older people living in institutions will have increased by 74% in Japan, 61% in Canada, 33% in the US, 26% in Germany, 29% in France, 27% in Sweden and 18% in the UK. The numbers of disabled people living at home are also set to grow fast. Between 2000 and 2020 they are expected to rise by 74% in Japan, 62% in Canada, 54% in France, 41% in the US and 29% in Sweden (source: Senior Watch study - www.seniorwatch.eu). The market for smart home applications (age-related assistance in shopping, dressing, independent living) will triple between 2005 and 2020, from 13 million people up to 37 million. This trend will be reinforced by the fact that incidence of disabilities is higher with age. It is estimated that 68 million people in 2005 had several forms of age-related impairment. This will grow to 84 million in 2020 (Source: EC Report: Overview of the European strategy in ICT for Aging Well). Between now and 2013, the EU and Member States, and the private sector will invest more than €1 billion in research and innovation for aging well: some €600m in the Ambient Assisted Living Joint Programme, an expected €400m in the EU's latest research framework programme and so far more than €50m on large scale pilot projects in the EU's ICT Policy Support Programme.

(Source:

http://ec.europa.eu/information_society/activities/einclusion/policy/ageing/action_plan/index_en.htm)

Bearing in mind these facts, we believe that the health care industry will gain more and more importance in the very near future.

In our opinion the second important topic is smart energy grids. Electrical/Power distribution markets worldwide are evolving and as a consequence information requirements and needs are increasing day by day. As it is stated in the `Towards a Future Internet Public Private Partnership: Usage Areas Workshop – Final Report`, the EU has set ambitious goals for its energy policy, including a commitment to generate 20% of its electricity from renewable sources by 2020; and to decarbonise the European power system (80% reduction in greenhouse gas emissions by 2050). On the other hand, in Turkey, new specific regulations are expected to be launched in order to stimulate the technological deployment of advanced metering and processing systems that support the efficiency and sustainability in the electricity networks by 2012, which in turn will enable the consumers to choose the seller for buying electricity. In this regard, energy brokers and retailers will become more important which means new smart infrastructures which are comprehensive, flexible and configurable in order to support the most complex and advanced requirements in Energy Management, will be needed. Bearing in mind these facts, we believe that smart energy grids will become more important than the past.

Providing service to more than 90% of high speed internet users and owning a major stake on a Turkish cellular operator, Turk Telekom is also interested in the management of the content ranging from VoIP to P2P across its networks. Amount of Internet traffic in our core networks is exponentially increasing, especially applications that require high bandwidth and low delays such as YouTube videos, 3D contents (video and interactive maps) are becoming very popular. Due to diverse nature of data traversing core networks, we believe prioritization among different quality of service flows is an essential task. Meta-data addition to various content types makes it easy to search and classify these contents according to their needs. With the grow of Internet traffic over mobile networks, we believe in the importance of providing a consistent experience across different interfaces and devices (e.g. notebooks, smartphones).

(2) What innovative Internet functionality and technologies would you consider important for your suggested use case and scenario (e.g. context awareness, sensor networks, advanced real time processing capabilities handling huge volume of data, ad hoc service composition and mash-up, managed broadband connectivity and services, embedded media support for interfaces easing the interpretation of processed contextual data, etc.)?

As mentioned in the previous question, as Türk Telekom Group, one of our focus areas is health industry. We believe for our target eHealth use case and scenarios context awareness, sensor networks, identity management, confidentiality and data sharing, user privacy management, support for analytics, service repository, device description repository are critical.

For the energy industry; sensor networks, remote control and smart metering, power quality management, data mining are important components.

For managing large amount of diverse content in our core networks, developing network components with advanced real-time processing capabilities, applying context-awareness techniques, and supporting embedded media information will be important.

(3) Which of the identified functionalities would you expect the Future Internet core technology platform to deliver to support your and other usage area scenarios?

We expect core technology platform to support all the mentioned enablers in the health sector.

More importantly, Future Internet core technology will need to be capable of supporting extensive data processing in faster-than real-time mode and provide the framework to allow easy deployment of context-aware applications.

(4) What kind of experimentation environment would you consider necessary for broad large scale testing of the platform to be developed in your use area? What would be needed to experiment new services and applications cutting across use areas (services and application mash-up) and building a new services and application ecosystem around the prototype implementations of the platform?

In the case of health sector; Türk Telekom Group collaborates with Turkish Health Ministry and Turkey's leading healthcare institution Acibadem Healthcare Group. As Türk Telekom Group; we believe in the importance of cooperating both with citizens (patient or healthy user) and institutions (like hospitals, health centers, etc) in the projects. In the health usage area, we are interested in the development and wide scale deployment of PHR (personal health record) applications. To this end it is important to be supported by the medical staff since domain expertise and organizational behaviours are crucial in this sector and feedback from the end-users contributes much to the results of the projects. Moreover, as Türk Telekom Group; we collaborate closely with the universities (eg Middle East Technical University) in the health projects. In our opinion, academic contribution are valuable for the projects.

In energy sector; energy generation, energy transmission and energy distribution are critical. Başkent Electricity Distribution Co. is one of the biggest distribution companies that covers a vast region in Turkey which covers; Ankara, Çankırı, Kırıkkale, Karabük, Zonguldak, Kastamonu, Bartın and has more than 3 million customers. TT Group collaborates with them within a R&D project focused on smart metering. For a large scale testing environment; electric generation, electric transmission and electric distribution companies shall also be included in the projects.

(5) How do you see the potential role of your organisation in the FI-PPP, in the context of Usage areas taking a prominent role in the Initiative, to ensure an appropriate application driven approach?

Türk Telekom is the Europe's 5th, the world's 13th largest telco operator. Türk Telekom group provides integrated telecommunication services from PSTN, GSM to wide band internet. Türk Telekom group companies have 17.3 millions of PSTN customers, 6 millions of ADSL customers and 12.6 million GSM customers as of March 31, 2009. With its modern network substructure covering the whole country, the group companies offer a wide range of services to their personal and corporate customers. As Türk Telekom group, we believe that we can contribute actively to the FI-PPP in the context of all of the usage areas and especially in Health and Smart Energy Grids. Having the point of view both of a telco operator and a GSM operator, TT Group has the potential of bringing a dual perspective to the issue. Moreover, via the software developer firms within our Group, Innova and Argela; we can also contribute to the development of software applications.

Our specific contributions can be, but not limited to:

- Contribute by providing data from commercial networks
- Develop test-beds jointly with research institutes
- - large-scale deployment of broadband Internet access (min 20 Mbit/s),

- - context awareness environment will be supported to pave way for future 'smart spaces',
- - managed broadband networks with 'intelligent core optical networks' will be deployed for 'bandwidth on demand' services,
- - Providing Broadband connectivity for (interactive) video services over Internet (IPTV, webtv) using fiber access and broadband wireless access (LTE) at least 20 Mbit/s.