Project Information

User-Centric Personalized IPTV UbiquitOus and SecUre Services

UP-TO-US aims to elaborate, prototype, and evaluate an open European solution allowing IPTV services personalization over different IPTV systems (having different architectures and belonging to different network operators and service providers), through content personalization according to each user, to the network and devices' contexts while preserving users' privacy.

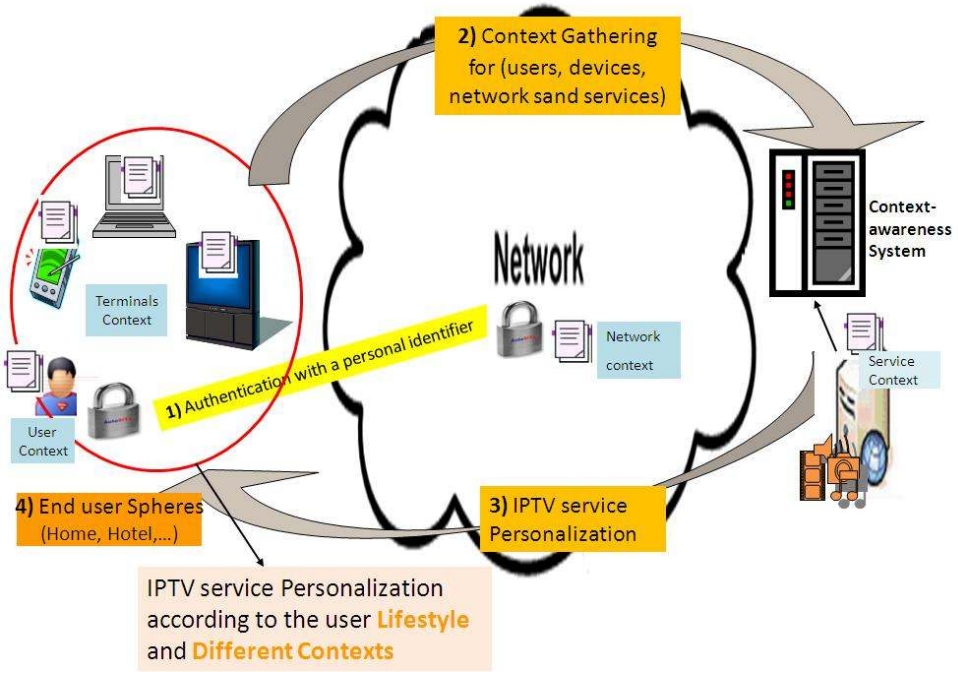
Main focus

UP-TO-US focuses on two use-cases for service personalization: users in nomadic situations (allowing the user to access his personalized IPTV content in a hotel for instance and be billed on his own bill *"My Personal Content Moves with Me"*), and users' mobility in his domestic sphere (allowing the user to move around within his domestic sphere while continuing accessing his IPTV service personalized according to his location and devices in his proximity *"My Content Follows Me in a Customized Manner"*). In order to achieve the objective of UP-TO-US, some enabler technologies will be developed and integrated to different IPTV systems (that will be chosen during the project), these mainly includes: a context-aware module, a profiling management module, and a privacy management module. Consequently, content is personalized according to users' preferences, Quality of Experience (QoE) requirements, and different contexts, while fostering trust between viewers and broadcasters through an efficient privacy management.

Approach

UP-TO-US will mainly address the following technical problems challenges.

- ***Full user interactivity with the IPTV system:*** proposing an evolution of IPTV standard architecture to include a context-awareness module capable of gathering and managing different types of context information related to users, networks, terminals and services. This



UP-TO-US

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www.celticplus.eu/Celtic-projects/Call7/UP-TO-US/uptous-default.asp

module will allow distinguishing each user through personal identifier(s), and tackle the user satisfaction "QoE", the resource level (access network capabilities, terminal(s) capabilities), and the semantic level (content and service metadata, user profile and preferences).

- ***Enhanced nomadic services access as well as services continuity:*** allowing each user to access his personalized IPTV content in nomadic situation (for instance, while being in a hotel) and be accounted on his own bill, which in turn will create new business opportunities between different actors in the IPTV value chain. In addition, user mobility within his personal sphere will be considered, allowing the user content to follow him to the more appropriate device according to context.
- ***User profile and content adaptation*****:** allow dynamic updating of users' profiles according to different contexts (including user contexts, networks and terminals' contexts), and users' QoE. In turn the IPTV content will be personalized in a continuous manner according to the users' profiles.
- ***Users' privacy guarantees*****:** giving users full control of their personal data by structuring user context information in privacy levels according to users' preferences.
- ***A platform for a user-centric, ubiquitous and secure IPTV services*****:** prototyping a novel personalized IPTV system functioning among different architectures that could belong to different operators.

Main results

The following results are expected at the end of the project:

- A context-awareness module interfacing with different IPTV architectures allowing to acquire the explicit and implicit user experience related information through gathering and matching user, network and terminal contexts,
- An identity management module incorporating privacy enhancement and integrating a multi-identity mechanism for privacy insurance and for efficient authentication and services authorization,
- A personalized service delivery module able to capture/model individual and group IPTV lifestyles and to provide users with a personalized IPTV experience (bundles of customized content/service as well as content/service recommendations), while considering their contexts and required QoE,
- A prototype for the advanced IPTV system integrating the different technology enablers modules (context-awareness, identity and privacy management, and personalized service delivery modules) allowing personalization of IPTV services,
- A business model integrating the business case for each actor within the IPTV value chain.

Impact

UP-TO-US results are expected to open new market opportunities and allow the creation of new services through advanced services personalization and as a consequence, new consumption and investment. New business models are expected involving different actors along the IPTV chain, which has a socio-economic dimension. Users will become an active part in the content creation; the advertiser will be ready to pay more for the targeted ad space. And the revenues come from two sides – the users and the advertisers. A dynamic customer profile database will also allow taking a step beyond advertising – becoming a multisided marketplace where also other kind of sellers and buyers can meet.

End-users (clients) will be involved in the requirements definition phase to know their expectation from a personalized IPTV system, and to have as a consequence a good image on the service expectation among different cultures and to understand the different markets' needs.

About Celtic

Celtic is a European research and development programme, designed to strengthen Europe's competitiveness in telecommunications through short and medium term collaborative R&D projects. Celtic is currently the only European R&D programme fully dedicated to end-to-end telecommunication solutions.

Timeframe: 8 years, from 2004 to 2011

Clusterbudget: in the range of 1 billion euro, shared between governments and private participants

Participants: small, medium and large companies from telecommunications industry, universities, research institutes, and local authorities from all 35 Eureka countries.

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