



## Making Television More Personal: NoTube

*An EU project focusing on TV content as a medium for personalised interaction*

The ultimate goal of NoTube is to develop flexible/adaptive end-to-end architecture, based on semantic technologies, for personalised creation, distribution and consumption of TV content. The project will take a user-centric approach to investigate fundamental aspects of consumers' content-customisation needs, interaction requirements and entertainment wishes, which will shape the future of the "TV" in all its new forms.

### Summary of Activities

NoTube aims to achieve the following innovations:

- To demonstrate web services for context-dependent and personalised selection of TV content
- To shift the digital entertainment from a single TV viewer activity to a community-based experience
- To realize distributed personalisation in interactive and multi-device environments, enabling anywhere and anytime TV entertainment

In the first year, we can mention the following research activities in particular:

- NoTube vocabularies have been linked to the shared Linked Open Data cloud and made available as a service
- Concept enrichment of multi-lingual TV program metadata
- Bridging the TV and Web content models in terms of standards alignment

NoTube research goes beyond the state of the art in many areas:

Web-service-based metadata exchange	User modelling in distributed and context-aware settings	Personalized presentation generation
<ul style="list-style-type: none"> <li>- Vocabulary alignment</li> <li>- Semantic annotations</li> <li>- Unified access to dynamic and distributed multimedia content</li> </ul>	<ul style="list-style-type: none"> <li>- Sharing user data</li> <li>- Modelling context with task, domain and device viewpoint</li> <li>- Matchmaking contexts and media</li> </ul>	<ul style="list-style-type: none"> <li>- For diverse multimedia content</li> <li>- For combined information on user, data and context</li> <li>- For recommendations and feedback</li> </ul>

For more information see <http://www.notube.tv>

Follow the NoTube blog at <http://blog.notu.be>



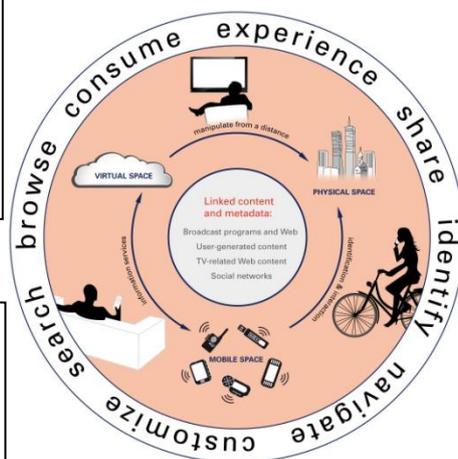
## NoTube demonstrators

First achievements are prototypical implementations of NoTube research results, which together will build the NoTube solution for future personalized television. We highlight a number of these below.

NoTube is able to demonstrate by the end of its first year of research: (1) innovative approaches to user modelling, (2) TV program recommendation strategies, (3) interaction through remote control and (4) a modular services architecture approach for context-dependent and personalised TV.

**iZapper** is an innovative interactive remote control. Next to regular control of a television, media center and setup box, it captures viewer watching activities (loving, bookmarking, banning programmes) for constructing contextual viewer profiles, which is used in content and news recommendation. Viewers can interact with friends via social web technology.

The NoTube **Service Broker** is the component in the NoTube architecture that is responsible for automatically and dynamically discovering, composing and invoking the most appropriate content sources and delivery services based on the semantic description of those services.



The **Beancounter** is a key component of the NoTube architecture, able to collect user data spread over different social networks and web services, and represent them semantically. This kind of representation allows us to extract implicit claims about user interests and behavior that constitutes a possible view of the internal user profile.

NoTube is working on **content recommendations** based around editorialised rules for following linked data paths, for example "Aretha Franklin and Cullen Miller are both based in Detroit". The key user-facing features are the ability to explain why the recommendations were made, and make novel and interesting suggestions.

For more information see <http://www.notube.tv>  
Follow the NoTube blog at <http://blog.notu.be>



## Promotion and Awareness

NoTube has already been extremely active in its first year in raising awareness in the research and professional community of its work towards Semantic Television. To mention some highlights:



Sponsoring ESWC 2009: NoTube logo on the USB stick given to every attendee

Posters at the EuroITV and FIS conferences



Presentations at the EU Project Matchmaking Day, SemTech European Day and at Korea Telecom



Press reports in Italy and Turkey

## Future Work

In NoTube's 2<sup>nd</sup> year, significant progress is expected building upon the groundwork done this year. Results will be reflected in three use case demonstrators:

Personalized News



Personalized TV Guide with Adaptive Advertising



Internet TV in the Social Web



We will further disseminate and exploit our work, including production of a NoTube booklet, presence at major events such as IBC and pursuing standardisation efforts with the EBU.

## Further Information

Project Coordinator: Guus Schreiber [schreiber@cs.vu.nl](mailto:schreiber@cs.vu.nl)

Scientific Coordinator: Lora Aroyo [l.m.aroyo@cs.vu.nl](mailto:l.m.aroyo@cs.vu.nl)

Dissemination Manager: Lyndon J B Nixon [lyndon.nixon@sti2.org](mailto:lyndon.nixon@sti2.org)

For more information see <http://www.notube.tv>

Follow the NoTube blog at <http://blog.notu.be>