

# Web 2.0 application developed to recommend television programmes

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Foto: SkyFirePDL

A group of researchers from the University of Vigo, Spain, has developed a Web 2.0 application that filters the programming schedules of hundreds of television channels to recommend programmes that viewers are most likely to be interested in, according to their tastes, timetables and other users' recommendations. This new social network is already being used by students and is freely available on the Internet.

The era of channel-hopping by television viewers trying to find a programme they like is almost over. The range of channels on offer has expanded spectacularly over recent years with the development of digital platforms, cable television and DTT, meaning it is now impossible for viewers to keep tabs on everything being shown and programmes they might want to watch. This is why the Interactive Digital Television

Laboratory, which is part of the Department of Telematic Engineering at the University of Vigo, has developed *queveo.tv*, an online application that provides each user with a choice of programmes, and has been published in the latest issue of *IEEE Transactions on Consumer Electronics*.

Ana Belén Barragáns, one of the researchers involved in the project, says: "The public is exposed to an information overload by being presented with hundreds of televisual choices". The Galician researchers have developed an individually-tailored tool based on algorithms and the collection of data to give television viewers predictions and recommendations based on their interests.

Barragáns tells SINC that "by using the *queveo.tv* application jointly with a PVR (Personal Video Recorder) people will no longer have to plan ahead to record their favourite programmes, and can avoid recording adverts or, in the worst cases, having to watch them".

Until now, most programme recommendation algorithms have operated using different models. Some used information filtering (IF) techniques, which recommend programmes similar to those viewed in the past. Others were based on collaborative or social filtering (CF), providing results on the basis of contents recommendations made by users with similar tastes. The University of Vigo has combined both these methods.

## **A social network for TV**

The University of Vigo has combined both methods. *Queveo.tv* is already operating on the Internet using a social networking format, which the researchers say boosts interaction between participants and benefits the platform. The social networking component of the application is the key to its success. Groups can be set up for fans of a series, or for people to make comments on specific episodes or

programmes, as well as to chat with friends, send recommendations, or add comments about programmes, channels or items screened.

The use of these new technologies also leads to problems, however. Although the CF methods, based on users' individual experiences and their inclusion within a network, result in high quality recommendations, "its efficacy declines with the number of users and television programmes", says Barragáns, referring to what is known as the sparsity problem.

The study by Barragáns and her team "involved us conducting a series of experiments to check the validity of the algorithms. The results show that the best ones used not only mitigate problems such as the scarcity of data, but also make very precise recommendations.

A beta version of this application has already been publicly available for several weeks, and is being tested by the students of the Higher Technical School of Telecommunication Engineering at the University of Vigo. According to Ana Belén Barragáns, "the feedback we have received is very encouraging".

More information: Ana Belén Barragáns Martínez; José J. Pazos Arias; Ana Fernández Vilas, Jorge García Duque y Martín López Nores. "What's on TV Tonight? An Efficient and Effective Personalized Recommender System of TV Programs". *IEEE Transactions on Consumer Electronics*. 55 (1), páginas 286-294. Febrero de 2009.

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