

Collaborative Personalised TV Programming

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Outline

- 1 Automating the Selection of TV Programmes
 - Distributing the Workload
 - A Standardised Review Format
 - Easy Writing of Reviews
 - Automated Distribution and Interpretation
- 2 System Architecture
 - Preference Engine
 - On-Demand Cache
 - User Interface

Automating the Selection of TV Programmes

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But how?

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My proposal for the meaning of a review:

- Presence/absence of a RSS entry with a specific keyword by a specific reviewer.

Easy Writing of Reviews

Reviews “written” by the push of a single button on the TV remote controller:

- Minimal workload involved in creating reviews.
- Everybody can contribute information.
- Automated creation of reviews can be integrated in ordinary operations of the TV remote controller.

Automated Distribution and Interpretation

Preference Engines

- Once we have identified a number of possible review values, we can train a **preference engine** to correlate the present reviews for each presented programme with the user's feedback on the programme quality.
- A preference engine can for example be an artificial neural network (ANN) trained with the traditional back-propagation algorithm.

System Architecture

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- TV programme sources.
- On-demand cache.
- Preference engine.
- User interface.

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- Preference engine. – The filtering and selection software.
- User interface. – The TV remote controller is used for giving feedback about the shown programmes.

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- Ranks and filters the available programmes based on the available reviews.
- Helps the on-demand cache deciding which programmes to store.

Preference Engine Implementation

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- Features of TV programmes which can be presented as keywords (categorisation, director, actors, etc.) can be fed to the preference engine in the same form as reviews.
- Internal data (such as if the viewer already has seen the programme) should also be considered as input to the ANN.

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For training:

- User feedback. – In the form of relative ratings of pairs of programmes.

Interaction with the on-demand cache

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- Through requests to have specific programmes downloaded to the cache.
- Answering queries from the cache system about the likelihood that there is interest in watching a programme.

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- Prefer programme. – Register and distribute a review saying that the viewer likes the current programme better than the previous one.
- Label programme. – Distribute a review assigning a keyword to the current programme.

Summary

- We have seen how existing collaboration technologies can be put together to generate personalised TV channels.
- We have seen how this can be done without a centralised database.
- Outlook
 - A prototype preference engine should be developed and tested on real users.
 - The dynamics of the reviewer network and rules for generating an optimal reviewer network should be studied.