Creating transparent, steerable recommendations

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Why?

Most commercial music recommenders rely on collaborative filtering techniques to generate music recommendations. They are lacking two fundamental aspects:

- **Transparency** - they cannot explain why an item was recommended beyond the trivial "Other people who listened to XX also listened to YY".
- **Steerability** - there is no way for a user to interact with the recommender to steer it to more relevant content.

What?

- The Sun Labs Music Explaura is a web-based recommender that provides transparent and steerable recommendations.
- Each artist's bio, pictures, videos and upcoming events are available.
- It can give detailed explanation about why a particular item was recommended.
- It allows a user to steer the recommendations based upon attributes of the music.

How the system works

- Each artist in the system is represented by a weighted set of tags, its tag cloud.
- The tags are weighted not by their frequency of application, but by their distinctiveness for an artist, using the text retrieval weighting function TF-IDF.
- The similarity between two artists is determined by computing the cosine distance between their respective tag cloud.

Transparent recommendations

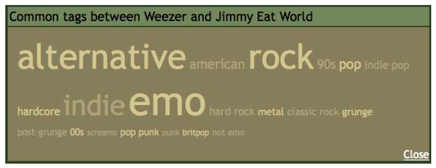
- One important key to the success of a music recommender is to gain the trust of its users, which can be done by explaining to them why items are being recommended.
- The Music Explaura can easily give a user a very clear explanation of why an item is recommended by showing how the two tag clouds overlap. This way, the user won't perceive the recommender as being *broken* if he doesn't agree with a recommendation.

Steerable recommendations

- Similarity is computed using the artitsts' tag clouds. By allowing the user to build and tweak his own tag cloud – to which the Explaura will find similar artists - we allow him to be the architect of the perfect recommendations for his particular context.
- It is possible to add tags and artists to a user's tag cloud. They can be grown or shrunk by dragging the mouse to modify their weight. The weight of a tag can even be made negative — at which point it is colored red. Tags with negative weights act as filters — artists tagged with a negatively weighted tag will not be recommended.

Transparent recommendations

Tools to let you understand exactly why artists are being recommended.

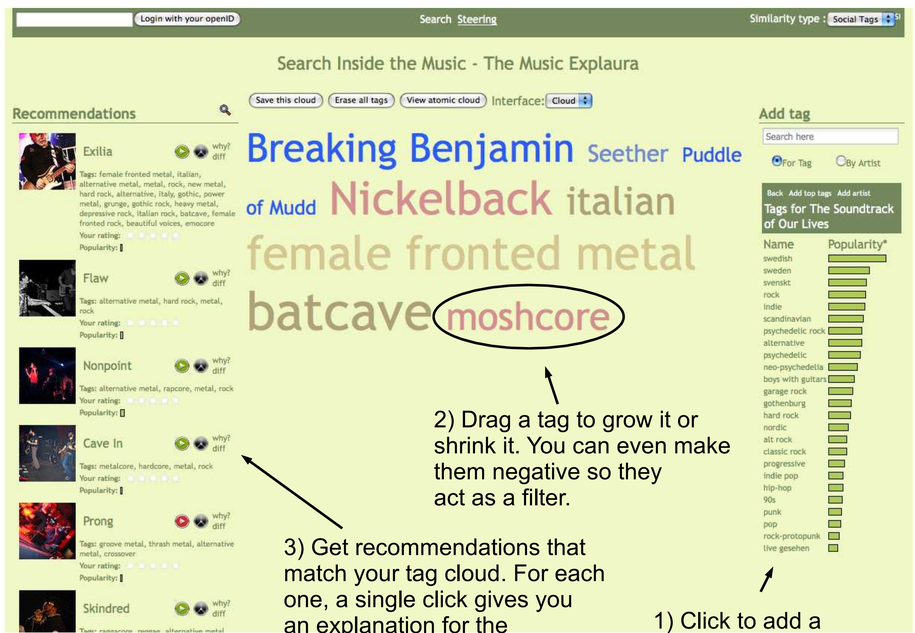


An explanation for every recommendation is always available. It is displayed as a tag cloud containing the common tags between the two artists – the bigger the tag, the stronger the overlap is.

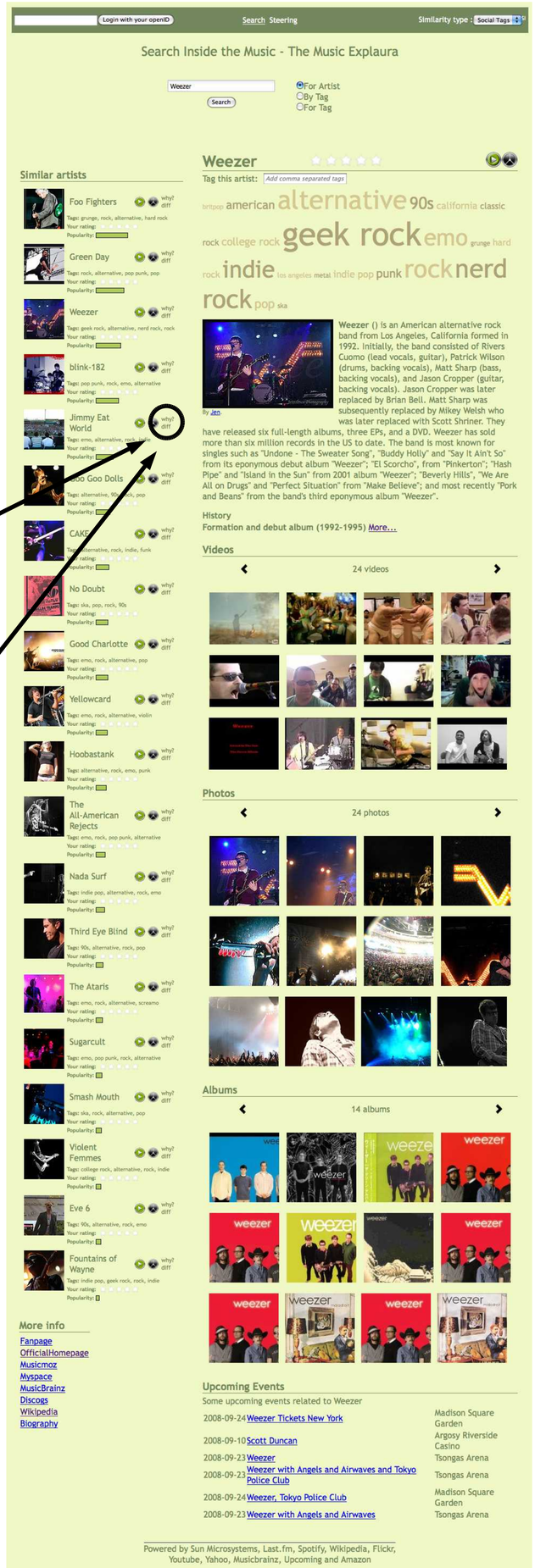
The **difference cloud** highlights what differentiates the artists by giving less weight to common tags and pulling each artist's distinctive tags apart.

Steerable recommendations

Tools to let you build the perfect recommendation. By combining transparency and steerability, users easily and quickly obtain the perfect recommendations.



2) Drag a tag to grow it or shrink it. You can even make them negative so they act as a filter.

3) Get recommendations that match your tag cloud. For each one, a single click gives you an explanation for the recommendation.

1) Click to add a tag or an artist.