

Project Description:

Interest Centric Community

Spring 2017

Communities consist of people who share some goals, yet they have individual interests, talents, characteristic. For example, the CMPE community has faculty, students (undergrad & grad), assistants (TA, RA), support staff, and alumni. Likewise, social clubs, neighbourhoods, volunteer groups, activists are composed of people we co-exists with, but not know very well. Amidst mandatory and routine official tasks we perform on a daily basis, we remain unaware of aspects of people and ability to connect with them in more interesting manners. Furthermore, with all the activity going on it is difficult to create and maintain meaningful connection with other people and information. It would be nice if we would be more aware of those who share an interest with us? A way to get insight into others on our radar. This application aims to provide a virtual space that increases and improves social interaction and awareness.

It is not obvious who has common interests or potentials for connecting in interesting ways. When we ponder about the people we are surrounded with, so many questions come to mind. What is my colleague, an expert in quantum computing, interested in? Anyone interested in participating in an upcoming hackathon? Who would be interested in a survival camping trip? What new topics are people thinking about today? Who are interested in the things I am interested in?

This project aims to provide a web and mobile application for members of a Community to create and organize content and connect with each other in meaningful ways. It aims to create information paths that can be utilized for more effective and enjoyable collective action. This application will enable participants to create *items of interest*. Others who are interested in such items can subscribe and interact about interest. For example, they may have conversations, contribute related material, organize events, challenge with questions and more. In short is a complementary interest-centric system for complementing community experience.

Members should be able to create interest-specific groups and content. Content creators will be able to set privacy options. Members can be invited and moderated although the hope is that most groups will foster an open policy. Members should be able to describe what information is visible to

others. Ill behaving users will be warned and must be able to be removed if ill behaviour persists.

Users should be able to search for and browse for information and members.

Users will be able to follow other users (with their permission), they will be able to create and join interest groups. They will be able to provide semantic tags for community items, which will be very useful in searching and recommending. Content must be able to be annotated using the W3C Web Annotation Data Model. The W3C Web Annotation Data Model proposed recommendation will be used to annotate heritage items. Its associated web annotation protocol (based on LDP) will be used to store annotations. The World Wide Consortium (W3C) [4] who works on all Web standards has introduced standards for representing annotations and their management. The Web Annotation Data Model [2] describes the vocabulary and its characteristics. The annotations should be stored and retrieved in accordance with the the protocol [3]. This protocol is based on Linked Data Platform [7], which addresses the needs for Linked Data¹ [5, 1, 6]. A web browser plugin (Firefox) that enables users to create and visualize annotations for cultural heritage must be provided. Annotations must be stored and retrieving with an API that is compliant with the standard. The annotations should be tested to assure validity. JSON-LD should be used for annotation representation as described in the W3C documentation. As expected, open source software with appropriate use permissions may be used, so long as it is properly attributed and documented. Figure 1 shows an annotation example for a song lyrics popular during the US civil war and Figure 2 provides an annotation related to BB King.

The system will recommend content and persons of interest. It will retain the history so that previously active members can be located and their information can be used.

There will be an android based mobile and web interface for your project.

Your back-end will provide and API for alternative front-ends.

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¹See <http://linkeddata.org/toexamineofthedatapresentononlinkeddata>.

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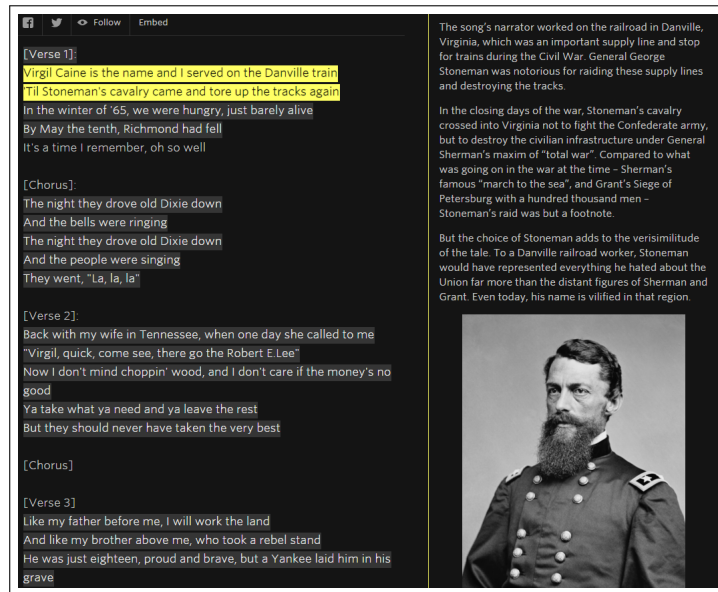


Figure 1: Annotation of a song during the US Civil War in Virginia.

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References

- [1] Linked data - connect distributed data across the web, 2016. <http://linkeddata.org/>.
- [2] Web annotation data model. <https://www.w3.org/TR/annotation-model/>, 2016. Accessed: 2016-04-14.
- [3] Web annotation data model, w3c candidate recommendation. <https://www.w3.org/TR/annotation-protocol/>, 2016. Accessed: 2016-04-14.
- [4] *World Wide Web Consortium*, 2016. accessed at July 2016.
- [5] C. Bizer, T. Heath, and T. Berners-Lee. Linked data-the story so far. *Semantic Services, Interoperability and Web Applications: Emerging Concepts*, pages 205–227, 2009.



Figure 2: Annotations related to the blues musician BB King.

- [6] T. Heath and C. Bizer. Linked data: Evolving the web into a global data space. *Synthesis lectures on the semantic web: theory and technology*, 1(1):1–136, 2011.
- [7] S. Speicher and J. Arwe. Linked data platform 1.0. <http://www.w3.org/TR/1dp/>, 2015. Accessed: 2016-09-07.