**Concept**

There is a set of three tools that are functional on their own, but would be exceptional integrated into one. The three tools are already online and functional and would require coding time to implement as one.

The question tool is an online web accessible tool that allows users to submit and vote on questions. Questions that have a high number of votes are promoted to the top of the screen for action. Questions can be tagged with comments. Functionality is simple and easy to grasp for first time users.

The rotisserie tool is an online discussion tool. The tool provides for a way to create a discussion around a specific question. Questions are entered into the tool by a discussion leader, and registered users can participate in the discussion. Discussions happen in rounds so that no one thread can initially overpower the opinions of the participants.

The playlist tool is an online syllabus maker. The tool provides for a way to generate and publish a list of content with links with information on how to access the content. The lists generated are generally ordered around a specific topic or intellectual discussion.

These three tools can be seen to have logical overlap and would benefit from being integrated into one tool. Basic integration would entail having all tools read and write from a common data set. With this model an example of use could be that popular questions from the question tool would be imported into the rotisserie to generate discussion. The discussion would be part of a larger topic that is covered by a playlist. Links to each resource would be included as resources for each.

On top of a common data set would be a common authentication mechanism and registration system for users. Currently to use the three tools, users have to register multiple times – a clear barrier to entry. Use of authentication and registration familiar to and in use by the users of the tool could even mean elimination of registration

**Functionality**

The functionality of the three tools is diverse, but there is a certain amount of overlap. The most functionally complete of the three tools is the rotisserie tool. In the rotisserie tool the highest level of organization is held by a project. Under a project, a syllabus, a list of readings, a list of rotisserie discussions and a message board are grouped. A syllabus generated within a project on the rotisserie tool however is not as functionally complete as the syllabus tool contained within the playlist application. Within the rotisserie tool there currently does not exist a way to have users vote on user generated questions.

With the above in mind the rewrite of the tool will form around the rotisserie tool, keeping the brand of the H2O framework. The functionality of the question tool and playlists will be incorporated into what is now referred to as the rotisserie.

1. H2O general
   1. Users should be able to create any part of the three parts of a project: question tool, rotisserie discussions, playlist fully independent of each other.
   2. Multiple instances of question tools and rotisserie discussions should be able to be created within each project
   3. Instances of syllabi, readings and message boards should be unique within a project.
   4. Users should be able to authenticate in a variety of ways – manual registration, FB, Twitter, openID, etc.
   5. Activity on a project should be tracked for future functionality
2. Question Tool
   1. Full incorporation into H2O with all current functionality
      1. Create/Manage instance
      2. Browse instances
      3. Participate/Follow instance
      4. Management tools
         1. Hide, modify, archive, unarchive questions (all or selection)
   2. New functionality
      1. Page refresh saves position
      2. Management tools
         1. Hide, modify, archive, unarchive instances (all or selection)
            1. Export questions (all or selection)

To file (csv?)

To rotisserie as starting point for discussion

* + - 1. Popular question behavior
         1. Ability to sort popular list
      2. Rich media tools
         1. Annotation of streaming media

Question tool replay portal

Question times are recorded so they are session aware and can later serve as annotations to rich media (video or audio) a là LiveScribe pen.

During replay of an annotated media, upcoming questions would appear queued in the list grayed out preemptively

1. Rotisserie
   1. Full rewrite with all current functionality
      1. Create/Manage projects
         1. Project home page
         2. Project resources
         3. Project message board
         4. Project rotisserie discussion
         5. Project syllabus (playlist tool)
      2. Management tools
         1. Invite participants to project
         2. Project and profile permissions and privacy settings
            1. Project ownership settings
            2. Non-member / Member privileges

Rotisserie, message board, question tool visibility

Rotisserie and syllabus editing

* + - * 1. Participation approval

Automatic, admin approved

* + - * 1. Invitation policy

Automatic, reject, admin approved

* + - * 1. Show / Hide features

Message boards, question tool, rotisserie

* + - 1. Email alerting
         1. Rotisserie deadlines, posts
         2. Project invitations
    1. Browse projects
    2. Search projects
       1. Search all or selection of (resources, message boards, discussions, syllabi
    3. Join projects
    4. Create communities (sets of projects)
    5. Browse communities
    6. Join communities
  1. New functionality
     1. Project question voting (question tool)
     2. Project syllabus
     3. Automatic community aggregation
        1. Classes asking questions along same timeline with same materials would be annotated in playlists grouped to show/share discussions
        2. Community management tools

1. Playlist
   1. Full incorporation into H2O with all current functionality
      1. Create/Edit playlists
         1. User comments
         2. User tags
      2. Browse playlists
      3. Search playlists
      4. Order playlists
         1. Custom lists / library
         2. Most influential playlists
         3. Most viewed playlists
         4. Featured playlists
         5. By tags, same items, same users, same influence, same author, same organization, etc
      5. Share playlists
         1. RSS, IPL, OPML, email, PDF
         2. Create playlists based on others
      6. Track playlist usage
         1. Most linked, commented, influential, derivations

**Timeline**

This project has a very aggressive timeline. Funding for the project runs from December 21, 2009 until June 30, 2010 and project completion is expected by end of the funding cycle. Specific milestones include an early user beta of the question tool by the middle of February and a user beta of the full suite by the end of May.

**Berkman Technology:**

The Berkman Center has in house technology staff with a large skill set. IT and development teams are on staff to lead, support and/or assist projects in all of their technological needs. The IT group has extensive experience running large web sites and production applications within a Linux environment as well as extensive experience with MySQL and PostgreSQL. The IT group maintains a full Linux development environment for use by our development team where we develop PHP, RoR and Perl applications for in house and external use.

The Berkman Center is committed to open source solutions. Our underlying technology highlights this with the use of open source throughout our infrastructure. Our server operating system of choice is Ubuntu Linux (a variant based on Debian Linux). Our in house developers are encouraged to publish and OS license all code to take advantage of the online community and in house shared knowledge of the developer core.

This application would ultimately be deployed and hosted as a tool for the Harvard community by the Berkman Center. It would also be a key tool for other universities and organizations to be able to deploy, for this reason, having the code be open source and well documented would be an advantage.