PROGRESS REPORT: Developing a Consumer-centered ISU Crop Production and Pest Management Web Page

Objectives
ISU Extension and Outreach and research personnel have created an abundance of diverse educational and research-related crop management online resources. However, farmers, agronomists, and others often are not aware of this information. Also, finding ISU-generated information about crops is not an intuitive process. We propose to create a single point of entry for ISU crops extension information. This crop knowledgebase consists of three subprojects: a website, a resource registry, and a semantic search. We aim for the system to be intuitive, accessible, performant and mobile-optimized.

Year 1: Problem Analysis and Architecture/Design
Year 2: Build Infrastructure and Begin to Migrate Content
Year 3: Migrate Content and Build Metrics

Funding Awarded $122,397

Progress to Date
Currently, information related to crops is scattered across numerous websites, databases and systems in various formats. We proposed a three-pronged approach to solve this problem: (1) offer a well-supported content management system (CMS) along with training as an incentive for content creators to create and tag their content based on federated metadata in a unified system, (2) create a centralized crop resource registry from existing ISU crop-related online assets using open standards and (3) integrate a semantic search that leverages the tags, inferred metadata and human-augmented metadata.

The proposal included two staff: a systems analyst/project manager and a communications specialist. The crops team hired Michael Hofmockel for the first position in July 2013. Since his hire, Michael has been defining architecture and laying the groundwork for the new system.

Michael has met with the committee as a whole and as individuals, as well as the Extension IT group. Notably, he has also opened discussions with the ISU library community to explore common goals with the ISU Digital Repository and seek help refining the metadata/search approaches.

Next Steps

CMS component: Michael has created a prototype of the CMS that will be released to the committee for feedback by the end of the year. After review and feedback by the committee, "low-lying fruit" and high-impact assets will be the first content moved into the new system. It is essential that the communications specialist begin to be involved in the project at this point, as this person will be directly involved in content migration. Seeding the CMS with this initial content will give it momentum to gain buy-in from managers of other online assets.
Resource registry component: Michael has created a prototype of the crop resource registry that will be released to the committee for feedback in the next few weeks. The committee will initially populate the registry with known online assets. We will continue to open the registry to ever-expanding groups to help locate assets that are within the project's scope.

Semantic search component: Michael is researching the best approach for integrating search that will produce the most intuitive and accurate returns from the CMS and the registry. We are pursuing faceted search as the primary navigation for both components. Essentially, online resources from the resource registry will be indexed with both artificial and human intelligence to structure the information according to existing semantic ontologies. This will allow a seamless information discovery experience across the disparate crop resources at Iowa State.