



# WIN WESTERN INNOVATION NETWORK

## Advancing Entrepreneurship & Job Creation

### Resources • Expertise • Innovation • Exploration

#### What is WIN?

Fostering the creation of start up companies and new employment opportunities is a recognized challenge at both the federal and state levels across the United States of America. The Western Innovation Network (WIN) is a partnership between research universities to foster such entrepreneurship and job creation through a unique online platform.

#### WIN Formation & Founding Members.

The WIN effort began with a National Science Foundation (NSF) funded Partnership of Innovation (PFI) grant to explore the notion of a universities collaboration model to enhance commercialization.

WIN is focused on building a unique Internet resource that supports the sharing of resources, expertise and

innovations to facilitate entrepreneurship in the western part of the United States. The sharing of research resources is intended to improve utilization and support commercial research.

WIN is also intended to support commercialization best practices with pooled Intellectual Property (IP) assets and a commercialization service for nonre-

search colleges. The intent is also to optimize a regionalized deal flow to connect start-ups with seed capital funds and improve upon the matching of human capital.

The founding members of WIN are the University of Utah, University of Washington, and Oregon State University.

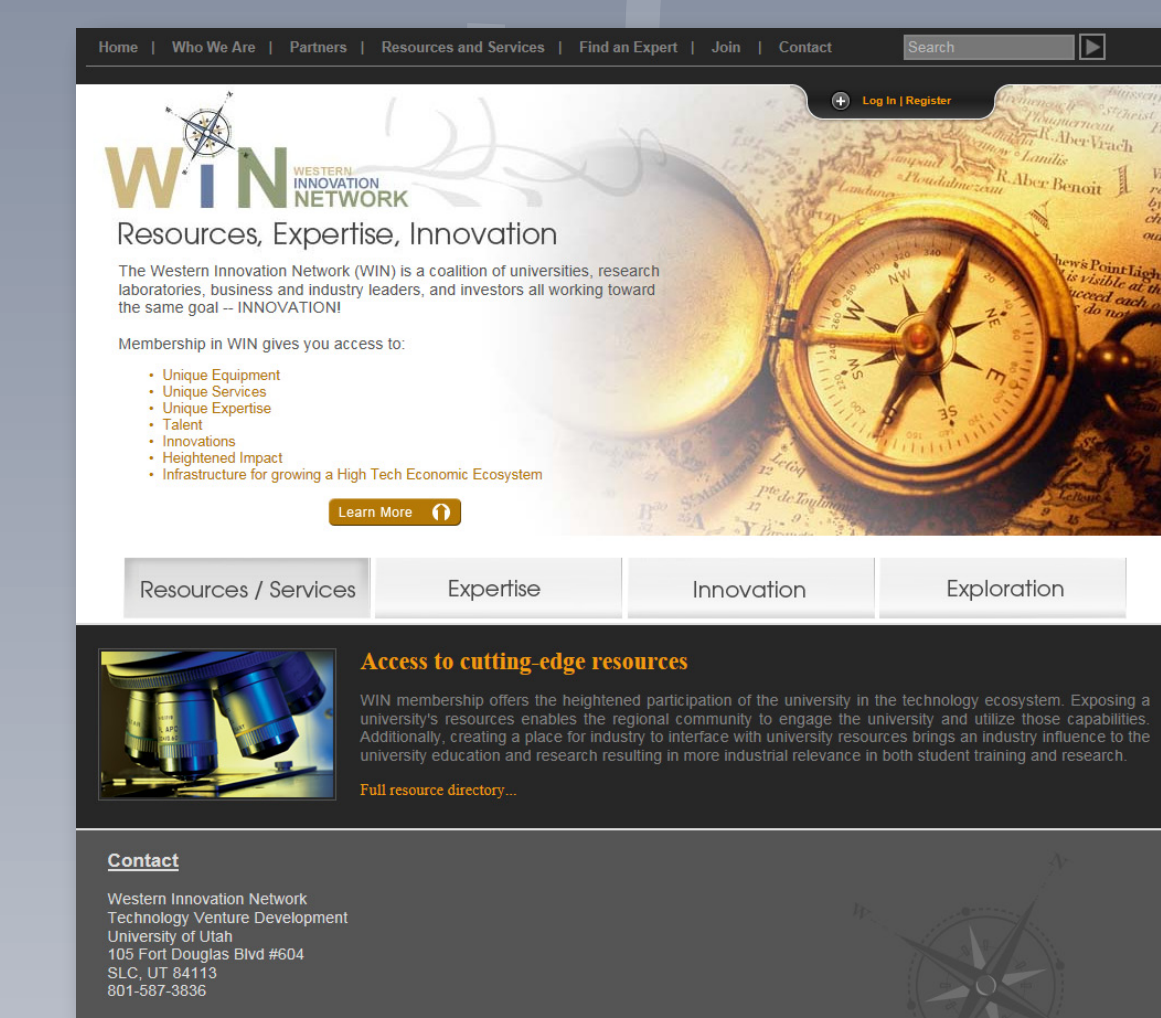
### KEY WIN Concept: Collective Access & Sharing of Limited Research Resources

#### Collective Access & Sharing of Limited Research Resources

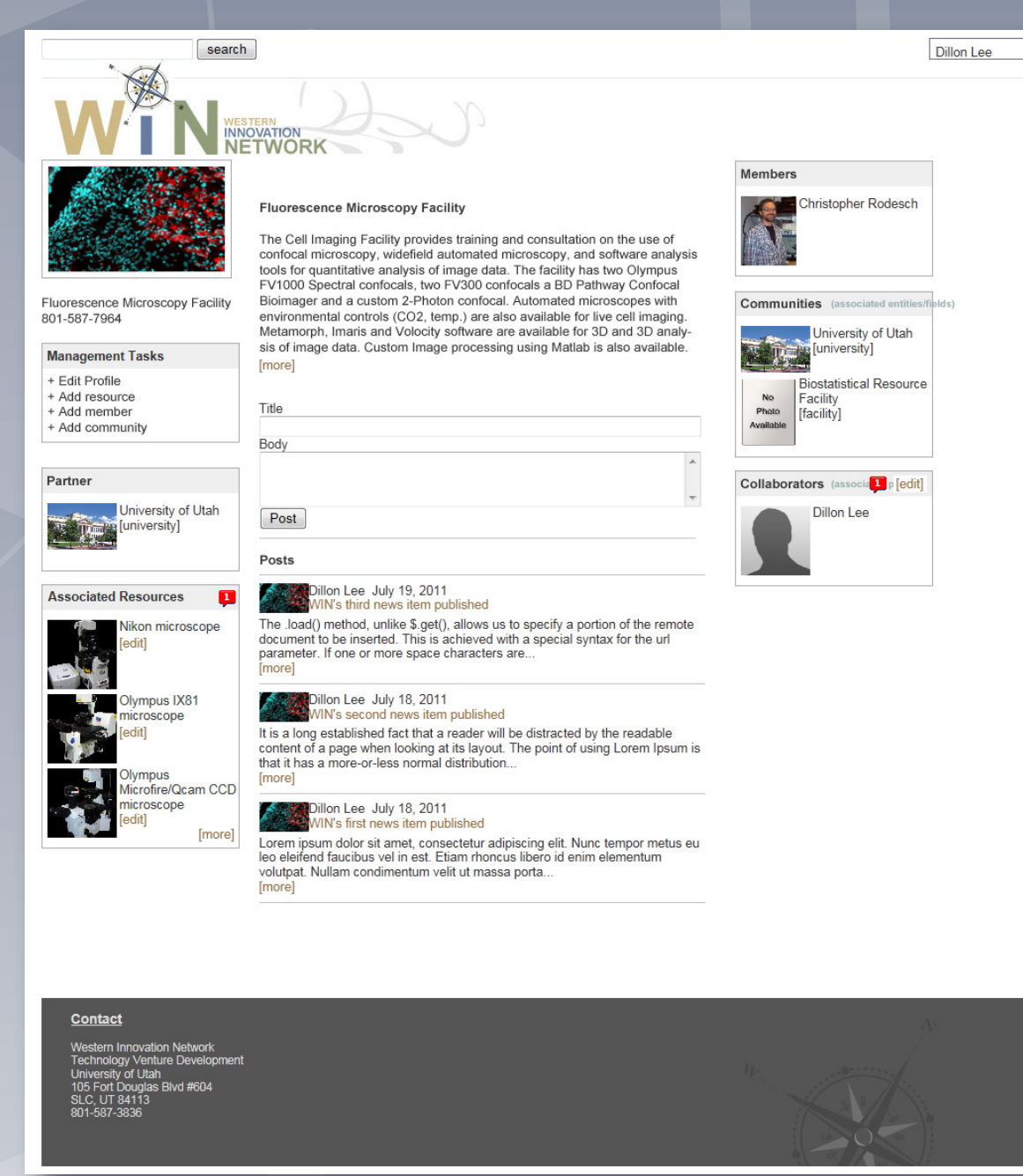
The concept behind WIN is to provide opportunities to collectively access and share limited resources and consulting services available at research universities to facilitate company and job growth. These collaborative efforts also allow start up companies to develop partnerships for accessing expensive technologies and expertise that would otherwise be prohibitively costly to duplicate at each university.

#### Example of Collective Sharing

The Small Animal Imaging Facility at the University of Utah provides an example of research resources available via WIN. This research resource extends the benefits of modern diagnostic medical imaging systems to the studies of anatomy and physiology in small animals. The Facility currently features state-of-the-art Bruker BioSpec 7.1 T horizontal-bore MRI, General Electric EVS-RS9 micro-CT, Inveon Preclinical micro-PET/ micro-SPECT/ micro-CT and Visen FMT 2500 fluorescence tomographer scanners. All are equipped with supporting and monitoring hardware that allows a wide variety of imaging experiments, including longitudinal studies, to be performed on live animals and specimens. Imaging scientists, full-time imaging personnel, and animal support technicians are available for technical consultation and experimental assistance. Participating WIN researchers and start up companies can use the Small Animal Imaging Facility rather than needing to acquire their own diagnostic medical imaging systems and expertise.



**WIN at a Glance.** The site provides customer interaction from the front end as well as allowing WIN members to log in and add or alter resources and personnel.



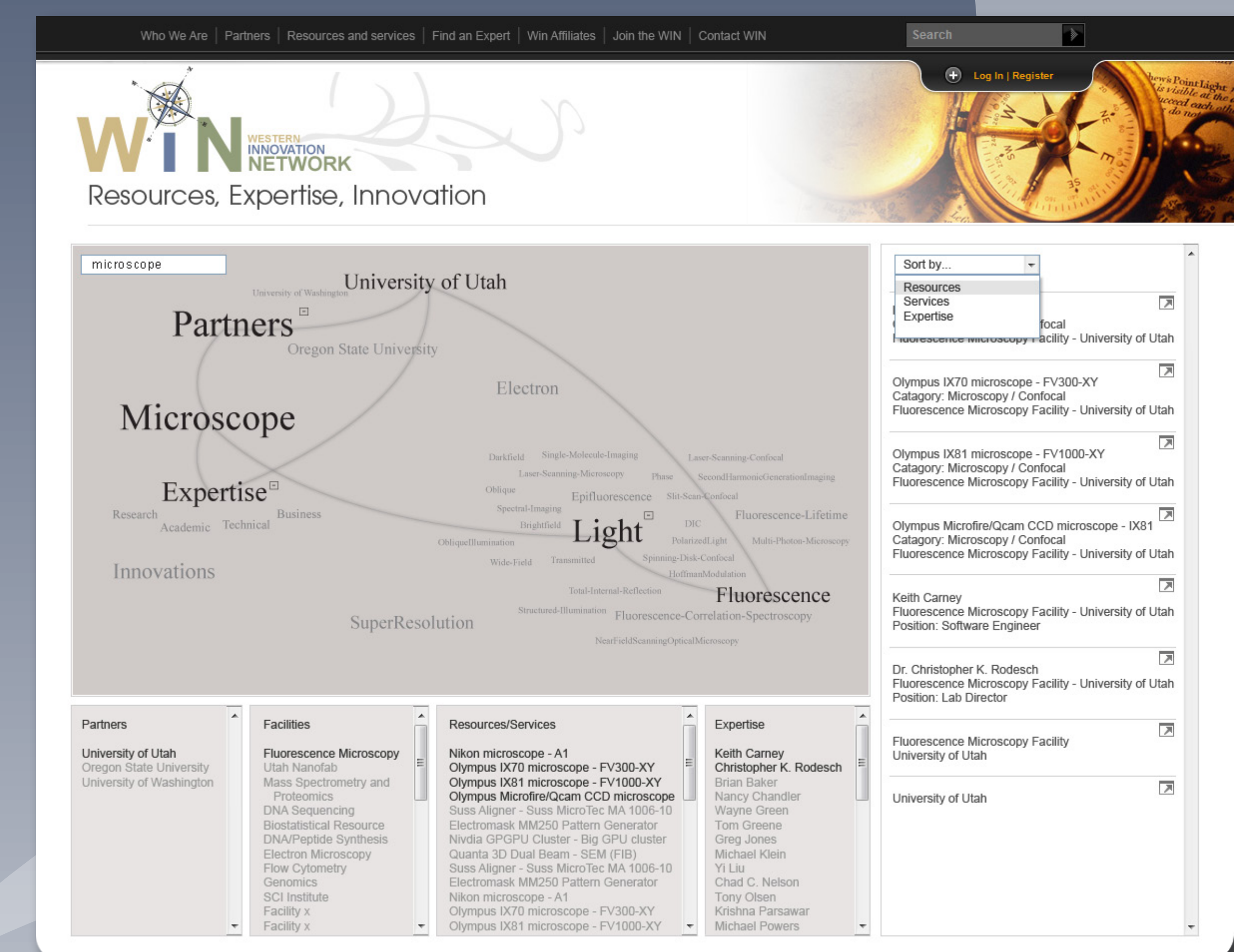
### WIN Online Platform: Merging Semantic Networking with Visual Ontology Search

The design of the WIN online platform merges several technology concepts that encompass online communities, directed search and training compute engines, and visual semantic and ontology search methods. The WIN online platform will use advanced on-line software and semantic networking techniques developed by Enclavix, a software and technology development firm founded by serial entrepreneurs in 2003. WIN will also prototype visual semantic and ontology search methods under development at the University of Utah's Scientific Computing and Imaging Institute (SCI). SCI has designed a unique ontology-based exploration interface that allows users to target customized searching of WIN's online information.

#### What is Computational Ontology?

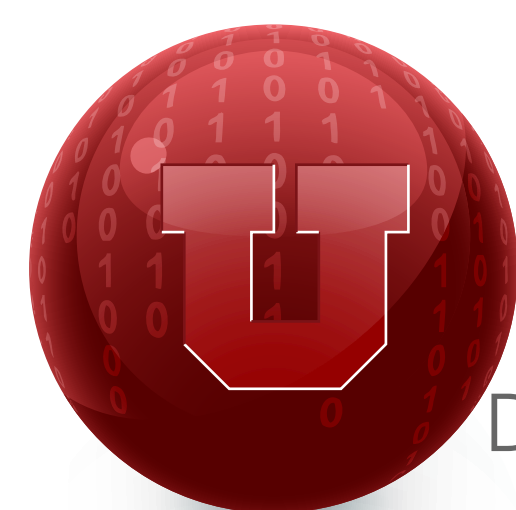
A computational ontology is a set of representational primitives for modeling a domain of knowledge. Ontology, in the applied context of software and database engineering, specifies a vocabulary with which to make assertions among Artificially Intelligent (AI) systems. These assertions convert into inputs or outputs for knowledge agents (software programs). The key role of ontologies with respect to database systems is to specify a data modeling representation at a level of abstraction above specific database designs, so that data can be exported, translated, queried, and unified across independently developed systems and services. Successful applications to date include database interoperability, cross database search, and the integration of web services.

For the WIN prototype, the ontology-based interface will allow users to search on the capabilities of (for instance) the Small Animal Imaging Facility by using terms like "physiology in small animals" without knowing the primary identifier equipment terminology such as "Bruker BioSpec 7.1 T horizontal-bore MRI". With this novel interface, the user will also be able to obtain in-depth information on the varied capabilities and the interconnection between participating WIN universities in regard to "physiology in small animals" research without initially searching via the designated sub-area research names such as "fluorescence tomography". This visual ontology interface thus allows researchers and entrepreneurs the flexibility to create their own set of online connections for establishing resources and collaborators via the WIN.



**Ontological Search:** An example of a visualization that guides the user to terms based on an ontology. For the case of WIN, this engine would help users find resources, expertise, or innovations.

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