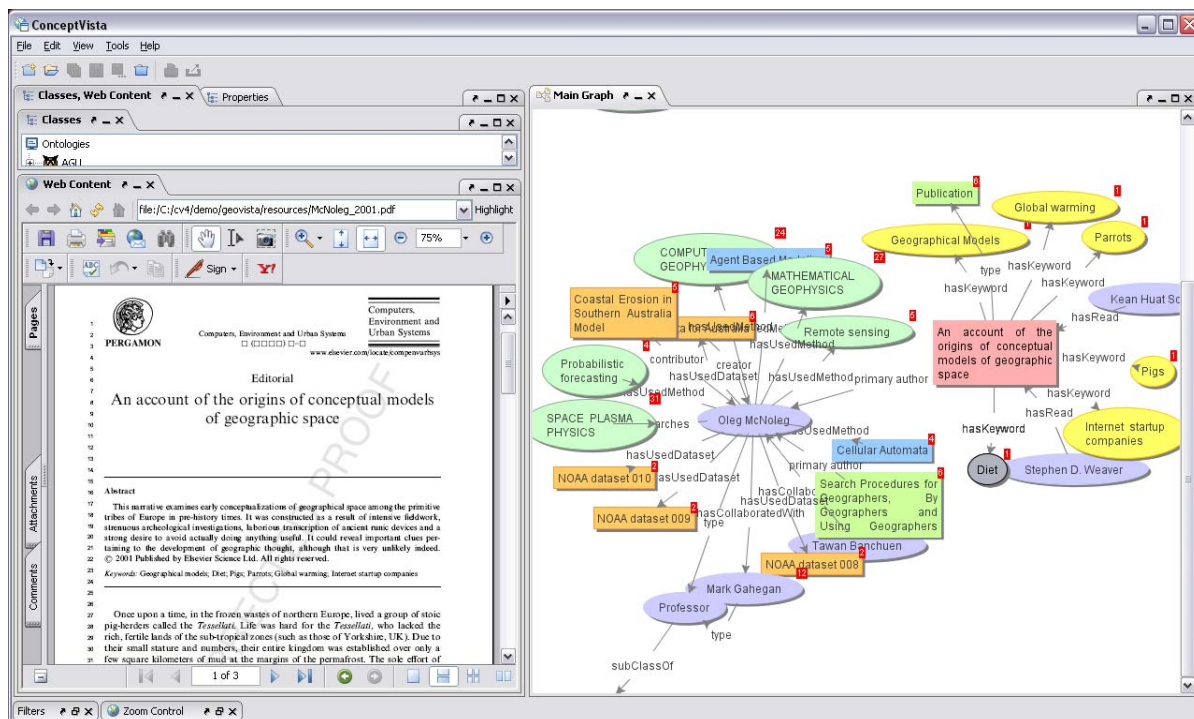


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Simply placing electronic geoscience resources such as datasets, methods, ontologies, workflows and articles in cyberinfrastructure does not mean that they will be used successfully by other researchers or educators. It is also necessary to provide the means to locate potentially useful content, and to understand it. Without suitable provision for these needs, many useful resources will go undiscovered, or else will be found but used inappropriately. In this talk I describe an approach to discovering, describing and understanding e-resources based on the notion that meaning is carried in the interconnections between resources and the actors in the cyberinfrastructure (including individuals, groups, organizations), as well as by ontologies and conventional metadata. Navigation around this universe is achieved by implementing the idea of *perspectives* as dynamic, conceptual views (defined by SPARQL-like queries against an OWL schema) that not only act as filters, but also dynamically promote and demote concepts, relationships and properties according to their immediate relevance.

We describe a means to represent a wide variety of interactions between resources in a cyberinfrastructure using the notion of a *knowledge nexus*, and we illustrate its use with resources and actors from the GEON cyberinfrastructure community. We also closely link browsing and visualizing strategies to our nexus, drawing on ideas from semiotics to move resources and connections not currently of interest from the foreground to the background, and *vice versa*. We illustrate our ideas via *ConceptVista*, an open-source concept mapping application that provides rich, visual depictions of the resources, cyber-community and myriad connections between them. Examples are presented that show how geographic and geoscientific knowledge can be explored not only via ontological structure, but also by use cases, social networks, citation graphs and organization charts; all of which may carry some aspects of meaning for the user.



A scientific article contextualized by various actors, ontologies and use cases within a cyberinfrastructure.