

New features in VIVO

Keywords

responsive user interface, role management, ontology, online editor

Abstract

Three minor releases have been published since the last CRIS conference (CRIS 2022). These minor releases contain a number of valuable new features which will be briefly presented at CRIS 2024.

Development of VIVO in the period 2022-2024

Two minor releases were published in 2022 and 2023, with a third release (1.15.0) currently in preparation for publication before CRIS 2024. A total of 18 contributors participated in coding, testing, reviewing, and documentation. The activities were coordinated using various GitHub features such as issues, pull requests, project boards, labels, milestones, branches, and releases. Weekly meetings were held on the Zoom platform, and three-week sprints were conducted. Communication was also facilitated through the VIVO slack channel and wiki pages. The release notes can be accessed at

<https://wiki.lyrasis.org/display/VIVODOC113x/Release+Notes>,
<https://wiki.lyrasis.org/display/VIVODOC114x/Release+Notes>,
<https://wiki.lyrasis.org/display/VIVODOC115x/Release+Notes>.

Working with digital documents

The updated version of VIVO now allows users to upload a file and link it to an individual in the system. This file can be associated with various items, such as a book (<http://purl.org/ontology/bibo/Book>). Users with appropriate privileges (administrators or self-editors) can delete the associated file, while visitors can download it. The system also allows for configuration of allowed MIME types and maximum file size. This feature makes it possible to create an integrated CRIS-IR using the VIVO platform.

Deletion of individuals and linked objects

This feature allows for the specification of a SPARQL Query to delete individual dependent objects when deleting an individual. This is a form of controlled cascade deletion that helps maintain the consistency of the graph. It enables the deletion of weak objects in the graph or consolidation of object properties that were linked to a deleted individual.

Online translation editor

The VIVO platform includes an integrated editor for localizing the VIVO website. This simplifies the process of translating the VIVO interface, even for those without knowledge of coding or semantic web technologies. For example, a VIVO system administrator can create an account for Swedish native speakers. They can then log in to VIVO and translate all labels in the user interface from English to Swedish directly within the platform.

User interface label ontology

The VitroUILabels vocabulary has been created to support the definition of user interface labels using triplets preserved in a graph. The PropertyKey class has been defined with an internal structure that includes five data properties: `hasKey`, `hasApp`, `hasTheme`, `ftlUrl`, and `hasPackage`. In addition to these properties, `rdfs:label` is used to define UI label translations in different languages based on the language tag assigned to `rdfs:label`. The properties `hasKey`, `hasApp`, and `hasTheme`, along with the language tag assigned to `rdfs:label`, are utilized to select the UI label based on the label key and the user's environment, including the selected locale, theme, and application.

Faceted search

An extended search ontology has been introduced. This ontology allows for the configuration of searches and the definition of filters to refine search results. Search results can be sorted by various criteria, such as relevance, date, or name. Finally, the types of objects (classes) and instances that can be searched for different roles can be defined.

Responsive user interface

Prior to VIVO 1.15.0, the Wilma theme, which was the default VIVO theme, was not fully responsive. However, this issue has been resolved in VIVO 1.15.0, allowing the VIVO user interface to adapt to any screen size, including smartphones, tablets, and iPads. The upcoming VIVO 1.16.0 release will focus on aligning this theme with WCAG standards.

The improved role management

The role management module in VIVO 1.15.0 is based on Attribute-Based Access Control (ABAC). An ontology has been introduced to enable more control over defining permissions for specific roles. This approach allows for greater control over landing pages. Individual pages for researchers and organizations or its parts can be made private, meaning they are only visible to users with certain permissions and not to anonymous visitors.