



facet navigation, digital library audiences will be able to navigate more efficiently.

- | Finally, users will be able to actively contribute to the digital library by allowing them to enrich and contribute their own content.

Advantages for you, as a content provider

You will be able to:

- | Connect your rich resources to a digital library, yet remain autonomous and flexible, and maintain control over your content.
- | Link your digital resources with the multilingual contents of other network members, thus quickly reaching a critical mass of content that may attract new audiences.
- | Open your content resources to a wider international audience. As reference structures in many different languages are linked into a global reference structure network, users will be able to retrieve relevant information resource in various languages.
- | Finally, you will be able to better leverage your investment in content digitisation by sharing and integrating your resources into a greater network.

Interested? Join the STERNA network and help build a digital library for bird enthusiasts

We are looking for new members as well as test partners for our project. As affiliated partner you will:

- | Receive the technical support to connect your resources and databases to the STERNA digital library;
- | Get access and learn how to use a set of web-based tools to semantically enrich and link your content;
- | Validate the STERNA methodology and approach as a benefit to the European digital library community;
- | Get featured as a STERNA showcase in a European-wide road show in 2010.

If you want to join, please see the contact details on the last page. For detailed information on the project, visit: <http://www.sterna-net.eu/>

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naturalis

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Royal Museum for Central Africa, Belgium



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STERNA* – Semantic Web-based Thematic European Reference Network Application

Creating a distributed digital library for wildlife enthusiasts and bird lovers

* Sterna is a genus of TERNS in the bird family Sternidae. It refers to the typical large white terns occurring near-globally in coastal regions. (Source: Wikipedia)

What is STERNA?

STERNA (Semantic Web-based Thematic European Reference Network Application) is the contribution of thirteen European natural history museums and content providers that collect and hold content on biodiversity, wildlife and nature to the goals and objectives of the European Digital Library initiative.

We specifically address the many small content providers that want to make their rich resources available to digital library users, but which lack both technical skills and financial resources to do so.

Our vision is to create a dispersed and networked information space, supported and sustained by a member network of autonomous content organisations, that serves a worldwide audience with a special interest in nature and wildlife.

How does it work? – The STERNA approach

STERNA uses state-of-the-art semantic web technologies to connect, link and make accessible digital content in a common thematic information space. Yet, rather than building a central content repository, we propose an architecture where resources remain within the control of their owners, leaving existing information systems and structures intact.

Instead, we use reference structures, i.e. all sorts of “controlled vocabulary”, such as simple word lists, glossaries, taxonomies, thesauri or ontologies, to link geographically distributed content.

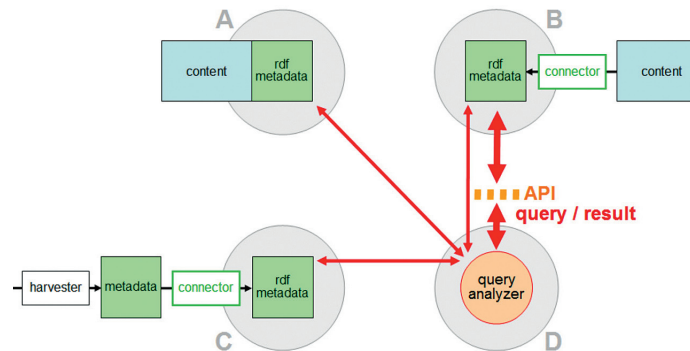
By connecting existing reference structures into a coherent network of concepts, and then attaching digital resources to this global reference network, we build a thematically focussed digital library of semantically integrated resources.

STERNA – A digital information space for nature enthusiasts, wildlife aficionados and bird lovers

The thematic focus the STERNA digital library is on birds and all sorts of bird-related information. A first prototype of this information space, bringing together a wide range of multimedia resources on birds and their habitats, will be available in December 2009.

The STERNA architecture – Accessing digital library content in a distributed manner

The basic technological architecture that allows users to search this digital library in a distributed fashion is based on metadata in RDF (Resource Description Framework) format and/or reference structures represented in SKOS (Simple Knowledge Organisation System) format.



The STERNA architecture for distributed querying

In this architecture, the necessary technology (query analyser) to support distributed querying is provided only by one member site (the federated site D), while the other participating member sites allow controlled sharing of their data.

Digital library users can initiate their query at any of the member sites (sites A, B, C, or D). The query is then routed to the federated site (site D), where it is resolved into its fundamental parts, and then intelligently routed to the relevant member sites. The query analyser finally collects and integrates the responses into a result list, which is sent back to the user.

Advantages for digital library audiences

- | Users can carry out searches across all the participating member sites simultaneously, making searches more effective and transparent.
- | They can start queries based on general concepts and do not necessarily need to know the accurate expert term to discover relevant content. Thus, non-expert users gain access to content normally reserved to professionals.
- | By issuing their queries in their native language, users will receive relevant content from any of the member sites, including resources in a different language.
- | Users will get only search results that are highly relevant to their initial search term as merely those items are listed that are semantically connected.
- | Applying advanced navigation tools such as

