THE BULGARIAN ONLINE ENCYCLOPEDIA: PROJECT AIMS AND OUTCOMES

In December 2024, the Bulgarian Encyclopedia Scientific Information Centre at the Bulgarian Academy of Sciences formally initiated its Online Encyclopedia project. The aim of Project »The Bulgarian Online Encyclopedia. Connected and accessible encyclopedic knowledge«[1]– Funding of scientific research projects in the field of green and digital technologies, is to provide open internet access to verified and scientifically proven information in Bulgarian to a wide range of readers. Students, scholars, researchers, and the general public are the target audience of the project. It is expected to create a positive environment for improving the education level in Bulgaria and support cognitive processes in Bulgarian schools. It also has the potential to facilitate the spread of comprehensive scientific knowledge into all areas of life and lead to the realisation of new products and processes. Furthermore, it will give fresh impetus to innovative enterprise development, facilitating informed decision-making.

The digital encyclopedia is founded on the rich scientific encyclopedic resources, archival documents, and photographs that have been kept at Bulgarian Encyclopedia Scientific Information Centre for 70 years. To this end, the project also involves activities concerning the digitisation of existing paper archives and printed encyclopedias. New on-premises equipment (a professional book scanner) and word/image processing software will be obtained so as to facilitate the digitisation of the Bulgarian Encyclopedia Scientific Information Centre's archives and their subsequent processing. To implement permanent, ubiquitous, and continuously updated data access (in accordance with the FAIR principle of free data[2]), an ecosystem of software tools encompassing the whole life cycle of the project are being developed by the lead partner, the Institute of Information and Communication Technologies at the Bulgarian Academy of Sciences. The provisioning of a specialised, agile, backend online environment, including tailored software solutions and multifunctional databases, is a specific objective of the project. It will ensure that all processed encyclopedic data is accessible 24/7 to authors, contributors, and editors. The software system is based on

[1] No. BG-RRP-2.017-0023; Contract No. RRP – 45 from 6/12/2024 /BG-RRP-2.017-0023-C01/, executed in accordance with Procedure BG-RRP-2.017.

[2] https://www.go-fair.org/fair-principles/

the CLaDA-BG infrastructure (National Interdisciplinary Research E-infrastructure for Bulgarian Language and Cultural Heritage Resources and Technologies). All data sets are equipped with relevant software components. In line with the linked data concept, each object in the ecosystem (archival records, users included in a user hierarchy) has its own GUID (Globally Unique Identifier). Thus, encyclopedic data is structured and made available for public use. A document archiving strategy is implemented within the project. Original images and written and printed documents are digitised, and digital repositories of indexed and edited printed encyclopedia articles are built. A conceptual encyclopedia hierarchy was created to index archival records and encyclopedia articles. Object metadata is collected and defined in registers maintained with a registry manager tool allowing metadata search and connected data retrieval. The new online environment is designed to handle various types of articles.

A modern frontend website of the Bulgarian Online Encyclopedia is being built, adopting the best practices and innovations and customised to the specific preferences and habits of Bulgarian users. It will meet the learning needs of pupils and students, provide researchers from varied backgrounds and scientific fields with general reference information, and assist businesses in finding relevant knowledge on diverse topics. The website will be user-friendly, with clear and intuitive navigation. A keyword search bar will be available on the home page, allowing users to quickly find specific articles by entering the search term. There will also be an alphabetical search option, which will display the word with a short description and a link to the corresponding article, as well as a search option by topic. Topics will include major categories, such as sciences (Philosophy, Mathematics, Astronomy, Physics, Mechanics, Chemistry, Earth Sciences, Biology, Linguistics, Psychology), Geography (continents, oceans, countries), Plant and Animal Life, People and Languages, History, Mythology and Religion, Arts, Archaeology, Cultural Heritage, Literature, Society, Ecology, Economy, Technology and Engineering, Human and Veterinary Medicine, Agriculture, Bulgaria, etc., with subcategories for more specific topics. In addition, the home page will have a recommended articles section (with dynamic content), a section for recently updated articles, and a field with information about the Bulgarian Encyclopedia Scientific Information Centre's printed publications. Articles will include text, images, internal links, and references. They will be written in literary language, in a clear and concise style. Each piece will be indicated by authorship, date of publishing, dates of subsequent revisions, and the names of the editor(s) who carried out updates. There will also be a comment box, where users can suggest new articles or changes to existing ones. Comments and suggestions will be accessible only to the editorial team. Readers will have the opportunity to provide feedback via email. As part of the project, a large number of encyclopedia articles will be uploaded to the website. It is expected to be launched with revised and updated encyclopedia articles from the Bulgarian Encyclopedia Scientific Information Centre's archive. Articles submitted for publication will be reviewed by experts in the relevant fields, ensuring up-to-date and accurate information.

Developing concepts for the online environment, the structure of the website and databases is among the ongoing activities performed by the Bulgarian Encyclopedia Scientific Information Centre's team. It determines the structure of archives, the main characteristics of the online environment, and the methods for extracting data. The project concept of the online encyclopedia defines the topics, sections, and subsections as well as the principles of structuring, search, article types in specialised thematic dictionaries, and illustration. To specify topics, the working group adheres to the pyramidal structure of classical encyclopedias by establishing in advance the significance of each main topic. Dictionaries, which will be available in the online environment after its implementation, are being compiled for specific topics, categories, and subcategories. Updates of the dictionaries will be carried out periodically. Methodological guidelines for writing different types of online articles (with specified volume, content, and structure), adding illustrations and information sources, and a guide for writing new articles, are being drawn up. In accordance with the methodological guidelines, models of encyclopedia articles, according to their type, are being created.

The Bulgarian Online Encyclopedia Project can be defined as sustainable, since it produces beneficial outcomes for the wider public in Bulgaria, its educational system, and business and scientific communities. After the completion of the project, the content of the Bulgarian Online Encyclopedia will be constantly updated and regularly supplemented with new articles to ensure its reliability and relevance, with a trend towards increasing the total number of articles. Efforts will be made towards finding additional financing through targeted state funding, sponsorship and/or public-private partnerships, donations and public funding (crowdfunding), etc.

The Bulgarian Online Encyclopedia will bolster the fight against fake news, disinformation, propaganda, and conspiracy and other unscientific theories on the internet and will contribute to the advancement and transfer of scientific knowledge. It will comply with the recommendations outlined in the Web Content Accessibility Guidelines (WCAG) 2.1.[3] Following these guidelines will make the content more accessible to a wider audience, including people with visual and auditory impairments, limited mobility, or speech disorders. Some adaptations will be made for individuals with learning disabilities and cognitive limitations.

IVA STAYKOVA, VICTORIA LAZOVA, KIRIL SIMOV, PETYA OSENOVA, ZHIVKO ANGELOV, RALITZA GUELEVA-TZVETKOVA

[3] https://www.w3.org/TR/WCAG21/