

**BULGARIAN ACADEMY OF SCIENCES**  
International Scientific Cooperation

Ôîðïà <b>B1</b>	Country: <b>Serbia and Montenegro</b>	Partner of BAS: <b>Mathematical Institute</b>
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Reg.¹:

**JOINT RESEARCH PROJECT**

**Title: Digitisation of Cultural and Scientific Heritage**

**Research partners:**

<p><b><u>Institute of BAS:</u></b> Institute of Mathematics and Informatics of the Bulgarian Academy of Sciences</p> <p><u>Postal code and address:</u> Bl. 8, Acad. G. Bonchev St. 1113 Sofia, Bulgaria</p> <p><u>Director:</u> Prof. Stefan Dodunekov, Dr. Sci.</p>	<p><b><u>Partner institute:</u></b> Mathematical Institute of Serbian Academy of Sciences and Arts</p> <p><u>Postal code and address:</u> Kneza Mihaila 35, 11000 Belgrade, Serbia and Montenegro</p> <p><u>Director:</u> Prof. Zoran Marković, Dr. Sci.</p>
<p><b><u>Project coordinator:</u></b> Dr. Milena Dobрева</p>	<p><b><u>Project coordinator:</u></b> Dr. Zoran Ognjanović</p>
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**Beginning: January 2004**

**Duration: 3 years**

## SUMMARY

### **Present state of knowledge in the field, significance and objectives of the joint research:**

Digitisation field (we mean here the broad sense of digitisation, which includes presentation of all related data to a cultural artefact in a computer form, not just digital imaging) involves knowledge from different specialised fields (digital imaging, electronic texts and encoding systems, corpus linguistics, computer science in general).

Digitisation of cultural and scientific heritage is amongst the priorities of the FP6 of the EC, but Southeastern countries still have specific problems with insufficient standardization and practical experience in mass digitisation. There is also a clear need to develop models which would meet the specific local needs.

Both participating institutions have already undertaken a number of national projects in the field of digitisation. Taking into account the close ties between the cultural heritage in both countries, the possibility to cooperate and exchange knowledge and practical experience will lead to solutions assuring building joint digital resources.

The *strategic objective* of the project is to boost cooperation and exchange of best practice.

This core group of specialists will be able to consult, monitor and develop digitisation projects in home countries and abroad based on interdisciplinary approach.

The long-term impact of the project would be on mobilising existing human and material resources in digitisation field in Bulgaria and Serbia.

The project is designed with the underlying idea to apply the EC policy in this field taking into consideration the Lund principles and Plan of action to work on digitisation of cultural and scientific heritage in the associated candidates countries. Thus, it will contribute to bridge the current priorities set by EC experts in the digitisation field, and institutions in Bulgaria and Serbia, and will provide a stable basis for future cooperation with other European countries.

**Keywords (up to 4):**

**information technologies, digitisation, preservation and access, cultural heritage**

### **Background of cooperation and envisaged results and benefit:**

The objectives of the project are accompanied by clear and measurable sets of actions, such as forming expert groups which will produce state of the art report and best practice guidelines. The project is based on the following basic trends of cooperation:

#### **1. Answering local needs**

The fast development and wide application of digital methods, combined with broadened access to the Internet and falling computing costs, have created intense interest in electronic

presentation and access to cultural and scientific heritage resources: original manuscripts, early printed books, epigraphic inscriptions, etc. Information technologies (IT) have offered cultural institutions new opportunities for the electronic presentation of their holdings, which are now made accessible not only to the specialists, but also to the citizens and interested parties worldwide.

As an inevitable part of the understanding of our common grounds and local diversities, the field of digitisation of cultural and scientific heritage is within the priority areas for the European Union. While in the previous decades the exposure and discussion over scientific and cultural heritage were a privilege to a small scientific community, now this heritage reveals greater interest.

This is an important development stimulus. However, the practical work in this field requires substantial efforts and very specialised expertise both to prepare the resources in electronic form and to present them properly to various audiences. Our project aims to remove currently existing research and practical work gaps in Bulgaria and Serbia.

## **2. Promoting best practices taking into account local experiences**

We witness for over one decade now that while the interest to methods and tools for presentation of cultural heritage in the associated countries grows, the real efforts usually end up with small demonstrations. Even in the EC, the expertise of specialists working in the field of digitisation is gained mostly by individual experience. If a young researcher has the chance to become a part of an experienced group, he/she would gain experience to work on a good quality. Otherwise, many institutions establish small-scale projects learning basically from pitfalls. This tendency is not a positive one, because it results in a variety of small scattered resources which could not be well interconnected. Such a situation might also lead to a negative “feelings” that the field is too complicated for a start of new projects or for a redesign of the existing ones. This project will contribute to strengthen local experiences and to offer more structured and balanced approaches to those who work in the field of digitisation.

## **3. Filling an existing gap (electronic resources on associated countries cultural and scientific heritage)**

The electronic resources available for the associated candidate countries first of which become members of the European Union in 2004, are still scarce. In most of these countries it is impossible, because of the lack of specialists, and economically not efficient to form digitisation groups attached to the various cultural and scientific heritage institutions.

**Relation to other projects** (partners, titles, duration, and funding):

The project is not related to other international projects, but will contribute to develop the ideas expressed in the Borovets Declaration of 17 September 2003, treating the creation of South-Eastern European Network for Digitisation of Scientific and Cultural Heritage.

**Research plan for the first year:**

The work in the first project year will concentrate on the following two topics:

1. *New technologies adoption in Bulgaria and Serbia and Montenegro*—this topic is important because the process of adoption of new technologies in the cultural and scientific heritage sector is not easily predictable.
2. *Encoding practices and interchange of data*—this activity is of extreme importance for finding modern solutions to expose texts written in Old Cyrillic and Glagolitic.

**Preliminary research plan for the second year:**

The work in the second project year will concentrate on the following two topics:

1. *Digitisation of scientific heritage*—this is a standard track of work in the EC. Work on it will give better idea on the local existing experiences and deviations from the EC state of the art. Both institutions have a strong interest in digitisation of mathematical heritage.
2. *Manuscript cataloguing*— This activity also covers a field of special importance for both countries, having in mind the common problems in describing Slavonic mediaeval manuscripts.

**Preliminary research plan for the third year:**

The work in the third project year will concentrate on the following two topics:

1. *Digitisation of audio archives and musical heritage*—This track of work should be aligned, on the long run, with tools for indexing which would take into account the local languages. Such work has not been done on great scale in the region, but is part of the cultural and scientific and cultural heritage which can not be skipped.
2. *Study of training options/needs in the field in the both countries*—This study will contribute to learn more about the state of the training and the most serious needs in specialists.

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**Scientific staff involved in the project:**

<b>From the Bulgarian side:</b>	<b>From the partner side:</b>
Assoc. Prof. Milena Dobрева Assoc. Prof. Plamen Mateev Assoc. Prof. Nikolay Kirov (tbc) Assoc. Prof. Nikola Ikonomov (IBL-BAS) Trifon Trifonov Kalina Sotirova Asen Velchev	Assoc. Prof. Zoran Ognjanović Prof. Zoran Marković Prof. Žarko Mijajlović Dr Dragan Blagojević Uroš Midić

**Annexes:**

**1. Borovets Declaration**

**SIGNATURES**

<b>On behalf of BAS:</b>	<b>On behalf of</b>
Project coordinator:	Project coordinator:
Director:	Director:
Signed in:	Signed in:
Date:	Date:

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