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DOI: <https://doi.org/10.32626/2309-9763.2024-36-343-353>

UDC 004.383.8:351.858:378

Serhiy Pochynok,

PhD student, Foreign Languages Department
Higher Education Institution «Podillia State University»,
Kamianets-Podilskyi, Ukraine
ORCID ID: <https://orcid.org/0009-0007-5735-6736>
awa_6@ukr.net

Olha Chaikovska,

PhD in Philological Sciences, Associate Professor,
Associate Professor of Foreign Languages Department
Higher Education Institution «Podillia State University»,
Kamianets-Podilskyi, Ukraine
ORCID ID: <https://orcid.org/0000-0001-9161-4574>
Olgachaikovskaya@ukr.net

**THE IMPLEMENTATION OF AI TOOLS TO DEVELOP NATIONAL CONSCIOUSNESS OF
FUTURE VOCATIONAL TRAINING TEACHERS**

Abstract. The formation of national-historical consciousness is crucial for individuals in the modern and complex society we live in today. To ensure the development of this

consciousness, the practical use of artificial intelligence tools is a game-changer. This article highlights the practical use of artificial intelligence tools and their effectiveness in forming the national-historical consciousness of individuals. Among the many network resources that contribute to the acquisition of new knowledge by students about the historical and cultural past for the formation of national and historical consciousness, virtual excursions hold a special place. By using artificial intelligence tools such as IDEOGRAM, BING, GEMINI, INVIDEO AI, and MYLENS AI to create these virtual excursions, students can gain an immersive and interactive experience of historical monuments, cultural monuments, and natural wonders in their country. This contributes to the development of their national consciousness, which is essential for their personal and professional growth. Additionally, the use of these tools can revolutionize the way individuals learn and form their national consciousness, providing a deeper understanding and appreciation of their nation's history and heritage. The article uses research methods such as analysis and generalization to formulate recommendations on the use of artificial intelligence tools for the creation of virtual excursions during the study of history of Ukraine in higher educational institutions. By integrating these tools, students can gain an immersive and interactive experience of historical monuments, cultural monuments, and natural wonders in their country, contributing to the development of their national consciousness. Overall, the use of artificial intelligence tools has the potential to revolutionize the way individuals learn and form their national consciousness.

Keywords: artificial intelligence; formation of consciousness; national and historical; virtual tour.

1. INTRODUCTION

Today, Ukraine and its citizens are becoming direct participants in processes that are extremely important for further determination, first of all, of their identity and role in world history. In difficult times for the country, along with the primary task of preserving its sovereignty and territorial integrity, and the search for ways to integrate into the European and Euro-Atlantic community, it is of great importance to define a new strategy of education as a multicomponent and multi-vector system that largely shapes the future development of Ukraine [3].

The most relevant educational strategies today are civic-patriotic, spiritual-moral, and military-patriotic education as the main components of national-patriotic education, as core, fundamental, meeting both the urgent requirements and challenges of our time, and laying the foundations for the formation of consciousness of present and future generations. Education in this context will contribute to the development of the state as a guarantee of one's personal development, based on the ideas of humanism, social welfare, democracy, freedom, tolerance, prudence, responsibility, healthy lifestyle, readiness for change and fulfilling the duty to protect the independence and territorial integrity of Ukraine.

Therefore, today, more than ever, we need new approaches and new ways to cultivate patriotism as a feeling and as a basic quality of a person. At the same time, it should be borne in mind that Ukraine has a long and majestic culture and history, the experience of state life, which are a powerful source and a solid foundation for the education of children and youth. They have already entered the educational and general education space, but the current social processes require their rethinking, which opens up new opportunities for the educational sphere.

Currently, there is a growing need for a special study of the formation of the national-historical consciousness of individuals. In the modern and difficult period of the development of society, the problem of forming the national consciousness of students of higher education institutions becomes relevant for several reasons: the mobility of students as an initiative part of the future intelligentsia, the tendency of mass culture to influence it, a decrease in the level of spiritual culture of society as a whole, changes in the value orientations of the younger generation, the importance of internalization of national spiritual values in the process of educating a student as a person and as a professional.

The rapid development of engineering and technology in modern society determines new strategic tasks for the development of education in Ukraine. These include fundamentally new requirements for the quality of training and retraining of specialists that meet the needs of the modern information society. The implementation of these tasks is based on the introduction of new training concepts, and the widespread use of innovative technologies, including artificial intelligence.

2. AIM AND TASKS

Theoretical substantiation and practical development of pedagogical means for the formation of national consciousness of future teachers of vocational training in the educational process in higher education institutions using artificial intelligence are presented in the paper.

3. RESEARCH FINDINGS

In today's environment, Artificial Intelligence (AI) is becoming an indispensable component of our daily lives, from intelligent personal assistants in smartphones to automatic car control functions. Artificial intelligence is actively used in the field of education, and many software solutions have already been created. This has made the academic world more convenient, personalized, and interesting, as everyone can now access materials through smart devices. Artificial intelligence is a broad concept. It encompasses any methods that replicate human thinking and skills such as comprehension, self-deference, and the ability to engage in meaningful and coherent dialogue [13].

Artificial intelligence has great potential for use in the educational process of higher education institutions. AI software tools are capable of processing a significantly larger amount of data than humans, allowing them to perform tasks faster and more accurately. In addition to the above, AI can help students learn at their own pace by providing an adaptive curriculum that

meets the individual needs of the student. In particular, AI tools can analyze data to provide students with additional materials and assignments to help strengthen their knowledge.

In addition, artificial intelligence can help create virtual playgrounds and simulators that allow students to gain hands-on experience and practice without the risk of errors or equipment damage.

Among the many network resources that provide students with new knowledge about the historical and cultural past, to form the national and historical consciousness of future teachers of vocational training in higher education institutions, a special place is occupied by virtual excursions.

A virtual excursion is an organizational form of training that differs from a real excursion by a virtual display of real-life objects to create conditions for independent observation, collection of necessary facts, etc. [10]. An excursion in this format allows you to visit interesting places in different countries of the world, which makes this process more accessible, in addition, it provides the opportunity to repeatedly view both fragments and the tour as a whole.

One of the services that conducts virtual tours for users is, for example, the online platform Google Arts & Culture [10], created by Google in 2011. It contains images of exhibits and interiors of museums, architectural monuments, and galleries located both in different countries of the world and on the territory of Ukraine. The service is constantly improving, expanding the lists of partner museums and providing more detailed images of their exhibits.

Entering the virtual space of this service, students can use the navigator to walk through the halls, view exhibits at close range, determine the content and main idea of exhibitions, study architecture and genres of art, people's achievements in the field of science and technology, historical finds and documents, etc.

Among the key advantages of virtual field trips compared to traditional study tours are:

- 1) accessibility;
- 2) the possibility of reviewing;
- 3) visibility;
- 4) availability of interactive tasks;
- 5) the ability to take into account the age and individual characteristics and interests

of students when selecting material for creating an excursion.

The availability and prevalence of various artificial intelligence tools allow students to create virtual excursions of an individual nature. In our opinion, this will allow for better assimilation of the material, will contribute to the development of creative thinking, and, consequently, the education of national and historical consciousness. By creating a virtual tour with the help of artificial intelligence, students not only get access to a significant amount of historical, local history, and environmental information but will also be able to summarize the material and form an effective visual aid that can be used in further education. Examples of these types of work would be: creating a laptop; essay writing; formation of a photo album with short comments on the photo; development of posters; recording a video on the theme of the excursion and more.

Preparation and conduct of educational virtual excursions consists of three stages: preparatory, the stage of direct conduct and the final stage of summing up the results of the excursion [2]. The preparatory stage is characterized by the search for the object of the excursion and the actual preparation for it (thinking through and selecting the necessary materials). At the stage of direct conduct, the exhibits are viewed, theoretical information is obtained and students perform tasks. This is followed by the final stage, characterized by the generalization of what has been seen, self-evaluation and mutual evaluation.

To accomplish these tasks, we suggest paying attention to the use of several artificial intelligence tools, such as IDEOGRAM, BING, GEMINI, INVIDEO AI, and MYLENS AI. These tools are free of charge and will help diversify, combine and classify graphic and video material.

Let's try to use the above applications, for example, to cover the topic of Scythian settlements and burials of the period VII to III-II centuries. B.C., on the territory of modern Ukraine. Applicants themselves can process the information, summarize and create a virtual tour, working in groups.

To begin with, let's try to collect and process information as part of the preparatory stage in creating a virtual tour.

For example, IDEOGRAM allows you to generate high-quality images that can be used as visual material in the future. After a short registration, this artificial intelligence offers to generate an image by specifying keywords that describe the result we need. After generation, several variants of images are offered, with possible further editing and saving in the required format for further use [11]. For example, we considered a request for an image of a Scythian warrior to be used as visual material (Fig. 1). In a few seconds, several variants of images were generated, which can be used successfully.

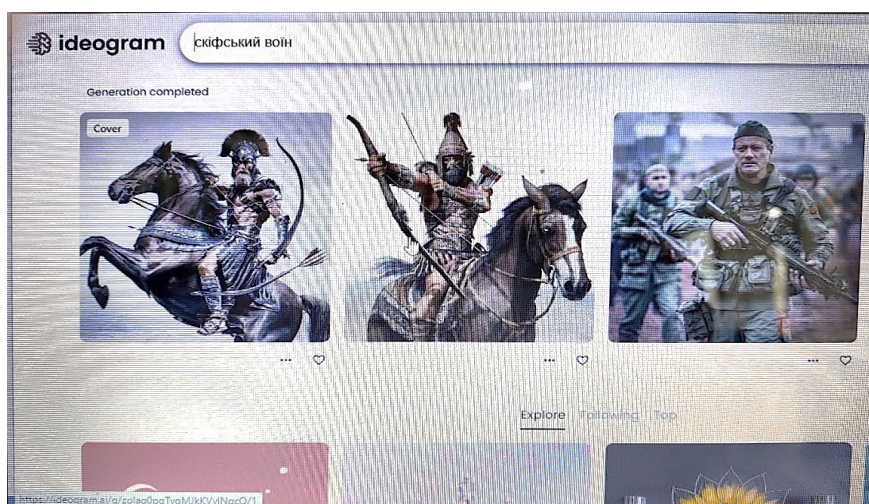


Fig. 1. Screenshot of an IDEOGRAM-generated image of a Scythian warrior

The BING app also allows you to generate high-quality images [8]. When asked about the visualization of Scythian settlements, we received several interesting options. (Fig. 2). And the image of the Scythian princess, in our opinion, turned out to be generated even brighter (Fig. 3).

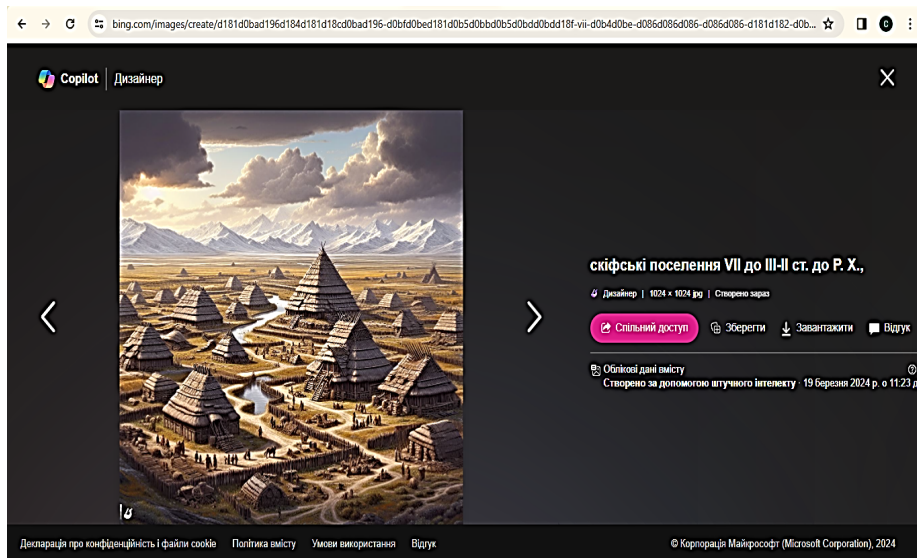


Fig. 2. Screenshot of a BING-generated image of a Scythian settlement

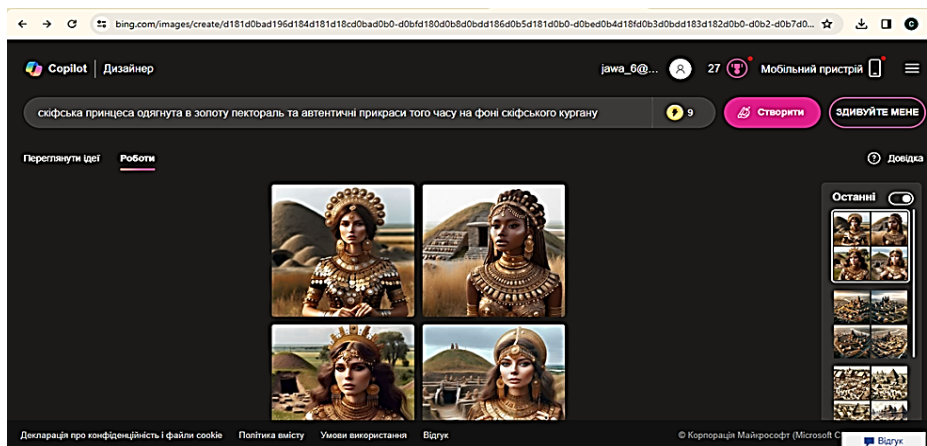


Fig. 3. Screenshot of a BING-generated image of a Scythian princess

The GEMINI tool allows you to get brief and comprehensive information or point out the main theses, which can later be used to accompany the text of the virtual tour [9]. We considered the request for Scythian settlements and burial mounds on the territory of modern Ukraine (Fig. 4). As you can see, GEMINI has provided us with basic summary information that can be used for the text of the upcoming virtual tour. You can also use GEMINI to voice the generated text for further use in the audio part of the video.

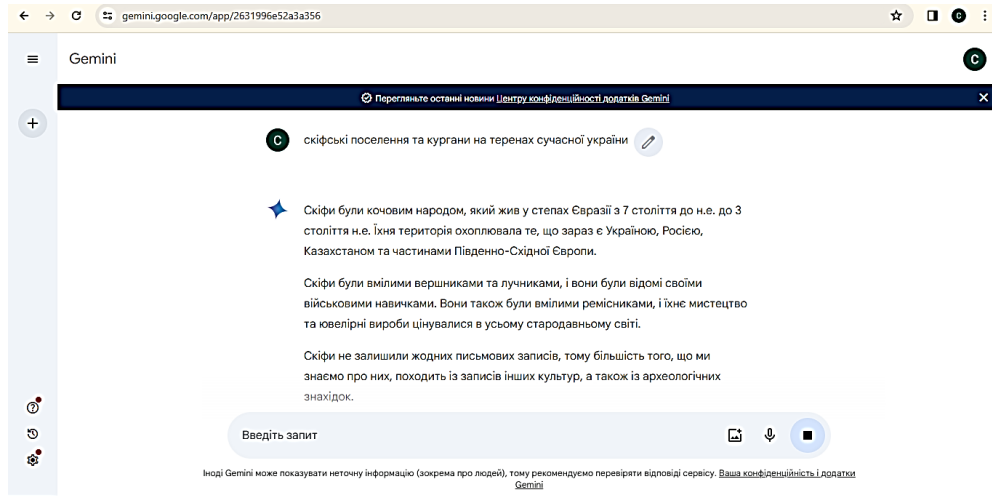


Fig. 4. Screenshot of a query in GEMINI regarding Scythian settlements and burial mounds on the territory of modern Ukraine

With the INVIDEO AI app, you can create a short video [7]. We offered to generate a video about the history of the Scythians. (Fig. 5).

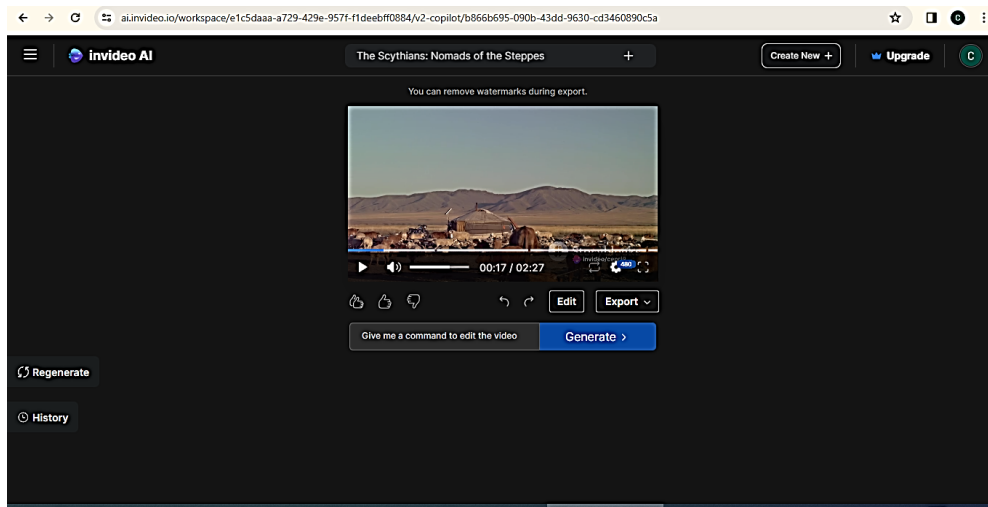


Fig. 5. Screenshot of an INVIDEO AI-generated video about the history of the Scythians

The result, in our opinion, is interesting, but there are certain disadvantages, namely that the soundtrack is generated in English, and therefore needs to be translated from English into Ukrainian for use (although this material can be used for philology students). Of course, artificial intelligence receives information from the global network and generates it according to its algorithms, and therefore needs to check historical accuracy, but this will allow you to draw critical conclusions when creating video material and edit it in the future to achieve the desired result, thus developing students' critical thinking.

An AI-powered tool called MYLENS. The AI is capable of generating visually appealing timelines of key events for any topic in the form of timelines. The tool perfectly structures and combines several topics, so it is very convenient to view coinciding events on one holistic graph. Features of MYLENS AI:

- Automatic Timeline Generation: Lens automatically generates timelines. Simply enter the period you want to depict on the graph and wait for the result.
- Thematic integration: The tool allows you to combine different topics into a single cohesive timeline, making it easier to explore intersecting events.
- Language Support: Lens AI speaks many languages, ensuring accessibility for users around the world.
- Learning Tool: Lens AI has proven to be an invaluable resource for both students for educational purposes and managers, and business owners who want to create a roadmap by helping to understand chronological contexts and connections between different events.
- Content creation: The tool helps users create content for presentations or research by organizing information in chronological order.
- Data visualization: Complex data presented in a user-friendly timeline format that improves the user's ability to understand and analyze information.

Coverage of various topics: MYLENS. AI is suitable for a wide range of topics, from historical events to mundane and work activities, making it a versatile tool for different wholes [12]. At our request regarding the history of the Scythians on the territory of modern Ukraine, MYLENS.

AI-generated a schematic representation of information that, in our opinion, helps to understand the chronological contexts and historical emphases of Scythian history, thus contributing to the generalization of material on this topic (Fig. 6).

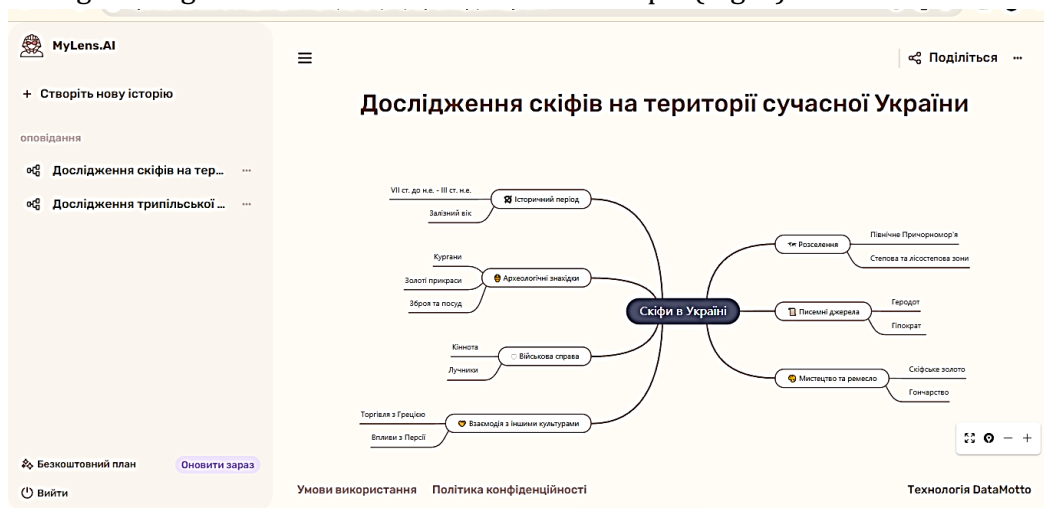


Fig. 6. Screenshot of the request to MYLENS. AI on the history of the Scythians on the territory of modern Ukraine

Thus, the artificial intelligence tools used, as part of the preparatory stage in the creation of a virtual tour, really help in the selection of the necessary materials and generate unique images, videos and information for further use.

4. CONCLUSIONS AND PROSPECTS FOR FURTHER RESEARCH

Thus, the educational space of a higher education institution can be considered one of the most favourable environments for the implementation of programs for the formation of national historical consciousness and civic education of young people because students are the socio-demographic group that will ultimately inherit the country in which they live. Artificial intelligence tools contribute to the development of the national consciousness of higher education students by generating symbols, and images and forming an idea of the culture, history and values of their country. By incorporating educational content created with the AI-powered apps we explored into learning materials and activities, higher education students can gain a deeper understanding and appreciation of their country's identity.

Artificial intelligence tools can be used to educate higher education students about important national symbols, such as flags, national emblems, and landmarks. They can also be used to get acquainted with historical events, figures and achievements that are important for the development of our country. Additionally, these resources can be used to foster a sense of unity and solidarity by emphasizing shared values, traditions, and beliefs. By using AI tools to visually represent these concepts, higher education students can better understand and internalize the idea of a shared national identity.

Overall, these resources can be a powerful tool for developing national consciousness and respect for the heritage and culture of one's country. By incorporating these tools into teaching practice, educators can help higher education students forge a stronger connection to their nation and foster a sense of pride in their country.

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ВИКОРИСТАННЯ ШТУЧНОГО ІНТЕЛЕКТУ ДЛЯ ФОРМУВАННЯ НАЦІОНАЛЬНОЇ СВІДОМОСТІ У МАЙБУТНІХ ПЕДАГОГІВ ПРОФЕСІЙНОГО НАВЧАННЯ

Починок Сергій Васильович,

аспірант кафедри іноземних мов,
Заклад вищої освіти «Подільський державний університет»
Кам'янець-Подільський, Україна
ORCID ID: <https://orcid.org/0009-0007-5735-6736>
awa_6@ukr.net

Чайковська Ольга Володимирівна

кандидат філологічних наук,
доцент кафедри іноземних мов
Заклад вищої освіти «Подільський державний університет»
Кам'янець-Подільський, Україна
ORCID ID: <https://orcid.org/0000-0001-9161-4574>
Olgachaikovskaya@ukr.net

Анотація. У статті висвітлено практичні методи використання засобів штучного інтелекту та ефективність їх застосування з метою формування національно-історичної свідомості особистості. Серед безлічі мережевих ресурсів, які сприяють здобуттю студентами нових знань про історичне та культурне минуле для формування національно-історичної свідомості майбутніх педагогів професійного навчання у закладах вищої освіти, особливе місце посідають віртуальні екскурсії. Для

створення такого типу екскурсій пропонуємо звернути увагу на використання декількох засобів штучного інтелекту, таких як *IDEOGRAM*, *BING*, *GEMINI*, *INVIDEO AI*, *MYLENS AI*. Ці засоби допоможуть урізноманітнити, об'єднати та класифікувати графічний та відео матеріали. У статті використано такі методи дослідження, як аналіз та узагальнення. На основі проведеного дослідження сформульовано рекомендації щодо використання засобів штучного інтелекту для створення віртуальних екскурсій під час вивчення дисципліни історія України в закладах вищої освіти. Така інтеграція сприятиме розвитку національної свідомості здобувачів вищої освіти, надаючи їм захватний та інтерактивний досвід історичних пам'яток, культурних пам'яток і природних чудес у своїй країні. Віртуально досліджуючи ці важливі місця, студенти можуть глибше зрозуміти та оцінити історію, спадщину своєї нації.

Ключові слова: штучний інтелект; формування свідомості; національно-історичний, віртуальна екскурсія.

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