Годишник Телекомуникации 2024, том 11, с. 107-117

Yearbook Telecommunications 2024, vol. 11, p. 107-117

eISSN 2534-854X https://telecommunications.nbu.bg/bg/godishnik-telekomunikacii

DOI: https://doi.org/10.33919/YTelecomm.24.11.11

IMPACT OF NEW TECHNOLOGIES AND ARTIFICIAL INTELLIGENCE IN BRAND MANAGEMENT

Alena Dobreva

Abstract: The topic of this article was chosen due to its relevance and the opportunity to explore various aspects of new technologies and artificial intelligence (AI) in marketing and customer service. Brand management plays a crucial role in modern business, as building, maintaining and developing a brand is essential for attracting and retaining customers. However, the integration of AI also raises important concerns about privacy, transparency and social responsibility, which are crucial for maintaining consumer trust. The article aims not only to show the innovative potential of AI, but also to highlight its role in building sustainable and successful brands.

Existing practices are analyzed, as well as new opportunities that can be implemented as the technology continues to develop, the challenges and limitations of artificial intelligence, the risks and limitations associated with AI are examined, emphasizing the balance between automation and maintaining an emotional connection with customers.

Keywords: AI, New technologies, Brand management, Chatbot.

1. INTRODUCTION

In today's rapidly evolving technological landscape, artificial intelligence (AI) plays a central role as a driver of innovation across various industries, including brand management. In an era of digitalization and intense competition, companies strive not only to deliver high-quality products and services but also to foster emotional connections with consumers through unique and memorable branding. As technology advances and data becomes more accessible, AI is taking on an increasingly significant role in brand management, offering automation, the ability to analyze vast amounts of information, and the creation of highly personalized consumer experiences.

Artificial intelligence is no longer a supplementary tool in brand management. It has become a core driver of brand evolution in today’s competitive landscape. Despite challenges related to ethics and data privacy, the advantages of AI in personalization, automation, predictive analytics, and management make it an indispensable asset for businesses seeking to optimize efficiency and decision-making. AI is a transformative force, providing companies with the ability to streamline operations, enhance customer engagement, and leverage data-driven insights while reducing operational costs.

2. APPLICATION OF ARTIFICIAL INTELLIGENCE IN BRAND MANAGEMENT

2.1.Current Applications

Artificial intelligence (AI) plays a pivotal role in various aspects of brand management and development.

Its primary applications include:

IMPACT OF NEW TECHNOLOGIES AND ARTIFICIAL INTELLIGENCE IN BRAND MANAGEMENT

Alena Dobreva

2.1.1. Marketing Campaign Automation

- Predicting consumer behavior: By analyzing historical consumer data, AI can anticipate which products or services will be of interest to customers. Amazon's recommendation algorithms leverage AI to suggest personalized products based on past purchases and browsing history.
- Dynamic advertising: AI automatically adjusts advertising messages based on user preferences, location, time of day, and other factors. One notable example is Google Ads Smart Bidding, which employs machine-learning algorithms to optimize advertising campaigns in real time. This includes determining the most cost-effective bid per click, predicting a user's likelihood of making a purchase, and personalizing ad content.

2.1.2. Content Management

- Content creation: AI-powered generative models, such as ChatGPT, create text for blogs, social media posts, and advertising materials. For instance, H&M utilizes AI to generate product descriptions tailored to different consumer segments.
- Image and video processing: Platforms like Canva and Adobe Firefly integrate AI to automatically generate visual content aligned with a brand's identity.

2.1.3. Social Media Monitoring and Analysis

- Sentiment analysis: AI scans social media comments, shares, and reviews to assess consumer sentiment toward a brand. Platforms such as Sprout Social and Hootsuite Insights utilize natural language processing to classify opinions as positive, neutral, or negative.
- Trend detection: AI algorithms enable brands to identify emerging trends and respond promptly. For example, TikTok's AI tracks the popularity of sounds, hashtags, and content trends, helping brands engage with viral movements.

2.1.4. Virtual Assistants and Chatbots for Customer Support

- AI-powered chatbots: Virtual assistants such as Zendesk and Intercom provide automated customer service, addressing common inquiries and enhancing user experiences with personalized responses.
- Customer query analytics: AI analyzes customer interactions to identify recurring issues, allowing brands to improve products and services. For instance, H&M integrates ChatGPT into its customer service platform to offer personalized clothing recommendations based on style preferences and occasions.

2.1.5. User Data Analytics

Годишник Телекомуникации 2024, том 11, с. 107-117

Yearbook Telecommunications 2024, vol. 11, p. 107-117

eISSN 2534-854X https://telecommunications.nbu.bg/bg/godishnik-telekomunikacii

DOI: https://doi.org/10.33919/YTelecomm.24.11.11

- Audience segmentation: AI-driven machine learning models classify users into specific segments based on shared characteristics. Netflix, for example, employs AI to analyze viewing preferences and suggest tailored movie and TV show recommendations.
- User experience optimization: AI tracks user interactions on websites and apps, providing data-driven suggestions for improving navigation, interface design, and personalization to enhance engagement and retention.

2.2.Potential Applications

As AI continues to evolve, new and innovative applications in brand management are expected to emerge:

2.2.1. Fully Personalized Products and Services

- Customization through AI-driven analysis: By analyzing individual preferences, AI can suggest products tailored to the specific needs of consumers. For example, Nike could leverage AI to design sneakers customized to a customer's style, size, and performance requirements.

2.2.2. Augmented Reality and Virtual Reality for Enhanced Brand Interaction

- Interactive experiences: AI-powered AR and VR allow consumers to “try on” products virtually. For instance, the IKEA Place App enables customers to visualize furniture in their homes using AR, reducing product returns by 30%.
- Immersive brand experiences: AI-driven VR can create virtual stores where customers engage with brands in a unique way. Sephora, for example, utilizes a virtual assistant that helps customers choose cosmetics through AR technology.

2.2.3. Automating the Creative Process

- Ad design and testing: AI can generate and evaluate thousands of ad variations to determine the most effective one for different audiences.
- AI-generated music and sound branding: Platforms like AIVA compose music that aligns with a brand’s identity. Coca-Cola uses AI to create data-driven advertising campaigns, while Spotify applies AI to curate personalized playlists and music recommendations.

2.2.4. Predicting Global Trends

- Macro data analysis: AI processes vast amounts of data from sources such as social media, news, and economic reports to predict both global and local market trends.

- Reputation management and crisis prevention: AI monitors media and social networks to detect potential threats to brand reputation and suggest proactive response strategies.
- Sustainability optimization: AI can recommend eco-friendly solutions for production and supply chains, integrating these efforts into marketing strategies. For example, Unilever uses AI-powered machine learning in logistics to optimize supply chains and reduce its carbon footprint.

3. CHALLENGES OF ARTIFICIAL INTELLIGENCE IN BRAND CREATION AND MANAGEMENT

While artificial intelligence offers numerous advantages in brand management, it also presents several challenges that companies must address to fully leverage its potential.

3.1.Technical Challenges

- Data quality limitations: AI algorithms are only as effective as the data they process. If the data is outdated, incomplete, or poorly structured, the results of AI-driven analysis can be inaccurate or misleading.
- Algorithm complexity: Understanding and managing AI-driven algorithms can be challenging for many companies. Even experts may struggle to interpret AI-generated decisions. For instance, a marketing team at an e-commerce platform may find that the AI recommends poorly selling products but cannot determine why, due to the model's lack of transparency.
- Lack of flexibility: AI systems are typically trained for specific tasks and often struggle to adapt to new situations. For example, a chatbot designed for customer support may fail to respond to non-standard queries, ultimately redirecting customers to human agents and delaying service.
- Cybersecurity risks: AI applications are potential targets for cyberattacks. In 2021, hackers exploited an automated chatbot system, leading to a leak of personal customer data from a major e-commerce company. This incident underscores the importance of robust cybersecurity measures in AI-driven brand management.

3.2.Ethical and Social Challenges

While AI enhances brand management, its use raises ethical and social concerns that can impact consumer trust and brand reputation.

- Privacy and data protection: The collection and use of vast amounts of user data pose significant privacy risks. Facebook faced global scrutiny following the Cambridge Analytica scandal, where improper data usage led to concerns over trust and resulted in regulatory sanctions against the company.
- Algorithmic bias and discrimination: If AI is trained on biased historical data, it can reinforce and even amplify discrimination. Amazon discontinued an AI-based hiring tool after discovering that its algorithm favored male candidates over female applicants due to biases in historical hiring data. Similarly,

eISSN 2534-854X https://telecommunications.nbu.bg/bg/godishnik-telekomunikacii
DOI: https://doi.org/10.33919/YTelecomm.24.11.11

Facebook's algorithms have been criticized for promoting divisive political content, potentially harming the platform's reputation.

- Lack of transparency: Consumers often struggle to understand how AI-driven decisions are made, which can erode trust in a brand. For example, Instagram modified its content recommendation algorithm, leading to user confusion and complaints, ultimately reducing engagement levels.
- Ethical concerns in automation: Excessive automation can distance customers from brands, reducing the human element in interactions. Airline passengers who rely solely on automated customer service systems frequently report dissatisfaction due to the lack of personalized assistance.

3.3.Strategic and Business Challenges

While AI offers significant benefits for brand management, its integration presents several strategic and business challenges that companies must navigate.

- Risk of excessive automation: Overuse of AI can lead to a loss of brand uniqueness and create distrust among certain consumer segments who prefer human interaction.
- Overreliance on AI: Companies that depend entirely on AI-driven decision-making risk losing their strategic vision.
- High implementation and maintenance costs: AI integration requires significant investments in technology, infrastructure, and staff training. For instance, a small retail company may invest in AI for data analysis but struggle to recoup the investment due to a limited customer base.
- Challenges in measuring effectiveness: Assessing AI's impact on brand success is often complex. Many companies lack clear metrics to evaluate the return on investment of AI-driven initiatives, making it difficult to determine their long-term value.

4. ARGUMENTS IN SUPPORT AND AGAINST AI IN BRAND MANAGEMENT

AI offers numerous advantages in brand management, making it an essential tool for modern businesses**.** While offers significant advantages, AI also presents certain challenges that companies must address.

4.1.Key benefits include

- Enhanced personalization of the customer experience: Modern consumers expect tailored interactions, which would be nearly impossible without AI. Personalized experiences increase customer loyalty, a critical factor for long-term brand success.
- Process acceleration and improved efficiency: AI automates time-consuming tasks such as data analysis, customer inquiries, and content creation. For

example, Coca-Cola leverages AI for automated ad generation, streamlining content production and distribution.

- Deeper audience insights: By analyzing large datasets, AI identifies consumer behavior patterns and needs, enabling more precise targeting and higher-impact marketing campaigns.
- Competitive advantage: Brands that integrate AI often outperform competitors. Amazon, for instance, dominates e-commerce through AI-powered logistics and personalized recommendations.
- Real-time brand reputation management: AI facilitates real-time monitoring of social media sentiment and customer feedback, allowing businesses to respond swiftly to potential issues. Nike employs AI to track brand perception on social media and adjust its communication strategy accordingly.
- Predictive analytics for future market trends: AI-driven machine learning models forecast emerging consumer trends, enabling brands to proactively develop innovations and stay ahead of market demands. H&M utilizes AI to predict future fashion styles and consumer preferences.

4.2.Arguments Against AI in Brand Management

- Lack of human creativity: AI can analyze data and generate content, but it cannot fully replace human creativity, intuition, and emotional intelligence. The optimal approach is to combine AI capabilities with creative professionals, ensuring that technology enhances, rather than replaces, human-driven innovation.
- Ethical and legal concerns: AI-powered systems can lead to privacy breaches, bias, and ethical dilemmas if not properly managed. Ensuring transparency in data usage and strict compliance with regulations such as GDPR is crucial to maintaining consumer trust and legal integrity.
- Overdependence on technology: Excessive reliance on AI can make brands vulnerable to technological failures, biases, or unforeseen system errors. To mitigate risks, companies should balance automation with traditional business practices, ensuring flexibility and adaptability.
- Accessibility for small businesses: AI implementation often requires significant investment, making it less feasible for smaller companies.

4.3.Artificial Intelligence. A Benefit or a Concern for Consumers

Consumer perception of artificial intelligence depends on its application, transparency, and the level of trust that companies establish. While AI offers significant advantages for brands, improper use can pose potential risks.

4.3.1. Positive Consumer Perceptions of AI

- Enhanced convenience: Consumers generally respond positively to personalized recommendations and AI-driven solutions that improve their experience.

Годишник Телекомуникации 2024, том 11, с. 107-117

Yearbook Telecommunications 2024, vol. 11, p. 107-117

eISSN 2534-854X https://telecommunications.nbu.bg/bg/godishnik-telekomunikacii

DOI: https://doi.org/10.33919/YTelecomm.24.11.11

- Spotify leverages AI to create customized playlists like "Discover Weekly," which users find highly valuable, leading to increased brand loyalty and engagement.
- Virtual assistants help resolve customer issues efficiently. For instance, Bank of America's "Erica" bot provides instant financial advice, offering a convenient and time-saving solution for customers.
- Improved recommendations and product discovery: AI-powered recommendation systems enhance the relevance of suggested products and services, leading to a more satisfying shopping experience.
- Amazon's AI-driven recommendation engine plays a key role in boosting sales, as customers value suggestions that align with their preferences and needs.
- Consumers generally view AI favorably when recommendations accurately reflect their interests, making shopping experiences more intuitive and efficient.
- Easier purchasing decisions: AI-powered virtual try-ons and product visualization tools simplify the shopping process, making it more intuitive and user-friendly.
- Sephora utilizes AI for virtual makeup trials, allowing customers to see how products will look before purchasing.
- IKEA's AR-based "Place" app enables users to visualize furniture in their homes, enhancing the decision-making process.
- Most consumers perceive these innovations as convenient and forward-thinking, improving their shopping experience.
- Positive impact on brand perception: Companies that integrate AI into their operations are often seen as innovative, modern, and technologically advanced. Tesla's use of AI for autopilot functionality is a key competitive advantage, reinforcing the brand's image as a leader in cutting-edge technology.

4.3.2. Negative Consumer Perceptions of AI

- Depersonalization of interactions: While AI enhances efficiency, it can sometimes reduce the human touch in customer service, leading to frustration.
- Airline customers often report dissatisfaction when AI-based chatbots fail to understand complex inquiries, requiring human intervention.
- Some consumers criticize brands that rely on automated responses on social media, perceiving it as a lack of genuine engagement and customer care.
- Privacy concerns: Many users are wary of AI's reliance on large volumes of personal data, fearing potential misuse or lack of transparency. Facebook has faced criticism for collecting extensive user data to power AI-driven targeted advertising, raising concerns about privacy and consumer rights.
- When companies fail to clearly communicate how data is collected and used, it can erode trust and lead to customer churn.
- Algorithmic inaccuracies: AI-powered recommendations are not always accurate or appropriate, which can negatively impact user experience and brand perception. YouTube's recommendation algorithm has been criticized for

occasionally suggesting irrelevant or inappropriate content, diminishing user trust in the platform.

- Ethical Considerations in Automated Decision-Making: The use of artificial intelligence (AI) in decision-making processes raises significant ethical concerns. Consumers may perceive AI-driven decisions as unfair or unethical, particularly when such systems influence critical outcomes. For instance, hiring algorithms used by certain companies have been criticized for exhibiting biases, raising concerns about fairness and discrimination.
- The Impact of AI on Authenticity: A high degree of AI-generated content, particularly on social media platforms, may lead to a perceived loss of authenticity. Customers often value human engagement, and excessive reliance on AI-generated content could diminish trust in a brand by creating a sense of detachment from genuine human interaction.

4.4. Factors Influencing Consumer Perception of AI

Several key factors shape consumer attitudes toward AI integration in business and marketing:

- Transparency and Ethical Considerations: Organizations that clearly communicate their AI usage and data collection practices tend to foster greater consumer trust and acceptance.
- Level of Personalization: When AI is leveraged to enhance customer experience—such as through personalized recommendations—it is generally perceived positively.
- Context of Use: While AI-powered chatbots are well received for handling basic inquiries, their use in complex or sensitive interactions may lead to frustration among customers.
- Quality of Interaction: The effectiveness of AI-driven engagement significantly impacts consumer perception. The more intuitive, accurate, and seamless the interaction, the more likely it is to be positively received.

The strategic implementation of AI in brand management offers opportunities to enhance convenience and personalization. However, the inappropriate or non-transparent use of AI may result in negative consumer perceptions, particularly concerning ethical concerns, the absence of human engagement, or potential privacy violations. Companies must strike a balance between leveraging AI for efficiency and maintaining consumer trust through ethical and transparent practices.

5. FUTURE TRENDS AND INNOVATIONS IN ARTIFICIAL INTELLIGENCE

As technological advancements continue, artificial intelligence (AI) is expected to become increasingly prevalent across various industries. In the healthcare sector, AI-driven diagnostic systems will likely become more sophisticated, enhancing the accuracy and efficiency of medical assessments. Similarly, in marketing, AI is projected to drive the development of highly interactive and personalized advertising platforms, optimizing customer engagement.

eISSN 2534-854X https://telecommunications.nbu.bg/bg/godishnik-telekomunikacii

DOI: https://doi.org/10.33919/YTelecomm.24.11.11

The automation of routine tasks is anticipated to expand further, enabling businesses to allocate resources more effectively toward strategic decision-making and innovation. However, growing consumer concerns regarding data privacy and security may prompt both governments and corporations to implement stricter regulations to ensure the ethical use of AI.

From a competitive perspective, companies that successfully integrate AI into their operations are likely to gain a significant market advantage. Conversely, organizations that fail to adopt AI-driven technologies risk falling behind in an increasingly digital and automated business environment.

The widespread adoption of AI will drive innovation across industries, improving efficiency and customer experience. Regulatory frameworks surrounding AI ethics and data privacy will become more stringent. Businesses that effectively utilize AI will strengthen their market position, while those that resist adoption may struggle to remain competitive.

As artificial intelligence (AI) continues to advance, its applications in branding, marketing, and customer engagement are expected to expand significantly. Key developments in AI-driven technologies will shape the future of consumer interactions, brand identity, and market strategies.

AI will enhance personalization by leveraging algorithms to predict customer preferences based on data from social media activity, purchase history, and online behavior. E-commerce platforms such as Shopify will provide fully customized user interfaces and personalized product recommendations tailored to individual consumer needs. Additionally, advancements in AI-driven emotional intelligence will enable virtual assistants, such as Siri and Alexa, to recognize and respond empathetically to users' emotional states through text and voice analysis.

The integration of AI with AR and VR will redefine the branding and retail experience. Customers will be able to explore products in immersive virtual spaces, with luxury brands like Gucci offering interactive virtual boutique tours. AR applications will become more sophisticated, allowing consumers to visualize products in their real-world environments with greater precision-exemplified by IKEA’s AR-driven furniture visualization technology.

AI will increasingly contribute to high-quality content creation for marketing and branding. Systems such as DALL·E and MidJourney will generate visually compelling brand imagery, aligning with audience preferences. AI-driven tools will automate the production of advertising campaigns by analyzing demographic and cultural factors. Furthermore, language models such as ChatGPT will create advertising slogans, articles, and social media content with minimal human intervention.

Brands will leverage AI to monitor and manage consumer sentiment in real time. Automated systems will detect and address negative reviews before they escalate, and chatbots will provide instant customer service solutions, including automated apologies or compensation. AI-driven tools will also facilitate real-time campaign adjustments based on consumer reactions and feedback.

AI will evolve from being a passive tool to an active collaborator in marketing and brand strategy. Platforms such as Canva will provide AI-assisted creative concepts, enabling users to generate high-quality designs with ease. Additionally, AI-powered interactive tools will support employee training in branding, marketing, and digital engagement strategies.

The future of branding will be closely tied to ethical AI usage and sustainability initiatives. Companies will be required to demonstrate transparency in data collection and AI applications, with brands like Apple emphasizing consumer privacy protection. AI will also play a crucial role

in optimizing supply chains, reducing environmental impact, and promoting sustainable business practices.

AI will empower brands to anticipate and respond to market shifts proactively. Predictive algorithms will dynamically adjust pricing based on demand and competition, while AI-driven analyses of global events will enable businesses to forecast and meet emerging consumer needs with greater accuracy.

Voice-activated AI will become a primary channel for consumer-brand interactions. Companies such as Domino's Pizza have already integrated voice-ordering systems, and the use of AI-driven voice interfaces will continue to expand, providing personalized and seamless customer experiences. As AI-driven voice technology evolves, interactions will become increasingly natural, intuitive, and adaptive to individual consumer preferences.

6. CONCLUSION

AI is poised to revolutionize branding, marketing, and customer engagement by enhancing personalization, optimizing content creation, improving reputation management, and facilitating advanced consumer interactions. While AI presents significant opportunities for innovation, businesses must ensure ethical AI use, prioritize sustainability, and maintain transparency to foster consumer trust. Companies that effectively integrate AI into their strategies will gain a competitive edge, while those that fail to adapt risk obsolescence in an increasingly AI-driven marketplace.

For businesses to maximize the benefits of artificial intelligence (AI), it is essential to establish a clear strategy for its implementation, identifying key areas where AI can generate the greatest value. Effective integration of AI requires investing in employee training to enhance technological skills and ensure a seamless transition into AI-driven processes. Transparency in data collection and usage is also critical, as organizations must uphold ethical standards and maintain consumer trust.

AI should be leveraged to enhance customer experience through personalization and operational efficiency while preserving essential human elements such as empathy and direct interaction. Achieving the right balance between advanced technology and human engagement is fundamental to a successful brand strategy. Organizations that strategically integrate AI into their operations will not only gain a sustainable competitive advantage but also foster deeper connections with their customers.

REFERENCES

[1] ZIAKIS, Christos and Maro VLACHOPOULOU. Artificial Intelligence in Digital Marketing: Insights from a Comprehensive Review. *Information* [online]. 2023, vol. 14(12), №664 [viewed 26.03.2025]. ISSN 2078-2489. MDPI. Available from: https://doi.org/10.3390/info14120664

[2] WILSON, George, Oliver JOHNSON, and William BROWN. The Impact of Artificial Intelligence on Digital Marketing Strategies. *Journal of Digital Marketing*. 2024, vol. 15(3), pp. 112-128. ISSN 2229-595X.

[3] GÜNDÜZYELI, Bora. Artificial Intelligence in Digital Marketing Within the Framework of Sustainable Management. *Sustainability* [online]. 2024, vol. 16(23), №10511 [viewed 26.03.2025]. ISSN 2071-1050. MDPI. Available from: https://doi.org/10.3390/su162310511

[4] LEE, Jooyoung and Sungeun SUH. AI Technology Integrated Education Model for Empowering Fashion Design Ideation. *Sustainability* [online]. 2024, vol. 16(17), №7262 [viewed 26.03.2025]. ISSN 2071-1050. MDPI. Available from: https://doi.org/10.3390/su16177262

[5] СТЕФАНОВА, Тереза. *Новите технологии: приложения, професии, умения: монография*. София: Аскони-издат, 2024. ISBN 978-954-383-151-7. [STEFANOVA, Tereza. *Novite tehnologii: prilozhenia, profesii, umenia: monografia*. Sofia: Askoni-izdat, 2024. ISBN 978-954-383-151-7.]

Годишник Телекомуникации 2024, том 11, с. 107-117

Yearbook Telecommunications 2024, vol. 11, p. 107-117

eISSN 2534-854X https://telecommunications.nbu.bg/bg/godishnik-telekomunikacii

DOI: https://doi.org/10.33919/YTelecomm.24.11.11

[6] ПАСАРЕЛСКИ, Росен. *Нови 5G мобилни клетъчни системи: Изследване на взаимодействието между 4G-LTE и 5G системите: архитектура, мрежови функции, интерфейс и протоколи*. София: Нов български университет, 2024. ISBN 978-619-233-282-2. [PASARELSKI, Rosen Ivanov. *Novi 5G mobilni kletachni sistemi: Izsledvane na vzaimodeystvieto mezhdu 4G-LTE i 5G sistemite: arhitektura, mrezhovi funktsii, interfeys i protokoli*. Sofia: Nov balgarski universitet, 2024. ISBN 978-619-233-282-2.]

[7] PASARELSKI, Rosen, Krasen ANGELOV, Kristian POSTAGIAN, and Stanimir SADINOV. Implementation and Analysis of a Customized Encryption Algorithm in 5G Networks for Educational Purposes. In: *4th International Conference on Communications, Information, Electronic and Energy Systems (CIEES), 23 - 25 November, 2023, Plovdiv, Bulgaria* [online]. 2023, pp. 1-5 [viewed 25.03.2025]. eISBN 979-8-3503-3691-7. IEEE Xplore. Available from: 10.1109/CIEES58940.2023.10378834

[8] ПАСАРЕЛСКИ, Росен и Теодора ПАСАРЕЛСКА. Изследване на фазите за мрежово планиране на мобилни клетъчни мрежи. *Индустриални технологии* [онлайн]. 2022, (9), с. 122-130 [прегледан 26.03.2023]. ISSN 1314-9911. Достъпен на: https://www.conference-burgas.com/volumes_it.html [PASARELSKI, Rosen i Teodora PASARELSKA. Izsledvane na fazite za mrezhovo planirane na mobilni kletachni mrezhi. *Industrialni tehnologii* [onlayn]. 2022, (9), s. 122-130 [pregledan 26.03.2023]. ISSN 1314-9911. Dostapen na: https://www.conference-burgas.com/volumes_it.html]

[9] КЪДРЕВ, Васил и Росен ПАСАРЕЛСКИ. Приложение на подходи на изкуствен интелект и машинно обучение в киберсигурността. *Годишник Телекомуникации* [онлайн]. 2021, (8), с. 53-64 [прегледан 26.03.2025]. eISSN 2534-854X. Достъпен на: https://doi.org/10.33919/YTelecomm.21.8.6 [KADREV, Vasil i Rosen PASARELSKI. Prilozhenie na podhodi na izkustven intelekt i mashinno obuchenie v kibersigurnostta. *Godishnik Telekomunikatsii* [onlayn]. 2021, (8), s. 53-64 [pregledan 26.03.2025]. eISSN 2534-854X. Dostapen na: https://doi.org/10.33919/YTelecomm.21.8.6]

[10] SADINOV, Stanimir, Panagiotis KOGIAS, Krasen ANGELOV, Michail MALAMATOUDIS, and Anatoliy ALEKSANDROV. The Impact of Channel Correlation on the System Performance and Quality of Service in 5G Networks. In: *7th International Conference on Energy Efficiency and Agricultural Engineering, (EE & AE): Proceedings* [online]. 2020, pp. 1-4 [viewed 25.03.2025]. eISBN 978-1-7281-0362-4. IEEE Xplore. Available from: 10.1109/EEAE49144.2020.9278982

[11] PASARELSKA, Teodora, Plamen TZVETKOV, and Rosen PASARELSKI. Research approach and spectrum allocation analysis for 5G network development. *33rd International Scientific Symposium „Metrology and Metrology Assurance 2023“: Proceedings*. Technical University of Sofia Publishing House, 2023, pp. 15-20. ISSN 2603-3194.

[12] ПАСАРЕЛСКА, Теодора и Росен ПАСАРЕЛСКИ. Изследване на фемтоклетъчни технологии за мобилни клетъчни мрежи. *Годишник Телекомуникации* [онлайн]. 2022, (9), с. 69-77 [прегледан 25.03.2025]. eISSN 2534-854X. Достъпен на: https://doi.org/10.33919/YTelecomm.22.9.7 [PASARELSKA, Teodora i Rosen PASARELSKI. Izsledvane na femtokletachni tehnologii za mobilni kletachni mrezhi. Godishnik Telekomunikatsii [onlayn]. 2022, (9), s. 69-77 [pregledan 25.03.2025]. eISSN 2534-854X. Dostapen na: https://doi.org/10.33919/YTelecomm.22.9.7]

[13] DE FREITAS, Julian and Elie OFEK. How AI Can Power Brand Management. *Harvard Business Review* [online]. [viewed 26.03.2025]. Available from: https://hbr.org/2024/09/how-ai-can-power-brand-management

Information about the authors:
Chief Assist. Dr. Alena Dobreva, NBU Department of Telecommunications, alenadobreva@abv.bg

Date of receipt of the manuscript: 15.05.2024
Date of adoption for publication: 30.09.2024