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РОЗВИТОК СИСТЕМИ СТРАХУВАННЯ ІНТЕЛЕКТУАЛЬНОЇ ВЛАСНОСТІ В СФЕРІ ТРАНСПОРТНИХ ТЕХНОЛОГІЙ: ПЕРСПЕКТИВИ І ВИКЛИКИ

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Анотація. Стаття присвячена дослідженню стратегічної важливості страхування інтелектуальної власності в технологічному цифровому ландшафті, що швидко змінюється та розвивається. Підкреслюючи новизну застосування страхування прав ІВ як для українських підприємств, так і для самих страхових компаній, автори розглядають передумови виникнення та розвитку страхування прав ІВ в Україні. Дослідження проводилася на прикладі вивчення та аналізу досвіду функціонування транспортних та логістичних компаній. В роботі підкреслено критичну роль охорони та захисту прав інтелектуальної власності в транспортних технологіях для забезпечення конкурентоспроможності компаній та їх інноваційного розвитку. Проаналізовано, в яких випадках транспортним підприємствам варто застосовувати цей інструмент. Наголошуються, що в умовах воєнних дій компанії можуть нести суттєві збитки через руйнування, викрадення або кібер-атаки на їх інтелектуальні активи, тому з метою управління ризиками та зменшення розміру потенційних збитків пропонується страхувати свої інтелектуальні активи. Автори досліджують різні сценарії використання власниками транспортних компаній цього сучасного інструменту в

бізнесі. Представляє інтерес аналіз патентного світового ландшафту сфери «транспорт». Зростання попиту на послуги страхування інтелектуальної власності в Україні відображає усвідомлення власниками бізнесу та топ-менеджерами важливості захисту інновацій та пов'язаних з ними ризиків. У статті висвітлюються тенденції та сучасні тренди у створенні нових страхових продуктів та розширенні покриття збитків, пов'язаних із втратою прав ІВ, що свідчить про постійну адаптацію страхових компаній до змін технологічного середовища. В дослідженні визначено проблеми, з якими стикаються страхові компанії на ринку інтелектуальної власності, наголошуючи на необхідності подальших наукових розробок для вирішення цих проблем і забезпечення ефективного захисту та розвитку інновацій у глобальному масштабі.

Ключові слова: права інтелектуальної власності, транспортні технології, захист прав інтелектуальної власності, страхування інтелектуальної власності, інноваційний розвиток.

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**DEVELOPMENT OF THE INTELLECTUAL PROPERTY INSURANCE SYSTEM IN
TRANSPORT TECHNOLOGIES: PERSPECTIVES AND CHALLENGES**

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Abstract. The article explores the strategic importance of intellectual property (IP) insurance within the rapidly evolving technological and digital landscape. By emphasizing the novelty of applying IP rights insurance for Ukrainian enterprises and the insurance companies themselves, the authors examine the prerequisites for the emergence and development of IP

rights insurance in Ukraine. The research was conducted through a detailed study and analysis of the operational experience of transport and logistics companies. The paper underscores the critical role of IP protection in transport technologies, which is essential for ensuring the competitiveness and innovative development of companies. The authors analyze the specific situations in which transport enterprises should implement IP insurance. They highlight that, especially during wartime, companies face substantial risks of loss due to destruction, theft, or cyber-attacks on their intellectual assets. To manage these risks and mitigate potential losses, insuring intellectual assets is recommended. The authors explore various scenarios where transport company owners can utilize this contemporary business tool effectively.

Additionally, the article presents an analysis of the global patent landscape within the transport sector, which provides valuable insights into current trends and developments. The growing demand for IP insurance services in Ukraine reflects the increasing awareness among business owners and top managers regarding the importance of protecting innovations and managing associated risks. The article also discusses trends and modern tendencies in the creation of new insurance products and the expansion of coverage for losses related to the infringement or loss of IP rights. This demonstrates the continuous adaptation of insurance companies to the evolving technological environment. Furthermore, the study identifies the challenges faced by insurance companies in the IP market, emphasizing the necessity for ongoing research to address these challenges. Such research is crucial for ensuring effective protection and fostering the development of innovations on a global scale. The authors conclude that the strategic implementation of IP insurance can significantly contribute to the sustainability and resilience of companies, particularly in high-risk environments. This, in turn, supports broader economic stability and growth by safeguarding the intangible assets that drive innovation and competitive advantage. The need for further scientific exploration and development of specialized insurance products tailored to the unique risks associated with IP underscores the importance of this field in the contemporary business landscape.

Key words: intellectual property rights, transport technologies, protection of intellectual property rights, intellectual property insurance, innovative development.

Introduction. In the modern innovative world, where rapid technological advancements define economic and social progress, the management and protection of intellectual property become a strategic component to support innovative development at both the national and individual enterprise levels. An essential aspect of intellectual property rights protection is the development of intellectual property insurance aimed at safeguarding the results of intellectual activity, creative achievements, and innovations. This article discusses the prospects for the development of the intellectual property insurance system and the challenges faced by business entities in transport technologies.

In developed countries, the share of intellectual capital in the business asset structure varies from 65% to 90%. Each year, the volumes of international trade in intellectual property rights increase. However, businesses and the state incur significant losses from the unauthorized use of intellectual property rights. Therefore, the protection and defense of intellectual property rights are crucial, as violations result in the loss of expected income and profits. Due to increased competition and intensified industrial espionage, companies now exert much more effort to protect their intellectual assets. The main reason is the awareness of all risks associated with potential infringements of these rights. One of the risk management mechanisms in the field of intellectual property rights is insurance, which has led to an increased demand for intellectual property insurance services in the intellectual property market.

The issue of researching the mechanisms of intellectual property commercialization is addressed in scientific works by renowned economists such as V.D. Bazilevich, O.B. Butnik-Siversky, V.V. Virchenko, O.P. Orlyuk, V.B. Strutynsky, and others. However, insufficient attention is paid to the study of intellectual property insurance as a service in the contemporary development of Ukraine's economy.

Task statement. The purpose of the research is to analyze the essence and peculiarities of the intellectual property insurance process in the field of transport technologies, identify current trends in organizing this process taking into account the requirements of domestic and international legislation, and assess the prospects for the development of the intellectual property insurance system in Ukraine. The main tasks of the research are: to determine the prerequisites for the emergence of the need to insure intellectual property rights in the field of transport technologies; to analyze the global patent landscape in the field of transportation, in particular, under the category 'Special Purpose Aircraft'; to investigate which services insurance companies can provide to transportation companies to reduce risks and losses in case of theft of their intellectual products or unfair use of innovative developments in the field of transport technologies; based on international experience, to develop recommendations for the development and improvement of insurance products for the protection of intellectual property rights in Ukraine.

The methodological basis of the research is the dialectical method, which helped to reveal the economic essence of insuring intellectual property rights, disclosed the main conditions of the intellectual property insurance process in the field of transport technologies. Systematic and synergistic approaches allowed to study the global patent landscape of the transportation sector. Thanks to the analysis of the insurance of intellectual property rights in various activities of transport and logistics enterprises, segmentation of insurance products for the protection of intellectual rights to transport technologies and innovative developments was carried out; the prerequisites influencing the development of insurance of intellectual property rights in the field of transport technologies were identified. The clustering method allowed to group the patent system of the transport sector by objects of intellectual property used in the market.

Results. Intellectual property insurance is a relatively new type of activity for the Ukrainian insurance business. Intellectual property insurance is a complex of economic relations arising from the protection of the proprietary interests of intellectual property rights holders in the event of insured events stipulated by the contract. The main prerequisites for the emergence of intellectual property insurance are presented in Figure 1.

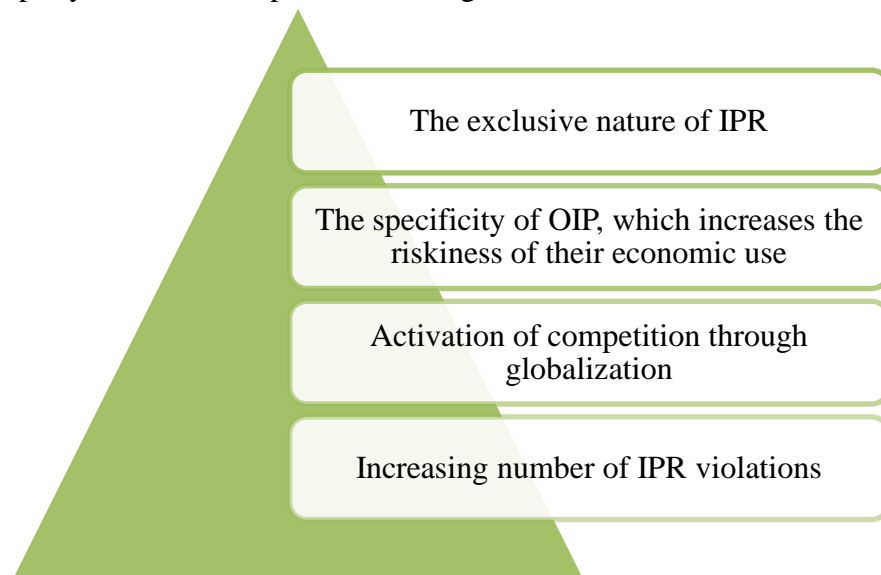


Рис. 1. Передумови виникнення страхування інтелектуальної власності
Fig.1. Prerequisites for the Emergence of Intellectual Property Insurance

In modern conditions, insurance companies have actively started creating and offering new insurance products for intellectual property rights owners aimed at compensating for losses from potential infringements of intellectual property rights. Insurance companies study the market and

adapt their products to provide enterprises with the most effective protection. At the current stage of the intellectual property market development, insurance covers such cases as:

- violation of the rights of the creator and owner of intellectual property objects;
- non-receipt of remuneration for the use of intellectual property objects;
- non-compliance with confidentiality agreements, licensing agreements, and agreements for the purchase and sale of intellectual property objects;
- the use of intellectual property objects as collateral for loans.

Insurance companies address the assessment of losses incurred by intellectual capital by equating it to a commercial activity object. A positive aspect is the increasing competition in the intellectual property insurance market, which encourages insurance companies to improve their products and expand insurance coverage, attempting to attract the attention of new clients. Additionally, there is ongoing development of new methods for assessing risks related to intellectual property infringement.

We agree with experts, particularly T. Vakhonieva, that the development of the intellectual property insurance system plays a key role in fostering innovative development in various industries [2]. Intellectual property is a valuable asset for businesses, encompassing patents, copyrights, trademarks. Ensuring adequate protection of these rights in the digital economy is a crucial factor for decision-making by companies investing in innovative projects. Additionally, the presence of insurance coverage can enhance the attractiveness of funding for innovative enterprises from investors. Investors will be more inclined to allocate funds for research and development, understanding that there is insurance protection in case of risks related to the commercialization of intellectual property rights.

However, with the increasing demand for intellectual property services on the market and the emergence of new insurance products, new challenges arise. Firstly, this includes the issue of evaluating intellectual property rights, as it affects the determination of insurance premiums. Accurate determination of the value of intellectual property rights is important for defining the optimal amount of insurance coverage and compensation payment terms. In this regard, determining the real risk of infringement or loss of intellectual property rights is crucial and serves as the foundational prerequisite for intellectual property insurance. Companies must conduct a comprehensive analysis of their intellectual property rights, taking into account the specifics of the industry, the level of competition, and risks, considering previous cases of infringements [3: p.122-128]. Considering a wide range of threats and risks, including not only the possibility of legal actions but also the unauthorized use of technologies or confidential information, is a crucial step in risk assessment.

Providing insurance coverage and determining the policy's value requires a high level of competence and expertise from the insurance professional in both intellectual property and insurance. Companies need to study market trends, analyze precedent cases, and collaborate with specialized consultants. While existing risk assessment standards can serve as a foundation, a personalized approach to the specific situation of the enterprise always remains critical.

Additionally, one of the significant challenges in the context of intellectual property insurance is moral risks, such as the loss of an employee's internal motivation to maintain a high level of innovation. When intellectual property rights are insured against intellectual risks, there is a danger of the company losing focus on preserving and developing intellectual property rights. Attention to maintaining high management and protection standards may diminish as the company feels that the insurance policy already provides the necessary protection for intellectual property. In the long term, this may lead to a loss of innovative potential and a competitive advantage in the market. Simultaneously, simplified intellectual property management affects various aspects of entrepreneurial activity. For example, companies may reduce investments in research and development, postpone the release of new products, or even lose necessary market differentiation due to insufficient attention to intellectual property management. This aspect requires attention and careful analysis, as negligent management of intellectual property rights can negatively impact the innovative development of the entire enterprise.

World trends in the field of transport indicate the activity of patenting in the field of transport. The highest growth rates of patent activity were recorded in air transport, primarily in relation to special-purpose aircraft and helicopters, and cargo transportation, packaging, primarily in relation to conveyors, elevators, containers, packaging devices [4: p.16-18].

Figure 2 represents landscape map of the transport sector. It visualizes the results of a patent search in relation to significant trends and interdependencies in the array of selected topics. In patent mapping, the technical solutions described in the documentation are displayed on the map in the form of isolated "islands" that show separate areas of research activity, the most popular of which form large "continents". These islands and continents can be white (the greatest saturation of patents and a small number of new patent registrations – old area or area of slowdown), brown (slightly less saturation, new registration is more active, but has a downward trend – deceleration area), or green (active registration of new patents – area of growth). The blue color marks new thematic areas, which may become new promising areas and areas of growth, or immediately move into the category of "area of slowdown" or disappear from the field of view (their names have not yet been determined).



Рис. 2. Патентний світовий ландшафт сфери «транспорт» [4]

Fig.2. Patent World Landscape of the Field of "Transport" [4]

The landscape map of the transport sector is mainly colored in brown and white colors, but there are still unnamed promising ones from the point of view of further development of the area (blue color). Among the fast-growing groups (the pace is more than 10,000%), the rubrics "Special purpose aircraft" and "Helicopters", "Devices for manipulating products or materials structurally related to conveyors", "Mechanical conveyors" and "Hand trolleys" are mainly located on the blue field.

Areas of growth also include the creation and implementation of new generation information and navigation systems, improvement of carriage and transportation process technologies, air transport, self-propelled vehicles, etc.

Areas of deceleration include: battery, gas, motor, electric power, lock, clutch, combustion engine, high-speed engine, turbine, heat exchanger, air conditioner, information unit, conveyor belt, and pipeline transport. The fewest patents fell on the blue areas from the headings "Electrical equipment of vehicles with electric traction", "Methods and devices for manipulating thin flexible products or materials".

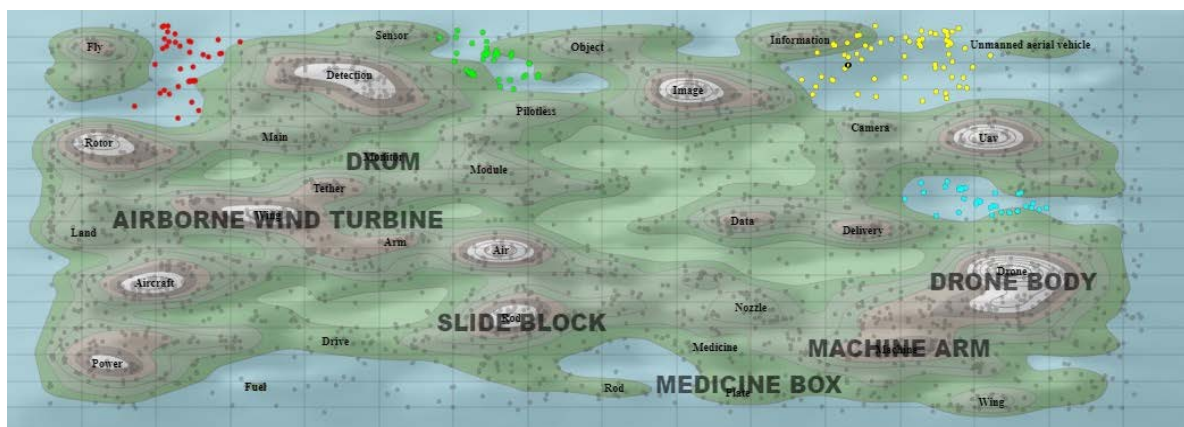


Рис. 3. Розміщення на ландшафтній карті патентів за рубрикою «Літальні апарати спеціального призначення» (червоні крапки – дрони, гелікоптери; зелені - системи, методи управління безпілотними, віддаленими транспортними засобами, ракетами; жовті – системи контролю, комп’ютерна навігація польоту, система стабілізації безпілотних літальних апаратів; блакитні - методи та системи забезпечення комп’ютеризованої доставки безпілотних літальних апаратів, картографія, боротьба з москитами) [4]

Fig. 3. Placement on the Landscape Map of patents under the Rubric "Special Purpose Aircraft" (red dots - drones, helicopters; green dots - systems, methods of controlling unmanned vehicles, remote vehicles, missiles; yellow dots - control systems, computer flight navigation, stabilization system of unmanned aerial vehicles; blue dots - methods and systems for providing computerized delivery of unmanned aircraft aircraft, cartography, mosquito control) [4]

Fig. 3 characterizes the field of special-purpose aircraft, the blue perspective areas correspond to fuel, unmanned aerial vehicles, drones, their control and stabilization systems, and the use of unmanned aerial vehicles for various purposes.

Other fast-growing categories fell into the brown, green, and blue areas, depending on the direction of each technology.

Differences in legal norms and protection of intellectual property rights among different countries pose a challenge when implementing insurance policies covering multinational risks. This problem not only complicates the creation of universal insurance products but can also affect the efficiency and implementation of such policies in different parts of the world and different countries. Significantly, the diversity of legal standards regarding intellectual property in different jurisdictions is a substantial issue. Countries have variations in terms and conditions for granting patents, copyrights, trademarks, and other forms of intellectual property. This complicates the development of a unified standard for insurance policies. An additional challenge is the reforms and changes in legislation regarding the regulation of intellectual property rights in different regions. Political, economic, and cultural changes can lead to reforms in intellectual property law, requiring constant adaptation of insurance products. To overcome these challenges, insurance companies operating in the global intellectual property market must actively collaborate with law enforcement agencies and government institutions in different countries to understand their specificities and implement effective security and insurance measures [5: p.12-27].

Furthermore, insurance companies must consider rapid changes in the transport technologies and shifts in the intellectual property market. One of the main problems is the speed at which new technologies emerge and evolve. For example, the development of artificial intelligence, blockchain technologies, quantum computing, and other innovative directions significantly alters approaches to intellectual property management. [6,7,8]. Insurance companies must be prepared to respond promptly to these changes, considering their potential impact on risks and the cost of intellectual property. Flexibility in creating insurance products is crucial for adapting to new forms of intellectual property. Insurance policies should be designed

to cover a wide range of technologies and innovations, even those that have not yet become widespread. For an insurance company, it is essential to regularly review and update policy terms, as rapid changes in the technological environment may require adjustments in insurance strategies.

Conclusions. Therefore, in a world of rapid technological changes and high innovation rates, the role of insurance of intellectual property in transport assumes strategic significance. The protection of intellectual property becomes crucial for supporting the innovative development of companies. The increasing demand for intellectual property insurance services indicates the awareness of business owners and top managers regarding the importance of innovation protection and responsibility for risks. Trends in creating new insurance products and expanding coverage demonstrate the continuous adaptation of insurance companies to the rapidly changing and transforming technological landscape. The research has identified a series of challenges faced by insurance companies operating in the intellectual property market, requiring further scientific developments to find solutions that ensure effective protection and development of innovations worldwide.

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