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**UNIA EUROPEJSKA**  
EUROPEJSKI  
FUNDUSZ SPOŁECZNY



# ZAGADNIENIA INNOWACYJNOŚCI FUNKCJONOWANIA SYSTEMU BADANIA + ROZWÓJ W NAUCE

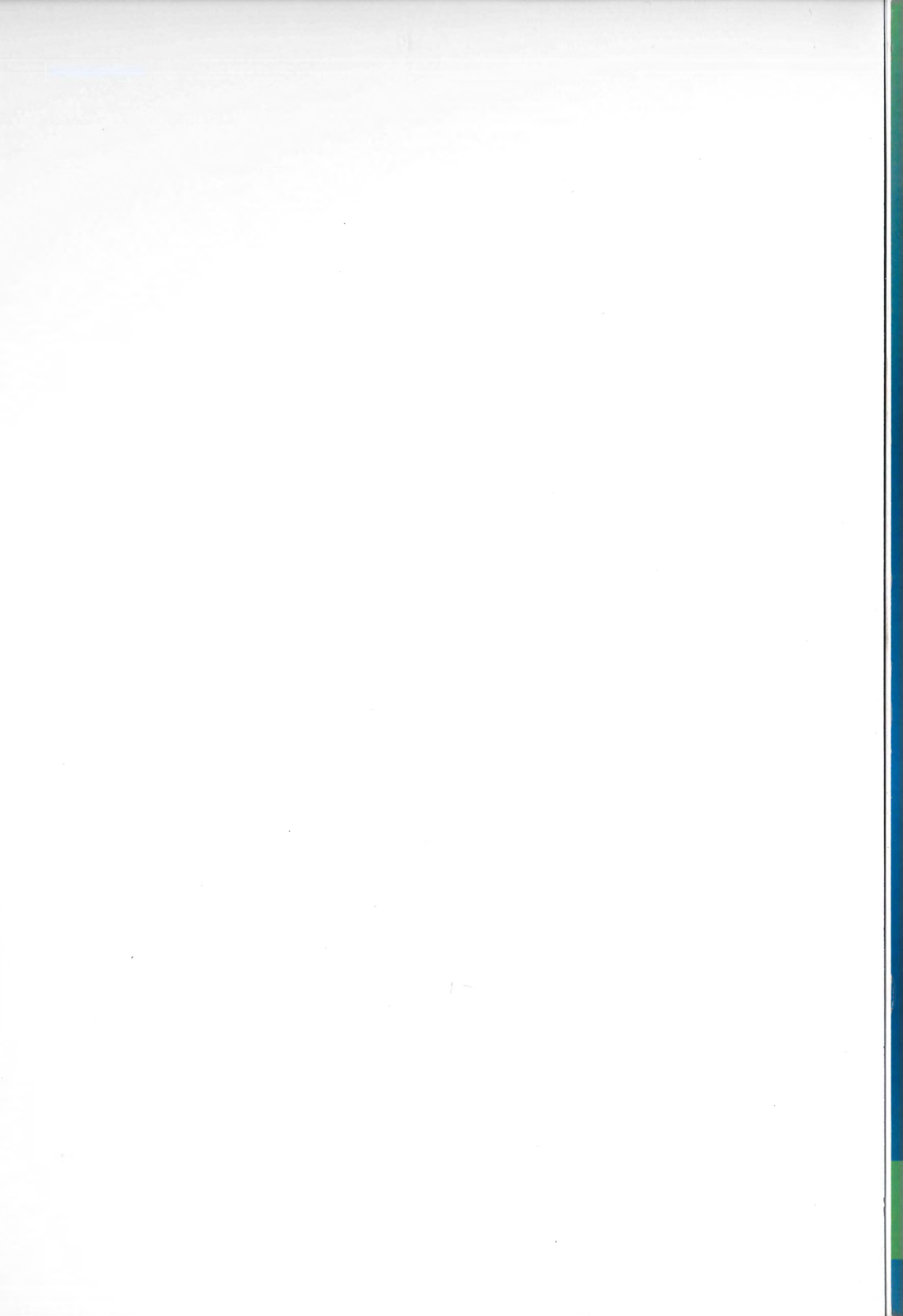
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**ANTONI MIKLEWSKI**

**Tom I**



Projekt: „INNOWACYJNE ZARZĄDZANIE SYSTEMEM B+R W JEDNOSTKACH NAUKOWYCH”  
jest współfinansowany ze środków Unii Europejskiej w ramach Europejskiego Funduszu Społecznego  
4.2. "Rozwój kwalifikacji kadr systemu B+R i wzrost świadomości roli nauki w rozwoju gospodarczym"

Wyższa Szkoła Informatyki Stosowanej i Zarządzania, 01-447 Warszawa, ul. Newelska 6, tel.: 22 3486523





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Książka współfinansowana ze środków Unii Europejskiej w ramach Europejskiego Funduszu Społecznego.

Projekt Programu Operacyjnego Kapitał Ludzki.

„Innowacyjne zarządzanie systemem B+R w jednostkach naukowych”

Priorytet IV Szkolnictwo Wyższe i Nauka.

Działanie 4.2. Rozwój kwalifikacji kadr systemu B+R i wzrost świadomości roli nauki w rozwoju gospodarczym.

Podnoszenie umiejętności pracowników systemu B+R w zakresie zarządzania badaniami naukowymi i pracami rozwojowymi oraz komercjalizacji rezultatów prac badawczych – w tym również w zakresie ochrony własności intelektualnej i przemysłowej.

Projekt POKL.04.02.00-00-059/08

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## **Artykuły gości zagranicznych**

# Advantages of the Provisional Patent Application

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## Introduction

Provisional Patent Application (PPA) was first introduced in the United States almost 25 years ago. Starting in 1995, inventors were able to file provisional patent applications. This informal, however still valid, type of patent application establishes a priority filing date and provides inventors one additional year to prepare and file a formal utility patent application.

Provisional patent applications were initiated in the United States to place domestic inventors on an equal position with foreign inventors. Before the U.S. provisional applications were introduced, foreign (Paris Convention signatory) applicants could claim the benefit of a foreign priority date, yet have their U.S. patent term measured from a **later** U.S. filing date. Foreign inventors were thus granted a term of patent protection that practically could last for 21 years. U.S. applicants, on the other hand, were disadvantaged: their patent term was measured from their **initial** U.S. filing date and limited to 20 years. Effective June 8, 1995, domestic applicants were given the opportunity to file provisional applications, thereby establishing U.S. priority dates that would *not* count against any resulting U.S. patent term. Allowing for U.S. patent protection that lasts 21 years from an initial filing date, this change in policy established parity between U.S. and foreign inventors.

As a simplified application, a provisional patent application does not require all the formal elements of a utility patent application. For example, provisional applications *are not* required to include formal claims, a declaration of inventorship, or drawings, all of which are required for utility applications. Instead, all that is required is a written description of an invention (which may be a poster or a manuscript) and a coversheet (simple application form) that, among other things, identifies the document as a provisional patent application.

Unlike utility patent applications, provisional patent applications are not substantively examined by a U.S. Patent and Trademark Office (PTO) examiner. They are just reviewed by the application division of the PTO to

ensure that the minimum filing requirements have been met. As a result, not only the application fee is lower (120 USD) but also the legal cost of *preparing* provisional applications is relatively low compared to utility applications. Since the PTO does not have to perform a prior art search or analyze provisional patent applications, the cost of *filing* these applications is quite inexpensive when compared to utility applications. As mentioned above these applications may be filed on-line, which further simplifies the process of application for the Polish scientists.

Aside from costs, several other factors should be considered when determining whether or not to file a provisional patent application. A few of their advantages and limitations associated with provisional applications are outlined below.

- Priority date

Because they have fewer formal requirements, provisional applications are simpler and generally less expensive to prepare and file. A provisional application may be in fact filed by a scientist himself. Therefore they are good tools to quickly and inexpensively obtain an official American filing date for an invention immediately after the invention has been conceived. An official filing date provides proof that an invention was conceived at least as early as its filing date. One needs to remember that American law gives priority to the one, who invented first rather than the one who filed first. It is important then, that filing follows the invention quite quickly.

- Additional year of patent protection

An issued patent, by law, gives an inventor the right to exclude others from using, selling, and/or offering to sell the patented invention for twenty years. This *twenty-year* patent term is calculated from the filing date of the inventor's *utility* patent application. The one-year time period between the filing of a provisional application and the filing of a utility application does *not* count against the twenty-year patent term. As a result then, filing a provisional application provides up to an extra year of patent protection, effectively extending the patent term to actually 21 years.

- Useful one year of extra time

Once a provisional application is filed, an inventor has up to one full year to file a formal utility application. This 12 month delay gives an inventor a chance to further develop his or her invention, evaluate the invention's commercial potential, and seek financial support for further developing and/or patenting the invention. In addition, that time enables an inventor to think about and prepare to the costs associated with preparing and filing a real patent application. The inventor may make sure that the invention is commercially viable, and/or until he or she is able to secure

financial support for the invention. There is time to perform market study and commercial partner search. If the inventor finds out during this period that the invention does not have a chance for a commercial success, he or she can avoid the substantially higher costs of real filing and simply after 12 months of provisional patent protection not to file a non-provisional one. The invention then loses the priority date, but can still be filed with a new one (if remains novel).

- Time for extra experiments

In American patent law terminology there is a term of "reduction to practice". An invention is considered to be *reduced to practice* when an inventor converts the inventive idea into something that can be reproduced by others. There must be some processed described then, or methods of achieving the subject of invention, or simply tests that may be reproduced by others. Filing a provisional application has the effect of *constructively* reducing an invention to practice, since the invention is adequately described so as to enable a person skilled in the art to reproduce it. By filing a provisional application, a legal assumption is created that the invention was reduced to practice, although constructively, *at least as early* as the filing date of the provisional application. This assumption may be very advantageous to an inventor, particularly if another inventor claims to have invented the same invention first.

In the United States, an inventor is entitled to a patent if he or she is the *first to invent* a particular invention. If a conflict arises over who actually invented the invention first, establishing a reduction to practice date may be meaningful to determining which inventor is entitled to the patent. In such disputes, the inventor who establishes the earlier reduction to practice date (for example, by filing the earlier provisional application) will be presumed to be the first to invent. The inventor who still claims his/her priority may only overcome this presumption by providing evidence that establishes that he or she is entitled to an earlier reduction to practice date. It is also very important in such case to maintain proper and date stamped lab notes, which in case of dispute may prove the day of the invention conception.

- No requirement to submit in English

If Polish inventors care about time and money and cannot provide English version of their invention documentation they can submit a US provisional application in Polish. They can simply file a copy of Polish patent filing and reserve a date as well as secure protection in the United States. Then within 12 months if they decide to file a non-provisional patent application they can provide English version. All after making sure filing an American patent is feasible. Also pictures and drawings are not required at the time of



provisional filing. Claims do not have to be submitted either, so drafting claims, which in many cases is costly can be postponed to the time of non-provisional application.

- Reservation of non-US priority date

Most countries outside of the U.S. (including Poland) award patents on a first to file basis. That is, an inventor will be entitled to a patent if he or she is the *first to file* an application (as opposed to “first to invent” as it is in Poland) for a particular invention, regardless of whether another inventor was the first to actually reduce the invention to practice. As a result, many foreign inventors (and U.S. inventors seeking international patent protection) seek to file patent applications outside US as soon as possible in order to preserve their foreign priority date. It should be noted that under U.S. law, establishing a foreign priority date does *not* necessarily guarantee a specified period of time for filing in the United States. Still, as members of the Paris Convention, patent applicants in Convention member-nations have up to 12 months to apply for patent protection in the United States in order to keep an international priority date.

- Avoiding filing bars

According to American law, if an invention is published anywhere in the world more than one year before a U.S. patent application for that invention is filed, the publication will act as a statutory bar to obtaining a U.S. patent. Another words, if an invention is in public domain anywhere in the world for more than 12 months a patent application for this particular invention cannot be filed anymore in the United States. This statutory bar is not limited to publications provided by an invention’s first inventor. If, for example, a second inventor independently conceives and publishes the invention more than one year before the first inventor files in the United States, the second inventor’s publication will bar the first inventor from ever obtaining a U.S. patent on that invention.

Here is an example: suppose inventor X, a Polish inventor, invents a novel instrument on January 1, 2005, and accordingly files a Polish patent application describing the instrument in April 2005. Independently, a French inventor, inventor Y, conceives of the same instrument and publishes it on March 1, 2005 in a French publication. Under U.S. law, the Polish inventor may rely on his or her earlier invention date to predate the French publication date. However, if the Polish inventor waits until after March 1, 2006 to file a U.S. application, the French publication will be deemed prior art under American law and will bar the Polish inventor from obtaining a U.S. patent.

To avoid this situation the Polish inventor could file a U.S. utility patent application concurrently with, or even after, filing his or her Polish

application. According to the Paris Convention, the Polish inventor would still have a period of 12 months after filing the Polish patent application to file a U.S. patent application. However, the utility patent application option could be quite costly, particularly since the Polish application would have to be translated into English and include U.S.-style claims, drawings, and other formalities.

As an alternative, if the Polish inventor was not prepared to such an expense, or if he or she preferred to further develop the instrument before committing to the high costs of filing in the United States, he or she could simply file a U.S. provisional application. Since provisional applications are not required to be written in English or to include claims, drawings, or other formalities, the Polish inventor could simply file a copy of his or her Polish application *in Polish* as a U.S. provisional application. In this manner, the Polish inventor could preserve a U.S. filing date and avoid a § 102(b) statutory bar, all at a very reasonable cost.

- Reservation of novelty

Most countries outside of the U.S. (including Poland) require *absolute novelty*, which means that, as a requirement to receiving patent protection, a patent application must be filed before *any* public disclosure of that invention. In these *absolute novelty* countries, *any* public disclosure of an invention prior to filing an application for patent acts as an obstacle to patentability. Therefore, prior art search is being conducted. As such, it is very important for inventors looking for foreign patent protection to preserve absolute novelty worldwide. Provisional applications may provide an easy, cost effective way to preserve absolute novelty; example: if an inventor is planning to publicly disclose an invention as part of a presentation, the inventor can simply preserve absolute novelty by filing a copy of all of the presentation and handout materials as a provisional application. In this manner, the inventor could both preserve a U.S. filing date and preserve absolute novelty in Paris Convention nations, or in nations that have acceded to the WTO (as the TRIPS Agreement [Trade-Related Aspects of Intellectual Property Rights] incorporates the Paris Convention). This includes the majority of the world's nations.

- "Patent pending" term

Once a provisional application is filed, an inventor is permitted to use the "Patent Pending" phrase. It is very important to industry that products they manufacture and sell can be equipped with a note "Patent pending". Use of this phrase indicates to the public that the marked product or products is or are believed to be inventive and that any and all available patent rights in the invention are being pursued. Application of the phrase also enables the immediate commercial promotion of an invention with less risk of having the

invention copied and/or stolen. In addition, a "Patent Pending" notice gives official notice to competitors, which may be particularly helpful in case of intellectual property theft or infringement once the invention is fully protected.

#### Disadvantages of provisional patent application

In addition to many advantages described above, there are several limitations and disadvantages associated with filing provisional applications.

- Additional cost

Although minimal, but still provisional patent application adds a cost. Provisional applications are typically less expensive to prepare and file than utility patent applications, there are costs associated with them, which can be avoided when filing non-provisional directly. Filing a provisional application first and then filing a corresponding utility application will *always* increase the overall cost of obtaining a patent. This is especially true when multiple provisional applications are filed to cover various aspects of an invention. Provisional patent applications, however, minimize the risk of cost growth. Once decided that the invention is not desired by market, or is not feasible one can always let the provisional go and bear only 120USD of cost.

- Only 12 months for decision

Once a provisional application is filed, an inventor *must* file a utility application claiming priority to the provisional application within one year. It means **before** the twelve-month-period ends. Failure to file a nonprovisional application within the one-year period will result in the provisional application automatically being canceled, which may prevent the inventor from ever patenting the invention.

- Invention disclosure

Although provisional applications do not have all of the formal, they still must meet the disclosure and enablement requirements of utility patent applications. The invention, simply speaking, needs to be described. That is, provisional applications must include a complete, adequate description of an invention and its best mode, as well as, all drawings necessary for understanding and/or recreating the described invention. If a provisional application will not be adequately continued in the corresponding non-provisional application, then only those aspects that are adequately supported in the provisional application will be entitled to the provisional application's priority date. All other aspects of the utility application will have a priority date later than the originally filed, corresponding to the filing date of the utility application. In this regard, preparing a provisional application

to fully support a later filed real application may be as time consuming and as costly as preparing a utility application.

- Trade secrets potentially exposed to risk

Another concern related to provisional applications is the potential loss of trade secrets. As described above, although provisional applications do not have all of the formal requirements of utility patent applications, they must nonetheless adequately describe inventions. In order to satisfy these requirements, inventors may disclose too much information, including information they might later wish to keep as a trade secret. Once a provisional application is filed, *all* information disclosed will be incorporated into a later filed corresponding real application. When the this application becomes a patent, the entire provisional application will become public, and any potential trade secrets it contains may be lost.

- False sense of security

Provisional patent application may give an inventor a false sense of security. In general a patent application does provide some protections, it does *not* provide, however, any enforceable patent rights. Furthermore, provisional applications *never* mature into patents. They need to be converted into non-provisional ones and then they mature to patents. If an inventor falsely believes he or she is adequately protected by a provisional application, he or she may delay filing a utility application. And if an inventor fails to file a utility application during the one-year period, the provisional application will automatically be abandoned thereby preventing the inventor from ever patenting the invention.

It is important to note that both provisional and non-provisional patent applications start the time count down for filing applications under the Patent Cooperation Treaty (PCT) and the Paris Convention. Since international patent applications *must* be filed within one year of a U.S. filing, the high costs of international filing will be incurred within one year of filing a provisional application. So PCT application can be filed right after provisional one (within 12 months of filing).

Provisional applications may *not* be amended. If certain aspects of an invention are developed or changed after a provisional application has been filed, an inventor will be required to file another application to reflect these developments or changes.

Similarly, if an inventor accidentally discloses secret information in a provisional application, the inventor will be precluded from going back and amending the provisional application to remove the secret information. Since provisional patent applications (during their life – before converting to non-provisional) are never published, the inventor can abandon the

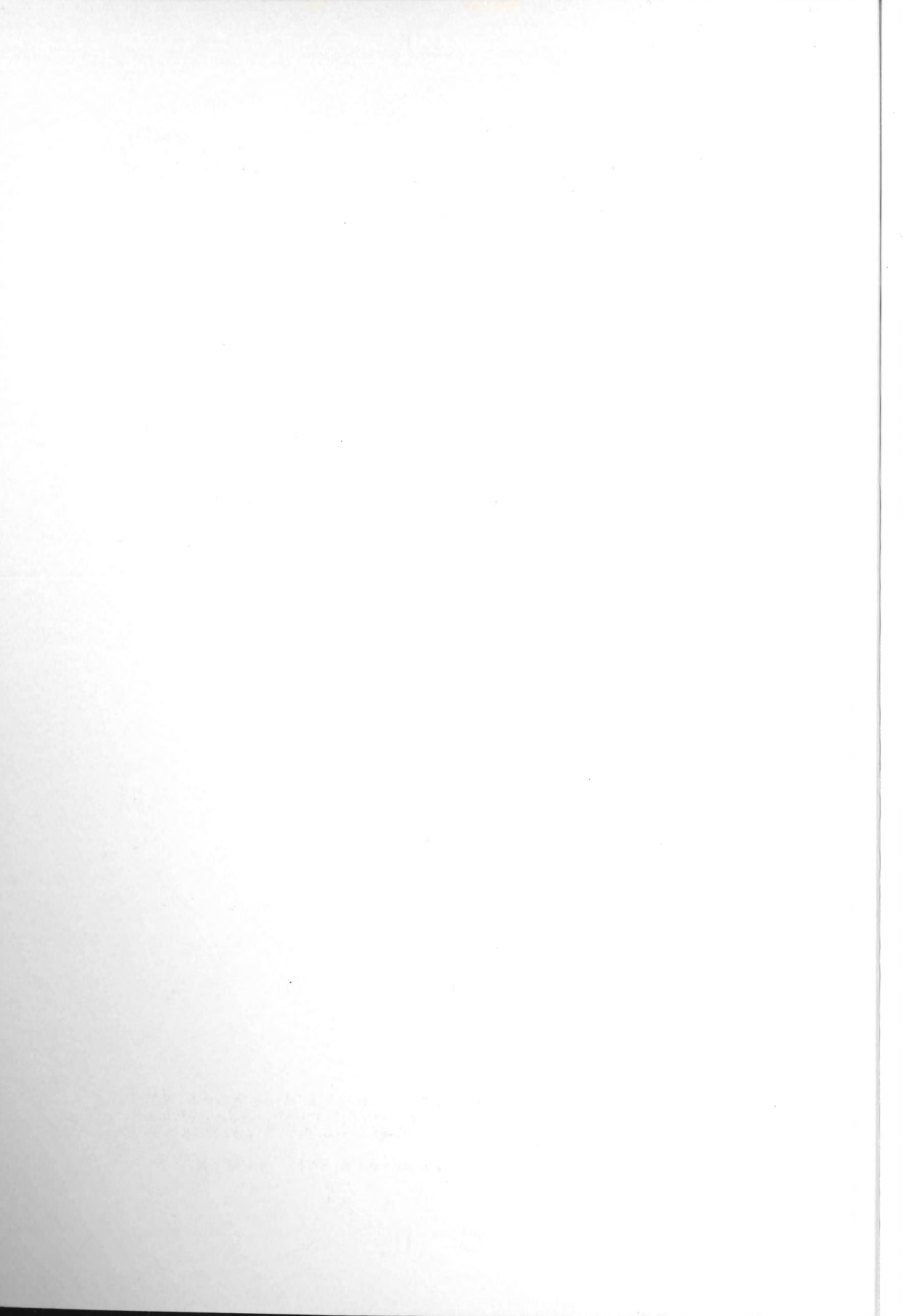
provisional application and possibly file another provisional application that excludes the secret materials. This would, however, reset the priority date.

## Summary

Provisional applications provide numerous advantages for both domestic and foreign inventors, which is why they are widely used in the United States and are often integral to successful patent strategies. There are also, however, certain risks and limitations associated with provisional applications, so filing provisional applications may not always be desirable or appropriate. Accordingly, before deciding whether to file a provisional application, care must be taken to properly assess:

- the nature of the invention(s),
- the particular needs of the inventor (or company),
- the inventor's (or company's) overall patent strategy.

This type of patent application is not well known to Polish scientists. It is very important to learn that tool and share the knowledge with Polish academic institutions, which in many cases have breakthrough inventions and no financial support to file protection in the United States. American market in many cases is rather desired market, so the provisional patent application is a great tool to test it and not to bear a huge financial risk.



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**Działanie 4.2:** Rozwój kwalifikacji kadr systemu B+R i wzrost świadomości gospodarczym. Podniesienie umiejętności pracowników systemu B+R w zakresie naukowymi i pracami rozwojowymi oraz komercjalizacji rezultatów prac badawczych w zakresie ochrony własności intelektualnej i przemysłowej.

Projekt POKL.04.02.00-00-059/08:

Innowacyjne zarządzanie systemem B+R w jednostkach naukowych.

Projekt wpisuje się w realizację unijnej strategii wzrostu Europa 2020.

W zmieniającym się świecie UE potrzebna jest inteligentna i zrównoważona gospodarka sprzyjająca włączeniu społecznemu.

**Inteligentny rozwój** oznacza uzyskanie lepszych wyników w dziedzinie:

- **edukacji** (zachęcanie do nauki, studiów i podnoszenia kwalifikacji),
- **badaw naukowych/innowacji** (stworzenie nowych produktów i usług, które wpłynęłyby na zwiększenie wzrostu gospodarczego i zatrudnienia oraz pomogłyby w rozwiązywaniu problemów społecznych),
- **społeczeństwa cyfrowego** (wykorzystanie technologii informacyjnych i komunikacyjnych).

**Unijne cele służące zapewnieniu inteligentnego rozwoju obejmują:**

1. zwiększenie łącznego poziomu inwestycji publicznych i prywatnych do wysokości 3 proc. unijnego PKB, a także zapewnienie lepszych warunków dla badań i rozwoju oraz innowacji,
2. podwyższenie wskaźnika zatrudnienia kobiet i mężczyzn w wieku 20–64 lat do 75 proc. do 2020 r. poprzez wprowadzenie większej liczby osób na rynek pracy, zwłaszcza kobiet, młodzieży, osób starszych, pracowników niskowyszkolonych i legalnych imigrantów,
3. zapewnienie lepszego poziomu wykształcenia – zwłaszcza:
  - sprowadzenie odsetka młodych ludzi przedwcześnie porzucających naukę do poziomu poniżej 10 proc.,
  - dążenie do tego, by co najmniej 40 proc. osób w wieku 30–34 lat miało wykształcenie wyższe (lub równoważne).

**Wniosek z artykułu K. Lityńskiego (Tom 1, str. 67):**

*Polityka zwiększania innowacyjności, która decyduje o konkurencyjności całej gospodarki, nie może podlegać nieskoordynowanym, a często wykluczającym się inicjatywom poszczególnych ministerstw.*

*Polityka proinnowacyjna nie polega jedynie na szybkim wydatkowaniu wszystkich dostępnych środków unijnych pod hasłem „innowacja”, lecz także na wytyczaniu i monitorowaniu kierunków i problemów, które powinny być rozwiązane w skali kraju i poszczególnych regionów.*

*Idea utworzenia platformy koordynującej działania proinnowacyjne rządu i jego agend nie jest nowa, jako koncepcja Krajowego Systemu Innowacji wydaje się obecnie ze wszech miar na czasie.*

