

# Learning path for patent examiners

## Inventive step: Intermediate level

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## Introduction

This publication, "Inventive step, Intermediate level", is part of the "Learning path for patent examiners" series edited and published by the European Patent Academy. The series is intended for patent examiners at national patent offices who are taking part in training organised by the European Patent Office (EPO). It is also freely available to the public for independent learning.

Topics covered include novelty, inventive step, clarity, unity of invention, sufficiency of disclosure, amendments and search. Also addressed are patenting issues specific to certain technical fields:

- patentability exceptions and exclusions in biotechnology
- assessment of novelty, inventive step, clarity, sufficiency of disclosure and unity of invention for chemical inventions
- the patentability of computer-implemented inventions, business methods, game rules, mathematics and its applications, presentations of information, graphical user interfaces and programs for computers
- claim formulation for computer-implemented inventions

Each publication focuses on one topic at entry, intermediate or advanced level. The explanations and examples are based on the European Patent Convention, the Guidelines for Examination in the EPO and selected decisions of the EPO's boards of appeal. References are made to the Patent Cooperation Treaty and its Regulations whenever appropriate.

The series will be revised annually to ensure it remains up to date.

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## 1. Learning objectives

Participants to this course will learn:

- To apply the problem-solution approach for complex cases
- The importance of the right formulation of the objective technical problem
- To use technical indicators for assessing inventive step

## 2. The meaning of "invention" and "inventive"

Article 52 EPC stipulates that an invention has to involve an inventive step. At first sight, this seems to be a paradox, but in fact the terms "invention" and "inventive" have two different meanings in the EPC.

The EPC does not give a precise definition of the term "invention". It merely states in Article 52 that an invention must have technical character and may be in any field of technology. In fact, the "invention" can be considered the technical subject-matter defined in the claims, i.e. the claimed entity (device, product or compound) or the claimed activity (method, process or usage).

On the other hand, in Article 56 the EPC gives a precise definition of what is meant by "inventive".

Thus, in patent language it is not contradictory to state that an invention is not inventive. An invention must be technical and is considered inventive if it fulfils the requirements of Article 56 EPC, i.e. if it is not obvious.

**Legal references:**

GL G-II, 1

## 3. The competences of the person skilled in the art

The person skilled in the art is a skilled practitioner in the relevant field of technology.

However, the skilled person is not strictly bound to their field of technology and may be expected to look for suggestions in **neighbouring** and **general technical fields**. They may even look in **remote technical fields** if prompted to do so.

The skilled person is aware of what is common general knowledge, which needs substantiating by a document, e.g. handbook, only if contested. A single patent publication or a single article in a technical journal normally cannot be considered common general knowledge.

There may be instances where it is more appropriate to think in terms of a **group of people**, e.g. a research or production team, rather than a single person.

It should be borne in mind that the skilled person has the same level of skill for assessing **inventive step** and **sufficiency of disclosure**.

**Legal references:**

GL G-VII, 3

## 4. The significance of the closest prior art

The first step of the problem-solution approach is selecting the closest prior art.

The closest prior art is **the most promising starting point** that may lead the skilled person to develop the invention.

The reason for identifying the closest prior art is efficiency. In principle, it would be possible to evaluate the invention against every item of prior art that resembled it – however remotely – in a whole series of comparisons. As a matter of practice, it is usually more efficient first to identify the item of prior art that comes closest to making the invention seem obvious. If the invention is deemed not obvious when starting from that prior art, it will normally not be obvious when starting from any other, more remote prior art.

Identifying the closest prior art can also be seen as an attempt to conclude in absolute terms that the claimed subject-matter is inventive. Without identifying the closest prior art, it would only be possible to conclude that an invention is not obvious with respect to certain combinations of documents. It is of course easier to conclude in absolute terms that an invention is obvious because it only takes one combination of documents to show that the claimed subject-matter is obvious.

Whenever a starting point leads to the conclusion that the claimed subject-matter is not inventive, this starting point can be taken to be the closest prior art. The question of whether another starting point comes even closer to the claimed subject-matter becomes secondary.

If there is doubt as to which of two or more pieces of prior art is really the closest, often the easiest way to decide is to run through a problem-solution analysis for each document in turn and see which argument seems the most convincing.

The closest prior art must be assessed from the skilled person's point of view on the day before the claimed invention's filing date or priority date. In particular, the closest prior art should not be assessed with the hindsight of knowing the invention.

The closest prior art can be that indicated by the applicant, i.e. cited by the applicant in the patent application itself, if the prior-art search does not reveal any document coming as close to the invention as the applicant's closest prior art.

Sometimes, the closest prior art cited by the applicant does not correspond to a published document but rather is described in the description of the patent application with possible corresponding drawings. In that case, during examination the applicant can state that a mistake has been made because what was thought to be prior art was only known internally and was not public. The examiner cannot simply use the description of the patent application and what is disclosed therein as state of the art as proof that a feature or feature combination is already known from the state of the art.

## Examples

Invention	Prior-art document
An electric toothbrush comprising: an electric motor a battery a low-charge indicator an inductive charging station	<b>D1:</b> an electric toothbrush comprising: an electric motor a battery a low-charge indicator
	<b>D2:</b> an electric toothbrush comprising: an electric motor a battery an inductive charging station
	<b>D3:</b> an electric shaver comprising: an electric motor a battery a low-charge indicator an inductive charging station

The invention concerns an electric toothbrush, so the closest prior art cannot be D3 because, even though it has the most features in common with the invention, it discloses an electric shaver.

The closest prior art should be an electric toothbrush. Both documents D1 and D2 seem to be good candidates and two problem-solution analyses can be run through starting from D1 and D2 to see which argument seems the most convincing.

If the invention is deemed obvious when starting from D2, then D2 can be seen as the closest prior art.

### Legal references:

GL G-VII, 5.1

## 5. The different types of distinguishing features

In the second step of the problem-solution approach, the difference over the closest prior art is established.

Once the closest prior art has been selected, the claimed invention can be compared with the closest prior art to identify the distinguishing features of the invention.

The distinguishing features can be of different types:

- additional features: features that are not included in the closest prior art
- alternative features: the closest prior art discloses similar features
- non-described features: the closest prior art does not give any specific details, but the entity or activity in the closest prior art must include at least similar features that are not described
- excluded features: the invention excludes features present in the closest prior art

### Examples

Example 1

Invention	Closest prior-art document D1
An electric toothbrush comprising: an electric motor a battery <i>a low-charge indicator</i>	An electric toothbrush comprising: an electric motor a battery

The distinguishing feature is the "*low-charge indicator*". It is an **additional** feature because the invention comprises a low-charge indicator in addition to the disclosure of the closest prior art.

#### Example 2

Invention	Closest prior-art document D2
An electric toothbrush comprising: an electric motor a battery <i>a low-charge indicator light</i>	An electric toothbrush comprising: an electric motor a battery <b>a low-charge indicator beeper</b>

The distinguishing feature is the *low-charge indicator light*. It is an **alternative** feature because the invention comprises a *light*, which is an alternative to the **beeper** of the closest prior art.

#### Example 3

Invention	Closest prior-art document D3
An electric toothbrush comprising: an electric motor a battery <i>a low-charge indicator light</i>	An electric toothbrush comprising: an electric motor a battery <b>a low-charge indicator</b>

The distinguishing feature is the *low-charge indicator light*. It is a **non-described** feature because the invention specifies that the indicator is a *light*; the closest prior art is silent as to the indicator type but the indicator must be of a certain type, e.g. light or beeper.

#### Example 4

Invention	Closest prior-art document D4
A robot comprising: a head a trunk two arms one leg only	A robot comprising: a head a trunk two arms two legs

The distinguishing feature is the absence of a second leg. It is an **excluded** feature because the invention does not have a second leg, unlike the closest prior art, which has two legs.

#### Legal references:

GL G-VII, 5.2

## 6. Formulating the technical effect

The third step of the problem-solution approach is defining the technical effect of the distinguishing features.

The definition of the technical effect can be based on what the applicant states to be the effect of its invention in the description.

However, in many cases it is not possible to follow this approach, for instance when the applicant does not indicate any explicit technical effect of its invention or it formulates the technical effect in vague terms like "the invention improves the system known from the prior art".

Moreover, when the closest prior art revealed by the prior-art search comes closer to the invention than the prior art indicated by the applicant, there is often the need to reformulate the technical effect achieved by the distinguishing features.

The extent to which such reformulation of the technical problem is possible has to be assessed on the merits of each particular case. As a matter of principle any effect provided by the invention may be used as a basis for the reformulation of the technical problem, as long as said effect is **derivable from the application as filed.**

Furthermore, it is important not to be misled by what the applicant says in the description about various advantages or effects of the invention if these effects do not result directly from the distinguishing features.

Features which cannot be seen to make any contribution to the **technical character** of an invention, either independently or in combination with other features, cannot support the presence of an inventive step. A situation such as this can occur if a feature only contributes to the solution of a non-technical problem, for instance a problem in a field excluded from patentability.

The technical effect need not provide an improvement compared with the prior art, and the technical effect may well already be provided by the closest prior art.

In rare cases, the technical effect provided by the distinguishing features might result only in a **disadvantage** over the closest prior art. If the skilled person can clearly recognise this disadvantage, and there is no advantage at all, then the claimed subject-matter is not inventive (Guidelines for Examination, G-VII, 10.1). In these cases, the conclusion that the subject-matter is not inventive can be drawn as early as at the third step of the problem-solution approach.

### Examples

#### Example 1

Invention	Closest prior-art document D1
An electric toothbrush comprising: an electric motor a battery <i>a low-charge indicator</i>	An electric toothbrush comprising: an electric motor a battery



The distinguishing feature is the "*low-charge indicator*". It is an **additional** feature because the invention comprises a low-charge indicator in addition to the disclosure of the closest prior art.

The **technical effect** provided by the distinguishing feature is to indicate that the charge of the battery is low and that the electric toothbrush is prevented from running out of power while being used.

#### Example 2

Invention	Closest prior-art document D2
An electric toothbrush comprising: an electric motor a battery <i>a low-charge indicator light</i>	An electric toothbrush comprising: an electric motor a battery <b>a low-charge indicator beeper</b>

The distinguishing feature is the *low-charge indicator light*. It is an **alternative** feature because the invention comprises a *light*, which is an alternative to the **beeper** of the closest prior art.

The **technical effect**, i.e. to indicate that the charge of the battery is low and that the electric toothbrush is prevented from running out of power while being used, is already provided by the closest prior art.

#### Example 3

Invention	Closest prior-art document D3
An electric toothbrush comprising: an electric motor a battery <i>a low-charge indicator light</i>	An electric toothbrush comprising: an electric motor a battery <b>a low-charge indicator</b>

The distinguishing feature is the *low-charge indicator light*. It is a **non-described** feature because the invention specifies that the indicator is a *light*; the closest prior art is silent as to the indicator type but the indicator must be of a certain type, e.g. light or beeper.

The **technical effect**, i.e. to indicate that the charge of the battery is insufficient and that the electric toothbrush is prevented from running out of power while being used, is already provided by the closest prior art.

#### Example 4

Invention	Closest prior-art document D4
A robot comprising: a head a trunk two arms one leg only	A robot comprising: a head a trunk two arms two legs

The distinguishing feature is the absence of a second leg. It is an **excluded** feature because the invention does not have a second leg, unlike the closest prior art, which has two legs.

If the description does not specify any advantageous technical effect of having only one leg and the robot of the invention is less stable than the robot of the prior art, then the conclusion that the subject-matter is not inventive can be reached as early as at this stage.

**Legal references:**

GL G-VII, 5.2

## 7. Formulating the objective problem

The fourth step of the problem-solution approach is defining the **objective technical problem**.

To properly assess inventive step, the right formulation of the objective technical problem is crucial. If the problem is formulated too specifically, it will point to the solution and the invention will appear unduly obvious. If, on the other hand, the problem is formulated too generally, it will be possible to solve it with a range of solutions which is so broad that the invention will never appear obvious.

Under Rule 42(1)(c) EPC, the applicant should indicate the technical problem solved by its invention. However, applicants sometimes formulate the technical problem in vague terms, e.g. "the invention solves the problem of overcoming the drawbacks of the prior art". The applicant might not even explicitly indicate the technical problem solved by the invention (this is not contrary to Rule 42(1)(c) EPC when the skilled person can derive the problem from the application as a whole).

Furthermore, the technical problem must often be **reformulated** when the closest prior art revealed by the prior-art search comes closer to the invention than the prior art considered by the applicant.

The problem mentioned by the applicant is usually referred to as the **subjective** problem whereas the problem obtained by the problem-solution approach, e.g. on the basis of new closest prior art, is referred to as the **objective** technical problem.

Distinguishing features can be of different types, and this can influence the definition of the technical problem as follows:

- additional distinguishing features: the technical effect is usually not provided by the closest prior art and the technical problem is "how to achieve the technical effect"
- alternative distinguishing features: the technical effect is usually provided by the closest prior art and the definition of the technical problem is "how to provide an alternative for obtaining the technical effect"
- non-described distinguishing features: the technical problem is how to provide these non-described features, i.e. how to fill the information gap
- excluded distinguishing features: it must be checked whether excluding these features from the closest prior art brings an advantage. If it does, then the technical problem is to provide this advantage. If, however, the excluded features result only in a disadvantage, the claimed subject-matter is not inventive (Guidelines G-VII, 10.1).

The relationship between the technical effect and the objective problem to be solved is such that, if the effect is properly defined, the problem to be solved can usually be formulated as *how to achieve the effect*.

## Examples

### Example 1

Invention	Closest prior-art document D1
An electric toothbrush comprising: an electric motor a battery <i>a low-charge indicator</i>	An electric toothbrush comprising: an electric motor a battery

The distinguishing feature is the "*low-charge indicator*". It is an **additional** feature because the invention comprises a low-charge indicator in addition to the disclosure of the closest prior art.

The **technical effect** provided by the distinguishing feature is to indicate that the charge of the battery is low and that the electric toothbrush might run out of power.

There are different possible formulations for the objective technical problem and it is crucial to avoid formulations that are too general or too specific.

Too general a formulation would be, for example, "how to improve the power source of the electric toothbrush of D1". This is unduly broad since in practice no-one would be faced with such a general theoretical problem.

Too specific a formulation would be, for example, "how to indicate that the battery is nearly empty". This formulation points to the solution of the low-charge indicator.

A correct formulation would be "**how to modify the electric toothbrush of D1 to prevent it from running out of power**".

### Example 2

Invention	Closest prior-art document D2
An electric toothbrush comprising: an electric motor a battery <i>a low-charge indicator light</i>	An electric toothbrush comprising: an electric motor a battery <b>a low-charge indicator beeper</b>

The distinguishing feature is the *low-charge indicator light*. It is an **alternative** feature because the invention comprises a *light*, which is an alternative to the **beeper** of the closest prior art.

The **technical effect**, i.e. to *indicate, or warn the user, that the charge of the battery is low* and that the electric toothbrush might run out of power, is already provided by the closest prior art.

The **objective technical problem** is how to modify the electric toothbrush of D1 to **provide an alternative way** of *warning the user that the charge of the battery is low*.

The closest prior art comes very close to the invention because it discloses an alternative solution. It is easier to formulate the objective technical problem in this case than when the invention comprises an additional feature not included in the prior art, i.e. there is less of a risk of a formulation of the technical problem pointing to the solution.

### Example 3

Invention	Closest prior-art document D3
An electric toothbrush comprising: an electric motor a battery <i>a low-charge indicator light</i>	An electric toothbrush comprising: an electric motor a battery <b>a low-charge indicator</b>

The distinguishing feature is the *low-charge indicator light*. It is a **non-described** feature because the invention specifies that the indicator is a *light*; the closest prior art is silent as to the indicator type but the indicator must be of a certain type, e.g. light or beeper.

The **technical effect**, i.e. to indicate that the charge of the battery is low and that the electric toothbrush might run out of power, is already provided by the closest prior art.

The **objective technical problem** is how to fill the information gap in D1 and how to **choose one way** of warning the user that the charge of the battery is low.

In this case too, the closest prior art comes very close to the invention because it is silent about a feature that must somehow be present, and it is easier to formulate the objective technical problem than in the case when the invention comprises an additional feature not included in the prior art.

#### Legal references:

GL G-VII, 5.2

## 8. Combination vs juxtaposition or aggregation

At the last step of the problem-solution approach, when deciding on obviousness, it is important to make the distinction between the features that form a **combination** and the features that form a mere **juxtaposition or aggregation**.

Features form a combination when there is a functional interaction between them. This means that the features achieve a combined technical effect which is different from, e.g. greater than, the sum of the technical effects of the individual features. In other words, there is a **synergistic effect** between the features of the combination. When there is no synergistic effect, the features form a mere juxtaposition.

This distinction between combination and juxtaposition is particularly important for the distinguishing features of the invention. When the distinguishing features are a mere juxtaposition of features, **inventive step can be assessed separately for each one**.

This is done by working on the basis that each distinguishing feature (or each combination of features) solves a different "partial problem". In this case, it is justified to combine the closest prior art with several pieces of prior art (e.g. closest prior art + D2 + D3 + common general knowledge + etc.), where each piece of prior art relates to one of the distinguishing features considered separately.

It is also important to identify whether the distinguishing features form a combination of features with the features of the closest prior art or a mere juxtaposition. In the case of juxtaposition, the

modification of the closest prior art to include the distinguishing features is usually considered obvious, as it is enough to show that the individual features are obvious to prove that the juxtaposition or aggregation of features does not involve an inventive step.

## Examples

Example 1 (Guidelines G-VII, Annex, 2)

The invention relates to a machine for producing sausages comprising a known mincing machine and a known filling machine disposed side by side.

In this case, there is no synergistic effect between the mincing machine and the filling machine – the two are an obvious **juxtaposition** of features.

Example 2 (Guidelines G-VII, Annex, 2)

The invention relates to a mixture of medicines comprising a known painkiller (analgesic) and a known tranquilliser (sedative). It was found that adding the tranquilliser, which intrinsically appeared to have no painkilling effect, intensified the analgesic effect of the painkiller in a way which could not have been predicted from the known properties of the active substances.

In this case, there is a synergistic effect between the painkiller and the tranquiliser – the two form a non-obvious **combination** of features.

### Legal references:

GL G-VII, 7, GL G-VII, A.2, GL G-VII, 6

## 9. Ex post facto analysis

The problem-solution approach is used to minimise the risk of hindsight distorting the assessment of inventive step (due to knowledge of the invention). However, even with the problem-solution approach, there is still a risk of bias due to knowledge of the solution of the invention.

Therefore, when assessing inventive step, examiners should always bear in mind that once the solution of the invention is known, it is often easy to demonstrate that this solution can be arrived at in apparently easy steps.

However, this reasoning, namely showing how the skilled person **could** get to the solution of the invention when trying to solve the objective technical problem, is typical of an **ex post facto analysis** and does not allow for a fair assessment of inventive step.

It is important to bear in mind that the risk of an ex post facto analysis being carried out is particularly significant for inventions providing a **simple solution** to the objective technical problem. This is because, unlike more complicated solutions, simple solutions usually appear obvious at first sight.

**One way of avoiding an ex post facto analysis** is to use the "could-would" approach, showing how the skilled person **would** – and **not simply could** – arrive at a solution falling under the scope of the claim. This is done by **identifying an indication or an incentive in the prior art that would lead the skilled person from the closest prior art to the invention.**

## Legal references:

GL G-VII, 8

## 10. Technical indicators

The "indicators" have been developed to help decide, at the last stage of the problem-solution approach, whether or not a combination of the closest prior art with the distinguishing features is obvious.

These indicators are sometimes called "secondary indicators" or "sub-tests". Other expressions include "negative indicators" and "positive indicators", which point to obvious and non-obvious inventions, respectively.

The most frequently used indicators are based on technical considerations; they are listed in the annex to the chapter of the Guidelines for Examination on inventive step (G-VII, Annex).

Among the technical indicators, a first type are indicators pointing to inventions that involve mere workshop modifications, which are not considered inventive. However, in that case it is usually not possible to argue that there is an incentive that would prompt the skilled person to combine the closest prior art with minor workshop modifications. The "could-would" approach thus cannot be used, but the workshop indicators can instead.

The workshop indicators are the following:

- Filling a gap in the state of the art: when the teaching of the prior art is obviously incomplete and completing it would naturally or readily occur to the skilled person, an inventive step has to be ruled out (Guidelines G-VII, Annex, 1.1(i)).
- Using well-known technical equivalents: when using a known equivalent involves no technical difficulties (GL G-VII, Annex, 1.1(ii)).
- Choosing from several equally likely alternatives (Guidelines G-VII, Annex, 3.1(i)).
- Choosing particular values for parameters: choosing a particular value (a dimension, a temperature, etc.) from a limited range of possibilities that results from routine trial and error or is arrived at by following normal design procedure is not normally deemed inventive (Guidelines G-VII, Annex, 3.1(ii)).
- Simple extrapolation from known facts: extrapolating from known data to arrive at the invention is a pointer towards obviousness (Guidelines G-VII, Annex, 3.1(iii)).

The workshop indicators are obviously "negative indicators" because they point to obvious inventions. They can be used in particular with **alternative** distinguishing features and **non-described** distinguishing features.

There are further indicators based on technical considerations that can be either negative indicators pointing at obvious inventions or positive indicators pointing at non-obvious inventions.

The negative technical indicators, in addition to the workshop indicators, are the following:

- Use of a known material: the invention consists merely in a new use of a well-known material employing the known properties of that material (Guidelines G-VII, Annex, 1.1(iii)).
- Analogous substitution of material: the invention consists in the substitution of a known material in a known device with a recently developed material whose properties make it plainly suitable for that use (Guidelines G-VII, Annex, 1.1(iv)).

- Analogous use of technique: the invention consists merely in the use of a known technique in a closely analogous situation (Guidelines G-VII, Annex, 1.1(v)).
- Selection from a broad field without a surprising effect: the invention merely involves selecting, more or less arbitrarily, particular chemical compounds or compositions (including alloys) from a broad field (Guidelines G-VII, Annex, 3.1(iv)).
- "One-way street" situation: the invention follows inevitably from developments in the prior art, in such a way that there was no choice between several possibilities (Guidelines G-VII, 10.2 and G-VII, Annex, 3.1(v)).

The positive technical indicators are usually based on the presence of an unexpected technical effect:

- A known working method or means when used for a different purpose involves a new, surprising effect (Guidelines G-VII, Annex, 1.2(i)).
- A new use of a known device or material involves overcoming technical difficulties not resolvable by routine techniques (Guidelines G-VII, Annex, 1.2(ii)).
- The invention involves special selection in a process of particular operating conditions (e.g. temperature and pressure) within a known range, such selection producing unexpected effects in the operation of the process or the properties of the resulting product (Guidelines G-VII, Annex, 3.2(i)).
- The invention consists in selecting particular chemical compounds or compositions (including alloys) from a broad field, such compounds or compositions having unexpected advantages (Guidelines G-VII, Annex, 3.2(ii)).
- Overcoming a technical prejudice: there is an inventive step if the prior art leads the person skilled in the art away from the procedure proposed by the invention (Guidelines G-VII, Annex, 4).

## Examples

Workshop indicators pointing at obvious inventions:

- **Filling a gap:** the invention relates to a building structure made from aluminium. A prior-art document discloses the same structure and says that it is of light-weight material but fails to mention the use of aluminium (Guidelines G-VII, Annex, **1.1(i)**).
- **Well-known technical equivalents:** the invention relates to a pump which differs from a known pump solely in that its motive power is provided by a hydraulic motor instead of an electric motor (Guidelines G-VII, Annex, **1.1(ii)**).
- **Equally likely alternatives:** the invention relates to a low-charge indicator light for the battery of an electric toothbrush. The prior art discloses an alternative in the form of a beeper. Lights and beepers are well-known equivalent alternatives for low-charge indicators.
- **Choosing particular values for parameters:** the invention relates to a process for carrying out a known reaction and is characterised by a specified rate of flow of an inert gas. The prescribed rates are merely those which would necessarily be arrived at by the skilled practitioner (Guidelines G-VII, Annex, **3.1(ii)**).
- **Simple extrapolation:** the invention concerns adding a fourth blade to a razor. The prior art discloses razors with one, two or three blades.

Further negative technical indicators, in addition to the workshop indicators, pointing at obvious inventions:

- **Use of a known material:** a washing composition containing as a detergent a known compound having the known property of lowering the surface tension of water, this property being known to be an essential one for detergents (Guidelines G-VII, Annex, **1.1(iii)**).
- **Analogous substitution of material:** an electric cable comprises a polyethylene sheath bonded to a metallic shield by an adhesive. The invention lies in the use of a particular newly developed adhesive known to be suitable for polymer-metal bonding (Guidelines G-VII, Annex, **1.1(iv)**).
- **Analogous use of technique:** the invention resides in the application of a pulse control technique to the electric motor driving the auxiliary mechanisms of an industrial truck, such as a fork-lift truck, the use of this technique to control the electric propulsion motor of the truck being already known (Guidelines G-VII, Annex, **1.1(v)**).
- **Selection from a broad field:** the prior art includes disclosure of a chemical compound characterised by a specified structure including a substituent group designated "R". This substituent "R" is defined so as to embrace all alkyls (general formula  $C_nH_{2n+1}$ ). The invention consists in the selection of a particular radical (e.g.  $C_5H_{11}$ ). The resulting compound either is not described as having advantageous properties or is described as having properties which the person skilled in the art would expect such compounds to possess (Guidelines G-VII, Annex, **3.1(iv)**).
- **"One-way street" situation:** from the prior art it is known that when you reach a particular compound in a series of known chemical compounds, expressed in terms of the number of carbon atoms, there is a consistently increasing insecticidal effect as you move up the series. With regard to insecticidal effect, the next member of the series after the member previously known then lies in a "one-way street" (Guidelines G-VII, 10.2 and G-VII, Annex, **3.1(v)**).

**Legal references:**

GL G-VII, 10, GL G-VII, 15, GL G-VII, A



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