



Europäisches  
Patentamt  
European  
Patent Office  
Office européen  
des brevets

# Using work products of the IP5 a comparison with workflow at the European Patent Office



# Overview – grant procedure

## Filing phase

Date of filing

Formal Requirements

## Search phase

Search for prior art is performed

A search report and a written opinion are issued

## Examination phase

Substantive issues

Grant or Refusal

# Overview – **post-grant** procedures

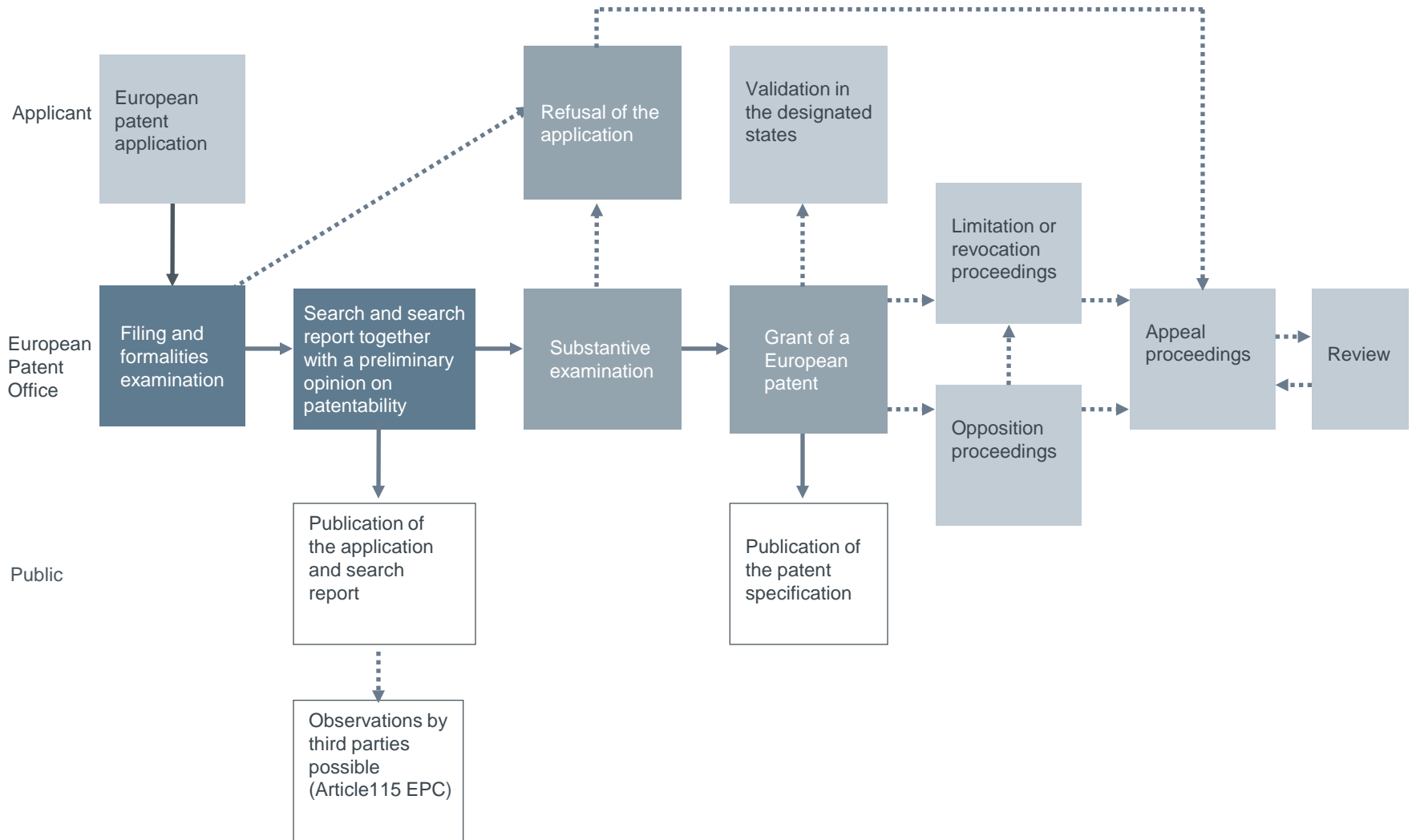
The post-grant procedures are:

**Opposition**

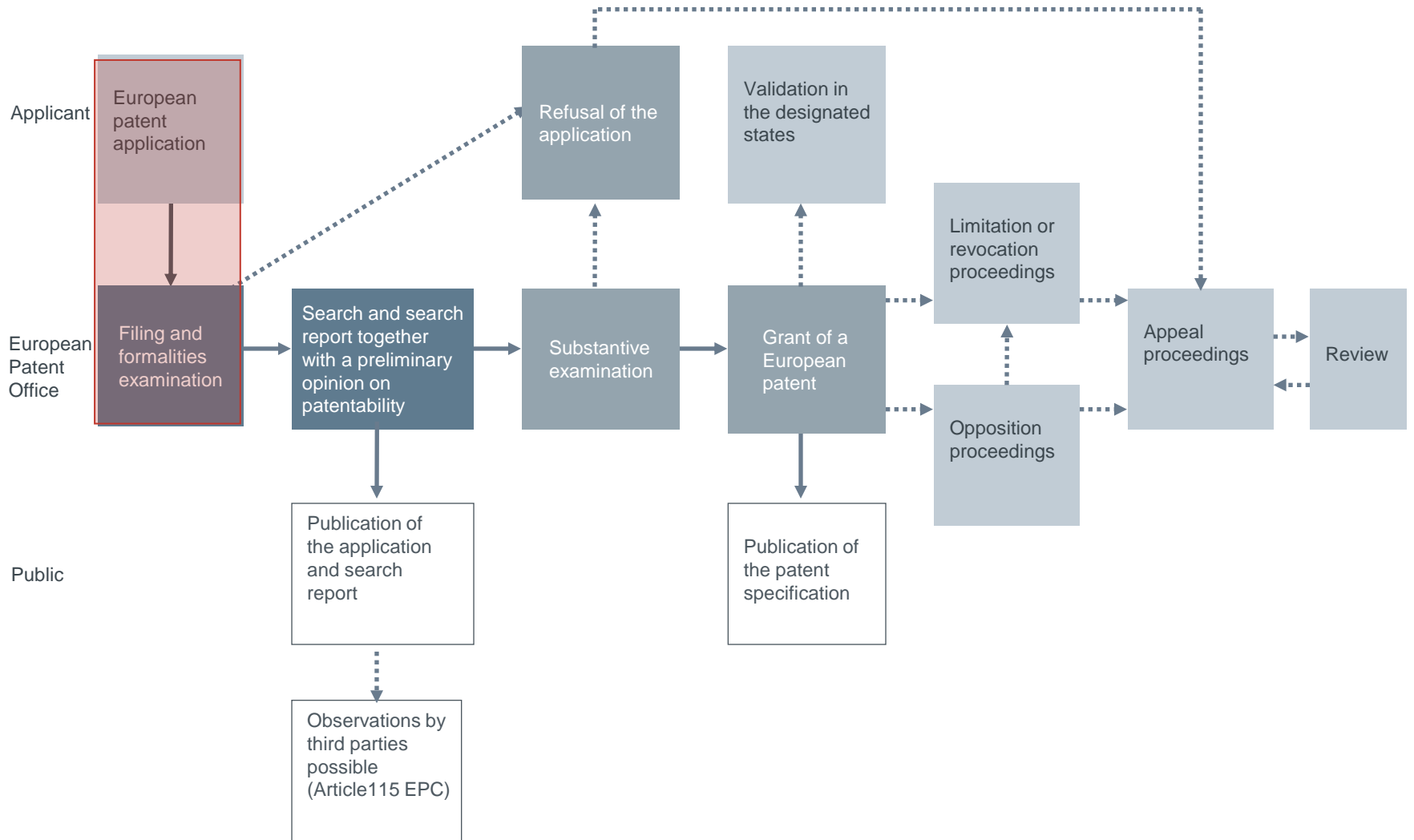
**Revocation / Limitation**

**Appeal**

# The grant procedure at a glance



# The grant procedure at a glance



# Filing a patent application

- The first step is for the applicant to file a request for grant of a European patent.
- The application must be accompanied by the required documentation.
- Applications may be filed online.

# Date of filing

**IMPORTANT!**

## What is essential:

Indication that a European patent is sought

Identification of the applicant

Description or reference to a previously filed application

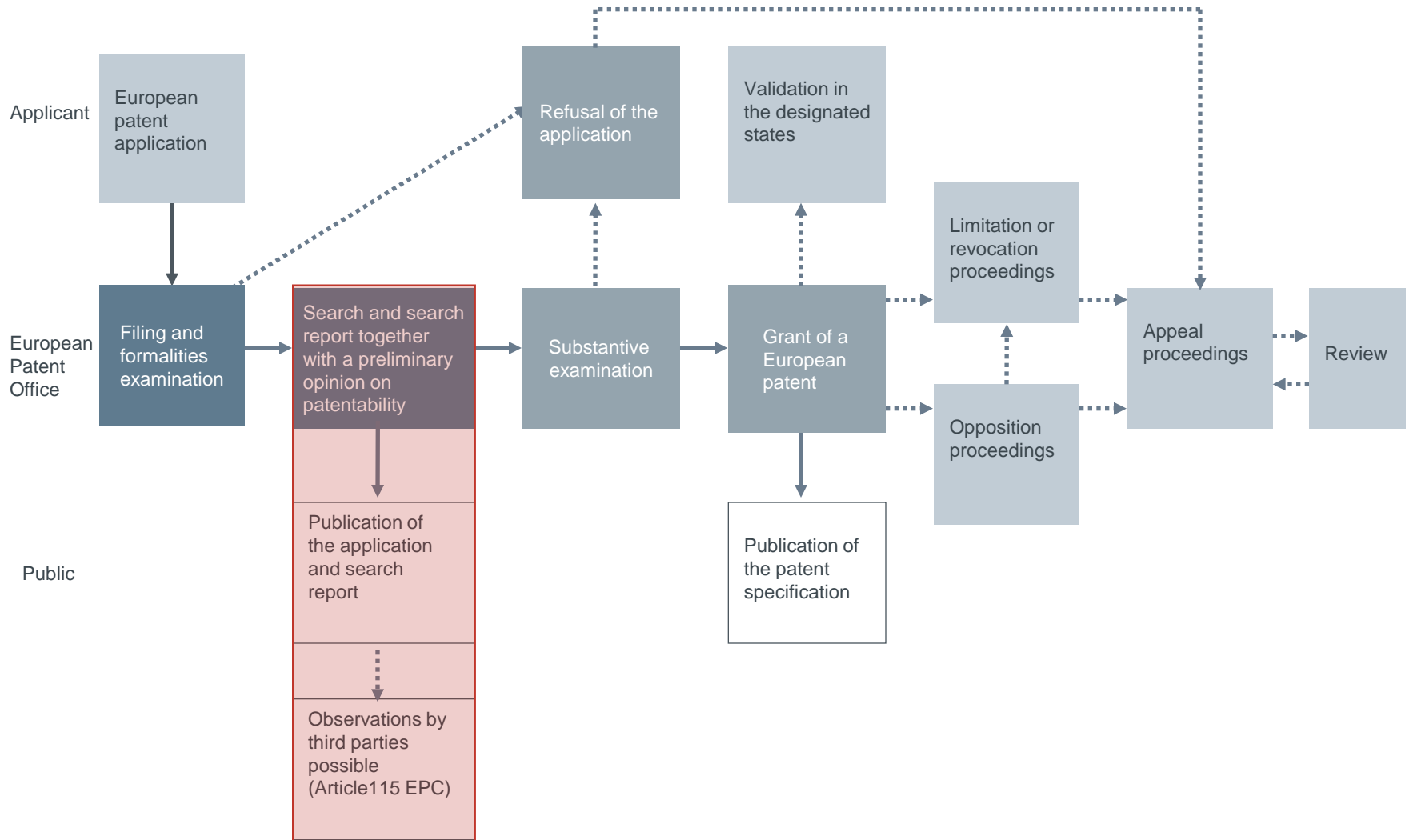
## What is not Essential:

Specific language

Claims

Priority claim

# The grant procedure at a glance





# Search

## Purpose of the search

- To discover the state of the art at the relevant date.
- To prepare for substantive examination and to determine whether, and if so to what extent, the invention to which the application relates is new and involves an inventive step.

## Search documentation

- Internal and external documents
- Patent and non-patent literature

# Search phase

- The outcome of the search phase is:
  - a **search report** listing the relevant prior art
  - an **opinion** on whether the application and the invention to which it relates meet the requirements of the EPC
- The combination of these two documents is known as the **extended European search report**

# European search report

The **search report** includes the citations of relevant documents.

Categories are assigned (X, Y, ...) to indicate the relevance and type of citation.

C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	GB 1 203 328 A (TREVOR JOHN FRANKLIN) 26 August 1970 (1970-08-26) example 1 ---	1,2,6-10
X	WO 94 12184 A (SYNTEX INC) 9 June 1994 (1994-06-09) examples 1,2 ---	1,10
X	US 5 688 529 A (HEGDE SAYEE GOJANAN ET AL) 18 November 1997 (1997-11-18) abstract ---	1,7,10
Y	WO 97 38689 A (HAEBERLIN BARBARA ;CIBA GEIGY AG (CH); MAK CHING PONG (CH); MEINZE) 23 October 1997 (1997-10-23) cited in the application example 1 --- -/--	1-10

The **opinion** provides a written analysis of the patentability of the application, based on the cited documents.

1 The following documents are referred to in this communication:  
D1 : US 6 243 026 B1 (JUDGE KEVIN ET AL) 5 June 2001 (2001-06-05)

**Clarity**

2. The present application refers to a traffic signal priority system, although the wording of claim 1 is such that tries to encompass a generic entry/exit control system. This however is not in line with the description, page 3, lines 3-5, where is clearly state that the invention directs to a traffic signal priority system. As such will be the claimed invention understood in the following (Art. 84 EPC). The applicant is reminded that the full scope of the claims must be supported by the

3 **Independent claims**

3.1 The present application does not meet the criteria of Article 52(2) EPC because the subject-matter of claim 1 is not new in the sense of Article 54(1) and (2) EPC.

Document D1 discloses (the references in parenthesis applying to this document):

A mobile event triggering method, comprising  
 detecting an entry of a vehicle into a defined event location (D1, col. 14, line 53)  
 evaluating a vehicle status with respect to at least one entry criterion (col. 14, line 53)  
 conducting an event entry action when the vehicle status meets said at least one entry criterion (D1, col. 14, line 55; lines 26-28)  
 evaluating the vehicle status with respect to at least one mobile event criterion corresponding to at least one mobile event  
 activating said at least one mobile event when the vehicle status meets said at least one mobile event criterion corresponding to said at least one mobile event

# Search Products – Search report

- 09.01.2014 [Notification of forthcoming publication](#)
- 31.01.2013 [Communication regarding the transmission of the European search report](#)
- 31.01.2013 [European search opinion](#)
- 31.01.2013 [European search report](#)
- 17.08.2012 [\(Electronic\) Receipt](#)
- 17.08.2012 [Letter accompanying subsequently filed items](#)
- 30.07.2012 [Abstract](#)

EP – direct

EP – ISA

- 17.07.2012 [Priority document \(electronically transmitted\)](#)
- 28.06.2012 [Copy of the international search report](#)
- 28.06.2012 [International publication of the A1 Pamphlet](#)
- 08.03.2012 [Written opinion of the ISA, boxes No. I to VIII \(for internal ISA use\)](#)
- 08.03.2012 [Written opinion of the ISA, cover sheet \(for internal ISA use\)](#)
- 08.03.2012 [Written opinion of the ISA, supplemental box \(for internal ISA use\)](#)

- 24.09.2014 [European search opinion](#)
- 24.09.2014 [Supplementary European search report](#)

EP – PCT *bis*

# Search Products – Search report



## EUROPEAN SEARCH REPORT

Application Number  
EP 12 17 8463

EP – direct  
/ PCT *bis*

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X, D	WD 96/32026 A1 (NOVUS FOODS LTD [GB]; PICKFORD KEITH [GB]) 17 October 1996 (1996-10-17) * the whole document *	1-13	INV. A23L1/00 A23L1/03 A23L1/0522 A23L1/315
X	WD 95/30344 A1 (NOVUS FOODS LTD [GB]; PICKFORD KEITH [GB]) 16 November 1995 (1995-11-16) * the whole document *	1-10	
X	WD 97/03572 A1 (NOVUS FOODS LTD [GB]; PICKFORD KEITH [GB]) 6 February 1997 (1997-02-06) * the whole document *	1-13	
E	EP 2 481 295 A1 (CRISP SENSATION HOLDING SA [CH]) 1 August 2012 (2012-08-01) * the whole document *	1-10	
L		1-10	
E	EP 2 481 294 A1 (CRISP SENSATION HOLDING SA [CH]) 1 August 2012 (2012-08-01) * the whole document *	1-10	
L			
			TECHNICAL FIELDS SEARCHED (IPC)
			A23L A21D

PCT *bis* claims  
can be different!

EP – ISA

## INTERNATIONAL SEARCH REPORT

International application No  
PCT/GB2011/052536

A. CLASSIFICATION OF SUBJECT MATTER INV. H01M10/48 G01R31/36 ADD.		
According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) H01M G01R		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
Electronic data base consulted during the international search (name of data base and, where practical, search terms used) EPO-Internal		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2008/118819 A1 (GAMBORA PAUL [US] ET AL) 22 May 2008 (2008-05-22) the whole document	18 1-17
A		
X	US 2010/079146 A1 (KUROSE DAISUKE [JP] ET AL) 1 April 2010 (2010-04-01) the whole document	18 1-17
A		
X	US 2005/077878 A1 (CARRIER DAVE [US] ET AL) 14 April 2005 (2005-04-14) the whole document	18 1-17
A		
<input type="checkbox"/> Further documents are listed in the continuation of Box C. <input checked="" type="checkbox"/> See patent family annex.		
* Special categories of cited documents: "X" document defining the general state of the art which is not considered to be of particular relevance "E" earlier document but published on or after the international filing date "L" document in which there are doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document relating to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed		"T" later document published after the international filing date or priority date and not in conflict with the application but added to understand the principle or theory underlying the invention "N" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is considered with one or more other such documents, each combination being obvious to a person skilled in the art "M" document member of the same patent family
Date of the actual completion of the international search		Date of mailing of the international search report
29 February 2012		09/03/2012
Name and mailing address of the ISA/ European Patent Office, P.O. Box 5018 Patentstrasse 2 NL - 2580 HW S'Gravenhage Tel: (+31-70) 340-0000 Fax: (+31-70) 340-3016		Authorized officer Horváth, László

# Search Products – Written Opinion

- 09.01.2014 [Notification of forthcoming publication](#)
- 31.01.2013 [Communication regarding the transmission of the European search report](#)
- 31.01.2013 [European search opinion](#)
- 31.01.2013 [European search report](#)
- 17.08.2012 [\(Electronic\) Receipt](#)
- 17.08.2012 [Letter accompanying subsequently filed items](#)
- 30.07.2012 [Abstract](#)



EP – direct

EP – ISA



- 17.07.2012 [Priority document \(electronically transmitted\)](#)
- 28.06.2012 [Copy of the international search report](#)
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- 08.03.2012 [Written opinion of the ISA, boxes No. I to VIII \(for internal ISA use\)](#)
- 08.03.2012 [Written opinion of the ISA, cover sheet \(for internal ISA use\)](#)
- 08.03.2012 [Written opinion of the ISA, supplemental box \(for internal ISA use\)](#)

# Search Products – Written Opinion

Application Documents  
EP ONLY



The examination is being carried out on the **following application documents**

**Description, Pages**

1-11 as originally filed

**Claims, Numbers**

1-13 as originally filed

Cited Documents



Reference is made to the following documents (D1-D5); the number adhered to in the rest of the procedure.

D1 WO 96/32026 A1

D2 WO 95/30344 A1

D3 WO 97/03572 A1

D4 EP 2 481 295 A1

D5 EP 2 481 294 A1

# Search Products – Written Opinion

Clarity  
Article 84 EPC

1 - The application does not meet the requirements of Article 84 EPC in that the subject-matter of claims 1,7,10,11 are not clear.

not clearly defined.

1.1 - Claim 1 does not meet the requirements of Article 84 EPC in that the matter for which protection is sought is not clearly defined. The functional statement "soluble products from enzymolysis of a mixture comprising ..." and "insoluble products from the enzymolysis" does not enable the skilled person to determine which technical features are necessary to perform the stated function.

Novelty  
Article 54 EPC

3 - The present application does not meet the requirements of Article 52(1) EPC, because the subject-matter of claims 1-10 is not new in the sense of Article 54(1) and (2) EPC.

- D1 describes a microwave cookable or reheatable foodstuff coating comprising an aqueous mixture including the following ingredients: a) starch, b) flour, c) a gelling

not new



# Search Products – Written Opinion

Inventive Step  
Article 56 EPC

4 - The present application does not meet the requirements of Article 52(1) EPC because the subject-matter of claim 11-13 does not involve an inventive step within the meaning of Article 56 EPC.

D1 describes also a process for forming the microwave cookable or reheatable coated foodstuff comprising the steps of: providing a blended mixture of ingredients in accordance with any preceding claim with water; incubating the mixture at an elevated temperature and pH range 6 to 10; mixing under high shear to form an emulsion; and applying the emulsion to a food substrate to form a coated product.

The subject-matter of claims 11-13 differs from D1 in that step c) separating the solid residue and supernatant is present.

The problem to be solved by the present invention may therefore be regarded as providing an alternative method of manufacture of a microwave cookable or reheatable foodstuff coating composition.

Such an alternative can only be regarded as inventive if the coating composition presents unexpected effects or properties in relation to the rest of the range.

The problem to be solved

Formal Issue

7 - To meet the requirements of Rule 42(1)(b) EPC, the documents D1-D5 should be identified in the description and the relevant background art disclosed therein should be briefly discussed.

# Search Products – KIPO non-final rejection

skilled person

In the invention in claim 1 of the patent claim of this application to claim 5 is this field of the invention field before the application like the lower part, since it is the person (it the hereinafter says to be technical engineer ' of the ordinary) having the normal knowledge easily invents patent cannot be received according to the article 29(2) of Patent Act.

- Follows -

Cited invention 1: patent Publication No. JP09-184013 A(1997.07. 15. disclosure)

article 29(2) of Patent Act.



Korean Intellectual Property Office

Cited invention 2:JP2009-068079 A(2009.04. 02. disclosure)

1. The Amendment and Written Opinion content.

The deficiency in the description matter coming through the Amendment in which the applicant was sleeping with 2015.06 and which submitted with the last reason for refusal 1 with 2 and related was amended and it did. Added the solution treatment condition to claim 1 and claim 4.

It compares with the cited invention 1 with 2 and the technical spirit and processing requirement about the solid solution treatment as to the applicant, claim 1 and claim 4 are different from each other through the Written Opinion after the correction and it does not disclose about the subject and the cited invention 1 and 2 are the improvement of the high temperature strength of this application it insists that the inventive step has this application.

# Search Products – USPTO non-final rejection

“obviousness”

## Claim Rejections - 35 USC § 103

The following is a quotation of pre-AIA 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious to a person having ordinary skill in the art to which the invention relates, had such person been apprised of the teachings of the prior art. The fact that an invention would not be made by such a person shall not be negated by the manner in which the invention was made.

35 U.S.C. 103(a)

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under pre-AIA 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.

# Search Products – SIPO First Office Action

inventive step

THE CLAIM(S) FAIL(S) TO COMPLY WITH THE INVENTIVE STEPS REQUESTED BY ARTICLE 22.3 OF THE PATENT LAW.

☒The claim(s) 1-5 fail(s) to comply with the inventive steps requested by Article 22.3 of the Patent Law.

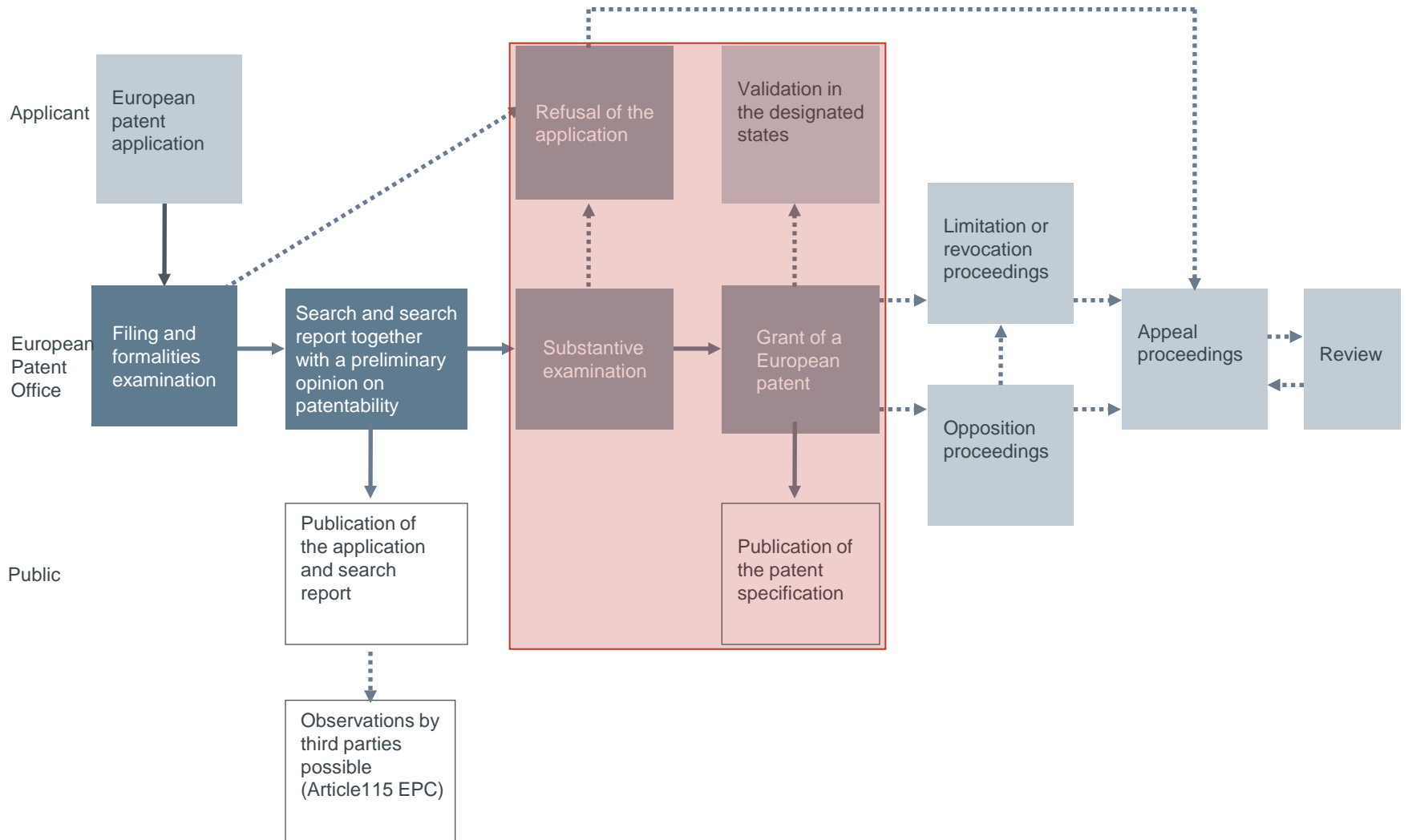
“skilled in the art”

stainless steel that can determine D1. Consequently,, claim 1 is compared with D1, the difference lies in, claim 1 is injected the S upper limit and is 0.01%, the disclosed S upper limit of D1 is 0.015%. But, S common impurity element in as the stainless steel, the those skilled in the art hopes usually that its content is low as far as possible, consequently select its appropriate content as required easily. Consequently,, it is conspicuous that the those skilled in the art obtains the technical solution that claim 1 required the safeguard by the routine techniques means in D1 and this field, therefore claim 1 requires the technical solution of protection not have prominent substantive features and a notable progress, do not possess the inventiveness of the Article 22, para. 3 of the Patent Law regulation.

# Publication

- Patent applications are published around **18 months** from the date of filing or priority.
  - These documents are known as **A publications**.
- Publication makes the contents of the application available to the public. It also
  - provides provisional protection
  - enables third parties to submit observations
  - forms part of the state of the art

# The grant procedure at a glance



# Substantive examination

- For an application to be granted, all the requirements of the EPC must be met
- The applicant may **request examination** up to six months after the mention of publication of the search report

# The examining division



- The examining division consists of **three members**
- Each decision is the responsibility of the division as a whole.
- Examination is an ex-parte procedure in which only the applicant is involved.
  - Third parties may only submit observations



# Substantive examination

## Invention disclosure, scope and definition

Clear definition of the protection sought

Sufficient disclosure of the invention

Unity of invention

## Technical content

Is new

Involves an inventive step

Has industrial applicability

# Substantive examination

**Prior art** used to back up the arguments.

All objections raised must be **reasoned** and supported by evidence.

# Substantive examination

Applicants and examiners exchange **written communications** stating their **objections**, **arguments** and **amendments**.

The applicant must always be given the **right to be heard**

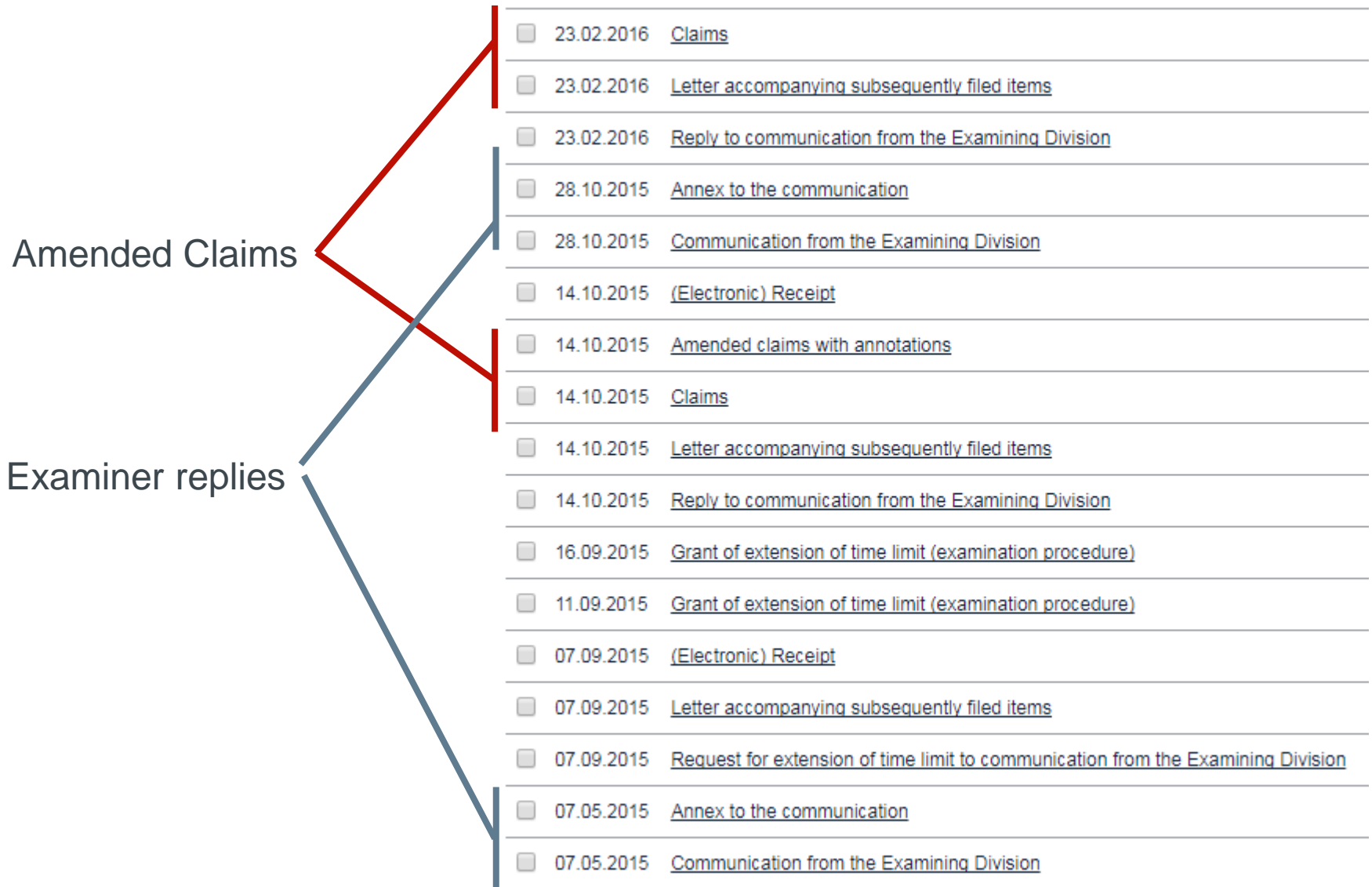


Therefore

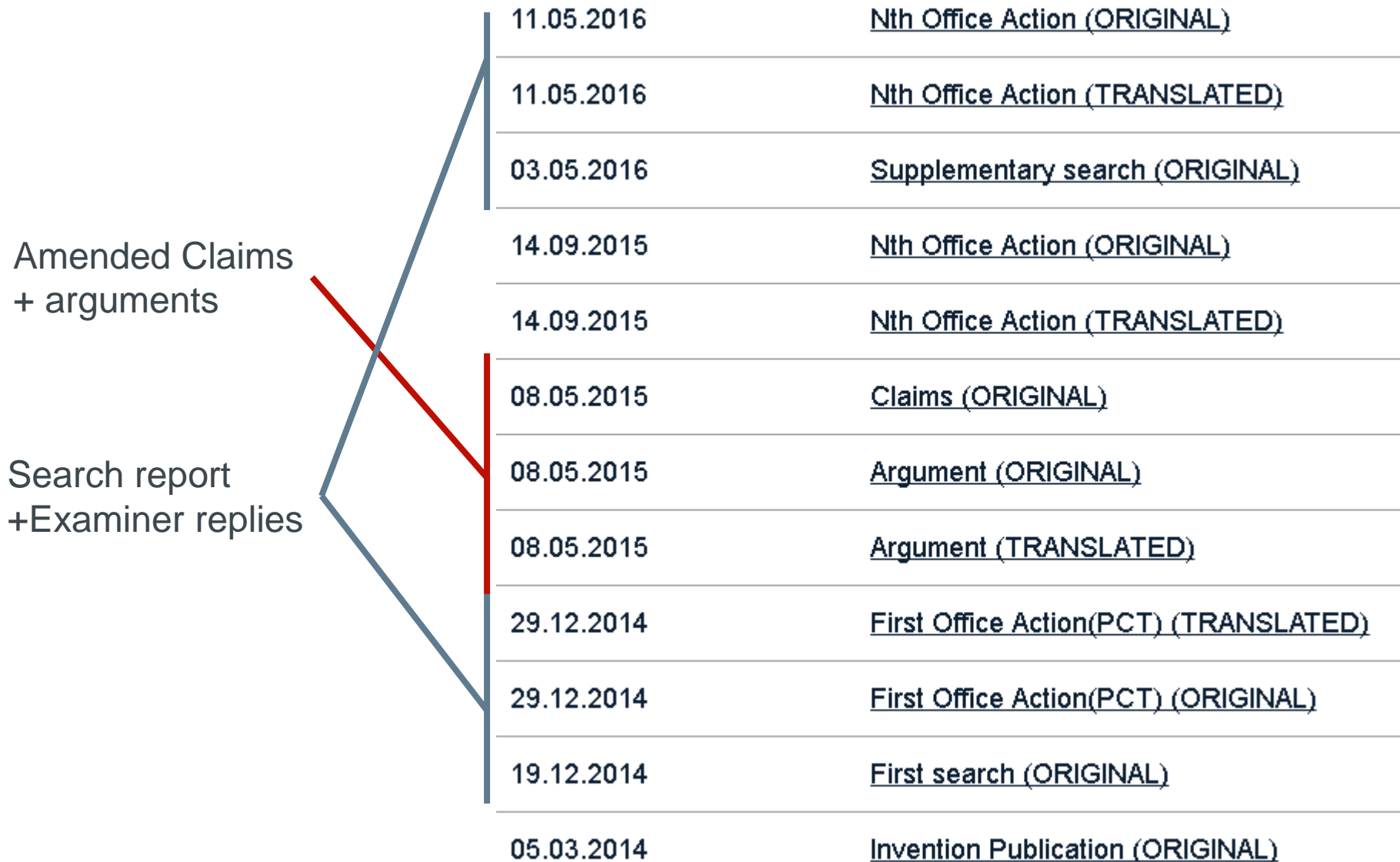


There can be no decision based on objections which have not been discussed.

# Substantive examination EPO



# Substantive examination **SIPO**



# Substantive examination **KIPO**

	27.01.2016	Notice of Final Rejection (TRANSLATED)
	27.01.2016	Notice of Final Rejection (ORIGINAL)
	29.12.2015	[Opinion according to the Notification of Reasons for Refusal] Written Opinion(Written Reply) (ORIGINAL)
	29.12.2015	[Amendment of Specification etc] Amendment (ORIGINAL)
Amended Claims + arguments	29.12.2015	[Amendment of Specification etc] Amendment (TRANSLATED)
	29.12.2015	[Opinion according to the Notification of Reasons for Refusal] Written Opinion(Written Reply) (TRANSLATED)
	03.11.2015	Request for Extension of Legal Period (ORIGINAL)
	03.11.2015	Request for Extension of Legal Period (TRANSLATED)
Examiner replies	07.10.2015	Notice of Final Rejection (ORIGINAL)
	07.10.2015	Notice of Final Rejection (TRANSLATED)
	08.06.2015	[Amendment of Specification etc] Amendment (ORIGINAL)
	08.06.2015	[Opinion according to the Notification of Reasons for Refusal] Written Opinion(Written Reply) (TRANSLATED)
	08.06.2015	[Amendment of Specification etc] Amendment (TRANSLATED)
	08.06.2015	[Opinion according to the Notification of Reasons for Refusal] Written Opinion(Written Reply) (ORIGINAL)
	07.04.2015	Request for the Submission of an Opinion (ORIGINAL)
	07.04.2015	Request for the Submission of an Opinion (TRANSLATED)

# Substantive examination **USPTO**

13.09.2016	<u>Applicant Initiated Interview Summary (PTOL-413)</u>
03.08.2016	<b>Notice of Allowance and Fees Due (PTOL-85)</b>
03.08.2016	<u>Index of Claims</u>
03.08.2016	<u>Examiner's search strategy and results</u>
03.08.2016	<u>Issue Information including classification, examiner, name, claim, renumbering, etc.</u>
03.08.2016	<u>Search information including classification, databases and other search related notes</u>
21.04.2016	<u>EFS Acknowledgment Receipt</u>
21.04.2016	<u>Amendment/Req. Reconsideration-After Non-Final Reject</u>
21.04.2016	<u>Claims</u>
21.04.2016	<u>Applicant Arguments/Remarks Made in an Amendment</u>
21.04.2016	<u>Fee Worksheet (SB06)</u>
27.01.2016	<u>Non-Final Rejection</u>
27.01.2016	<u>Search information including classification, databases and other search related notes</u>
27.01.2016	<u>Examiner's search strategy and results</u>
27.01.2016	<u>List of References cited by applicant and considered by examiner</u>
27.01.2016	<u>Bibliographic Data Sheet</u>
27.01.2016	<u>Index of Claims</u>

Amended Claims  
+ arguments

Examiner replies

# Amended claims (with annotations)

10.03.2016 [Communication from the Examining Division](#)

23.02.2016 [\(Electronic\) Receipt](#)

23.02.2016 [Amended claims with annotations](#)

23.02.2016 [Claims](#)

23.02.2016 [Letter accompanying subsequently filed items](#)

1. A secondary battery comprising:
    - an electrode element in which a positive electrode and a negative electrode are placed so as to face each other,
    - an electrolyte solution, and
    - an outer casing enclosing the electrode element and the electrolyte solution therein, wherein characterized in that  
~~the negative electrode is formed by binding a negative electrode active material comprising a silicon-silicon oxide-carbon composite at least one of a metal a) capable of forming an alloy with lithium and a metal oxide b) capable of intercalating and deintercalating lithium ions to a negative electrode current collector with a binder for a negative electrode, and~~
- the electrolyte solution comprises:
- 65 to 99% by volume of the phosphate ester compound,
  - 0.01 to 30% by volume of the fluorinated carbonate compound, and
  - 0.1 to 10% by volume of a halogenated phosphate ester compound.



# Final outcome

- The application meets the requirements of the EPC:

- + **translation** of the claims

- + **payment** of grant and publishing fees

➔ **grant**

- The application does **not** meet the requirements of the EPC:

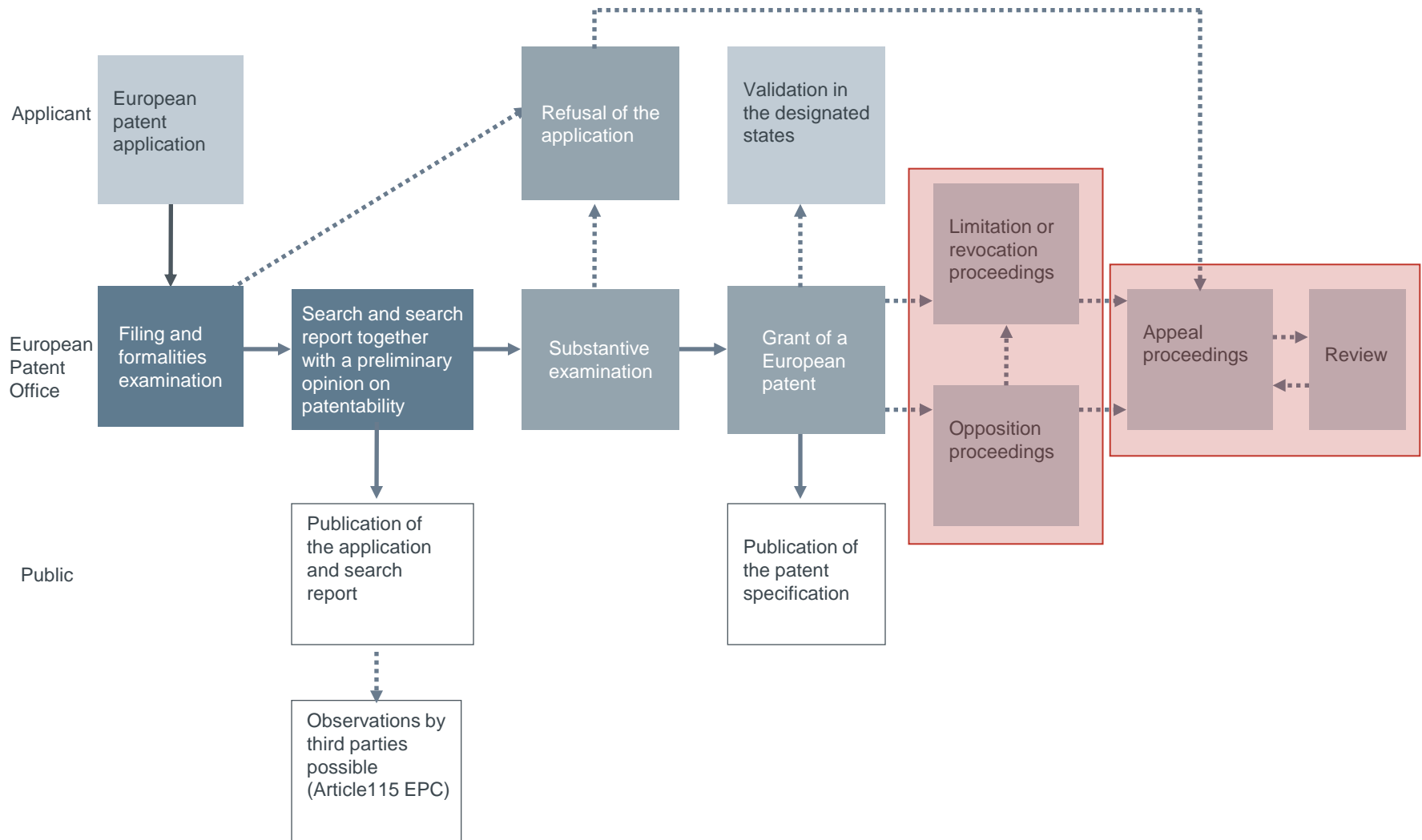
➔ **refusal**

# Grant

Includes:  
Claims, Desc., Figures

- 03.05.2017 [Transmission of the certificate](#)
- 06.04.2017 [Decision to grant a European patent](#)
- 23.03.2017 [\(Electronic\) Receipt](#)
- 23.03.2017 [French translation of claims](#)
- 23.03.2017 [German translation of the claims](#)
- 23.03.2017 [Letter accompanying subsequently filed items](#)
- 02.12.2016 [Bibliographic data of the European patent application](#)
- 02.12.2016 [Communication about intention to grant a European patent](#)
- 02.12.2016 [Intention to grant \(signatures\)](#)
- 02.12.2016 [Text intended for grant](#)
- 02.12.2016 [Text intended for grant \(clean copy\)](#)
- 09.09.2016 [\(Electronic\) Receipt](#)
- 09.09.2016 [Amended description with annotations](#)

# The grant procedure at a glance



# Overview – post-grant procedures

The post-grant procedures are:

## Opposition

13.01.2017 [Communication regarding the expiry of opposition period](#)

10.03.2016 [Transmission of the certificate](#)

11.02.2016 [Decision to grant a European patent](#)

## Revocation / Limitation

## Appeal

# Conclusion

The procedure before the European Patent office comprises:

- a **search** carried out
- an **examination** conducted
- and a **decision** taken.

This decision may later be **opposed** or **appealed**

Other offices have:        different procedures  
                                     different names for products

**But!** The principles of substantive examination are **broadly similar**

# Comparison between IP5 offices

The catalogue of differing practices:

<https://www.fiveipoffices.org/activities/harmonisation/cdp-1.html>

IP5 patent system overview:

<https://www.fiveipoffices.org/material/systemoverview.html>

	Europe	Japan	Korea	China	India
<b>Patentable subject matter</b>	... (text) ...	... (text) ...	... (text) ...	... (text) ...	... (text) ...
<b>Prior art</b>	... (text) ...	... (text) ...	... (text) ...	... (text) ...	... (text) ...
<b>Substantive examination</b>	... (text) ...	... (text) ...	... (text) ...	... (text) ...	... (text) ...
<b>Formal examination</b>	... (text) ...	... (text) ...	... (text) ...	... (text) ...	... (text) ...
<b>Appeals</b>	... (text) ...	... (text) ...	... (text) ...	... (text) ...	... (text) ...
<b>Infringement</b>	... (text) ...	... (text) ...	... (text) ...	... (text) ...	... (text) ...
<b>Validity</b>	... (text) ...	... (text) ...	... (text) ...	... (text) ...	... (text) ...
<b>Enforcement</b>	... (text) ...	... (text) ...	... (text) ...	... (text) ...	... (text) ...
<b>Procedural aspects</b>	... (text) ...	... (text) ...	... (text) ...	... (text) ...	... (text) ...
<b>Other</b>	... (text) ...	... (text) ...	... (text) ...	... (text) ...	... (text) ...

Thank you !