

# Improving your grant rate of computer-implemented invention patents in Europe

**2020**



*Improving your grant rate of computer-implemented invention  
patents in Europe*

Howard Sands and Phil Merchant 9 September 2020

## Overview

- Introduction - what's it all about?
- Statistics on filing and grant – success is possible
- The EPO approach - how it works and what you can do
- Worked examples
- Tips and Pointers – how to make the system work for you

## *Improving your grant rate of computer-implemented invention patents in Europe*

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### Introduction - What's it all about?

#### Europe

##### Article 52 EPC:

*“(1) European patents shall be granted for any inventions, in all fields of technology, provided that they are new, involve an inventive step and are susceptible of industrial application”*

*(2) The following in particular shall not be regarded as inventions within the meaning of paragraph 1: (a) discoveries, scientific theories and mathematical methods; (b) aesthetic creations; (c) schemes, rules and methods for performing mental acts, playing games or doing business, and programs for computers; (d) presentations of information.*

*(3) Paragraph 2 shall exclude the patentability of the subject-matter or activities referred to therein only to the extent to which a European patent application or European patent relates to such subject-matter or activities as such.*

#### United Kingdom

##### Section 1 Patents Act 1977:

*(1) A patent may be granted only for an invention in respect of which the following conditions are satisfied, that is to say -*

- (a) the invention is new;*
- (b) it involves an inventive step;*
- (c) it is capable of industrial application;*
- (d) the grant of a patent for it is not excluded by subsections (2) and (3) or section 4A below; and references in this Act to a patentable invention shall be construed accordingly.*

*(2) It is hereby declared that the following (among other things) are not inventions for the purposes of this Act, that is to say, anything which consists of -*

- (a) a discovery, scientific theory or mathematical method;*
- (b) a literary, dramatic, musical or artistic work or any other aesthetic creation whatsoever;*
- (c) a scheme, rule or method for performing a mental act, playing a game or doing business, or a program for a computer;*
- (d) the presentation of information; but the foregoing provision shall prevent anything from being treated as an invention for the purposes of this Act only to the extent that a patent or application for a patent relates to that thing as such.*

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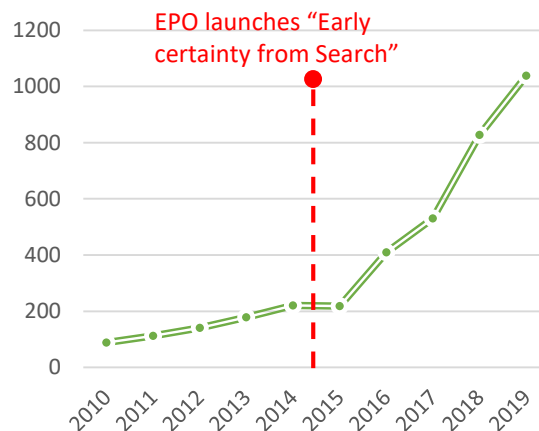
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### Statistics on filing and grant - Success is possible

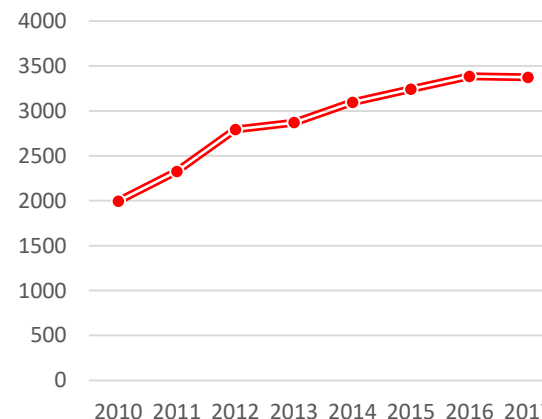
- **G06Q:** DATA PROCESSING SYSTEMS OR METHODS, SPECIALLY ADAPTED FOR ADMINISTRATIVE, COMMERCIAL, FINANCIAL, MANAGERIAL, SUPERVISORY OR FORECASTING PURPOSES; SYSTEMS OR METHODS SPECIALLY ADAPTED FOR ADMINISTRATIVE, COMMERCIAL, FINANCIAL, MANAGERIAL, SUPERVISORY OR FORECASTING PURPOSES, NOT OTHERWISE PROVIDED FOR

	FILED	GRANTED
2010	1996	88
2011	2326	113
2012	2793	141
2013	2870	179
2014	3096	221
2015	3243	218
2016	3385	410
2017	3374	530
2018		828
		1038

G06Q - EP grants



G06Q - EP filings



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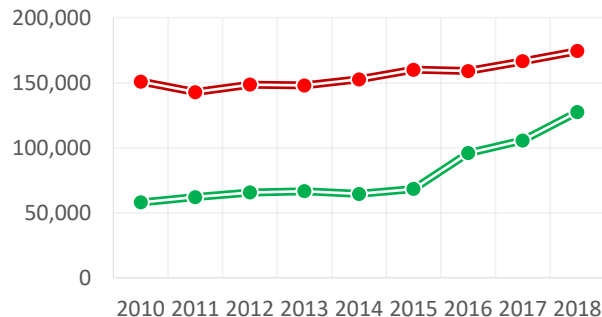
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### Statistics on filing and grant - a softening approach?

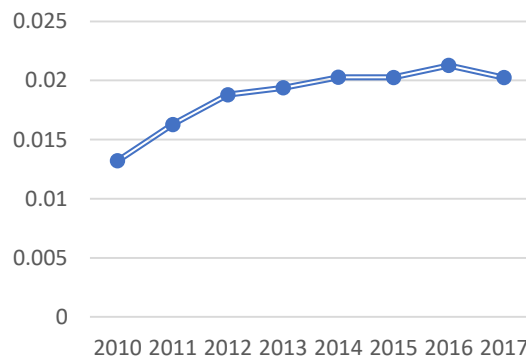
		2010	2011	2012	2013	2014	2015	2016	2017	2018
ALL EP	FILED	151,015	142,822	148,562	148,027	152,703	160,004	159,087	166,594	174,481
	GRANTED	58,117	62,108	65,655	66,712	64,613	68,419	95,940	105,635	127,625

#### TOTAL EP<sup>[1]</sup>

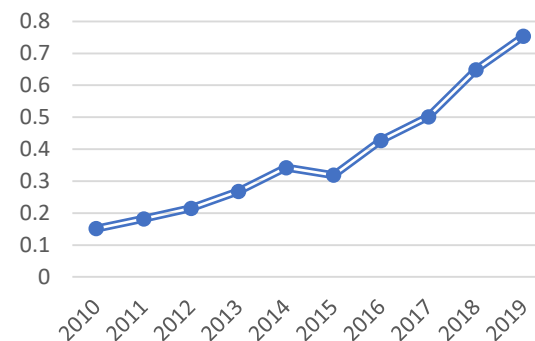
—●— FILED —●— GRANTED



#### G06Q - percentage of total filings



#### G06Q grants - Percentage of total



# The EPO approach

How it works and what you can do



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# The EPO interpretation of the statute

### **Invention** - EPO Guidelines G-II-2:

*"[T]he subject-matter of the claim is to be considered as a whole, in order to decide whether the claimed subject-matter has a technical character. If it does not, there is no invention within the meaning of Art. 52(1)."*

**Inventive Step (Obviousness)** – Guidelines G-VII-5; "problem and solution" approach:

- (i) Determine the closest prior art;
- (ii) Identify the "distinguishing features" with respect to that closest prior art, identify the "technical effect" they provide and therefore the "technical problem" that they solve.
- (iii) Considering whether the claimed invention, starting from the closest prior art and seeking to solve the objective technical problem, would be obvious to the skilled person.)

### Article 52 EPC

*(1) European patents shall be granted for any **inventions**, in all fields of technology, provided that they are new, involve an **inventive step** and are susceptible of industrial application.*

*(2) The following in particular shall not be regarded as inventions within the meaning of paragraph 1: (a) discoveries, scientific theories and mathematical methods; (b) aesthetic creations; (c) schemes, rules and methods for performing mental acts, playing games or doing business, and programs for computers; (d) presentations of information.*

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### A test for **technical character** (in two stages)

**Step 1: Is the claim directed toward excluded subject-matter as such?**  
If yes, claim is not patentable under Article 52(2) EPC. If no, go to Step 2.

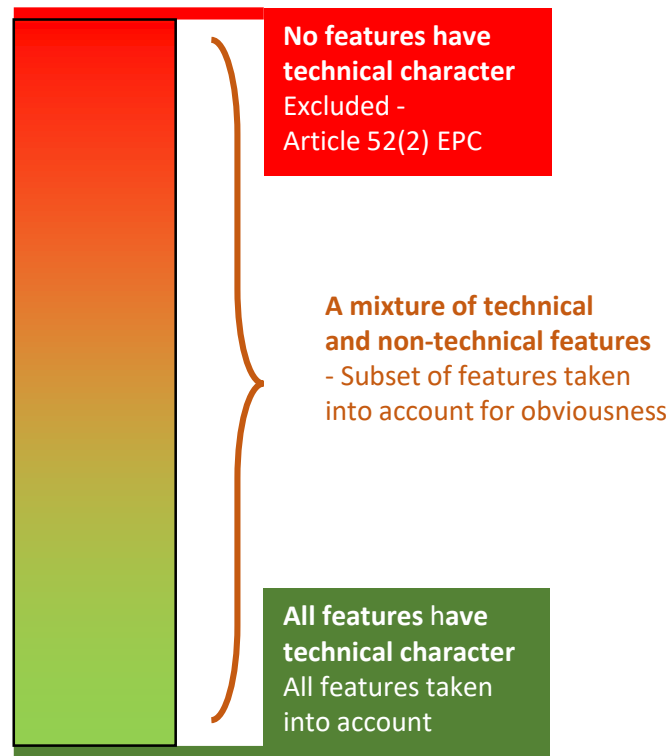
**Step 2: Apply a (refined) inventive step analysis**

***Step 2a: Identify features that contribute toward the technical character***

Such features include:

- a: Features of the claim that are per se “technical” (e.g. processor).
- b: Features of the claim are per se “non-technical” (e.g. mathematical method step), but in the context of the invention interact with the technical features to provide a technical effect.

***Step 2b: Conduct an inventive step analysis taking into account those distinguishing features that contribute toward technical character.***





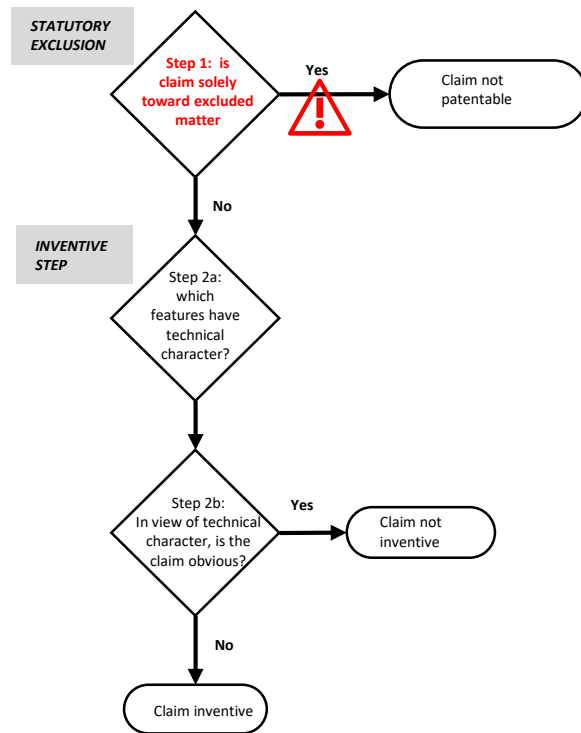
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### An example

"A method for verifying details of transactions drawn upon a financial account and a user's authorization to use the financial account, the method comprising:

- receiving from a user information identifying a financial account which the user desires to use, before the user may initiate an online transaction using the financial account;
- generating a series of verifying transactions involving the financial account, with selected details of the transactions not being known to the user;
- initiating the series of verifying transactions;
- identifying a first set of details of said series of verifying transactions;
- receiving from the user a test set of details, to include specified details of evidence of the verifying transactions retrieved by the user from his or her financial account;
- comparing said test set of details to said first set of details; and
- if said test set of details matches said first set of details, authorizing the user to conduct online transactions using the financial account."



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### T0844/09 [PayPal, Inc.] – cont.

"A computer-implemented method of operating a verification system for verifying details of transactions drawn upon a financial account and a user's authorization to use the financial account, the method comprising:

receiving from a user, at a user interface, information identifying a financial account which the user desires to use, before the user may initiate an online transaction using the financial account;

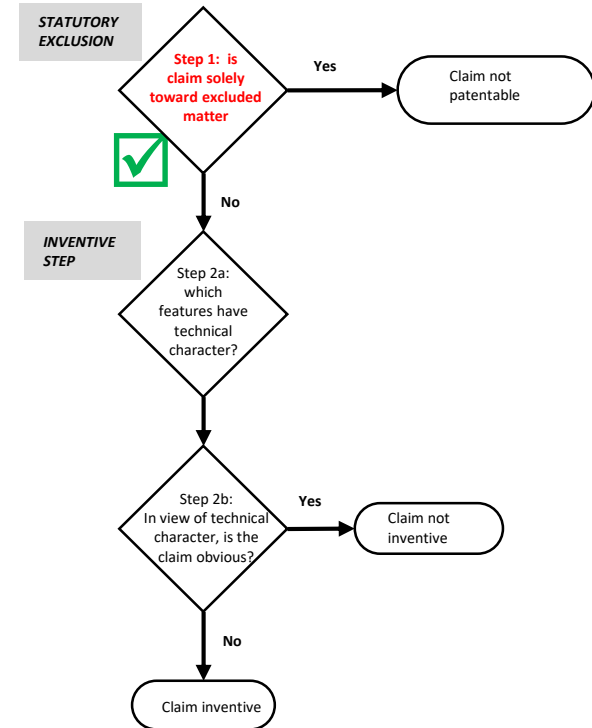
generating a series of verifying transactions involving the financial account, with selected details of the transactions not being known to the user;

initiating the series of verifying transactions from a transaction processor;

storing in storage means within the verification system a first set of details of said series of verifying transactions;

receiving from the user, at the user interface, a test set of details, to include specified details of evidence of the verifying transactions retrieved by the user from his or her financial account;

comparing said test set of details to said first set of details; and  
if said test set of details matches said first set of details, authorizing the user to conduct online transactions using the financial account."



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### T0844/09 [PayPal, Inc.] – cont. – Inventive Step

"A computer-implemented method of operating a verification system for verifying details of transactions drawn upon a financial account and a user's authorization to use the financial account, the method comprising:

receiving from a user, at a user interface, information identifying a financial account which the user desires to use, before the user may initiate an online transaction using the financial account;

generating a series of verifying transactions involving the financial account, with selected details of the transactions not being known to the user;

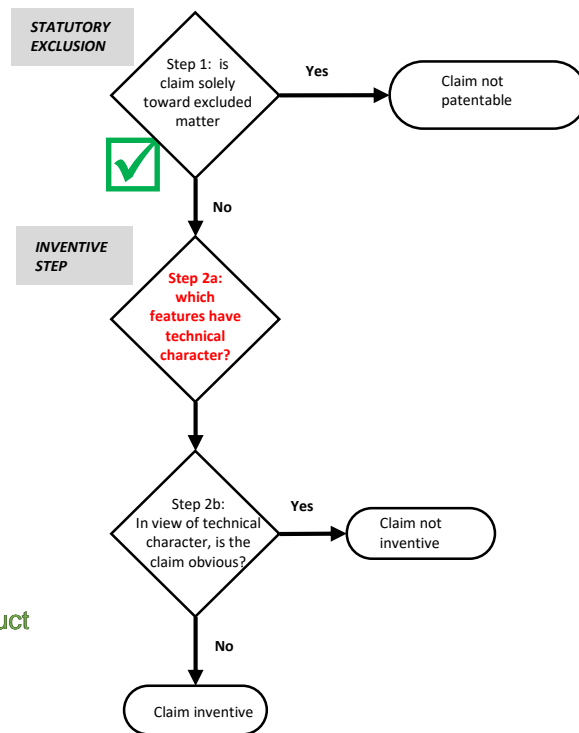
initiating the series of verifying transactions from a transaction processor;

storing in storage means within the verification system a first set of details of said series of verifying transactions;

receiving from the user, at the user interface, a test set of details, to include specified details of evidence of the verifying transactions retrieved by the user from his or her financial account;

comparing said test set of details to said first set of details; and

if said test set of details matches said first set of details, authorizing the user to conduct online transactions using the financial account."



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"A computer-implemented method of operating a verification system for verifying details of transactions drawn upon a financial account and a user's authorization to use the financial account, the method comprising:

receiving from a user, at a user interface, information identifying a financial account which the user desires to use, before the user may initiate an online transaction using the financial account;

generating a series of verifying transactions involving the financial account, with selected details of the transactions not being known to the user; initiating the series of verifying transactions from a transaction processor;

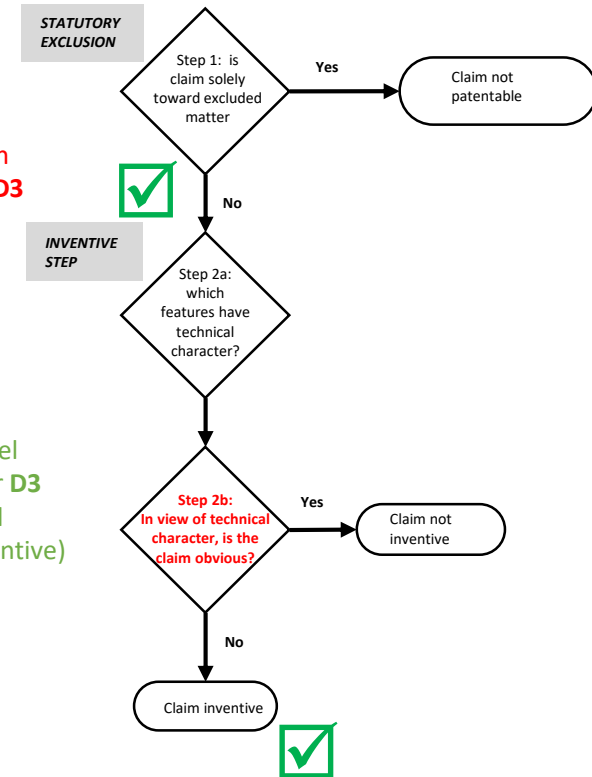
storing in storage means within the verification system a first set of details of said series of verifying transactions;

receiving from the user, at the user interface, a test set of details, to include specified details of evidence of the verifying transactions retrieved by the user from his or her financial account;

comparing said test set of details to said first set of details; and if said test set of details matches said first set of details, authorizing the user to conduct online transactions using the financial account."

Known  
from D3

Novel  
over D3  
(and  
inventive)



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A look at some further examples...

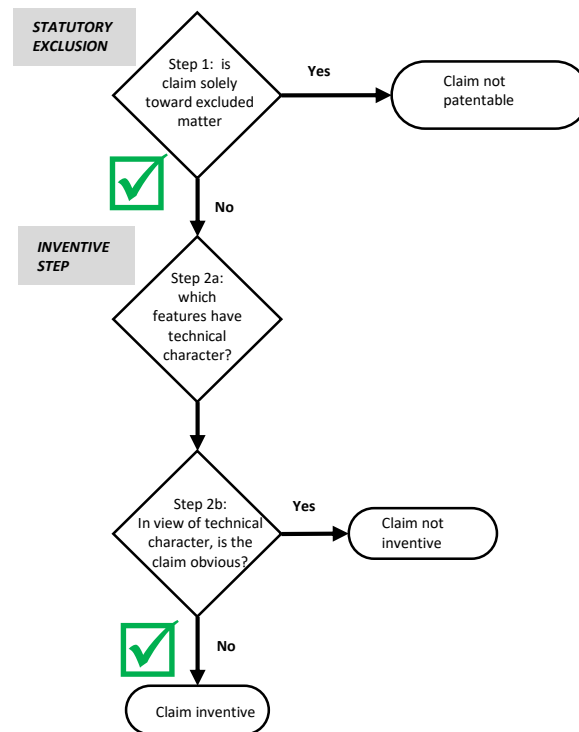


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### Example 1: T1749/14 [Maxim Integrated Products, Inc.]

1. A method comprising:
  - (a) storing customer account information in a customer mobile personal point-of-sale terminal (CMPPT), wherein the CMPPT includes a cellular telephone portion and a point-of-sale attachment portion; this CMPPT is personalized for the individual customer by storing (a) encryption key(s) that is(are) used for communication with the individual CMPPT of the individual customer, and using this personalized CMPPT in subsequent operations;
  - (b) after the storing of customer account information in the CMPPT according (a) receiving merchant account information into the CMPPT; and
  - (c) initiating a transaction by sending the customer account information and the merchant account information from the CMPPT to a financial transaction verification entity (FTVE).



Conclusion – Inventive (but remitted)

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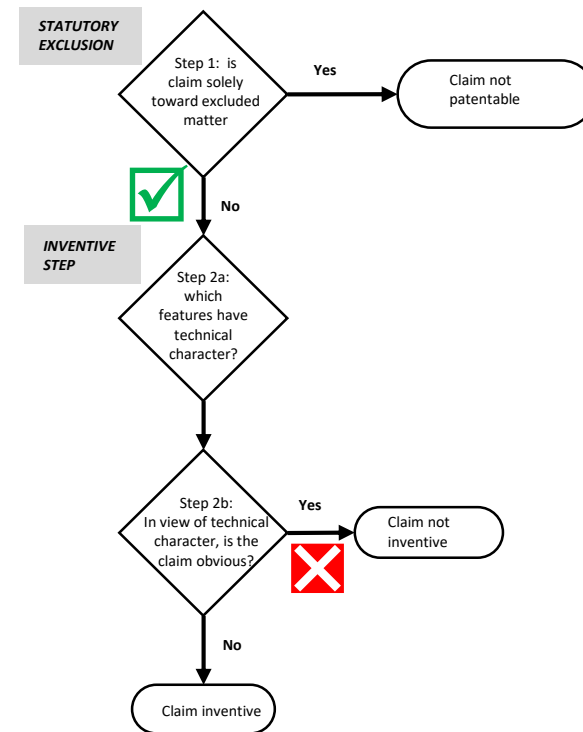
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### Example 2: T0247/15 [Open TV, Inc.]

1. A method of scheduling delivery of multiple advertisements selectively to a plurality of online users having client devices, comprising:

- determining expected values relating to each user being online to access information over the Internet during a given time period;
- generating an ordered list of the advertisements to be selectively delivered to the users based on the expected values, said ordered list being prioritized to meet delivery requirements associated with said advertisements;
- and generating an individual list of items of advertisements to be delivered to each user based on the ordered list, wherein said individual list is dynamically generated for each user on user login,
- transmitting advertisements according to the individual list of advertisements to each user.

**Conclusion – Does not involve an inventive step**



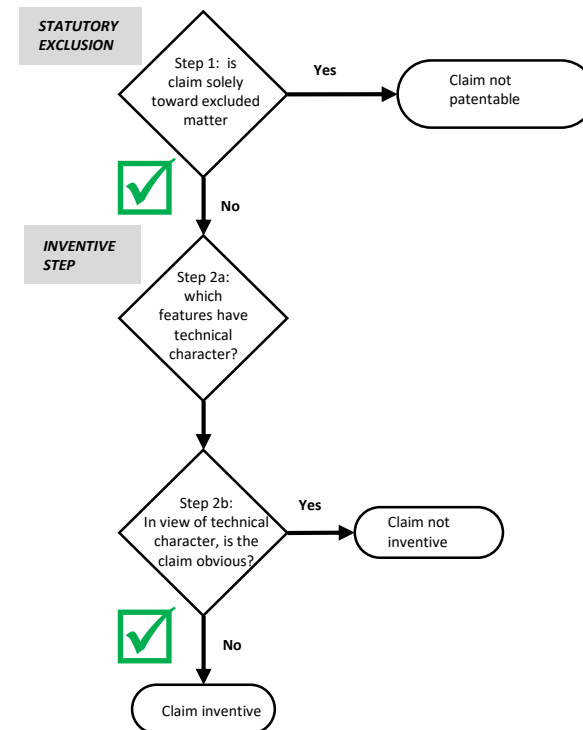
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### Example 3: T0171/14 [Dionex Corporation]

1. A method of analyzing and displaying data received from electrochemical analysis performed by applying one or more voltage waveforms on analyte(s) and measuring the resulting current in the analyte(s), the method comprising:
  - receiving raw data from the electrochemical analysis wherein the raw data is representative of the measured current parameters;
  - storing the received raw data;
  - displaying the raw data in a first plot, the first plot being a plot of the raw data as a function of time;
  - displaying the raw data in a second plot, the second plot being a three-dimensional plot of the raw data;
  - receiving a user-selected integration time interval based on a user-selected portion of a user-selected one of the first plot and the second plot;
  - integrating the raw data based on the user-selected integration time interval;
  - and
  - providing a response based on the processing.

**Conclusion – Involves an inventive step**





# Tips and Pointers

Increasing your chances

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## Strategies pre-OA – Drafting your application

- Consider a pre-filing review for description – adapt description to “problem-and-solution” framework.
  - Clear background section defining the technical problem to be solved.
  - Clear summary of invention and detailed description setting out how a technical solution is achieved.
  - Present disclosure in technical language.
- Co-file a separate EP alongside US non-provisional.
- Co-file a GB application at the same time as an EP.
- Consider reformulating your claim to present in a technical context (e.g. avoid using “finance” or other business-like terms). This could help with search category allocation.
- Avoid jargon within your claim or description. EPO examiners will read the claim in isolation – a description cannot be used as a dictionary.

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## Strategies – response to Office Action

- What worked locally might not work before EPO – consult with your EPA
- Introduce more *per-se* technical features into the claim (search dependent claims, description)
- Argue in favour of non-technical features having technical character. Review your disclosure for description of any objective, technical benefit (and downplay subjective technical benefit). Emphasize the technical steps of how a desirable result is achieved by the features in the claim.
- EPO has strict “added subject-matter” provisions, so unfortunately it is too late to add any material into the description that might otherwise help emphasize technical character. It is possible to rely on common general knowledge, but careful of a squeeze with inventive step...

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Thank you for your attention

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