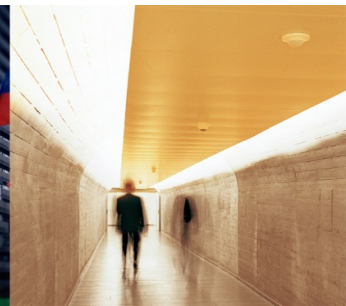


Examination of Computer Implemented Inventions CII and Business Methods Applications

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26-30 November 2012



Outline

- What are computer implemented inventions and business methods
- Legal context
- Common practice at the EPO
- Relevant decisions & examples

CII and Business Methods

- ❑ A Computer Implemented Invention is an invention containing features realised wholly or partially by means of a computer program.
- ❑ A business method has no clear definition, denotes commercial activities, marketing, financial strategies etc.
- ❑ A business method can be a CII or not.
 - *Method for selling toys in which toys are placed in low shelves easily accessible by young children.*

Legal Framework

Basic Requirements

EPC
European Patent Convention



Basic Requirements

European Patent Convention (EPC)

European patents shall be granted for
- **any inventions, in all fields of technology,**
provided that they

→ A.52(2)(3)

- are new

→ A.54

- involve an inventive step and

→ A.56

- are susceptible of industrial application

→ A.57

A.52(1)

What is an invention ?

What is an invention ?

No positive definition of an invention

EPC defines inventions by exclusions:

The following, in particular,
shall not be regarded as inventions:

- a) discoveries, scientific theories, 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;

A.52(2)

...only to the extent to which a European patent application relates to such subject matter or activities
as such.

A.52(3)

Legal Framework

Basic Requirements

EPC
European Patent Convention



Interpretation

Guidelines
for Examination in
the EPO



Case Law
of the
Boards of Appeal



Fundamentals of Examination

- determine if it (what) is an **invention**

- check **other requirements** recited in Article 52(1)
EPC

- legal context
 - EPC
 - decisions of the Boards of Appeal
 - guidelines for examination

What is an invention?

- ❑ Article 52 (2)&(3) EPC exclusions:
 - narrow interpretation
 - exclusions relate to purely abstract concepts devoid of any technical implication

- ❑ exclusion is relative
 - circumstances or interpretations which rule out exclusion

- ❑ from the BOA decisions and guidelines

need of technical character

Invention: Why require "technical character"?

□ implicitly contained in the EPC

the invention must be of **"technical character"**
to the extent that it

- must relate to a **technical** field → Rule 42(1)(a) EPC
- must concern a **technical** problem → Rule 42(1)(c) EPC
- must have **technical** features in terms of which the matter for which protection is sought can be defined in the claim → Rule 43(1) EPC

□ implicit requirement of the EPC corroborated by BoA (*T1173/97*, *T935/97*, *T931/95*, *T641/00*, *T258/03*)

What is technical character ?

- ❑ processing **physical data** parameters or control values of an industrial process

- ❑ processing which **affects the way a computer operates**
 - ✓ saving memory, increasing speed
 - ✓ security of a process, rate of data transfer etc.

- ❑ the **physical features of an entity**
 - ✓ memory, processor etc.

What is technical character ?

not enough

- ❑ involvement of technical considerations, if method may exclusively be carried out mentally *T 914/02*
GE, nuclear core
- ❑ although possibly encompassing a technical embodiment, also encompasses ways of implementing it that do not qualify as technical
T 619/02 QUEST, odour selection

What is technical character ?

... for computer programs

The normal technical effects like flow of electrical current are not sufficient

The computer program, when carried out has to provide a **"further technical effect"**

T 1173/97 (IBM)

T 935/97 (IBM)

What is technical character ?

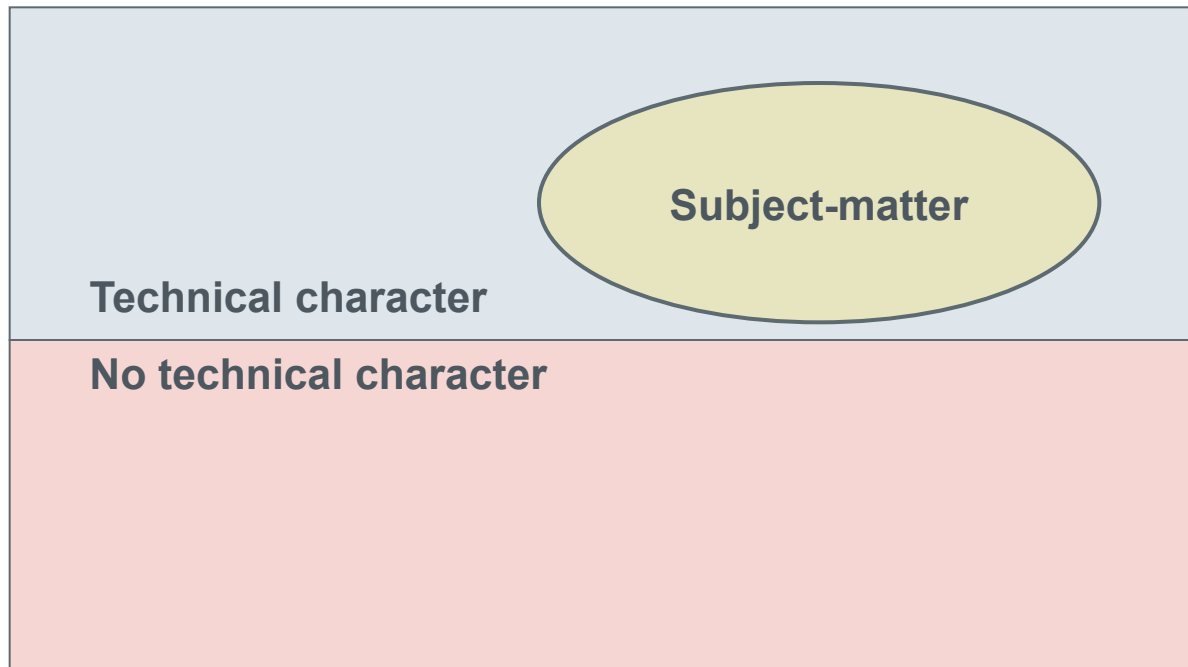
further technical effect	no further technical effect
control of a brake in a car	aesthetical effects of music or a video
faster communication between mobile phones	new rules for an auction scheme
secure data transmission (encryption of data)	selling and booking sailing cruise packages
resource allocation in an operating system	calculation of a pension contributions

Technical character assessment

- when*
 - at the search stage (if possible, otherwise examination)
- without using prior art*
 - *T1173/97 IBM, T0931/95 Pension Benefits (PB), T0258/03 Hitachi*
- claim considered as a whole*
 - *T0026/86 X-ray apparatus, T0208/84 VICOM*
- each feature or their combination needs to be considered*
 - *T0258/03 Hitachi* even trivial features can lend technical character
- claim category relevant?*
 - Yes in *T0931/95 PB*
 - No in *T0769/92 Sohei, T1173/97 IBM, T0258/03 Hitachi, Guidelines GII,2 (2012)*

So what is an invention ?

- ✓ Subject-matter *is not* excluded from patentability
- × **Subject-matter *is* excluded from patentability**



At least one feature has technical character
=> subject-matter has technical character.

Having technical character, is:

- a general and absolute requirement
- a requirement strictly separated from the other 3

T 154/04 (DUNS)

- ... but a trivial requirement!

T0258/03 Hitachi

Trivial requirement

"A method of encouraging customers to be loyal buyers by giving a discount on future purchases."

non-technical

*"A **computer implemented method** with a **database** of customers who have previously purchased goods for applying a discount to any subsequent purchase."*

technical

Fundamentals of Examination

- determine if it is an invention
- check other requirements recited in Article 52(1) EPC

European patents shall be granted for

- **any inventions, in all fields of technology,** provided that they

→ A.52(2)(3)

- **are new**

→ A.54

- **involve an inventive step** and

→ A.56

- are susceptible of industrial application

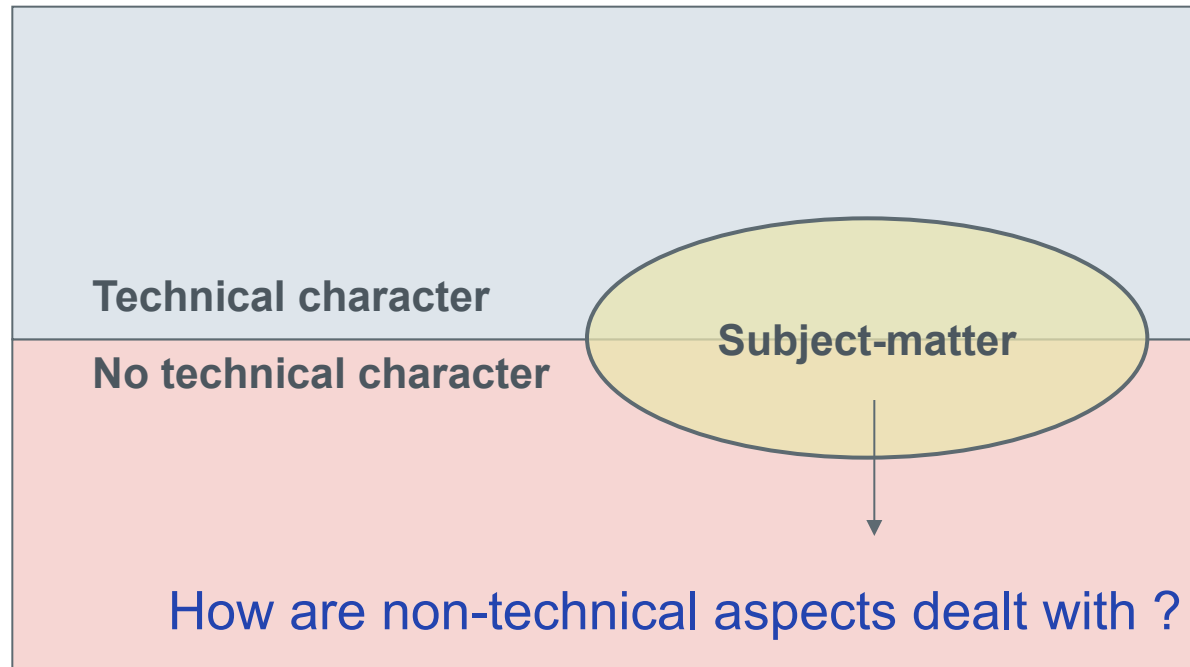
→ A.57

A.52(1)

Mixed type claims

The subject matter of the claim as a whole defines technical and non-technical aspects and thus has technical character.

→ assessment of novelty and inventive step



Assessing novelty A. 54

- Novelty exists if at least one technical feature distinguishes claimed invention from prior art.
-in practice, in particular for mixed-type claims

any distinguishing feature implies
novelty

What is an inventive step ?

- requires a non-obvious technical contribution, ie a non-obvious solution to a technical problem defined in terms of technical features

- assessed with respect to prior art

- Problem-and-solution approach
 - ✓ **Identify closest prior art**
 - ✓ **Determine differentiating features and their technical effects**
 - ✓ **Formulate an objective technical problem based on the differences**
 - ✓ **Decide whether the proposed solution is or not obvious for a person skilled in the art**

Assessing inventive step

- ❑ State of the art: **state of technology**

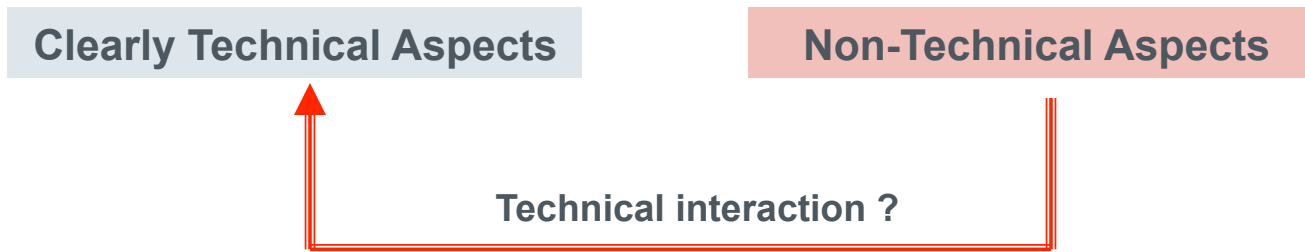
- ❑ Closest prior art (CPA): **chosen from a field of technology**

- ❑ Person skilled in the art
 - **Skilled in a field of technology**
 - Has **common general knowledge in the field**
 - Has **no knowledge of non-technical fields**

- ❑ Objective technical problem
 - problem that the skilled person might be asked to solve
 - derived by the **technical** differences between the closest prior art and the claimed subject-matter
 - it must be a **technical problem**
 - no pointers to the **technical** solution*

Assessing inventive step: Mixed-type claims

- In Computer-Implemented Inventions (and Business methods) inventions often mix technical aspects and excluded matter. How to determine a technical problem? **COMVIK approach T0641/00**



Features making no contribution to technical character (i.e. not contributing to the solution of a technical problem by providing a technical effect) **cannot support the presence of an inventive step** (*T641/00 COMVIK*)

Only technical features and aspects of the claimed invention should be taken into account in assessing inventive step.

Assessing inventive step

□ Objective technical problem

- problem that the skilled person might be asked to solve
- derived by the **technical** differences between the closest prior art and the claimed subject-matter
- it must be a **technical problem**
- no pointers to the **technical** solution, but ...

... where a claim refers to **an aim to be achieved in a non-technical field**, this aim may legitimately appear in the formulation of the problem as part of the framework of the technical problem that is to be solved, in particular as a constraint that has to be met. (T641/00;
COMVIK)

Assessing inventive step: Mixed-type claims

Clearly Technical Aspects



State of the art:

- state of technology

Closest prior art:

- always chosen from a field of technology

Skilled person:

- skilled in the field of information technology
- aware of common general knowledge in information technology
- no knowledge of non-technical fields
(T614/00; COMVIK)
(T0172/03; RICOH)

Non-Technical Aspects/ Process



'requirements specification'

= instructions given to a programmer summarising the requirements of the customer

i.e. business or administrative process to be automated

≠ state of the art (T172/03; RICOH)

non-patentable considerations, ideas and concepts that belong to the phase preceding any invention

(T154/04; DUNS)

CII & BM

mix of **non-technical** and **technical** features:

"requirement specification"

prior art in a field of technology

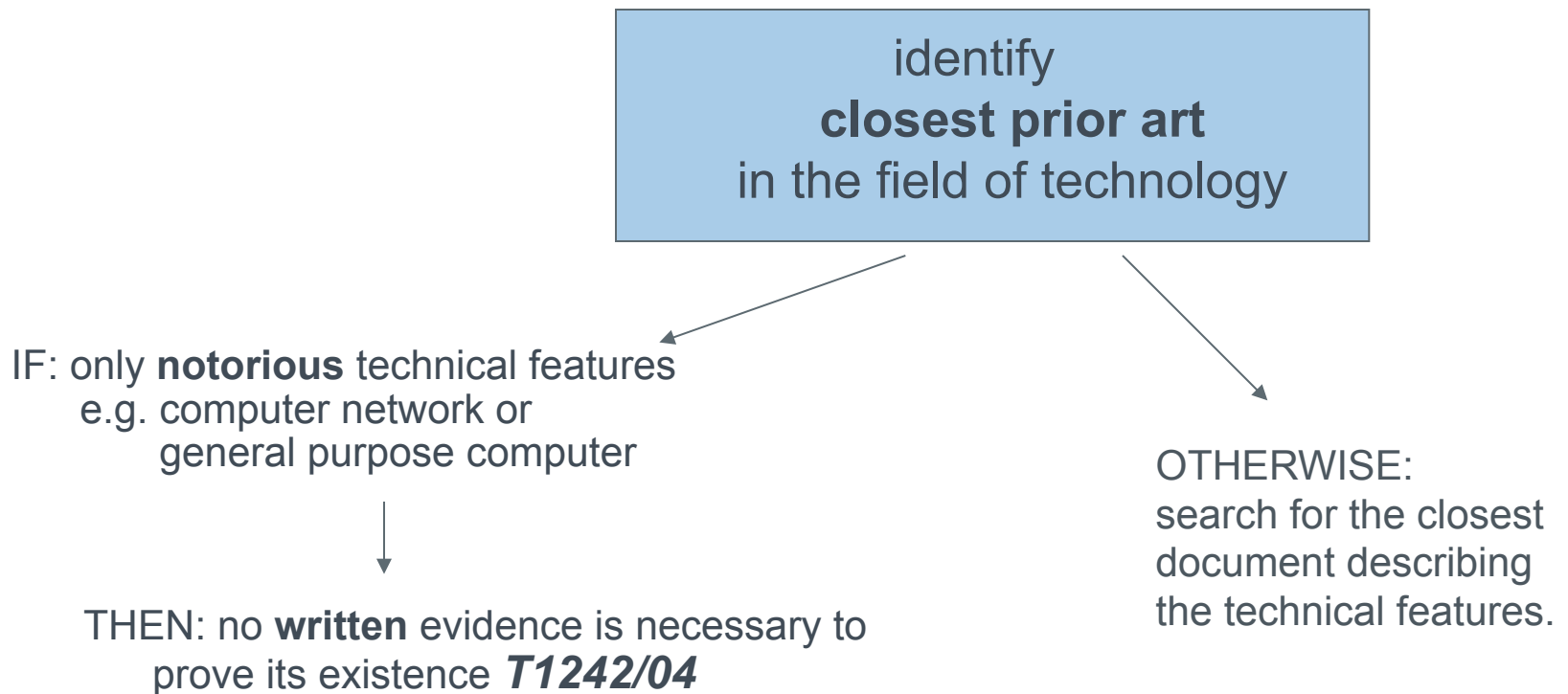
= instructions given to the programmer summarising the requirements of the customer

e.g. a business or administrative process to be automated

- skilled person is aware of it *T641/00 Comvik*
- normally found in description & in claims

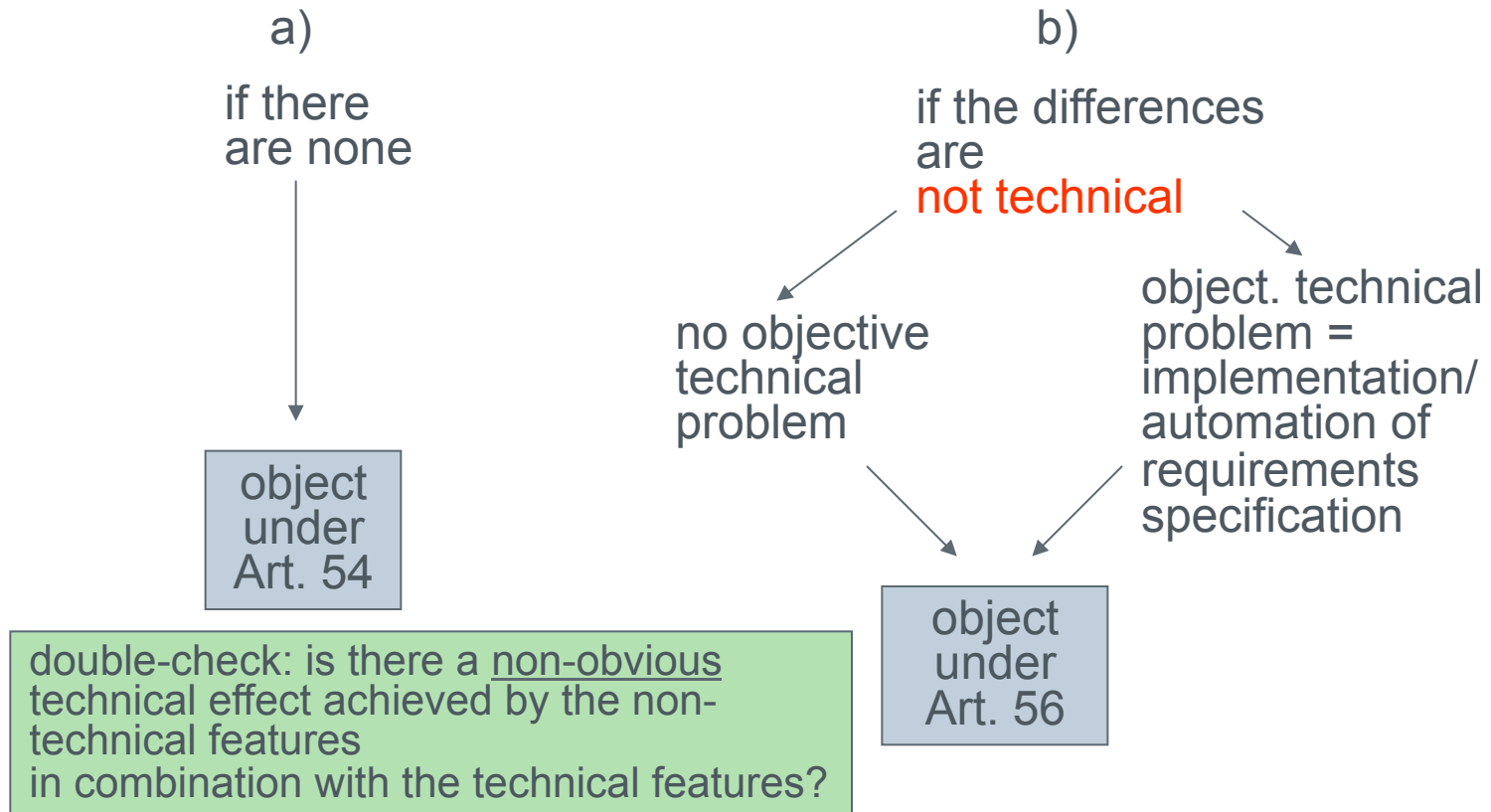
Mixed subject-matter

based on the **technical** implementation set out in the claims and description:



Mixed subject-matter

Identify **all the differences** between the subject matter of the claim and the closest prior art



Mixed subject-matter

Identify **all the differences** between the subject matter of the claim and the closest prior art

c)

if differences =
mix of **non-technical** & **technical**
features

i) formulate the objective technical problem taking into account the requirements specification e.g. *"how to adapt system of CPA in order to implement the business concept"*

Solution:

solution of the objective technical problem must require the technical features of the above identified differences.

ii) if the solution of the technical problem is obvious

→ object under Art. 56

double-check: Is there a non-obvious technical effect achieved by the non-technical features in combination with the technical features?

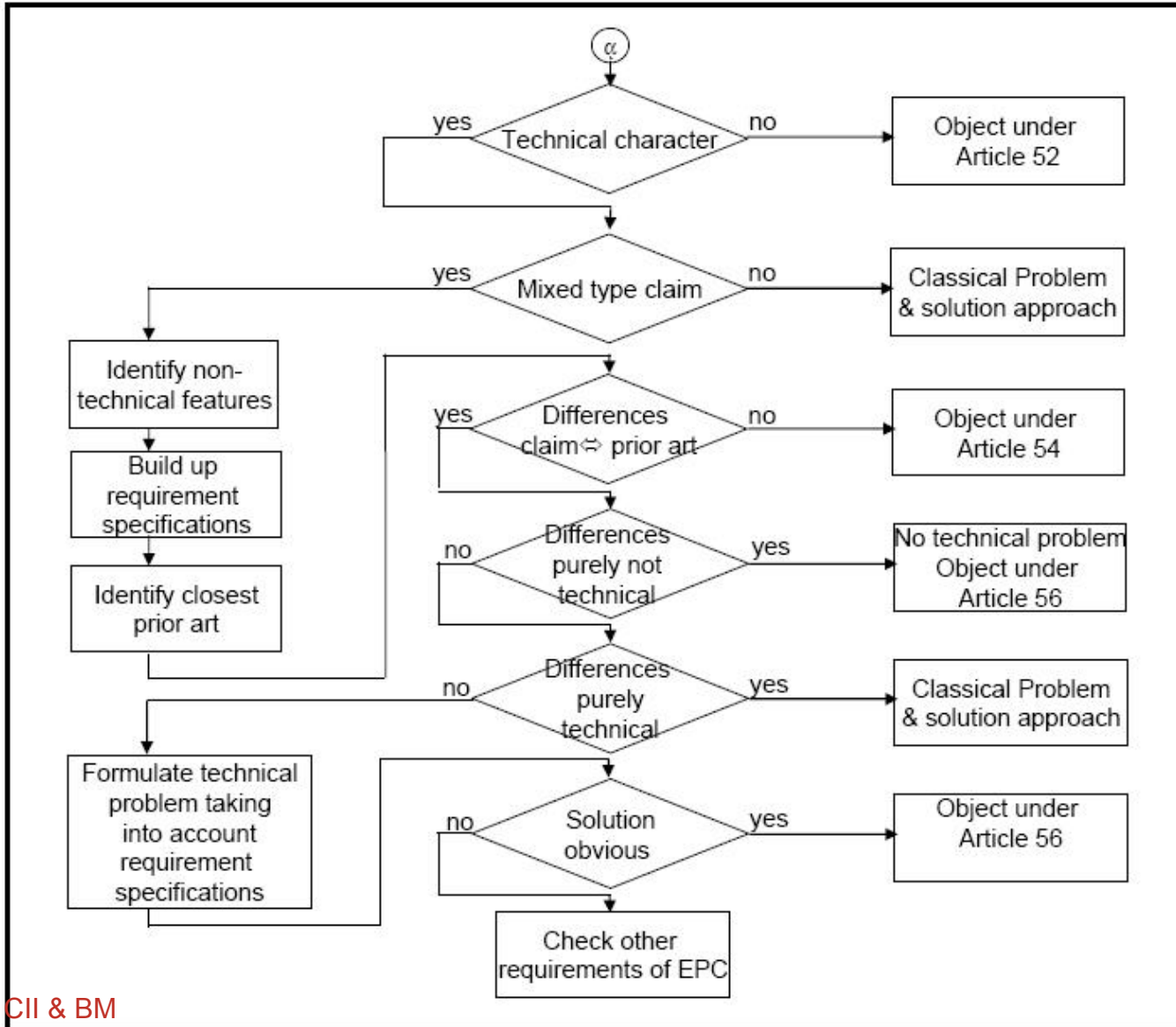
d)

if differences are purely
technical



apply
classical
PSA

Overview



Example I

Method for purchasing and payment of goods and services, preferably audio and/or video data provided on a provider's **platform in a computer network**, like the Internet, comprising the steps:

- taking a customer's order for goods and services, preferably an order for **audio and/or video data files**;
- providing a **download** of ordered goods and services, preferably of audio and/or video data files, for the customer; and
- debiting a mobile telephone account of the customer.

Example I

Technical	Yes
Mixed type claim	Yes
Requirement specs	<u>Ordering and paying for goods</u>
Closest prior art 	Platform for downloading audio files from the Internet
Differences	<u>Debiting mobile phone account</u>
Technical problem	<u>none</u>
Solution obvious	n.a.

Example I modified

Method for purchasing and payment of goods and services, preferably audio and/or video data provided on a provider's **platform in a computer network**, like the Internet, comprising the steps:

- taking a customer's order for goods and services, preferably an order for **audio and/or video data files**;
- providing a **download** of ordered goods and services, preferably of audio and/or video data files, for the customer; and
- debiting a mobile telephone account of the customer,

whereby the purchase data sent to the telephone company are at least **partially encrypted** by a password.

Example I modified

Technical	Yes
Mixed type claim	Yes
Requirement specs	Ordering and paying for goods
Closest prior art	Platform for downloading audio files from the Internet
Differences	Debiting mobile phone account and encrypting purchase data
Technical problem	Enhance data security
Solution obvious	Was encryption known?

Example II

In an **online** sales system that supports user-to-user sales, a **system** for facilitating the ability for users to list products for sale to other users, the system comprising:

a **browsable electronic catalog** of products that includes functionality for users to make **online** purchases of products;

a purchase history **tracking component** that maintains purchase histories of users of the system, the purchase histories including identifiers of products purchased from the **browsable electronic catalog**; and

Example II (cont.)

a marketplace **listing creation component** that supports an ability for a user to specify a product to be listed for sale by selecting the product from an **electronic display** of at least a portion of the user's purchase history, as maintained by the purchase history **tracking component**, whereby the user may select a used product unit that was previously purchased from the **electronic catalog** and is currently in the user's physical possession, and **add a listing** within the **electronic catalog** for reselling the used product unit;

wherein the marketplace **listing creation component** further provides an option for the user to specify within the listing at least a current condition of the used product unit and a selling price for reselling the used product unit.

Example II:

Technical Aspects

A (computer) system comprising:

- implicitly a server, clients and data transmission;
- an electronic catalog;
- implicitly data bases (purchase history);

Non-Technical Aspects/ Process

Business process: sales system, purchase history, marketplace user-to-user for re-selling previously purchased products

no technical interaction
does not contribute to technical character

The subject matter of the claim defines technical and non-technical aspects and thus has **technical character**.

→ assessment of inventive step

Example II

Technical character:	yes
Non-technical aspects:	yes
Requirements specification:	= business method: "user-to-user re-seller marketplace"
Closest prior art:	computer system comprising a server, databases, and a terminal which are connected via a communication network
Differences:	said business method
Skilled person:	data processing expert
Objective technical problem:	automate said business method on said computer system
Solution:	implementation/ automation is considered obvious

Example II

Technical character:	yes
Non-technical aspects:	yes
Requirements specification:	= business method: "user-to-user re-seller marketplace"
Closest prior art:	E-commerce system
Differences:	said business method
Skilled person:	data processing expert
Objective technical problem:	adapt E-commerce system to automate said business method on said computer system
Solution:	implementation/ automation is considered obvious

Example II

- ❑ Application EP02776385, filed 16-04-2004

- ❑ Search Report issued 27-12-2005
 - Declaration meaningful search not possible Rule 45 EPC 1973

- ❑ First communication issued 28-01-2011, objection A.56

- ❑ Application withdrawn 31-10-2011
- ❑ US Patent US 7,389,294 B2

Example III

An **electronic catalog system**, comprising:

an **electronic catalog** of products; and

a **server system** that provides online access to the **electronic catalog** of products and provides **functionality** for users to purchase products from the **electronic catalog**:

wherein the **server system** is responsive to a request from a user for a page from the **electronic catalog** by supplementing the page with information about a related order placed by the user, said page being a catalog page that provides a user option to select a product for purchase, whereby users are presented with context-dependent information being displayed without requiring the users to explicitly request order history information.

Example III:

Technical Aspects

A (computer) system comprising:

- implicitly a server, clients and data transmission;
- an electronic catalog;
- implicitly data bases (purchase history);

Non-Technical Aspects/ Process

Business process: sales system, purchase history, present information of related orders placed by user

no technical interaction
does not contribute to technical character

The subject matter of the claim defines technical and non-technical aspects and thus has **technical character**.

→ assessment of inventive step

Example III

Technical character:	yes
Non-technical aspects:	yes
Requirements specification:	= business method: "context-related purchases"
Closest prior art:	computer system comprising a server, database, and a terminal which are connected via a communication network
Differences:	said business method
Skilled person:	data processing expert
Objective technical problem:	automate said business method on said computer system
Solution:	implementation/ automation is considered obvious

Example III

Technical character:	yes
Non-technical aspects:	yes
Requirements specification:	= business method: "context-related purchases"
Closest prior art:	E-commerce system
Differences:	said business method
Skilled person:	data processing expert
Objective technical problem:	adapt E-commerce system to automate said business method on said computer system
Solution:	implementation/ automation is considered obvious

Example III

- Application EP1407408, filed with amended claims 18-12-2009
- Search Report issued 15-06-2004
 - Declaration meaningful search not possible Rule 45 EPC 1973
- Amended claims filed 17-08-2004 (cache and dynamic introduction of information to the web page introduced in claim 1)
- First communication issued 11-03-2005, objected on A.56
- Replied received on 20-06-2005
 - provide more efficient system and process defined as objective technical problem, Oral Proceedings requested
- Summons to Oral Proceedings issued 25-06-2008
 - A. 56 use of cache for improving efficiency well-known, dynamic generation web pages also known: obvious solution
- Application withdrawn 01-07-2008
- US Patent US 7,672,874 B2

Example III, amended claim 17-08-2004

A **server system** that provides online access to a browsable electronic catalogue of item, and provides functionality for users to order items from the electronic catalogues using computing devices that communicate with the server system over a network, the server system comprising a database that stores user-specific data descriptive of orders placed by users from the electronic catalogue, the server system characterised by:

a **cache** that temporarily stores data descriptive of orders previously placed by users that are currently browsing the electronic catalogue, including data retrieved from the database;

wherein the **server system** is programmed to respond to a request from an online user for a catalogue page that describes a catalogue item by at least (1) checking the cache for information about an order, previously placed by the user, that is related to the catalogue item, and (2) if the cache contains information about such a related order, **dynamically incorporating the information about the related order into the catalogue page** for presentation to the user;

whereby users are provided with personal, context-dependent information about previously placed orders during browsing of the electronic catalogue.

To bear in mind...

- ❑ **Circumventing** a technical problem rather than solving it by technical means cannot contribute to the technical character of the subject-matter claimed. *(T258/03; HITACHI)*
- ❑ A **mere automation** of constraints imposed by the **purely non technical aspects**, such automation using conventional hardware and programming methods is considered to be obvious to a skilled person. *(T172/03; RICOH)*
- ❑ Use of data processing means for processing or providing **information** of purely administrative, actuarial and/or financial character not inventive *(T931/95; PBS)*

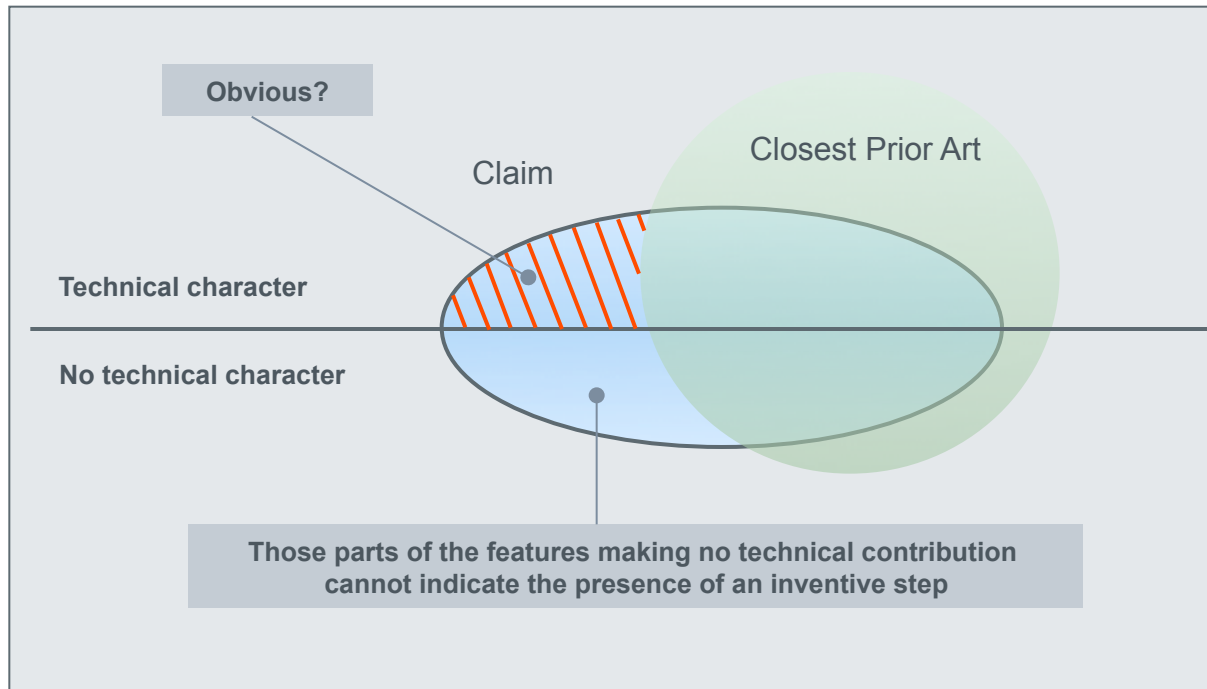
To bear in mind....

- ❑ Presentation of information
The task of designing diagrams is non-technical. This is so, even if the diagrams arguably convey information in a way which a viewer may intuitively regard as particularly **appealing, lucid or logical** (T125/04; CVA)

- ❑ A specific manner of representation does not contribute to inventive step if
it is conceived exclusively with regard to a human being's **mental** capabilities and with a view to aiding a user to visually analyse data and make decisions on the basis of this analysis;
it does not relate to any technical format or structure of the information processed, nor is it linked to the internal functioning of the system (T125/04; CVA)

What you should be looking for

A non-obvious technical contribution over the prior art in the technical field is necessary.



A confirmed approach ?

With respect to this approach towards exclusion from patentability and inventive step assessment,

- T154/04 (DUNS)

found that it has a "**sound legal basis** in the Convention and is **consistent** with the Case Law of the Boards of Appeal".

A confirmed approach ?

With respect to this approach towards exclusion from patentability and inventive step assessment,

- ❑ The referral to the Enlarged Board of Appeal (G3/08)

found **no divergence of case law**, but normal evolution and development of jurisprudence;

noted that Art. 52 threshold indeed low, but doesn't mean that no influence on inventive step assessment;

considered the approach to assess inventive step laid down in T154/04 appears to be a "**practicable system** for delimiting innovations for which a patent may be granted."

Thank you for your attention

More information:

www.epo.org



Declaration of "No Search"


Rule 63 (extract)

- European patent application does not comply with the provisions of the Convention to such an extent that


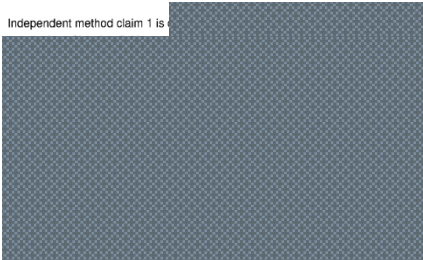
- not possible** to carry out a **meaningful search** into the state of the art on the basis of all or some of the claims

- either
 - declare that search is not possible or
 - draw up a partial European search report.

Declaration of "No Search"

 European Patent Office		DECLARATION which, under Rule 45 of the European Patent Convention EP 03 82 4846 shall be considered for the purposes of subsequent proceedings, as the European search report		Application Number: 03 82 4846
The Search Division considers that the present application, does not comply with the provisions of the EPC to such an extent that it is not possible to carry out a meaningful search into the state of the art on the basis of all claims. Reason: The claims relate to subject-matter excluded from patentability under Article 52(2) and (3) EPC. Given that the claims are formulated in terms of such subject matter or merely specify commonplace features relating to its technological implementation, the search examiner could not establish any technical problem which might potentially have required an inventive step to overcome. Hence it was not possible to carry out a meaningful search into the state of the art (Rule 45 EPC; see also Guidelines for Examination in the EPC, Part B, Chapter VIII, 1-6). The applicant's attention is drawn to the fact that a search may be carried out during examination following a declaration of no search under Rule 45 EPC, should the problems which led to the declaration being issued be overcome (see EPC Guideline C-VI, 6.5).		CLASSIFICATION OF THE APPLICATION (CLASS)		G06F17/50
2 EP 03 82 4846 (EN)		Place of search: MUNICH		Date: 6 April 2004
		Examiner: Hopper, E		



		Beschreibungsprotokoll (Anlage)	Communication Minutes (Annex)	Notification Proceeding-verbal (Annex)
		Blatt: Sheet: Page(s):	1	Anmelde-Nr.: Application No.: 03 024 846.2 Demandes n°:
The examination is being carried out on the following application documents:				
Text for the Contracting States: AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LU MC NL PT RO SE SI SK TR LI				
Description, pages: 1-29 as originally filed				
Claims, No.: 1-29 as originally filed				
Drawings, sheets: 1/7-7/7 as originally filed				
1. Article 52(2) EPC 1.1 Independent Method Claim a. Independent method claim 1 is				
				
b.				
EPO Form 2006 01 INT EX				

declaration under Rule 63

EPC: ESOP; Rule 62

PCT: Chapter I:
 Chapter II:

Art. 17(2) PCT and Rule 39.1 PCT
 Rule 70.2(d) PCT

T1242/04

No-Search:

- does relate to situation where a meaningful search cannot be carried out
- does not relate to the possible relevance of the results of the search in a possible later substantive examination
- Rule 63 (EPC2000) is considered as an exception situation.
- in the case of claims containing **non-technical aspects**:
 - Rule 63 applies only where there are **no technical aspects** in the entire claim set.



T1242/04

- Notorious general technical knowledge does not require documentary evidence.
e.g. client/server; data files; general database technology.
- Such non-documented general technical knowledge can be used as closest prior art.

"No Document" search report



**SUPPLEMENTARY
EUROPEAN SEARCH REPORT**

Application Number

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
L	<p>EPO: "Mitteilung des Europäischen Patentamts vom 1. Oktober 2007 über Geschäftsmethoden = Notice from the European Patent Office dated 1 October 2007 concerning business methods = Communiqué de l'Office européen des brevets, en date du 1er octobre 2007, concernant les méthodes dans le domaine des activités"</p> <p>JOURNAL OFFICIEL DE L'OFFICE EUROPEEN DES BREVETS.OFFICIAL JOURNAL OF THE EUROPEAN PATENT OFFICE.AMTSBLATT DES EUROPAEISCHEN PATENTAMTS, OEB, MUNCHEN, DE, vol. 30, no. 11, 1 November 2007 (2007-11-01), pages 592-593, XP007905525 ISSN: 0170-9291</p> <p>The claimed subject matter, with due regard to the description and drawings, relates to processes comprised in the list of subject matter and activities excluded from patentability under Art.52(2) and (3) EPC. The applicant is advised that in accordance with the established practice of the EPO, no search need be performed in respect of those aspects of the claimed invention.</p> <p>The only identifiable technical aspects of the claimed invention relate to the use of conventional, general -purpose data processing technology for processing data of an inherently non-technical nature. The information technology employed is considered to have been generally known as it was widely available to everyone at the date of filing/priority of the present application. The notoriety of such prior art cannot reasonably be contested. No documentary evidence was therefore considered required.</p> <p>The supplementary search report has been based on the last set of claims valid and available at the start of the search.</p>	1-2	<p>INV. G06F17/60</p>
			<p>TECHNICAL FIELDS SEARCHED (IPC)</p> <p>G06F</p>
Place of search		Date of completion of the search	Examiner
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant # taken alone Y : particularly relevant # combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons</p> <p>& : member of the same patent family, corresponding document</p>			

EPO FORM 1505 (04.06.2010)