

GERMAN AND EUROPEAN PATENT ATTORNEYS COMPUTER SCIENCE

[CONTACT US](#)

Patenting Software in the Context of Embedded Systems



Speaker: Dr. Jochen Reich

Dr. Jochen Reich represents clients as German and European Patent Attorney focusing on information technology. He graduated at Technical University of Munich and holds a Master's Degree and Ph.d. both in computer science. He chairs the patent working group of Society for Computer Science representing the largest computer science community in the German speaking area. He operates his law firm in Munich in close proximity to the German and European Patent Office.

[< Back to the EventList](#)

Patenting software in the context of embedded systems

**NOV
12
2020**

Lecture > electronica Conferences > electronica Embedded Platforms Conference
> Track 4: Software & Tools

15:20-15:50 h | Virtual

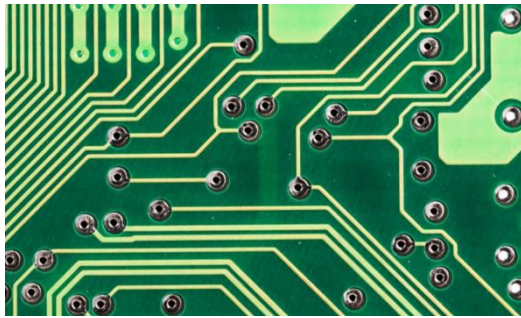
Software patenting in Europe is a complex task but is highly required to keep up with international competition and protection of innovation and intellectual assets. The audience will gain a first hand insight in European and German patent practice and will learn about software patenting in the context of embedded systems. The audience will experience the procedure towards protecting intellectual properties and the specific challenges of embedded systems. Detailed examples are discussed and solutions are demonstrated. The benefit will be a first insight in patenting software and an understanding of general guidelines how to proceed with inventive contributions towards patenting. Patenting software in the field of embedded systems is specific and requires appropriate handling. Patents are an appropriate and necessary means towards protecting intellectual property and fostering innovation.

Subjects: Embedded systems

Speaker: Dr. Jochen Reich (Reich-IP)

Embedded Systems

Hardware



Software

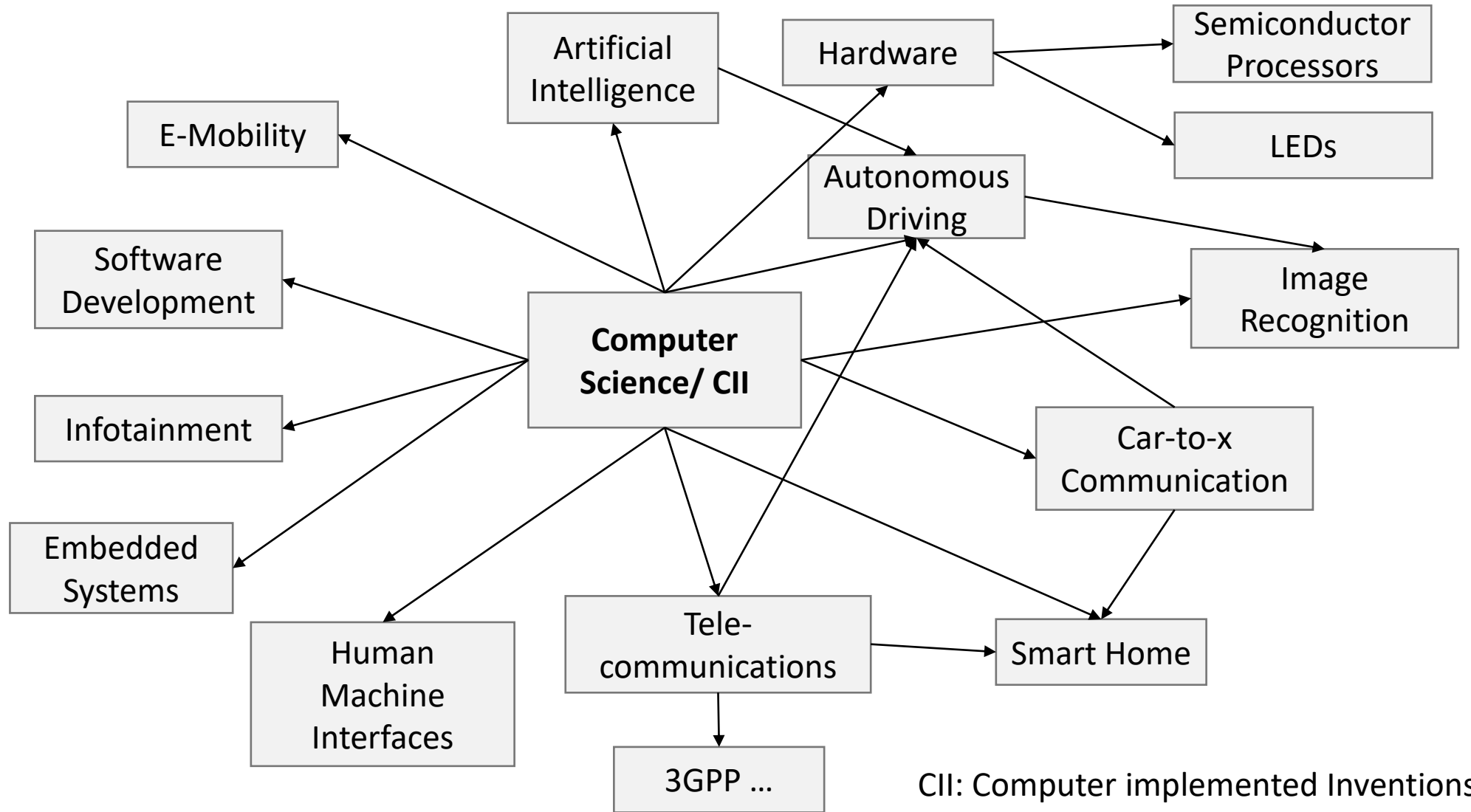
```
83 public class LinkedList<E>  
84     extends AbstractSequentialList<E>  
85     implements List<E>, Deque<E>, Cloneable, java.io.Serializable  
86 {  
87     transient int size = 0;  
88  
89     /**  
90      * Pointer to first node.  
91      * Invariant: (first == null && last == null) ||  
92                  (first.prev == null && first.item != null)  
93      */  
94     transient Node<E> first;  
95  
96     /**
```



Patents



Embedded Systems:
Patenting Hardware and/ or Software?
=> Strategies?



CII: Computer implemented Inventions

Guidelines for Examination in the European Patent Office:

- (iv) Examples of allowable claim types
 - Methods of operating a data-processing system comprising steps A, B, ... – a data-processing apparatus/system comprising means for carrying out said method – a computer program [product] adapted to perform said method – a computer-readable storage medium/data carrier comprising said program;

3.9.1 Cases where all method steps can be fully implemented by generic data processing means

A common type of CII relates to subject-matter where all the method steps can fully be carried out by computer program instructions running on means which, in the context of the invention, provide generic data processing functions. Such means can, for example, be embedded in a personal computer, smartphone, printer etc. In such inventions, although different claim structures are possible, the set of claims usually starts with a method claim. Further claims in other categories with subject-matter corresponding to that of the method may be included to obtain complete protection of the invention. If the invention concerns software which can be loaded into memory, transmitted over a network or distributed on a data carrier, a claim to a computer program [product] may also be present in addition to a computer-implemented method. The category of a computer program [product] claim is distinguished from that of a corresponding computer-implemented method (T.424/03 and G.3/08). The following non-exhaustive list comprises examples of acceptable claim formulations (T.410/96, T.1173/97 and T.2140/08) in such a set of claims:

4.13.1 Interpretation of expressions such as "Apparatus for ...", "Product for ... "

If a claim commences with such words as "Apparatus for carrying out the process ...", this must be construed as meaning merely apparatus suitable for carrying out the process. An apparatus which otherwise possesses all of the features specified in the claims but which is unsuitable for the stated purpose or requires modifications to enable it to be so used for said purpose, is normally not considered as anticipating the claim.

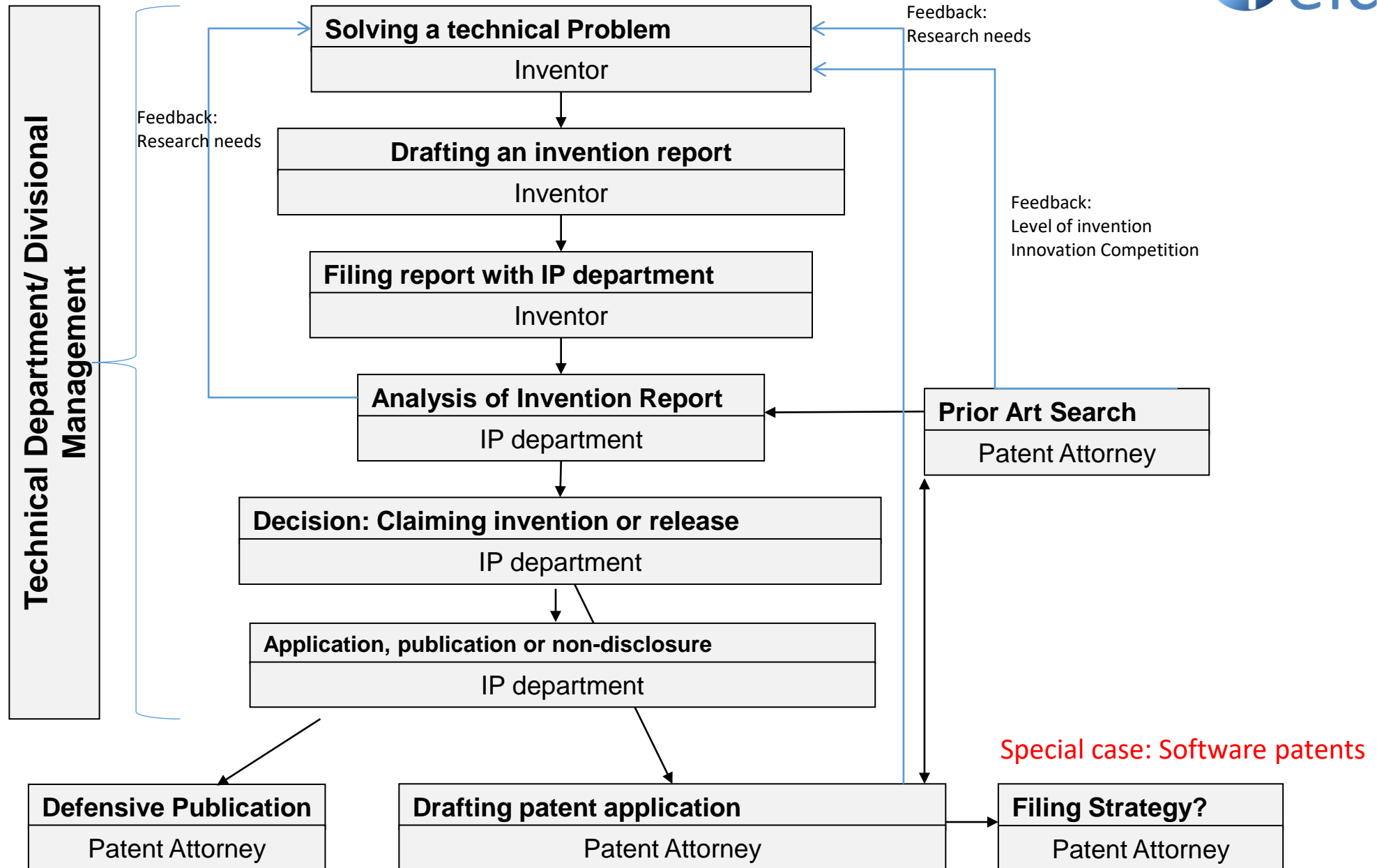
Memory for storing information:

ANY (!) memory

Claim types:

- (Computer implemented) method
- Apparatus/ System arrangement
- Computer Program Product

Way to protection:



Disclosure of the invention?

- What is considered to form prior art?
- When is a technical teaching disclosed?
 - Code obfuscation techniques
 - Types of Reverse Engineering
 - Encryption of Code
 - Distributed/ heterogeneous data sources
- Burden of proof
- Advantages/ Disadvantages of Disclosure
- Perspectives: applicant/ opponent

European Patent Convention EPC

Article 52

Novelty

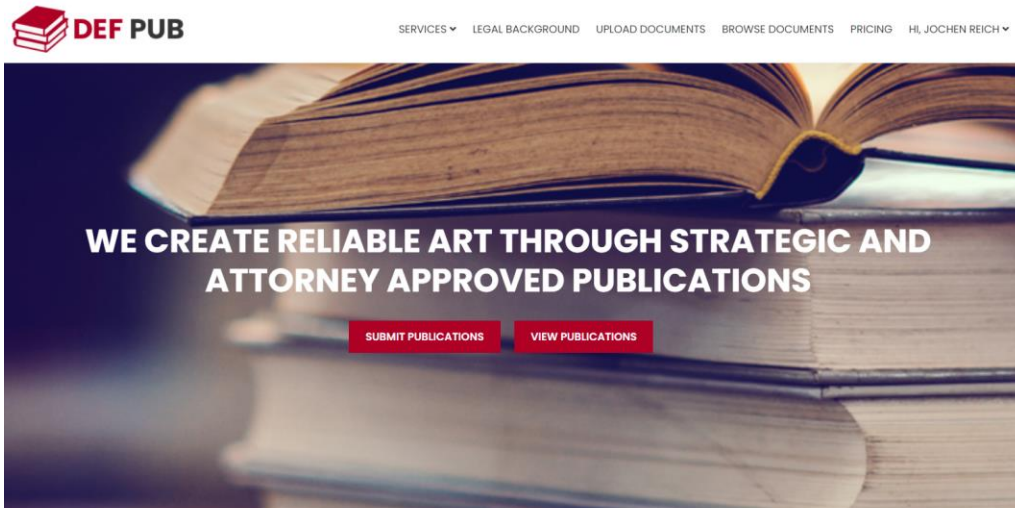
(1) An invention shall be considered to be new if it does not form part of the state of the art.

(2) The state of the art shall be held to comprise everything made available to the public by means of a written or oral description, by use, or in any other way, before the date of filing of the European patent application.



Defensive Publications:

www.def-pub.de
www.def-pub.com



OUR SERVICES



EASY PUBLICATION



BROWSE PUBLICATIONS



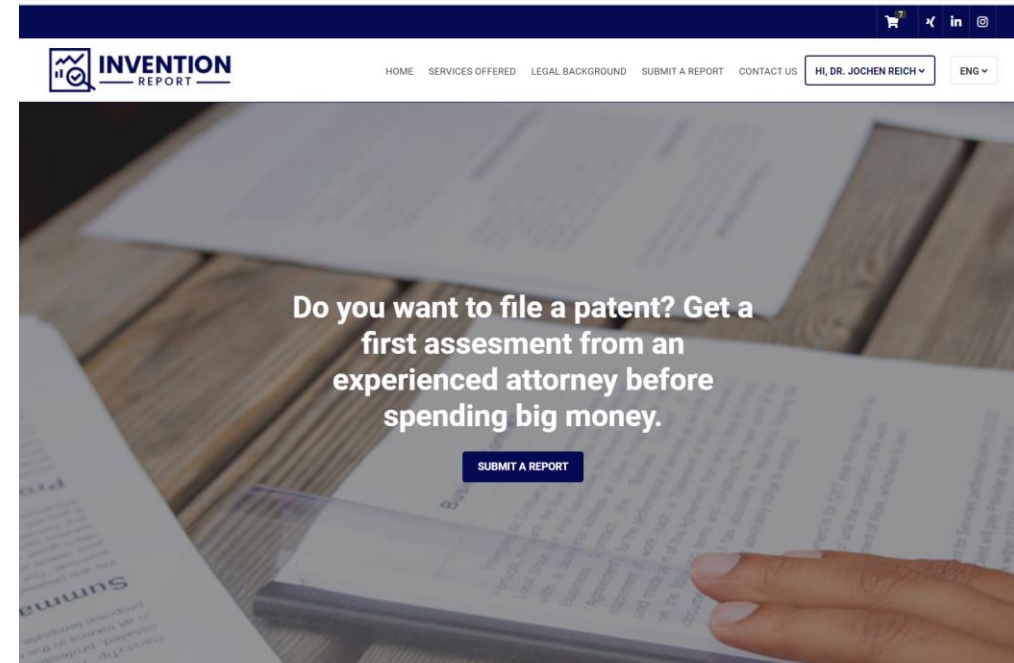
LEGAL ADVICE



PATENT FILING

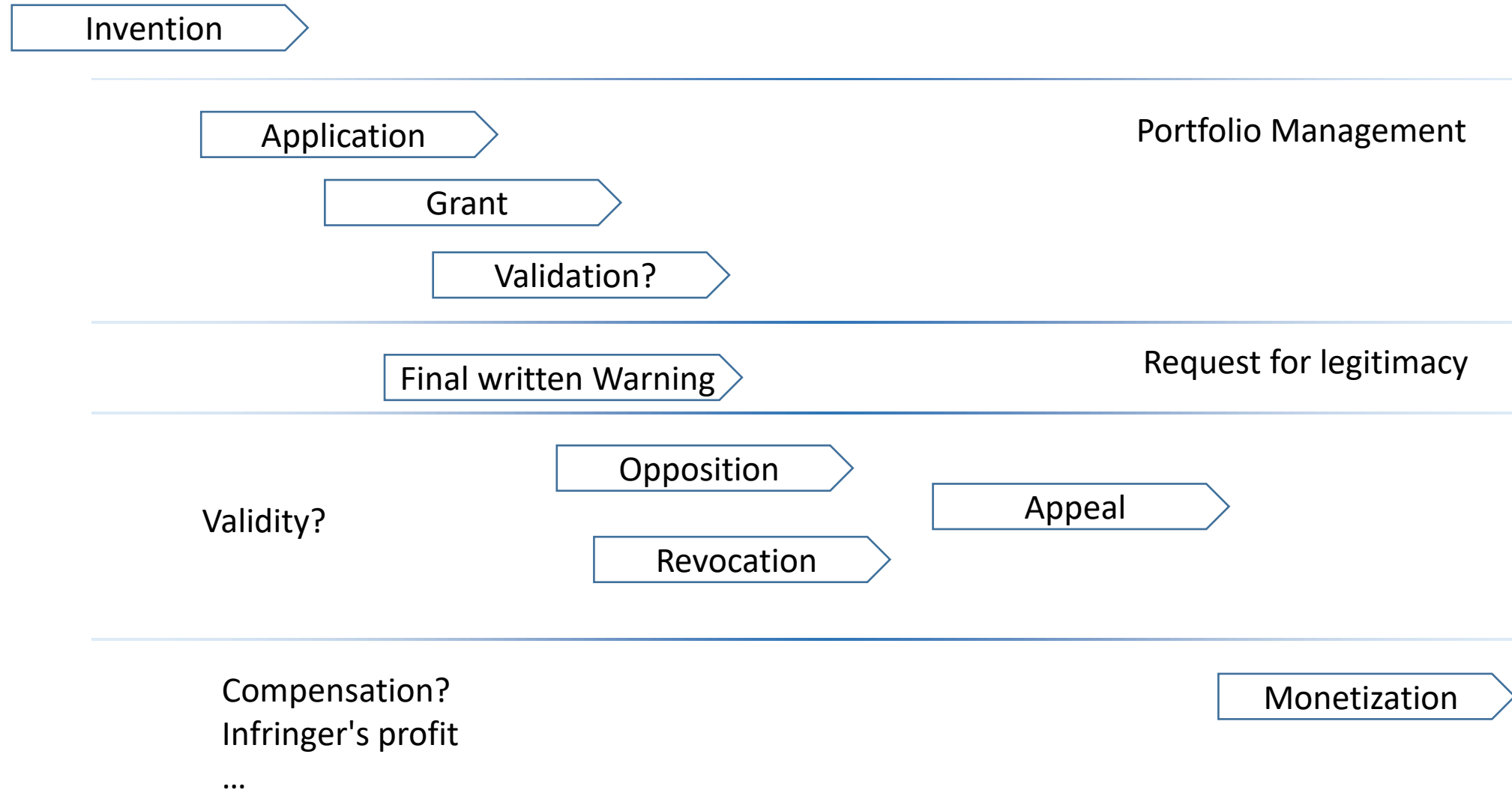
Filing an Invention:

www.erfindungsmeldung.de
www.invention-report.com



Services Offered

Have you made an invention and are you considering patenting it? For this you would like a first assessment of whether an



German Patent Act, Patentgesetz, PatG

§ 1

(1) 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) (...)

(3) The following in particular shall **not** be regarded as inventions within the meaning of subsection (1):

1. discoveries, scientific theories and mathematical methods;
2. aesthetic creations;
3. schemes, rules and methods for performing mental acts, playing games or doing business, and **programs for computers**;
4. presentations of information.

(4) Subsection (3) shall exclude patentability only to the extent to which protection is being sought for the subject-matter or activities referred to **as such**.

European Patent Convention EPC

Article 52

Patentable inventions

(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**.

Applying the Problem-solution approach

1. Determination of the closest prior art
2. Identifying Distinguishing Features
3. Formulation of technical effect
4. Formulation of the objective technical problem
5. Could-would approach

Embedded System: Software and/ or Hardware
=> Mixed type? Software as such?

The COMVIK decision (simplified)

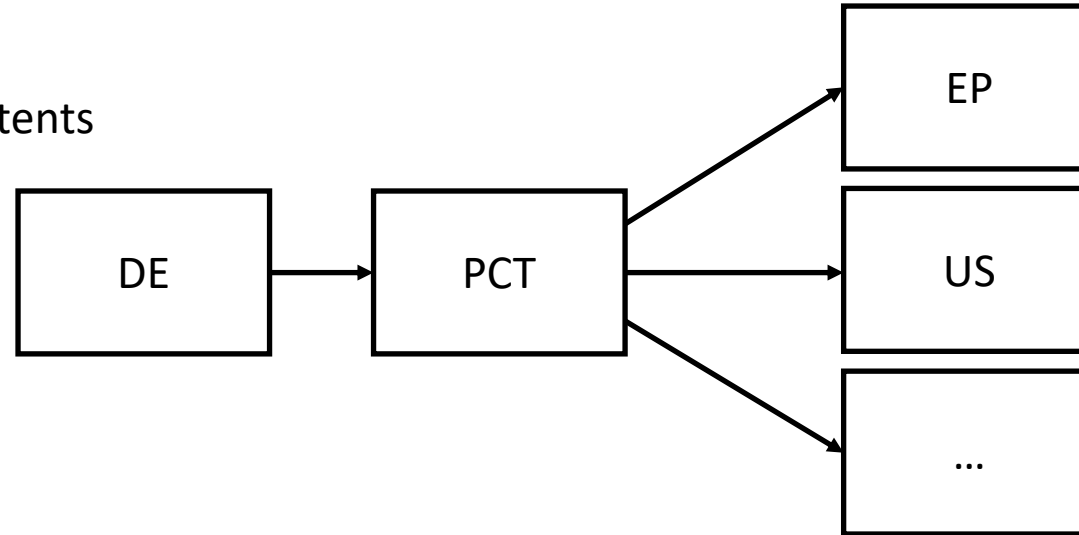
A method in a digital cellular phone system of the GSM type, in which subscriber units (MS) are controlled by a subscriber identification module (SIM), **characterized in that**

the subscriber identification module (SIM) has at least two optionally usable identifiers (IMSI 1, IMSI 2), the data of which are stored in a location directory of the system, whereby

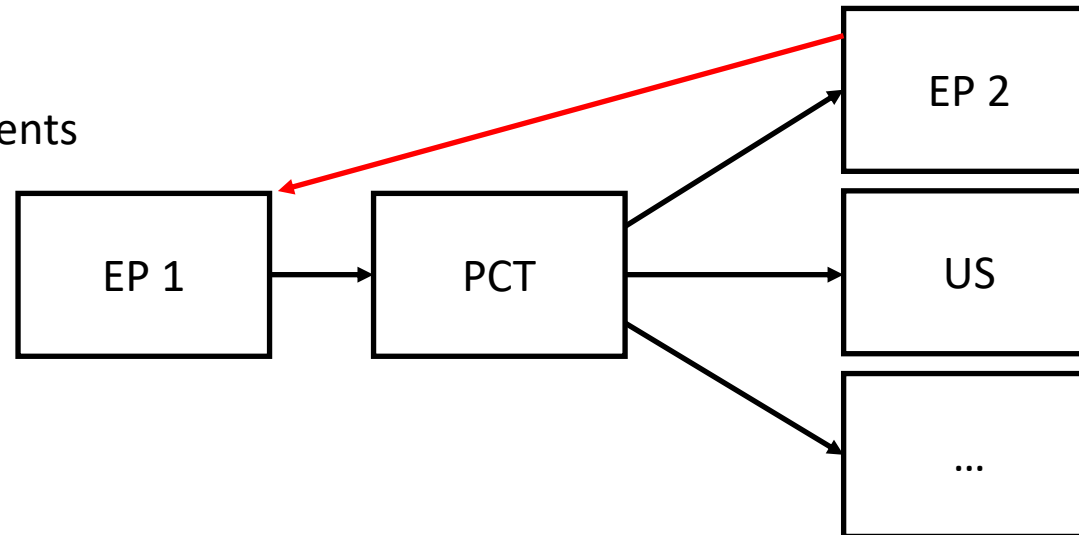
only one identifier (IMSI 1 or IMSI 2) can be activated at a time and the user can choose the desired one when using a subscriber unit (MS),

the optional activation being used to split the charges between business and private calls or between different users.

Hardware Patents



Software Patents



Aspects to be considered:

- specific patent practice in each jurisdiction
- enforcement on national level
- challenging patents on regional/national level
- different ways to national protection
- specific drafting techniques

Thank you for the Attention

Dr. Jochen Reich

Patentanwalt, European Patent Attorney

Computer Scientist

Any questions? Let's connect:



Further reading:

www.reich-ip.com

Reich-ip HOME LEISTUNGEN FACHGEBIETE TEAM JOBS LINKS KONTAKT LOGIN | IMPRESSUM GER

**PATENTANWÄLTE
GERMAN AND EUROPEAN
PATENT ATTORNEYS
INFORMATIK**

KONTAKT

www.softwarepatente.com

>> Softwarepatente
... alles zur Patentierung von Software

Blog Kanzlei Verteidigung Gesetze Rechtsprechung Informatik Terminologie Links Impressum

Ihre Anfrage

Nehmen Sie Kontakt auf:
XING

Dieses Portal setzt sich sachlich mit dem Thema "Softwarepatente", insbesondere Künstliche Intelligenz (KI), Blockchain, Internet of Things, VR, standardisierbare Patente im Mobilfunkbereich, Kommunikationsprotokolle und generell Informationstechnik bzw. Nachrichtentechnik auseinander. Speziell wird die Frage behandelt, unter welchen Voraussetzungen Software patentiert werden kann und wie man sich vor Schutzrechten Dritter wirksam schützen kann. Schwerpunkte sind sowohl der Schutz von (Software-) Innovation als auch der Widerruf reiner Softwarepatente.

Gründer und einer der Autoren dieser Webseite ist Dr. Jochen Reich, Inhaber der Kanzlei Reich IP, einer der wenigen Patentanwälte in Deutschland mit Promotion in Informatik. Er ist u.a. Leiter des Arbeitskreises "Patente" der Gesellschaft für Informatik.

Google News - Suchen

bits - The Return of the Softwarepatente
RSS APP • Oct 12
Die Gefahr der Softwarepatente ist zurück, diesmal im Bundestag. "Künstliche Intelligenz" soll in Großbritannien jetzt Social Distancing durchsetzen. Vor 30 Jahren erschien Monkey Island. Und die New York Times interessiert sich für QAnon-Anhängerinnen in Deutschland.

Mehr Ausgewogenheit: Anstehende Modernisierung des Patentrechts
RSS APP • Oct 02
PresseNetwork - Presseportal für Pressemitteilungen und Unternehmens-News

Mehr Ausgewogenheit: Anstehende Modernisierung des Patentrechts
RSS APP • Oct 02
Stellungnahme seitens Patentverein und Bundesverband IT-Mittelstand e.V. Berlin und Bodenheim, 02. Oktober 2020 - Der Patentverein und der Bundesverband IT-Mittelstand...

<https://patente.gi.de/>

GESELLSCHAFT FÜR INFORMATIK G I AKTUELLES PROJEKTE NETZWERK SERVICE ÜBER UNS

MITGLIED WERDEN MEINE GI

ARBEITSKREIS PATENTE

Startseite Mitteilungen Themen Häufige Fragen Mitarbeit Rechtsprechung Weiteres Kontakt

Willkommen beim Arbeitskreis Patente

Der Arbeitskreis "Patente" der Gesellschaft für Informatik e.V. dient der wissenschaftlichen Betreuung des Themas und soll eine Schnittstelle zwischen Informatik und Patentrecht bzw. dem Gewerblichen Rechtsschutz bieten.

Anwalt.de

ANWALT.DE Rechtsanwälte Rechtstipps Ratgeber Recht nützlich NEU: Newsletter für Anwälte Ich bin Anwalt Login

Ort PLZ Rechtsthema Anwaltsname Kanzleiname etc. Suchen

Wie bekomme ich ein Patent auf Software?

12.05.2020 • 3 Minuten Lesezeit • ★★★★★ (103)

Abstrakt

Während das Patentrecht an sich bereits kompliziert genug ist haben sich bezüglich der Patentierung von Software spezielle Vorgehensweisen und eine ganz eigene Rechtsprechung herausgebildet. Diese sind sehr spezifisch und teilweise nicht mit Leitsätzen aus anderen technischen Gebieten zu vergleichen. Auch werden rechtliche Fragen der Lizenzierung oftmals von Rechtsanwälten behandelt, während die konkrete Ausgestaltung eines Softwarepatents typischerweise durch einen technisch vorgebildeten Patentanwalt erfolgt.

In dem vorliegenden Rechtstipp erhalten Sie Erfahrungen aus erster Hand von einem gleichfalls promovierten Informatiker und Patentanwalt und erhalten lediglich einen Einstieg (!) in die rechtlichen Grundlagen der Patentierung von Software.

An der gesellschaftlichen Debatte ob Softwarepatente nun wünschenswert sind oder nicht beteiligt sich der Autor als zur Neutralität verpflichteter Patentanwalt nicht.

Motivation

Die Einordnung des Patentrechts gegenüber dem Urheberrecht und einer allgemeinen Geheimhaltung ist durch den Schutz der zu Grunde liegenden technischen Lehre gegeben. Das Urheberrecht schützt lediglich die Ausdrucksformen eines Computerprogramms, wobei Ideen, Grundsätze, die einem Element eines Computerprogramms zu Grunde liegen, einschließlich der den Schnittstellen zu Grunde...

Patentanwalt Dr. Jochen Reich

★★★★★ (2)

Rechtsgebiete: Gewerblicher Rechtsschutz • IT-Recht • Markenrecht • Patentrecht

Nachricht senden

089 90176134 Bewerten