„Patentschutz für Softwareinnovationen"

Kurze Einführung zur strategischen Nutzung von IP

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Peter Bittner (Dipl. Phys./LLM)

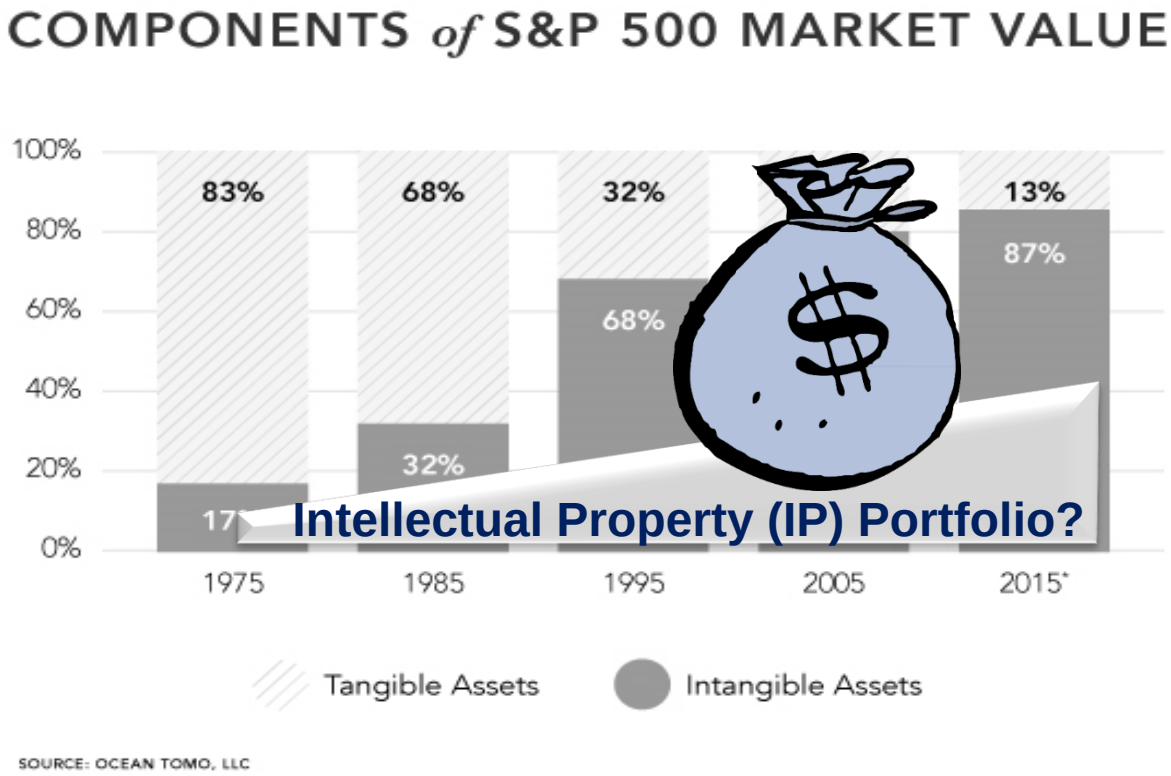
Peter Bittner und Partner - European Patent Attorneys

Chairman des Advisory Boards von
I3PM International Institute for IP Management

Peter Bittner

- Background in solid states physics
- 20 years in Industry (Nokia, SAP)
- 20 years experience in IP Management (10 years In-house + 10 years Consulting)
- IP Strategy Development
- IP Portfolio Management
- IP Process Definition and Implementing
- European Patent Attorney with a focus software based inventions
- Chairman of the Advisory Board of I3PM

Intangible Portion of Company Value



- tangible assets

↓

book value in the balance sheet

- ***Challenge***: managing company value

↓

managing the intangible assets

Source: http://www.oceantomo.com/blog/2015/03-05-ocean-tomo-2015-intangible-asset-market-value/

What is Intellectual Property (IP)?

A possible definition:

Ownership in intangible assets which relate to creations of the human mind through respective IP assets

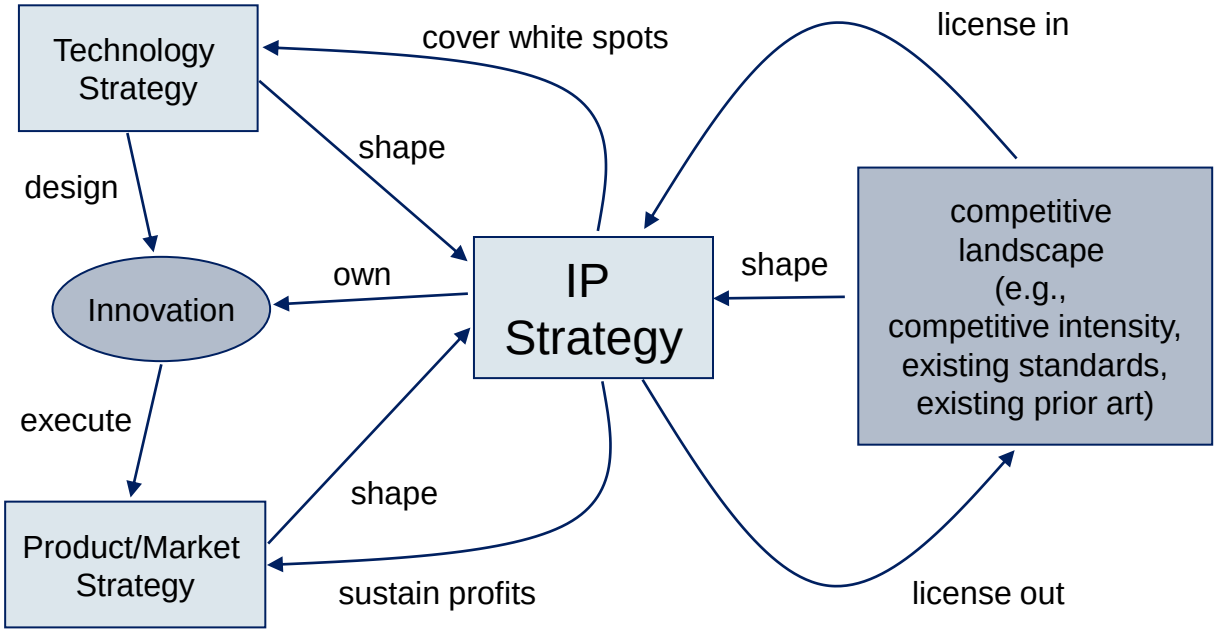
What to own?

"Software is like entropy. It is difficult to grasp, weighs nothing, and obeys the second law of thermodynamics – i.e., always increases." *Norman Ralph Augustine (former CEO of Lockheed Martin)*

→ Through appropriate IP asset types for corresponding software assets

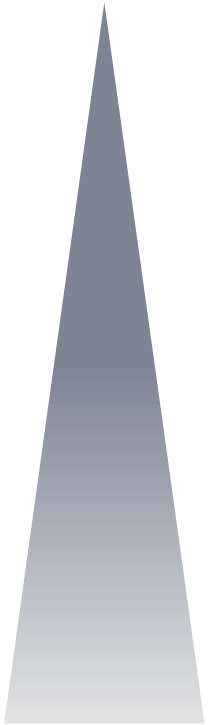
IP at the Heart of Strategy

- Innovation is the primary growth driver (Robert Solow)
- To own the innovation you have to own respective IP Assets
- Whoever owns the IP will own the profits (FTO & exclusivity)



Exclusivity vs. Freedom to Operate (FTO)

exclusivity



FTO

- Enforcing by obtaining an injunction against infringer
  - → maintain exclusivity for the claimed features
  - → keep your competitive advantage
  - → allows for premium price strategy

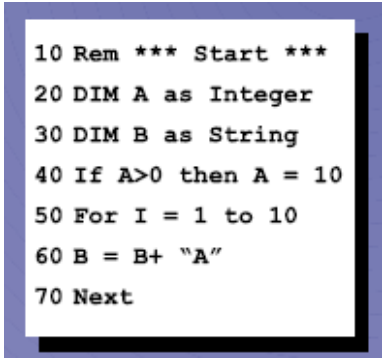
- Obtaining additional revenues
  - → enforcing to obtain damages for infringement
  - → negotiating settlement for future royalty income
  - → licensing for increasing market reach

- Cross-licensing to obtain 3rd party technology access
  - → cooperation
  - → balance payments

Copyright

Protects automatically each expression of an individual work in:

- Literature (includes computer programs, e.g., §69a UrhG, 17 U.S.C. §117) http://digital-law-online.info/lpdi1.0/treatise27.html http://www.gi-ev.de/fileadmin/redaktion/Download/GI-Position_Urheberrecht2006.pdf
- Science
- Arts



Prohibits

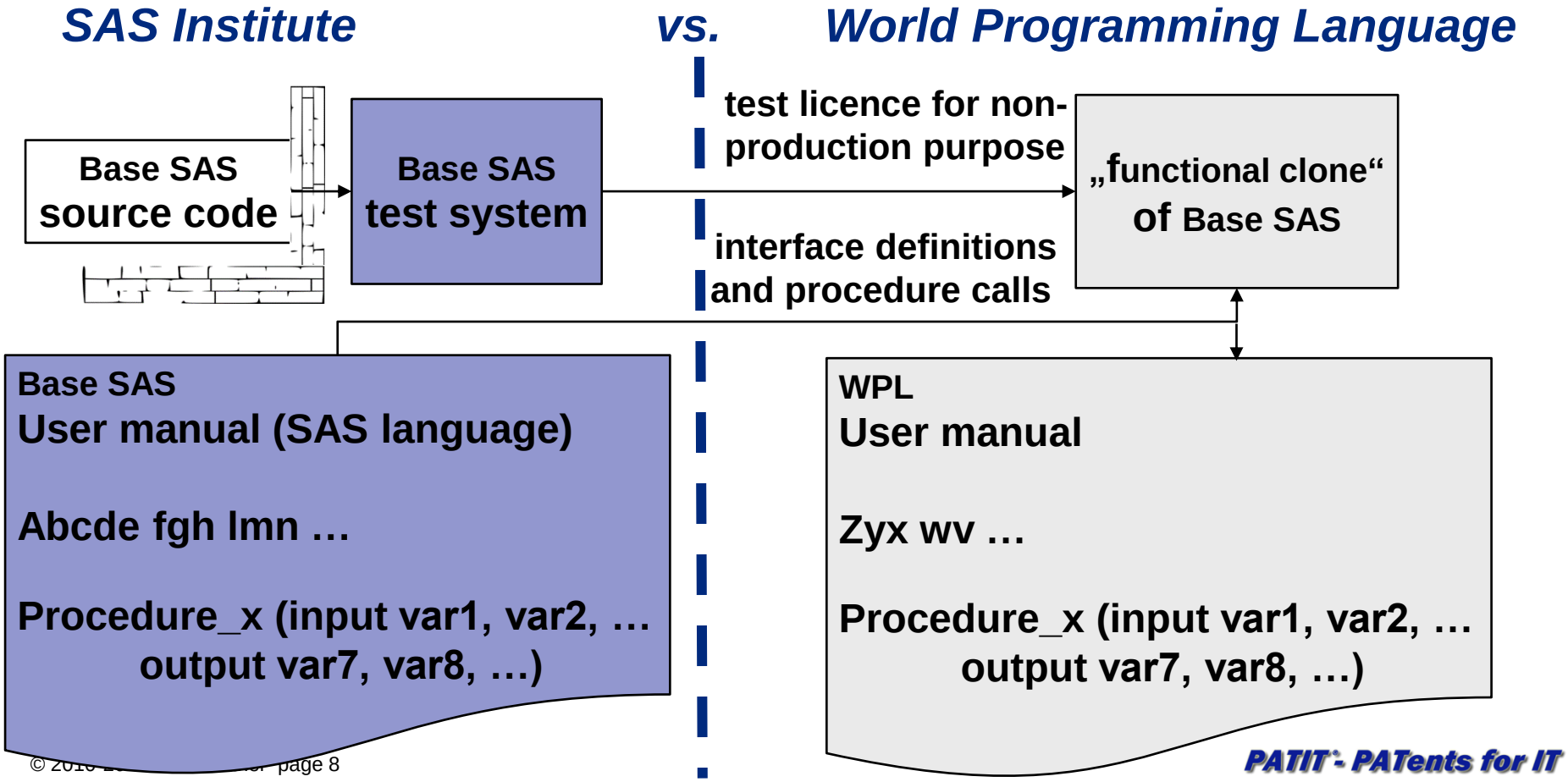
- Copying (except backup), trivial extensions, adaptations, translation into other programming languages, reverse engineering (for 70 years in Germany, 95 years in the US)

However

No protection for general concepts or algorithms

(e.g., §69a (2) UrhG)

How Far Reaches Copyright (ECJ 2012)?



ECJ C-406/10 – SAS vs. WPL (2012)

Why Patents for Software? There is Copyright anyway!

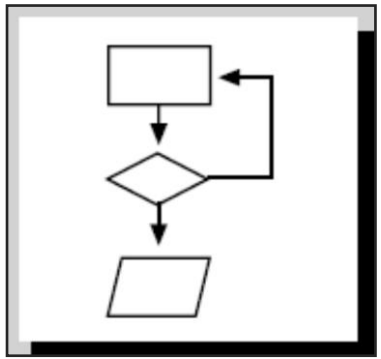
How far reaches copyright protection?

➢ Specification & design documents	✓
➢ Program code	✓
➢ Syntax of programming language	-
➢ Interface definitions	-
➢ Functionality of program	-
➢ User manuals	✓
➢ Graphic user interfaces	(✓)
➢ Format of data files	-

Patents

protect embodiments of an inventive technical concept such as:

- Method (Algorithms)
- Use of a method for a specific purpose
- System/Apparatus
- Computer Program Products
- Chemical compounds
- …



Can be used to protect SW innovation!

max. for 20 years

Main Criteria for Patentability

In Europe

- inventions in all fields of technology
- new
- inventive step
- industrially applicable

In the US

- Falling into statutory subject matter category
- new
- non-obvious
- useful

Non-Inventions Excluded from Patentability

In Europe (EPC Art. 52)

(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

… as such

Patents for SW Innovations?

~~***Software is not patentable!***~~

- any technical invention in the context of a SW solution can be protected by patents if the invention is new, solves a technical problem in a non-obvious way, and has technical character
- Technical character conferred by:
  - Further technical effect going beyond the normal technical effects that are always present when a program runs on a computer
  - technical considerations reflected in the claimed subject-matter
  - Serving a technical purpose

Technischer Zweck bei mathematischen Methoden

- Steuerung eines bestimmten technischen Systems
- **digitale** Audio-, **Bild- oder Video**verbesserung oder **–analyse**
- Datencodierung zur zuverlässigen und/oder effizienten Übertragung oder Speicherung
- Verschlüsselung/Entschlüsselung oder Signatur von elektronischen Nachrichten
- Optimierung der Lastverteilung in einem Computer-Netzwerk
- **Erstellung einer medizinischen Diagnose durch ein automatisiertes System, das physiologische Messungen verarbeitet**
- Simulation des Verhaltens einer hinreichend bestimmten Klasse von technischen Gegenständen (spannend wegen G 1/19 – computer implemented simulations)

Lindera Patent EP3656302

1. A computer-implemented method **for human gait analysis based on a video stream** (202) obtained from a monocular camera device (201), the video stream comprising a plurality of frames reflecting the walk of a human individual (10), the method comprising:

inferring, from the obtained video stream, three-dimensional gait information wherein the three-dimensional gait information includes estimates of the individual's joint locations including at least the individual's foot locations on each frame, the estimates being derived by matching for each frame two-dimensional joint coordinates of the respective frame with respective three-dimensional model information of the individual's body;

and

determining one or more gait parameters of the individual based on the individual's foot locations in local extrema frames showing local extrema of the distance between one foot location of the individual and a corresponding reference joint location **wherein at least one of the determined gait parameters is associated with a score characterizing a risk of fall for the individual**.

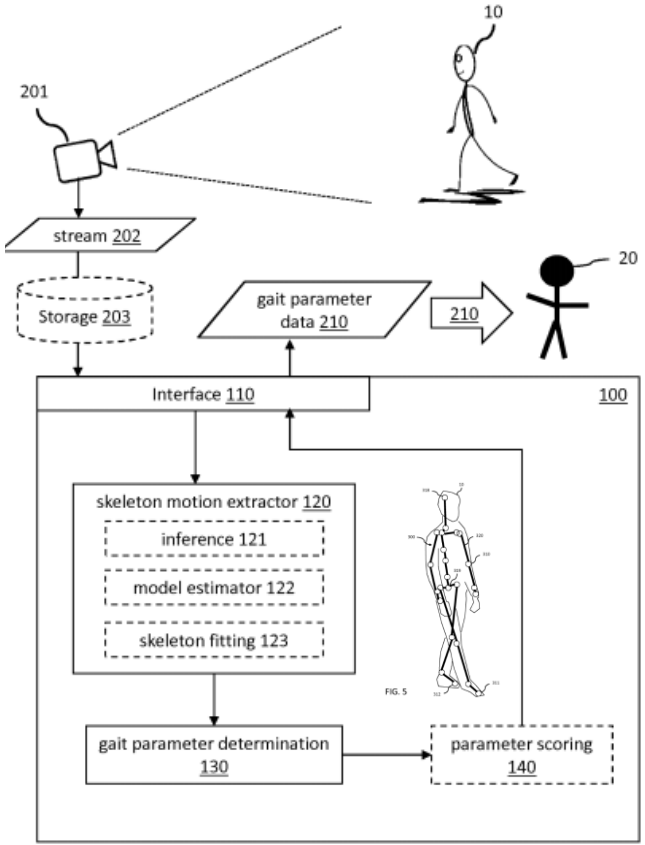


FIG. 1

Weitere erfinderische Aspekte der int. Anmeldung

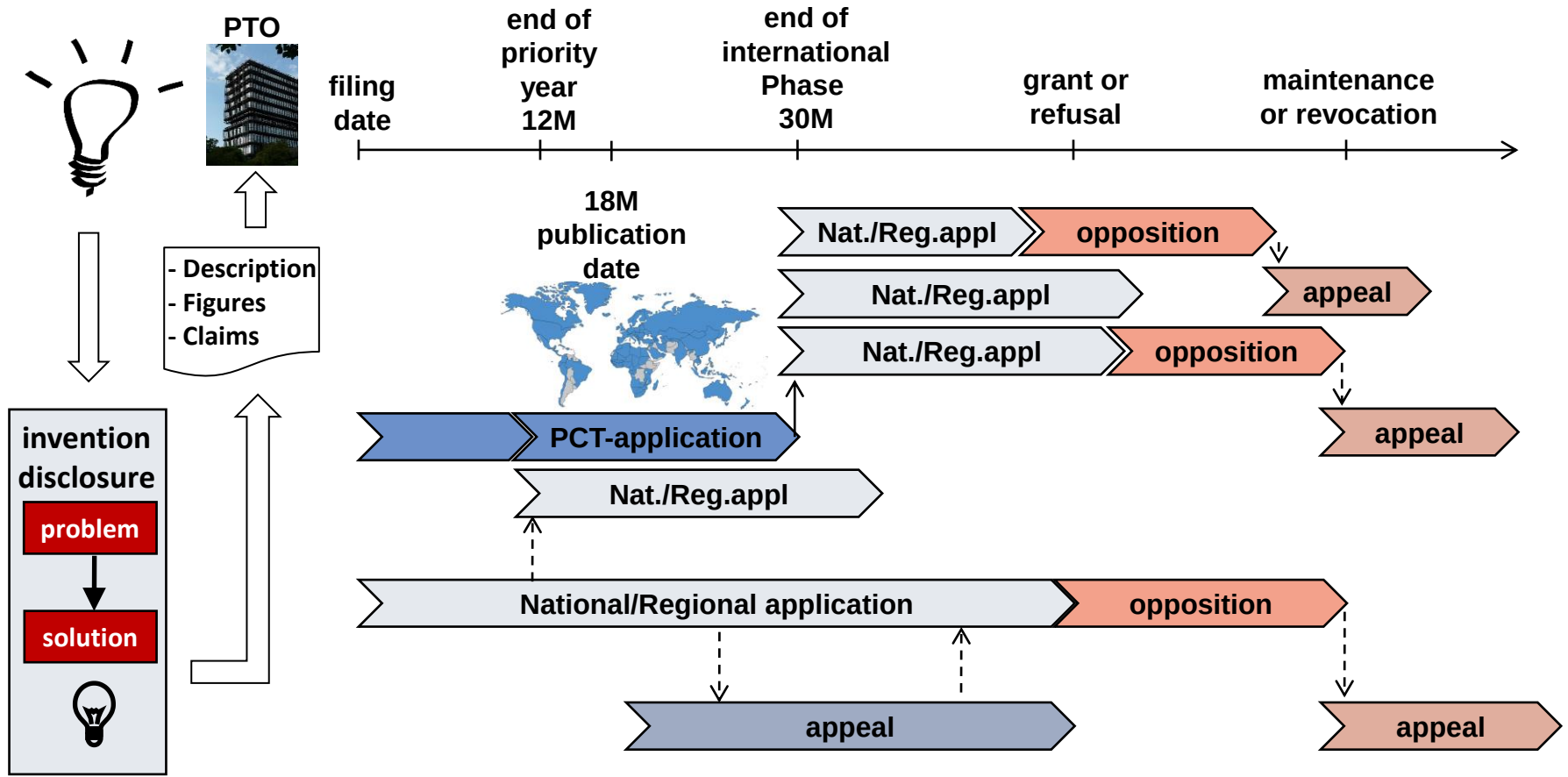
Weitere Details zum “skeleton fitting”:

“estimating a skeleton model of the individual (10) by determining, for each frame of the selected sequence, a loss for each joint of a default skeleton model in each spatial coordinate, and adjusting the default skeleton model to compensate the determined losses to provide an adjusted skeleton model; and
performing kinematic skeleton fitting per video frame using the adjusted skeleton model to determine a plurality of joint locations including at least the foot locations of the individual’s feet on each frame.”

Weitere Details zur “local extrema”-Ermittlung:

for determining the one or more gait parameters, clusters of honest local extrema frames are determined where the frames of a particular cluster contribute to the computation of the individual’s step length in that an average distance value is computed based on all frames of the respective cluster so that the honest local extrema frames of the particular cluster include such frames which collectively reflect the distance between the individual’s feet for a particular step of the individual.

Ways to Get a Patent



For Follow-Up – Just Call

Peter Bittner - European Patent Attorney
LL.M. in IP Law and Management (CEIPI)
Diplomphysiker

Peter Bittner und Partner, European Patent Attorneys
Herrenwiesenweg 2
D- 69207 Sandhausen

Telefon: +49 6224 1899127
E-Mail: pb@bittner-patent.eu
Internet: www.bittner-patent.eu