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Knobbe Practice Webinar Series: Prosecuting and Interpreting Claims Invoking Means Plus Function in the United States

米国におけるミーンズプラスファンクションと解釈されるクレームの取り扱いと実務

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Invoking Interpretation Under Section 112(f) 112条(f)に基づく解釈の発動

- Patent applications are not rejected under Section 112(f)（112(f)で拒絶されるわけではない）

- Section 112(f) – Means Plus Function Interpretation:
  - An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.（発明のある部材の構造又は行為をクレームに詳細に記載することなく、その部材又は行為の機能を果たす手段又はステップとしてクレームに記載することで権利化できる方法。ただし、その権利範囲は明細書に書かれているその部材又は行為及びそれと同等の範囲に限定される）

Historical Perspective – Prior to 1998　歴史的経緯　1998年前

- Means Plus Function as a Best Practice 以前はベストプラクティスだった
  - Recitation of "means" for a claim element was preferred
  - No need for "nonce" words as the term "means" was encouraged
  - Claim scope would cover all disclosed embodiments in the specification – literal infringement
  - Equivalents would encompass all additional, non-disclosed embodiments implementing the same function

- Greater scope with claim differentiation
  - Dependent claims reciting specific structures for implementing function would necessarily broaden the means plus function scope

- Accompanied by well written specification was important for full scope

Historical Perspective – Post 1998 歴史的経緯 1998年以後

- Means Plus Function No Longer Best Practice – Federal Circuit CAFC判決による変化
  - Literal infringement limited to structures disclosed in specification
  - Equivalents do not include any structures that were in existence at the time of filing but not disclosed
  - Doctrine of Equivalence limited to "future" structures not in existence at the time of filing that implement the recited function
  - Result: Greater risk that means plus function interpretation would result in more narrow claims

- Result 現状
  - Substantial reduction in use of "means" in claim language
  - Increase use of "nonce" words to incorporate some functional language – especially in the software and electrical arts
  - Greater uncertainty in scope of claims based on potential claim construction invoking interpretation as means plus function limitations

Invoking Interpretation Under Section 112(f)　112条(f)に基づく解釈の発動

- Invoking interpretation under Section 112(f) (See MPEP § 2181(I)):
  （112(f)だと解釈される場合）
  - The claim limitation uses the term "means" or a term used as a substitute for "means" that is a generic placeholder; AND（"means"またはそれと同様の用語を使った場合であって、かつ）

  - The term "means" or the generic placeholder is modified by functional language, typically, but not always linked by the transition word "for" (e.g., "means for") or another linking word or phrase, such as "configured to" or "so that."; AND（"for"やそれと同様の用語を接続として使った場合であって、かつ）

  - The term "means" or the generic placeholder is not modified by sufficient structure, material, or acts for performing the claimed function.（"means"またはそれと同様の用語が、その構造などによって十分に変化されていない場合）

- Common substitute terms (e.g., "nonce" terms:
    - "mechanism for,"
    - "module for,"
    - "device for,"
    - "unit for,"
    - "component for,"
    - "element for,"
    - "member for,"
    - "apparatus for,"
    - "machine for," or
    - "system for."

- There is no fixed list of terms that avoid invocation of Section 112(f)（どのような用語が112(f)だと解釈されるかのリストはない

- Nonce words may not always invoke means plus function

- Patent practitioners may not know which words are considered nonce words unless litigation occurs

Invoking Interpretation Under Section 112(f) – Examples　具体例

- *means for adhering the top and bottom portion*
  - "means" invokes the presumption of interpretation of means plus function
  - "adhering the top and bottom portion" is the functional language linked by "for"
  - No structure recited in the claim
  - RESULT: Limitation is interpreted as a means plus function limitation

- *member for adhering the top and bottom portion*
  - "member" invokes the presumption of interpretation of means plus function as a substitute term
  - "adhering the top and bottom portion" is the functional language linked by "for"
  - No structure recited in the claim
  - RESULT: Limitation is interpreted as a means plus function limitation - SAME

Invoking Interpretation Under Section 112(f) – Examples 具体例

- *means for collecting user input*
  - "means" invokes the presumption of interpretation of means plus function
  - "collecting user input" is the functional language linked by "for"
  - No structure recited in the claim
  - RESULT: Limitation is interpreted as a means plus function limitation

- *an interface module for collecting user input*
  - "module" invokes the presumption of interpretation of means plus function as a substitute term
  - "collecting user input" is the functional language linked by "for"
  - "interface" may not be sufficient structure recited in the claim
  - RESULT: Limitation is interpreted as a means plus function limitation - SAME

Invoking Interpretation Under Section 112(f) – Examples　具体例

- *an aluminum shaft with tapered ends for translating lateral movement*
  - No "means" or other substitute terms
  - "translating lateral movement" is the functional language linked by "for"
  - "Aluminum shaft with tapered ends" may be sufficient structure recited in the claims
  - RESULT: Limitation is NOT likely interpreted as a means plus function limitation

- *a user demographic component implementing a deep learning algorithm for characterizing user input as having threshold errors*
  - "component" may invoke the presumption of interpretation of means plus function as a substitute term
  - "characterizing user input as having threshold errors" is the functional language linked by "for"
  - "user demographic component implementing a deep learning algorithm" may be sufficient structure recited in the claim
  - RESULT: Limitation is NOT likely interpreted as a means plus function limitation

Prosecution and Means Plus Function Interpretation – MPEP 2181　審査基準

- In response to the Office action that finds that 35 U.S.C. 112(f) is invoked, if applicant does not want to have the claim limitation interpreted under 35 U.S.C. 112(f), applicant may:
  - (1) present a sufficient showing to establish that the claim limitation recites sufficient structure to perform the claimed function so as to avoid interpretation under 35 U.S.C. 112(f); or
  - (2) amend the claim limitation in a way that avoids interpretation under 35 U.S.C. 112(f) (e.g., by reciting sufficient structure to perform the claimed function).

- If there is no disclosure of structure, material or acts for performing the recited function, the claim fails to satisfy the requirements of 35 U.S.C. 112(b).

- The disclosure of the structure (or material or acts) may be implicit or inherent in the specification if it would have been clear to those skilled in the art what structure (or material or acts) corresponds to the means- (or step-) plus-function claim limitation.

- Cannot rely on incorporation by reference for supporting structure in specification

1.   A battery system, comprising:

a plurality of battery trays ~~that comprises~~ each comprising ~~one or more~~ at least one battery cell~~s~~;

a plurality of slave battery management systems (BMSs) ~~for controlling~~ configured to respectively control the battery tray~~s~~; and

a master BMS ~~for controlling a plurality of~~ configured to control the slave BMSs, wherein each of the slave BMS~~s~~ comprises:

a ~~switching unit~~ switch ~~for generating~~ configured to generate a pulse signal ~~according to~~ based at least in part on an input;

a display ~~unit for displaying a state~~ configured to display a status of the corresponding battery tray; and

a ~~control unit~~ controller ~~for determining~~ configured to: i) determine an operation mode of the slave BMS based at least in part on ~~according to~~ a pulse width of the pulse signal, ~~setting~~ ii) assign an identifier (ID) of the slave BMS ~~according to a~~ based at least in part on the number ~~of generation~~ of generated ~~of the~~ pulse signal~~s~~, and ~~displaying~~ iii) control the display to display the ID of the slave BMS. ~~on the display unit.~~

Special Case: Computer-implemented inventions 112(f) and 112(b)
特殊な例：コンピュータ関連発明における112(f)及び112(b)

- A computer-implemented Section 112(f) claim limitation will be indefinite under Section 112(b) when the specification:（不明確として拒絶になる場合）

    – Fails to disclose any algorithm to perform the claimed function.（クレームの機能を実行するアルゴリズムを開示していない場合）

    – Discloses an algorithm but the algorithm is not sufficient to perform the entire claimed function(s).（アルゴリズムは記載されているが、クレームの機能を実行するために十分でない場合）

- The sufficiency of the algorithm is determined in view of what one of ordinary skill in the art would understand as sufficient to define the structure and make the boundaries of the claim understandable.（アルゴリズムが十分に明確かどうかは当業者が十分に理解できるかどうかで判断される）

    – Disclosure of an algorithm cannot be avoided by arguing that one of ordinary skill in the art is capable of writing software to perform the claimed function. See MPEP§2161.01(l).（この拒絶は当業者はクレームの機能を実行するためのソフトウェアを書くことができるからという理由では回避できない）

Practice Tips – Avoiding Section 112(f) Rejections 112(f)条拒絶回避の具体案

- Specification Drafting Best Practices（明細書を書くにあたって最善の方法）
    - The specification should be the "key" for all broad terms that can be implemented in multiple ways/embodiments（定義の広い用語については明細書の記載が重要になる）
    - If means plus function is intended to be invoked, be sure to identify alternatives （ミーンズプラスファンクションと解釈される場合には別の手段を特定する）
    - Multiple independent claim sets

- Claim Drafting Best Practices
    - Each independent claim should have at least one drawing that forms the basis of support for written description and enablement（各独立クレームに対応した図面を少なくとも１つ用意する）
    - Eliminate "easy" invocation of means plus function by avoiding "nonce" words （意味のない用語を使わないようにしてミーンズプラスファンクションと解釈されるのを避ける）

Practice Tips – Multiple Independent Claims　複数の独立クレームの提示

- 1. A system for determining orientation of widgets comprising:
  - a controller having a memory and executable instructions for translating a set of inputs corresponding to a plurality of navigational controls, wherein individual inputs from the plurality of navigational controls are independently encrypted;
  - an orientation module configured to determine orientation information from the translated set of inputs based on time of day and user preference information;
  - …..

- 2. The system as recited in Claim 1, wherein the orientation module executes a machine learned model that is trained based on historical information corresponding to an identified set of users.

- 3. The system as recited in Claim 1, wherein the controller utilizes a lookup table of predefined translation values for individual inputs in the set of inputs.

- 4. A method for determining orientation of widgets comprising:
  - translating a set of inputs corresponding to a plurality of navigational controls, wherein individual inputs from the plurality of navigational controls are independently encrypted;
  - determining orientation information from the translated set of inputs based on time of day and user preference information;
  - . . .

- 5. The system as recited in Claim 4, wherein determining orientation information from the translated set of inputs includes executing a machine learned model that is trained based on historical information corresponding to an identified set of users.

- 6. The system as recited in Claim 1, translating a set of inputs corresponding to a plurality of navigational controls includes utilizing a lookup table of predefined translation values for individual inputs in the set of inputs

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