To Whom is Interested in the Supreme Court's Biosig/Definiteness Decision

Dear Addressee,

Berlin, June 4, 2014. On June 2, 2014, the Supreme Court added by its unanimous Biosig decision another key element to its – for patent precedents – epochal line of unanimous KSR/Bilski/Mayo/Myriad decisions. By Biosig the Supreme Court states **●)** that the CAFC's "insoluble ambiguous" test "*does not satisfy the statute's definiteness requirement*", as its "*formulation tolerates some ambiguous claims but not others*", and **●●)** that it requires to find "*a patent invalid for indefiniteness if its claims, read in the light of the specification delineating the patent, and the prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention*" [and only then as the first bullet point implies].

Attached is my 03.03.2014 Amicus Brief to the Supreme Court answering its definiteness questions. The Biosig decision implements it to 100%. By **●)** the Biosig decision explicitly confirms the Amicus Brief's comment on the CAFC's "insoluble ambiguous" test (see e.g. page 12), and by its requirement **●●)** the Supreme Court explicitly confirms the Amicus Brief's finding that a patent is invalid for whatsoever reason – here for indefiniteness of its claims – if it fails to pass the FSTP-Test (see e.g. pages 2-5). The Biosig decision confirms also the other fundamental insights into the indefiniteness problem reported by the Amicus Brief.

Seen in hindsight and in total, with the KSR/Bilski/Mayo/Myriad/Biosig decisions the Supreme Court took 35 USC substantive patent law precedents straight ahead to a level of scientification, which enables it to consistent and predictable decision making also as to emerging technology inventions.

Comments are highly appreciated.

Best regards

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No. 13-369

IN THE
Supreme Court of the United States

NAUTILUS, INC.,
Petitioner,
v.
BIOSIG INSTRUMENTS, INC.
Respondent.

On Writ of Certiorari to the United States Court of Appeals for the Federal Circuit

BRIEF OF AMICUS CURIAE SIGRAM SCHINDLER BETEILIGUNGSGESELLSCHAFT mbH, IN SUPPORT OF NEITHER PARTY

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March 3, 2014 *Counsel of Record

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[5] S. Schindler: "Math. Model. Substantive Patent Law (SPL) Top-Down vs. Bottom -Up", Yokohama, JURISIN 2013*).

[6] SSBG pat. appl.: "THE FSTP EXPERT SYSTEM"*).

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[32] S. Schindler, "*A KR Based Innovation Expert System (IES) for US SPL Precedents*", Phuket, ICIM-2014***)**.
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*) see www.fstp-expert-system.com

STATEMENT OF IDENTITY AND INTEREST

Sigram Schindler Beteiligungsgesellschaft mbH and its subsidiaries (collectively "SSBG") are research-based high technology companies located in Berlin, Germany, developing and selling products also in the US, primarily via TELES AG. SSBG is a majority shareholder of TELES AG, founded 1983 by Sigram Schindler[1)].

SSBG's business is dependent upon patent protection, in particular in the United States and Europe. Strong patent systems require that the patents issued are consistently interpreted. Thus, SSGB has a vested interest in supporting the US patent system in its on-going development in adjusting itself to the needs of the emerging technologies. This Court indicated by its groundbreaking *KSR/Bilski/Mayo/Myriad* decisions what these needs are and how it requires meeting them by precedents as to 35 USC §§ 101/102/103/112. This brief aims at supporting this development by showing that these Supreme Court requirements facilitate US SPL precedents by providing to it an Advanced IT basis.

This brief, in support of neither party, is filed on behalf of *Amicus Curiae* SSBG – which has no financial interest in either side.

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[1] Pursuant to Supreme Court Rule 37.6, amicus curiae states, that no counsel for a party authored this brief in whole or in part, and no entity or person other than amicus curiae, its members, and its counsel, made any monetary contribution toward the preparation or submission of this brief. Letters from the parties consenting to the filing of this brief are on file with the Clerk.

SUMMARY OF THE ARGUMENT

The two questions, which this Court wants to be answered by Amicus Briefs, are:

"I Whether Petitioner has shown that the Federal Circuit's test for patent indefiniteness under 35 USC § 112(2) conflicts with this Court's precedent .....

II Whether the Federal Circuit erred in giving respect to the presumption of validity specified by Congress in 35 USC § 282 in considering the invalidity defense of indefiniteness under 35 USC §112(2)."

They both have a common key issue: "What aspects of a claimed invention and its claim render it definite or indefinite[8)], under 35 USC §§ 112(2)/282?"

This latter question is quite similar to the question recently asked by this Court as to computer-implemented inventions ("**CIIs**"), i.e.: "What aspects of a claimed CII render it patent-eligible or non-patent-eligible, under 35 USC § 101 – in the light of KSR/Bilski/Mayo/Myriad?".

The meaning of the term "patent-eligible" has been derived, up to *Mayo,* by two SSBG Amicus Briefs [18,45] from 35 USC directly[2)a)]. Here, this is possible for the term "definite", too. In both cases the so gained meanings of the terms/notions [18.ftn3. par2] "patent-eligible"/"definite" enable determining the resp. aspects of any claimed invention, which define its being patent-eligible resp. definite[2)b)].

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[2] **a)** If this had been impossible, this meaning would have had – or would had – to be derived by a court.

b) In both cases holds: A claimed invention is legally "non-patent-eligible" resp. "indefinite" iff it lacks one of the respectively determined aspects for rendering it "patent-eligible" resp. "definite".

In both cases it is the "**FSTP-Test**", which enables exactly and deterministically determining, whether any given claimed invention has the resp. aspects rendering it "definite" resp. "patent-eligible".

The FSTP-Test is due to the openness, with which this Court and the CAFC manage the development of US patent precedents. It vastly has been inspired by the questions both Highest Courts put forward in their invitations of Amicus Briefs – to which SSBG responded by its pertinent Amicus Briefs [10,18] to both Highest Courts[3)]. It nevertheless is elaborated on in this brief, once more, just as some principles underlying it[4)] – the same in SPL precedents and in fundamental Mathematics/elementary Logic/Advanced IT – which enables answering the questions I and II by showing the big step forward in understanding the US substantive patent law ("SPL") due to its *Mayo* interpretation[3)].

The FSTP-Test is a logical conjunction of presently 10 FSTP (sub)tests, called "**FSTP test.o**"[7)], $1 \leq o \leq 10$. Any FSTP test.o is focused on a single

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[3] The FSTP-Test has been presented, as *KSR/Bilski/Mayo* descendant, in much more detail already and far further developed in a series of other recent FSTP publications – as shown by the above references list. These publications are either •) scientific and then mathematically and/or in Advanced IT deeper going [5,15,24, 25,46,47], or •) predictive and then consensus-making/education oriented [1,9,10,18,19,22,23,26,32,33,34,42, 45], among them six Amicus Briefs to this Court resp. the CAFC – starting with *Bilski* [26] – or just •) patent applications concerning "FSTP Technology" [6,7,11,43], anyway having both characteristics vastly overlapping.

SSBG's textbook on "Patent Technology" is unfortunately not yet available (in preparation).

"**SPL concern**" and checks the claimed invention at stake for its and its inventive concepts satisfying this SPL concern – except FSTP test.1 checking 2 SPL concerns. The above two aspects of a claimed invention, its patent-eligibility and its definiteness, correspond 1:1 to two SPL concerns [5,10,11,18,25].

A claimed invention satisfies SPL iff it and its inventive concepts satisfy all SPL concerns.

The above 4 SPL §§ of 35 USC embody and their interpretation by this Court ex- and implicitly identified hitherto a total of 11 US SPL concerns[7)].

The 10 FSTP test.o are ordered hierarchically[4)] – just as the 11 SPL concerns, both thus avoiding circular statements – and evidently induce this hierarchical order also on the 11 such aspects of any claimed invention under US SPL test.

This Court's *Mayo* decision ex- or implicitly requires to identify these aspects of a claimed invention by its "inventive concepts". These thus must be determined by a first step in construing the "refined" claim construction for it[6)] – as one cannot assume the Supreme Court would require describing aspects of a claimed invention by terms/notions not justified by § 112, as this would render meaningless the claimed invention's § 101 test that *Mayo* prescribes.

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[4] This brief elaborates also on other issues in SPL precedents, not immediately to recognize as impacting on questions I or II – e.g. the tolerable complexity of a claim's wording, not belonging to the hierarchical order between SPL concerns and induced by it on the peer aspects of a claim(ed invention)[8)] as such when being SPL-tested. These issues need not necessarily ever appear before a court. The other ones did already (as the pending one) or will, sooner or later, as soon as noticed.

I.e., *Mayo* already addresses – by the refined claim construction it requires, as compared to the classical one [25,18] – the above key issue and thereby induces its principal resolution, as shown below.

Yet: *Mayo* deals solely with claimed pharmaceutical inventions and determining their patent-eligibility. But, its reasoning covers not only these two aspects of a claimed invention. This reasoning covers •) any claimed invention (in checking its satisfying SPL, i.e. 35 USC 112/101/102/103, if of emerging technology anyway) and •) all its 11 SPL aspects.

This Court emphasized this far reach of its unanimous *Mayo* decision[5)] by asking the CAFC in a whole series of legally quite different cases to reconsider its decisions in the light of *Mayo*.

The ARGUMENT hence focuses on *Mayo's*

- implementation by the FSTP-Test and its impact on the replies to the questions I and II, and thus
- a basic confirmation of the CAFC's 'insoluble ambiguity' test and proving that relaxing it – as desired by the opponents – would contradict 35 USC SPL.

It thereby shows that only Advanced IT cognition as to these questions enables objectively deciding them.

The CONCLUSION of this argument hints at its consequences and the help desired by this Court.

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[5] This motivated SSBG to invest into the scientific R&D of what an invention is, as such and as seen by SPL and its precedents, as well as into leveraging on its results[3)] – especially by developing and disseminating the so enabled Mathematical KR insights, here called "Patent Technology"[3)], including a FSTP-Test based prototype system of an "Innovation Expert System, IES" capable of managing interpretations of claim(ed invention)s. It is currently focused on US SPL, but simply expandable.

ARGUMENTS

I. THE FSTP-TEST IMPLEMENTS *MAYO,* THUS TESTS ALSO FOR (IN)DEFINITENESS

The preceding presentations summarized that *Mayo* is groundbreaking for claimed inventions' SPL tests, as intellectually paving the way for construing their "refined claim constructions"[6] by disaggregating their compound tests under §§ 101/102/103/112 into 10 FSTP test.o[7] checking these inventions satisfying the 11 US SPL concerns – their definiteness and patent-eligibility being two of these 11 concerns.

Here the structure/working of this complex FSTP-Test[5] is explained by its principles – stressing the decisive role of multiple interpretations of a claim(ed invention) therein – after the following two introductory paragraphs.

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[6] *Mayo* nowhere explicitly uses the terms "SPL" or " claim construction" for claim(ed invention)s to be SPL tested. This doesn't mean, *Mayo* would not deal with the notions of these terms [7,10]. The contrary is true: Most of what *Mayo* states are SPL requirements to be met by a claim(ed invention)[8] for its(their) satisfying SPL[9] [19,25,45/ftn5] – be the invention at stake an emerging technology invention or not.

Broadly established counter statements against this phenomenon – such as "... there is no claim construction language in *Mayo* ..." or alike about *Mayo* [38] – are absolutely untenable [45/ftn5] as representing wishful but erroneous and hence today totally outdated thinking about the informative power and clarity of natural language wordings [7.ftn1-3]. This untenable thinking also caused the case underlying this invitation of Amicus Briefs, as elaborated on by Subsection II.

Firstly: Applying the FSTP-Test to a claimed invention means construing the refined claim construction for it. I.e.: Stating that this refined claim construction is construable is equivalent to stating this claimed invention passes the FSTP-Test. Thereby holds: A claimed invention passes its SPL test iff it passes the FSTP-Test.

Secondly: The outline[7)] of the FSTP-Test needs explanations, provided below. Up-front is evident:

- It starts with FSTP test.1, which •) interpretation controlled transforms the claimed invention's creative/inventive concepts ("cr/**in-Cs**") if "**compound**" or not binary by disaggregation into "**binary elementary disclosed (BED)**" inventive concepts [7,10]), thereby •) checking twice their – interpretation depending! – "definiteness", and then incrementally checks by FSTP test.o, o=2,3,...,10, the claim(ed invention) for its satisfying all other SPL concerns, again interpretation depending.
- It is logically enormously complex. Showing part of this complexity here serves the purpose to indicate, how many details and their sophisticated interrelations are involved in any claim(ed invention)'s test for its satisfying SPL. With all likelihood, hitherto this amount of sophisticated but very real complexity – only very briefly sketched here, not explained – has hitherto never been understood. Hence the established belief, claimed inventions' SPL tests were rationally decidable without scientific scrutiny, e.g. by the FSTP-Test. Applying this scientific/mathematical scrutiny to SPL testing, e.g. by the FSTP-Test, discloses new legal problems. Some of them are identified below. These will be resolved by the US Highest Courts.

In principle, the FSTP-Test works as follows[7]:

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[7] The below description of the FSTP-Test – i.e. of its 10 FSTP test.o, o=1,2,...,10 – is here heavily abbreviated and adapted to these abbreviations [46,47]. Any term "justify" or acronym thereof is controlled by the selected claim interpretation. This is an interpretation of the claim(ed invention), **not just of the tested claim**!!!

Several of the hitherto unnoticed intricacies in a claimed invention's SPL test may be allocated by the Highest Courts to other FSTP test.o's than done below – the scientific scrutiny of the FSTP-Test is open to such adjustments. The "patenting English" language used presents the FSTP-Test as being a CII, which guides its user through its execution on a claim(ed invention).

1) The FSTP-Test starts, ∀ claim interpretations, with the **justified definite disaggregation** of the compound inventive concepts, after the posc[15] **justified these definite** for the selected interpretation, comprising the steps: It

- **(a)** prompts the user for the claimed invention's and prior art's docs with "**marked-up items, MUIs**";
- **(b)** automatically identifies all doci-MUI's as BAD-Xin;
- **(c)** prompts ∀interpretations for an initial $S ::= \{BED\text{-}cr\text{-}C0k \mid 1 \leq k \leq K\}$;
- **(d)** prompts for posc's definite justification of S;
- **(e)** prompts to disaggregate $\forall BAD\text{-}X0n$ by : $\{BED\text{-}cr\text{-}C0k^n \mid 1 \leq k^n \leq K^n\} \subseteq S \wedge BAD\text{-}X0n ::= \wedge^{1 \leq kn \leq Kn} BED\text{-}cr\text{-}C0k^n$, $1 \leq n \leq N \wedge BED\text{-}cr\text{-}C0k^n \neq BED\text{-}cr\text{-}C0k^{n'}\ \forall n \neq n' \wedge \sum^{1 \leq n \leq N} K^n = K$;
- **(f)** prompts ∀ BAD-X0n for the posc's definite justification of its disaggregation in **(e)**.

2) Justifying the **lawful disclosures** of **S**

- **a** It prompts $\forall BED\text{-}cr\text{-}C0k^n$ for a not yet used disclosure $DIS'(BED\text{-}cr\text{-}C0k^n)$ ::={MUI.0s disclosing this $BED\text{-}cr\text{-}C0k^n$ lawfully};
- **b** prompts for $JUS^{dis}(DIS'(BED\text{-}cr\text{-}C0k^n))$;

3) **Justifying definiteness** under § 112.6 of S
It prompts ∀BED-in-C0k$^{n'}$ used in a means-plus-function-clause for a JUS^{def}(BED-in-C0k$^{n'}$) of its definiteness due to its DIS(BED-in-C0k$^{n'}$);

4) Justifying **enablement** of S
It prompts ∀ BED-in-C0k^{n} ϵ S for a JUS^{ena}(BED-in-C0k^{n}, S) of its enablement in S, due to DIS(BED-cr-C0k^{n}) of some BED-cr-C0k^{n}ϵS;

5) Justifying **independence** of S
It prompts ∀ BED-in-C0k^{n} ϵ S for a JUS^{ind}(BED- in-C0k^{n}, S), due to BED-in-C0k^{n} not evidently derivable from S\BED-in-C0k^{n};

6) Justifying **posc-nonequivalenc** of S
a if |RS|=0 then BED*-in-C0k ::= "dummy";
b else performing **c-f** ∀ 1≤i≤|RS|;
c It prompts to disaggregate ∀ BAD-Xin into
$\wedge^{1\le kn\le Kn}$BED-in-Cik^{n};
d It prompts to define BED*-in-Cik^{n} ::=
either BED-in-C0k^{n} iff BED-in-Cik^{n} = BED-in-C0k^{n}
∧ disclosed ∧ definite ∧ enabled,
else "dummy(ik^{n})";
e It prompts for JUS^{posc}(BED*-in-Cik^{n}).

7) Justifying TT.0 is **not an abstract idea only** over S
It prompts to invoke the NAIO test*) on the pair (S,P).

8) Justifying TT.0 is **not natural phenomena solely** over S
It prompts ∀BED-in-C0k^{n} for JUS^{NNPS}(BID-in-C.0.k^{n})};

9) Justifying TT.0 is **novel and nonobvious** over S
It prompts to invoke the NANO test**) on the pair
(S, if |RS|= 0 then {BED*-in-C0k | 1≤k≤K}
else {BED*-in-Cik | 1≤k≤K, 1≤i≤|RS|});

10) Justifying TT.0 is **not idempotent** S' ⊆ S
It prompts to invoke the NANO test**) as in 9), but replacing S by S' comprising all inventive concepts in S.
.

The following list of items **i)-v)** compares the FSTP-Test to the 'insoluble ambiguity' test and explains the description and working of the FSTP-Test

i) The best approach to explaining the working of the FSTP-Test is to start with the just mentioned comparison. As its name indicates, the 'insoluble ambiguity' test of a claim(ed invention)[8] leaves it to its user to somehow figure out, whether there is

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*) The **"Not an Abstract Idea Only, NAIO"** test basically comprises 4 steps [5,7,10,25,18]:

1) verifying that the specification of the claimed invention discloses a problem, P.0, described to be solved by it, the latter being described by S;

2) verifying, using the inventive concepts of S, that the claimed invention solves P.0;

3) verifying that P.0 is not solved by the claimed invention, if therein an inventive concept of S is removed or relaxed;

4) if all verifications 1)-3) apply, then this claimed invention is "not an abstract idea only".

) The **"Novel And Not Obvious, NANO" test basically comprises 4 steps, checking all "anticipation combinations, ACs" of S derivable from any prior art documents' invention [6]:

1) generating the ANC matrix, its lines representing for any prior art document its invention, and its columns representing the elements of S;

2) generating, for any entry in the ANC matrix, its "Anticipates/Non-ants/Contradicts" relation;

3) automatically deriving from the ANC matrix the {AC} with the minimal number Q^{plcs} of NC-entries;

4) automatically delivering $<Q^{plcs},\{AC\}>$, indicating the claimed invention's creativity.

a non-ambiguous interpretation of it, qualifying it as definite iff such an interpretation is found.

The FSTP-Test guides the user in dependably figuring this out: It systematically checks all finitely many options, whether there is at least one, in which the claimed invention under test satisfies all 11 SPL requirements mentioned above.

How to perform this exhaustion of all these options is left away here, but discussed e.g. in [7,11].

ii) There are three decisive distinctions between both tests: The FSTP-Test

1.) performs this exhaustive search by means of the claimed invention's finitely many inventive concepts making it up [7], while the 'insoluble ambiguity' test doesn't yet know *Mayo's* notion of 'inventive concept' and hence does not know how to make its search being finite.

2.) knows from *Mayo* a priori that any inventive concept disclosed by the specification, therein explicitly named or not, may be taken into account in a claim interpretation, while the 'insoluble ambiguity' test doesn't know such freedom/obligation in/to •) exploring the specification for disclosures of inventive concepts embodied by the invention underlying the specification [45] – i.e. used by some claim interpretation disclosed by the specification – and •) leveraging on all findings obtained by this scrutiny of searching for all of the only finitely many claim interpretations in the specification [7]. The notions of 'claim' and 'claim interpretation' here in **2.)** and **3.)** just used, are explained in detail in Section IIB).

3.) knows from *Mayo* a priori, now refining **2.)**, that for any single inventive concept "IN-C°"

thus found as used by some claim interpretation "INT°" of the claim(ed invention) underlying the specification [45], holds the following: IN-C° must – alone and jointly with the other IN-C°s this interpretation INT° uses – in INT°

a) meet also the other § 112 requirements q.1, q.3, q.4, q.5,q.6, and
b) not turn the whole claimed invention into an abstract idea only or a natural law,

while the 'insoluble ambiguity' test, if not knowing about INT° – often occurring as barred from using the notion of 'inventive concept' – cannot check its IN-C°s for **a)** and **b)**.

iii) But, the 'insoluble ambiguity' test pursues the in principle same decision strategy like the FSTP-Test as to a claim(ed invention)'s (in)definiteness. Though, by its end, it might state an interpretation as non-ambiguous and hence qualify the tested claim(ed invention) to be definite, although this interpretation potentially may have another flaw, making the tested claim(ed invention) fail its SPL test and hence would render void this definiteness decision – while the FSTP-Test may detect another claim interpretation passing the SPL test (which then would pass the 'insoluble ambiguity' test, too).

Thus, the 'insoluble ambiguity' test is logically a test of a claim(ed invention), the passing of which is only necessary – even the minimal necessity – for this claim(ed invention) to be qualified definite, but this passing is not sufficient to this end. I.e., the 'insoluble ambiguous' test is incapable of qualifying a claim(ed invention) as definite.

By contrast, the FSTP-Test is designed, right from its outset, to check the tested claim(ed invention) for meeting all 11 SPL requirements, inclu-

ding its definiteness requirements. In the wake of its execution, it thus checks all the criteria, which in total are necessary and sufficient for the claim(ed invention)'s definiteness – being one of the 11 § 112 concerns. I.e., the FSTP-Test is a much more rigorous definiteness test – as required by 35 USC SPL – than the 'insoluble ambiguity' test.

In total: For a claim(ed invention) its passing •) the FSTP-Test is necessary and sufficient for its being definite, •) the 'insoluble ambiguity' test is necessary for its being definite, and •) any further relaxed test says absolutely nothing about its being definite.

iv) Thereby 'indefinite' of an interpretation means that – another meaning is not on hand – there is a property with one of the inventive concepts defining this interpretation of which it is not clear whether "it is there" or not, making this inventive concept and with it this interpretation of the claim(ed invention) ambiguous.

In addition to the properties of the compound inventive concepts, evidently any inventive concept is part of up to ten FSTP test.o and hence has up to 10 such properties – which may be different in different interpretations, if there are more than a single one, which often is the case in model based inventions, as typical for emerging technologies. All these properties may be disclosed in a way by the specification such that the above question for its "being there" arises. Thus, any such property may be the resource of "its" interpretation's indefiniteness/ambiguity.

This shows that it is wrong to assume, as [50-53] often do, that indefiniteness of a claim(ed invention) is mono-causal.

Thus, for model based claim(ed invention)s their "**interpretation specific**" analysis is indispensable, while for MoT based ones, *Bilski*, this particular view on them seems to make no sense. This view is tightly related to the above questions I and II is shown by the two just compared tests, as both talk about several/all possible interpretations.

Both tests try to find out – for a claim(ed invention), disclosed by the specification of a patent (application), though both tests under different premises, as explained also above – whether there is still "**residual ambiguity**" after having removed as many initially seemingly existing ambiguities as possible from an initial alleged interpretation of this claim(ed invention) by disaggregating the latter, by using any ambiguity where feasible, into then "**tentatively**" SPL satisfying interpretations of this claim(ed invention).

If a so defined residual ambiguity exists in any SPL satisfying interpretation, both tests would denote this claim(ed invention) to be "**insoluble ambiguous**". This means that there is not a single allegedly SPL satisfying interpretation of this claim(ed invention), which would not contain an ambiguity – and hence fail its SPL test, i.e. would indeed not satisfy SPL. I.e.: Ambiguities with non-SPL-satisfying interpretations are irrelevant.

The FSTP-Test finds out, whether no such SPL satisfying interpretation exists, otherwise even all interpretations satisfying SPL, of this claim(ed invention). The 'insoluble ambiguity' test is incapable of both such positive statements (see **iii)**).

v) For leveraging on this interpretation specific view at claim interpretation, these interpretations must be identifiable. The simplest way of identifying a

SPL tentatively or truly satisfying interpretation of this claim(ed invention) is to use as its identifier this interpretation's "**generative inventive concepts set**, **GICS**", being the set of inventive concepts used in this interpretation. It results from filtering out by the FSTP-Test all sets S in FSTP test.1 to FSTP test.10. Those which passed FSTP test.10 are the GICSes identifying interpretations.

The inventive concepts – input by the user – on the top level of FSTP test.1, if compound, would be disaggregated by it into logically equivalent conjunctions of BED inventive concepts, and output to FSTP test.2, as resulting from test.1[8)9)].

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[8] Thereby this Amicus Brief, just as any preceding one, does not yet address the question whether only one of both, the claimed invention or the claim claiming it, may be indefinite. Considering also § 112(6), the CAFC has decided in *Noah* that this may occur.

[9] It were worthwhile noticing that "construing the claim construction for a claimed invention" – i.e. performing "claim interpretation" of the claim claiming this invention (see Section II) – does not mean testing of the claimed invention its feature/limitations (since *Mayo* especially its 'inventive concepts', being much more concise versions of these classical 'features/limitations' [19,18,7]) only separately, one after the other, as to their satisfying § 112. I.e., the claim construction is not only a feature/limitation wise resp. inventive concept wise analysis of a claim(ed invention)[8)].

But, "construing the claim construction for a claim(ed invention)" means and has ever meant – though often not noticed, as referring to a complex five parties relation, due to its fundamentality not being bothered for in every day patent business life – establishing the <u>whole</u> "claim construction" for this claim(ed invention)[8)]. In other words, "construing the claim cons-

truction for a claim(ed invention)" means, more explicitly, putting-up from the invention's elementary building blocks – being its features/limitations resp. inventive concepts – the complete mental construct representing the invention created by an inventor (1) and being claimed by the patentee (2) by this claim, whereby this claim moreover claims granting by the USPTO (3) patent protection for the so represented invention. The latter claim is to be approved by the USPTO if and only if this mental construct alias this so represented claim(ed invention) meets the requirements stated by the US (4) in terms of its law (here: 35 USC SPL) as interpreted by this Court (5).

Hence, this mental construct alias this so represented claim(ed invention) alias its so designed claim construction got to be construed such that eventually the final decision maker, this Court, is enabled by it to decide about the claim(ed invention)'s patent-eligibility and patentability and communicate it to the public by means of it.

Consequently, this mental construct alias this so represented claim(ed invention) alias its so designed claim construction got to be concise and complete [18,19,25]. Thereby only this Court (and its subsidiary courts, first of all the CAFC) are entitled to de novo construing the claim construction.

In its *Markman/KSR/Bilski/Mayo/Myriad* line of decisions, this Court has ex- and/or implicitly requested and explained repeatedly a so designed claim construction. This is to be construed from the specification of the patent representing this patent protection granted (for an application: applied for). These requests by this Court evidently culminated in *Mayo*.

Given this evident – for not to say: only reasonable – interpretation of the term 'claim construction', in particular in the light of *Mayo* , it is grossly misleading that phrases are widely used, such as "construing a

claim" instead of correctly saying "construing the claim construction for a claim", or even worse "construing the claims" of an invention ..... At the point in time, when a claim construction is to be construed, the claim(s) is/are) cannot be construed anymore, as they then exist already. By contrast, such sloppy wordings are often understood as justifying to apply [56] the allegedly "broadest reasonable interpretation" to a claim – not to a claim(ed invention)!!! I.e., completely ignoring the invention in this BRI application [45,21,37]!!! – thus indeed construing/fabricating new claim(s).

This complete SPL test, e.g. by the FSTP-Test, is often much more limiting the claim(ed invention) than some alleged "claim limitations" for this invention, which are fabricated/constructed in "free-style" – in particular by just leaving away [18,19,25] some tests from construing the refined claim construction, thus rendering such obscure test legally definitively flawed – for somehow complementing its classical claim construction such that both, the classical claim construction together with this free-style complement, look like establishing the claimed invention's complete SPL test. Such pretense thus is legally untenable.

II. NOTIONAL DEFICITS IN A CONFLICT ABOUT A CLAIM'S (IN)DEFINITENESS

Section I has explained the main cause for a conflict as to a claim's (in)definiteness[8)] – namely not construing for the invention it claims the refined claim construction. It has also shown that an (in)definiteness conflict and with it the legal questions I and II could equally be raised due to several other terms/notions of SPL than those immediately affecting the (in)definiteness property of a claim (checked by FSTP test.1/test.7), but capable of rendering the claim (in)definite[4)]. The following elaborations are representative also for such other (in)definiteness causes, without delving into them – but returning to this very substantial threat in the CONCLUSION.

Finally, an (in)definiteness conflict about a claim may also be caused and/or amplified by notional deficit. Namely, within a usual claim notionally a linguistic legal question overlays a pragmatic legal question, both of them not completely understood as based on defective notions, as demonstrated by [50-53] and explained below. These questions are:

A) "Up to what complexity of the wording of a claim is it as clear as required by § 112(2)?", overlaying

B) "What is a claim in 35 USC exactly?".

Section II answers both questions such that this reply is indisputably

- consistent to today's SPL precedents and notionally in line with Advanced IT/Mathematics, and
- preventing the threatening (in)definiteness cases mentioned above based on defective notions. Some of them have already come-up [52.p12/13], the *Noah* case, two weeks ago the *LBC* case, ...

The briefs of the here involved parties and Amici Curiae [50-53] explicitly struggle about question **A)**, only implicitly address question **B)**, and none of them recognizes this overlay of two hitherto not yet clarified mongrel questions. The Subsections IIA) and IIB) provide both respective clarifications.

IIA): Question A) is subject to the limitation that a claim's wording and its written representation uses natural language. Hence a quite usual invention cannot be specified in detail by the single sentence of a claim without making it incomprehensible, unless it is 'semantically extended', i.e. this sentence is enriched by terms representing functions[11)].

This is demonstrated by the real-life claim 68 (already discussed in [45]) in normal, i.e. so functionally enriched English knowledge representation ("KR"). A pretty similar claim 68° is also shown below[10)], yet as detailed specification and hence in much less functional KR, i.e. much more verbose, as typical for patents' specification sections – whereby, for brevity, this less functional KR of the claim 68 replacement does not yet contain all binary elementary disclosed (BID) inventive concepts making-up the claim(ed invention) by claim 68. Although, it contains the 4 inventive concepts discussed in [45].

It is evident: Claim 68° is far too long to be easily comprehensible by the posc[15)]. As not worthwhile reading it, it is left in German.

I.e.: Already the so reduced complexity of claim 68° shows that grasping its working is in natural language KR much more complicated than in normal KR. Not only must it use about 3 times as many words – their word counts are 181 and 553. What is even worse: The logical structure of the less

functional KR is too complicated. Both rendering this KR totally useless.

Hence, common sense requires from a claim's normal KR (and therein from the invention it claims) to use terms/notions representing functions semantically so powerful[12)] that the posc may easily grasp this invention's principle working[11)]. This is the answer to the above question **A)**.

For such a "high level semantics" claim, the problem arises whether the function(s) it quotes is(are) definite – as all briefs [50-53] correctly noticed. Even if it were definite, this would not tell whether the invention it claims[8)] passes its SPL test.

Answering this question requires construing a refined claim construction[9)] for this claim(ed invention) – i.e. applying the FSTP-Test to it, as explained in [25,18,19] and here in Section I – which comprises deciding its definiteness.

The above answer to question **A)** thus is safe.

Therefore, there is no justification for assuming, a claim is definite only[2)] if the pertinent posc is able to recognize "at its face" what exactly a claim technically tells to it, i.e. without investing a decent amount of effort into precisely understanding it [50-53]. But, as usually practiced, a claim as such need to enable the posc only to quickly grasping its principle working, not enable it to decide its (in)definiteness. The latter cannot be tested separately, anyway[9)], as explained in [18,25] and reminded in Section I: As shown there, for the SPL test of many claim(ed invention)s, especially model based ones, construing the refined claim construction for them is

necessary, which includes deciding its (in)definiteness[10)][11)][12)].

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[10] The normal KR of claim 68

68. Switching apparatus for selectively routing a telephone call from a first end terminal to a second end terminal, comprising:

- a device that provides access to a packet switching network through which data can be sent for delivery to the second end terminal;
- means for transferring first data of the telephone call originated by the first terminal through the packet--switching network for delivery to the second end terminal;
- a device for establishing a connection to a line-switching network through which data can be sent for delivery to the second end terminal;
- means for transferring second data of the telephone call originated by the first terminal over the connection through the line-switching network for delivery to the second end terminal; and
- means responsive to a control signal for changing-over from a packet-switching mode of transfer of the first data of the telephone call to a line-switching mode of transfer of the second data of the telephone call without
  - interruption of a call-up procedure, wherein
  - said control signal is produced by a network management system.

(*word count = 181*)

The less functional KR of the pretty similar claim 68°

The difference between the above and the below KR of this claim is: The former is located on a "high functional level", while the latter replaces all functions by their algorithmic implementations as disclosed by the specification, common to claim 68 and claim 68°.

68° „Verfahren zur Übertragung von Daten von einem ersten zu einem zweiten Switch, erster geeignet für:
- die Datenübertragung

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All the middle part is skipped, In total, the full version of claim 68° comprises more than 550 words and is 3 pages long.

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  - o anfangs um paketvermittelte Anruf-Datenübertragung zu ermöglich bzw.
  - o später um deren Wechsel auf Leitungsvermittlung zu ermöglichen."

11 For the pertinent posc[15)] just as in Advanced IT a 'function' is immaterial. It exists only intellectually. It reduces the working of an algorithm implementing it – doing something stepwise – to just the I/O behavior of its execution. I.e., and without going into details: A deterministic algorithm defines its function uniquely, while the opposite does not hold, as for any function there is an infinite number of different algorithms defining it.

A simple example is the commonly known function "add", e.g. "add(1,1) = 2". It may be implemented by infinitely many algorithms, any one defining it, e.g. by n=1,2,3,... algorithms working as follows:

"add(1,1) := 1 + n*(1/n)".

Any such algorithm consists of 3 algorithmic steps, with 2 steps being different for different values of n. I.e.: All n algorithms are different from each other.

Hence, it is untenable to assume – as often done in [50-53] – that a function in a claim is indefinitely specified, •) if more than one algorithm exists implementing it (as these always exist, for considering only disclosed ones see **IIB)**), or •) if not all algorithms implementing it are disclosed by the specification (which never is possible as there always is an innumerable number of such algorithms).

[12] This use of the term "function" requires an explanation, as it evidently contradicts the simple but popular [55] hear-say "Functional claiming is inadmissible" as making the claim[8)] indefinite. This is an oversimplification: A correct statement were: "Non-enabled functional claiming is inadmissible, enabled functional claiming is unavoidable for clarity" – the latter not replacing construing for the claim(ed invention) its refined claim construction.

IIB): Question B) addresses a "**patent monopole granting pragmatics**, **pmgp**" based notional deficit of today's SPL precedents, not a natural language based such deficit as underlying question A).

Answering question A) has shown: By its implied refined claim construction, *Mayo* also paves the legal way for overcoming the hitherto lingering linguistically caused antagonism existing between •) improving the simplicity/clarity of claims' wordings by appropriately increasing the semantic power of the terms/notions therein[10], and •) testing these claim(ed invention)s using terms of "high level semantics" for satisfying SPL.

Question B) addresses no notional legal problems resulting from deficiencies of using natural language in claims' wordings, but a notional legal confusion to be removed, resulting from a broad gap in SPL precedents as to emerging technology, more generally, as to model based claim(ed inventions). Recognizing this gap and how to remove it again is legally enabled by *Mayo* – and only by its removal insights become available, without which the above questions I and II cannot be answered seriously.

To start with: Question B), what under 35 USC the terms 'claim' and 'scope' ought to mean at all, has no simple answer as the only 2 simple definitions of the semantics of a claim's scope cannot be – due to the below causes, i.e. their resp. pmgp's –

- the set of all patent-eligible embodiments of the properties of the claim(ed invention). Namely: Then the scope of this claim would comprise all patent-eligible potential inventions characterized by limitations additional to those disclosed by its specification. This claim then were defined to be

preemptive and therefore not patentable – due to pmgp properties *Mayo* requires.

- a finite subset of this just defined set of this claim(ed invention). Namely: This were, with most claims, nothing else but an invitation to "invent around" them – as known from "legalizing" illegal software systems. Thus, such a definition of the notion of 'scope' of a claimed invention would often completely devaluate this claim and the whole US patent system. It hence would contradict the most fundamental property any pmgp has, as all pmgp's strive for unfolding/preserving the value of SPL.

Consequently, more complex semantics of appropriate pragmatics (more precisely: pmgp) – as compared to these two meanings – of the terms 'scope' and 'claim' of a claim(ed invention) is unavoidable. As explained in Section I in principle and shown below in more detail, the definition of these more complex semantics of a claim(ed invention)'s claim and scope under 35 USC is possible iff this claimed invention is qualified by one of its finitely many generative inventive concepts sets.

Due to the objectives of any pmgp, the below suggested definitions of the notions 'claim' and 'scope' will eventually prevail, after been approved by this Court – or even been set by this Court, as in *Mayo*.

At the time being, [50-53] demonstrate that exactly the just excluded two definitions of the meaning of the term 'claim' are assumed in their arguing about what •) features determine the (in)definiteness of the invention it claims, •) (in)definiteness test is feasible in terms of pmgp, •) the legal status is of the CAFC's "insolubly ambiguous" such test, •) the allocation should be of what SPL

decision power to the CAFC resp. to a district court (see in the recent LBC decision by the CAFC), •) .... These assumptions confuse such arguing of [50-53] even more than it is anyway – due to its total ignoring of *Mayo*.

The way out is paved by *Mayo* , again by its notions "inventive concepts"[13)] and "nonpreemptiveness"[14)]. These new notions enable the key insights, impossible *pre-Mayo*, into the subtleties of SPL for finding the below definitions of the semantics of appropriate pmgp of the terms 'claim' and 'scope' such that they meet – while avoiding both of the just explained traps – all the requirements of everyday patent business, in particular when dealing with model based inventions.

The strengths of these definitions of the notions 'claim' and its 'scope' – still customizable for the Highest Courts' needs by a dozen of their parameters (here left implicit) for following the Highest Courts' development of SPL precedents – are briefly indicated by the below items **i)-viii)**, after defining both notions, next.

Both notions need not be defined for an invention not passing its SPL test, i.e. its FSTP-Test. Thus, in the below elaborations any claim(ed invention) satisfies SPL.

Moreover, just as in Section I, the below elaborations cannot be presented/grasped completely, as this needs theoretical work [7,5], not fitting here.

Nevertheless, the sketches **i)-viii)** of some implications of the below definition(s) should suffice for communicating convincingly, what groundbreaking insights into the power and subtlety of 35 USC SPL – as necessary for patenting emerging technology inventions (see below) – *Mayo* indeed has enabled.

The notion of the 'scope' of the claim claiming a so qualified invention is:

> "For an invention and a generative set of its inventive concepts, the meaning of the term 'scope' of a claim is defined to be the set of all embodiments of exactly all its properties protected by SPL."

Thus, this is the SPL semantic alias meaning of the terms 'its scope'. It depends on the invention's generative inventive concepts set.

The definition of the notion of its 'claim' follows immediately from this definition of 'scope':

> "For an invention and a generative set of its inventive concepts, the meaning of the term 'claim' is that it claims the so identified scope."

Thus, this is the SPL semantic of the terms 'its claim'. I.e.: A claim of a patent (application) may claim different scopes of protection by SPL.

The same as for its claim holds for the definition of the notion of its 'interpretation':

> "For an invention and a generative set of its inventive concepts, the meaning of the term 'interpretation', interpreting the so qualified invention, is defined to be its scope."

Thus, this is the SPL semantic of the terms 'its interpretation'. The interpretation of a so qualified claimed invention and its claim is defined by what it yields, i.e. its scope – both being different for different generative inventive concepts sets.

As mentioned above, there are substantial cognitions enabled by these definitions, showing the power of *Mayo* interpreted SPL. These are trustworthy, as mathematically rigorous. This does not

render these elaborations academic "l'art pour l'art" – it indicates the *Mayo* induced clarity achievable about SPL, indispensable for eliminating the confusions created by wishful SPL interpretation [50-53].

Several of such cognitions based on these definitions are sketched by **i)-viii)**. Some of them also show that these cognitions clearly falsify erroneous legal statements about SPL in [50-53], allegedly justifying the questions I and II at issue – as they are not justifiable, legally at least.

i) Emerging technologies need this power and subtlety of SPL: This shows the chemical compound Dimethylfumarat. It has originally been developed and patented as a drug curing skin diseases and only recently has been detected to reduce also Multiple Sclerosis – in the US marketed under the product name Tecfidera – and another patent for this new usefulness (in EPC 'problem solution') has been issued. The same is utmost likely to occur e.g. with the "BRCA genes".

I.e.: SPL protection of such claim(ed invention)s must be grantable precisely as to their enablingly disclosed usefulness.

To put it generally: Patent protection for model based claimed inventions need this power and subtlety of 35 USC SPL, as otherwise many if not most patents granted to them would prove as being preemptive, what *Mayo* explicitly required to be avoided – and this applies for probably all emerging technology areas. This were especially disastrous for the life science based new technologies with their inevitably huge research funds.

ii) More on multiple interpretations: By 35 USC SPL, for a claim(ed invention) there are as many

different scopes alias claim interpretations as there are generative inventive concept sets for it.

Thus, it is wrong to assume an invention and/or its claim were indefinite just because of these several different interpretations for them.

In other words: Interpreting a claim(ed invention) with multiple generative inventive concepts sets and not identifying exactly which single one of them is used in this interpretation, inevitably causes the confusion discussed here and underlying the above two questions I and II, as put forward by this Court.

I.e.: If there are n different interpretations for a claim(ed invention) – and all terms other than inventive concepts used in these n interpretations have the same meanings – then this indicates that this invention's specification discloses n generative inventive concept sets of the claimed invention (which implies disclosing by it n different kinds of usefulness) with n different scopes of its claim, but not this claim(ed invention)'s indefiniteness. Nothing is wrong with a claim(ed invention) having n clearly defined scopes derived from n clearly defined interpretation rules, being the claimed invention's n generative inventive concepts sets. Of the main SPL problem thus potentially arising – that of potentially double patenting an invention – is shown by **iii)** that it does not exist.

Finally: The "multiple broadest reasonable interpretation" test of claim(ed invention)s [50,52,53] cannot indicate their indefiniteness – even if one ignored that already this test's base, the BRI test [14], is legally absolutely untenable [21,37,45].

iii) **No preemptive and no double patenting**: If the preceding paragraph holds for a claimed invention,

the total usefulness of the claim(ed invention) may be the same in its generative inventive concepts sets (in EPC terms, the n inventions then resolve the same problem) or not (in EPC terms, the n inventions then resolve different problems). In both cases, all generative inventive concepts sets are different from each other.

If a patent is granted for exactly one generative inventive concepts set of a claim(ed invention), then it does not preempt and is not preempted by such a patent for another generative inventive concepts set of this same claim(ed invention).

And accordingly, two such patents for a so understood claim(ed invention) evidently represent no double patenting for it.

At the latest at this point, when discussing two patents granted and based on the same claim(ed invention) – as solving the same problem by different procedures, or solving different problems by very similar procedures, or both – one sees that the qualification of a claim(ed invention) by its generative inventive concepts set is just explicitly naming the pmgp reason why this is possible.

Covering a single claim(ed invention) by several patents without exerting double patenting has actually been possible by some time already. The above definitions hence only make explicit a view at SPL that has been lingering in the background for a while, already, and has since then caused confusion, such as expressed in [50-53].

iv) **The non-existence of an isolated (in)definiteness test**: Although this is boring already, for many today's patent practitioners this message probably will still remain shocking, inacceptable – they will remain yearning for a cookbook recipe as to decide

about a claim(ed invention)'s e.g. (in)definiteteness, and refuse to believe that this does actually exist but requires a slightly higher reading capability, as required by *Mayo*. The reason therefore has been explained several times, in Section I as well as e.g. in [45,25].

v) **The CAFC's "insoluble ambiguous" test for claim/claimed invention indefiniteness**: Its correctness explained already in the wake of explaining the working of the FSTP-Test is consistent with this *Mayo* implied refinement of the understanding of 35 USC SPL. It evidently got to be applied separately for the various generative inventive concepts sets – if there are several ones.
As indicated in Section I, a perfect execution of the 'insoluble ambiguity' test eventually is nothing else but an execution of the FSTP-Test.

vi) **Infringement/Equivalence**: These notions of 'scope', 'claim', and 'interpretation' implied by *Mayo's* interpretation of the 35 USC SPL, which clarified its actual subtlety and power, provide by their preciseness (they are even apt for being mathematically modelled [5,25,47]) a much better basis for analysing in an unquestionable and very transparent manner infringement/equivalence problems – just as an X ray system may do with a broken or just inflamed bone or a MRT system with an aneurysm in the brain.

vii) **Decision support**: This interpretation of US SPL and these notions of 'scope', 'claim', and 'interpretation' – in the foreseeable future probably then with all national patent systems, worldwide – would be part of the basis of any smart 'patent expert system', e.g. of the IES [46,47,7,11,32,43,46,47].

viii) All above elaborations also hold for all claim(ed inventions) with only as single generative inventive concepts set, trivially.

These necessities/pragmatics represented by the SPL in 35 USC, as interpreted by this Court's *Mayo* decision, provide a scientific and political frame comprising a multitude of unresolved SPL problems for resolution by the law makers and this Court, when further developing the SPL, in particular as to emerging technologies' needs – especially when elaborating on the vague legal notions identified in Section I in the wake of outlining the FSTP-Test[13)14)15)].

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[13] **The *Mayo* Term "Inventive Concept"** as understood by *Mayo*[3)-6)] (see also [6.ftn4,18]), are the incremental units of the claimed invention's total usefulness. Separating them from each other – after disaggregating the compound inventive concepts of the elements of the claimed invention into their respective conjunctions of independent of each other elementary inventive concepts – enables separating, for any claim(ed invention), its patent-eligible from its non-patent-eligible elementary inventive concepts. This fundamental *Mayo's* requirement is to be met by any claim(ed invention)'s claim construction.

[14] **The *Bilski/Mayo* Term "Abstract Idea"** is explained in [18,19] also as to its representation of the patentability killing notion of 'preemptiveness' of a claim(ed invention).

[15] "**posc**" stands for "**person of ordinary skill and creativity**" [57], an important clarification of the interpretation of 35 USC § 103, provided by this Court in *KSR*.

CONCLUSIONS

Up-front: *Mayo* vastly facilitates **SPL** precedents by enabling Advanced IT [2-4] to support it. Here e.g., in grasping the key issues embodied by the above questions I and II, being: How to deal with (applications for) patents for emerging technology inventions, as these are no longer tangible or only visible, but plainly intellectual models based, thus here overstraining the current patent system.

These by *Mayo* enabled perspectives of SPL precedents, irrelevant for short-term business, fail to interest most patent practitioners, at least hitherto.

However, the *MARKMAN/KSR/Bilski/Mayo/Myriad* line of decisions of this Court shows that it considers its charter to be to support, also in this "innovation age", sustainable success of the US economy and that it believes the best way to achieve this objective is to increase, within 35 USC, scientific rationality in US SPL precedents. Indeed, tying SPL precedents tighter to the "intellectual constant" called "scientific rationality" would reduce impacts on it broadly recognized [16] and feared by long-term investors.

Mayo is an exemplary and big step towards this objective: The requirement it implies, of construing for an emerging technology invention a refined claim construction, defines first time what exactly is meant by "its indefiniteness" or "testing it under SPL". The scientification of SPL precedents this Court thus initiated, provides the basis for enabling any innovation driven enterprise to manage its "creativity" business activities as transparently/reliably as its other established business activities, e.g. in the business areas of ERP, CRM, or US GAAP.

This leads to the below conclusions, comprising the answers to the above questions I and II:

- While it today may be inconvenient for many US patent practitioners, enforcing the rationality/ scientification of SPL precedents required by *Mayo* is not only worthwhile but necessary – for sake of sustainable economic success of the US.
- This means confirming the *Mayo* implied requirement, to construe for a claimed invention its refined claim construction as its SPL test.
- Specifically as to questions I and II: The CAFC test for indefiniteness of a claimed invention is a functional and hence non-executable specification of a part of what the meaning is of "construing for it the refined claim construction".

  This means ad I: The CAFC test does not conflict but is in line with this Court's precedents, especially with *Mayo* – disabling the Petitioner of showing the contrary – and ad II: Therefore the CAFC did not err in interpreting 35 USC § 282.
- The completely executable FSTP-Test actually does construe for it this refined claim construction as it is nothing else but the algorithm (scheme) implementing the requirements stated by Mayo for its necessary and sufficient testing for its satisfying US SPL as interpreted by this Court.
- The USPTO's position as to the CAFC's "insoluble ambiguous" test may be read as confirming much of the just said, yet without referring to Mayo. Just as its *Mayo* guidelines ignore *Mayo's* new terms/notions "inventive concept" and its relation to testing its "preemptivity"; that for § 282 doesn't

mention *Mayo*; that recommending claims' "Broadest reasonable interpretation" is untenable [45]: They all need updates to align them with this Court's requirements, just as those of the CAFC. This Court should find a way via the CAFC to remove stumbling blocks for the unfolding of innovation activities – such as this unfortunate (in)definiteness debate and its above questions I and II.

- And more alike wild-goose chasing cases will arise, to change the US SPL precedents in favor of whatever major parties just feel fit for, unless this Court puts an end to the evidently topical feeling that anything might go – as demonstrated by the case underlying this invitation of Amicus Briefs.

  The most efficient way to achieve this probably is to tell the community of patent business practitioners by this Court – quite similar as it did it in its Mayo decision – that, while in the past SPL and its precedents had nothing to do with IT, the situation has changed: With the ever growing economical importance of innovations of all kinds for the US society and their rapidly increasing scientification, patents in emerging technologies – vastly developed in the US – deserve and urgently require Advanced IT potentials to be used for supporting them by this community for their most efficient management and usage. That the intellectual level of such patent business and its level of complexity is too high for this community – as already indicated in the most recent brief in this case – is no excuse: These levels are still far below those of accounting systems of public companies.

A little bit of new professional qualification will suffice for the patent business community, comparable to what getting a driver's license has cost – not due to *Mayo*, but caused by what protecting emerging technology inventions requires.

- This Court should encourage, by its decisions in the pending cases, the initiatives recently launched by the White House [54] and the USPTO [55] by confirming, what the IPO [56] has put beautifully by its slogan taking them programmatically:

> *"Patent Claim Limitations Construed According to Claims, Specification, and Prosecution History, not 'Universally Accepted Meaning' ".*

One of this Court's responsibilities is to ensure that such 'universally accepted meanings', here within the patent business community, should not impede the pioneering spirit of the US, but encourage it by adjusting SPL precedents for leveraging on inventions especially in emerging technologies.

In total: *Mayo's* slight raising the intellectual bar – by its *Mayo* interpretation of the SPL in 35 USC – for patent applications, examinations, and interpretations, and for up-front drafting them, has proven very productive. It is about to provide to judges, inventors. investors, patent lawyers, the USPTO, and the public much more certainty about the US SPL and patent protected inventions than possible *pre-Mayo*, in particular as to claimed inventions in emerging technology areas.

This Court should leverage on the dynamics it thus created, as stated by the above IPO slogan, for increasing by its consistent decisions making, along

the line of its *KSR/Bilski/Mayo/Myriad* decisions, also the confidence in and hence the appeal and attractiveness of the research communities, as well as the social standing of sponsors of and investors into sustainable research business. This is the best guarantee for also the economic resilience provided by the US patent system to the US society.

Respectfully Submitted,

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