

THE CAFC's REBELLION IS OVER – THE SUPREME COURT, BY *Mayo/Biosig/Alice*, PROVIDES CLEAR GUIDANCE AS TO PATENTING EMERGING TECHNOLOGY INVENTIONS

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Abstract:

As to the fundamental question shaking the National Patent System (NPS) since several years, the heat is not over yet. But clarity has increased looming largely at a series of national high level conferences addressing this issue – e.g. the FCBA conference, Ashville, 17.-20.06.2014; the PTO's respective hearing, Alexandria, 22.07.2014; the CASRIP, Seattle, 23.-24.07.2014. This groundbreaking question being:

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- “Does the US Constitution, for a legal decision based on 35 USC §§ 101/102/ 103/112 (abbr. by ‘SPL, Substantive Patent Law’),
- require using the uniform refined claim construction framework set forth by the *KSR*, *Bilski*, *Mayo*, *Myriad*, *Biosig* and *Alice* decisions of the Supreme Court, which overcomes the shortcomings of the classical claim construction as to emerging technology inventions, or does it
 - entitle the PTO, a district court, and the CAFC to continue using the classical claim construction and its “broadest reasonable interpretation, BRI” of a claim, thereby refining them for meeting emerging technology inventions’ needs on its own as suitable for its business – just ‘in the light’ of the above Supreme Court decisions”.

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This SSBG Report provides an analysis ●) of the implications of these Supreme Court decisions on SPL precedents as seen by Advanced IT (AIT), ●) of the now dominating comments on this line of unanimous decisions – fully in line with this AIT view – notwithstanding that these decisions still encounter ●) fierce critics by several national ‘heavy weight’ opinion leaders, e.g. the two most recent CAFC chief judges, based on the irrational assumption, the classical claim construction and its claim interpretation(s) were capable of providing robust protection by 35 USC SPL to emerging technology inventions, too, without refining the latter’s interpretation as just done by the Supreme Court.

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This over many decades dominating irrational assumption had since *Phillips* in 2005 even created a “BRI” schism between USPTO and CAFC and since *Mayo* in 2012 also a “ClaimConstruction” schism between CAFC and the Supreme Court. This Report shows that in particular 3 of the above decisions, *Mayo/Biosig/Alice*, now ended all these irrationalities – and provided the hitherto missing resilient constitutional fundament absolutely indispensable for robustly protecting emerging technology inventions as required by the principles of the US Constitution.

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The SSBG Report hence conveys a really dramatic scientific message about the current development in the US NPS due to these 3 Supreme Court decisions. This message is embedded into a pro- and an epilog – like in an ancient Greek drama, of which kind this development somewhat has – for separating, from ●) the Advanced IT’s scientific/unquestionable interpretation of these 3 decisions, ●) the author’s individual interpretations of ●) public substantial arguments about them made during the above conferences (see the prolog) and of ●) PTO’s remarkable hesitation/reluctance to acknowledge them totally/wholistically, in spite of much lip service (see the epilog).

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Nevertheless, the pro- and epilog’s individual interpretation will be tightly tied to the elaborations in this Report’s scientific body, thus exposing the area of conflict not settled, yet.

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The Report’s author and its SSBG (“Sigram Schindler Beteiligungs-GmbH”) have a twofold interest in this groundbreaking development in the US NPS. Firstly, they are investing into developing an Advanced IT and fully SPL precedents based “Innovation Expert System (IES)” – evidently the first one of this kind – which, equally evidently, requires a scientifically ‘well-defined’ terminological/notional fundament of the thus emerging ‘patent technology’. Secondly, they are badly hit, in two legal cases, by the above addressed anomalies in the US NPS system and hence are about preparing a Petition for Writ of Certiorari, based on this Report. For avoiding legal conflicts, this Report comprises absolutely nothing specific as to these cases. The actual ‘Petition for Cert’, coming before its deadline on 24.08.2014, will comprise these cases, too. For convenience of the reader, the content and the format of the bodies of the Petition for Cert and of this Report should be identical, except the cases and simplifications/completions/improvements (as a few days are left for them).

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PROLOG

5 This prolog presents the author's individual interpretations of a recent series of publicly made substantial arguments and/or comments about the Supreme Court's unanimous *Mayo/Biosig/Alice* decisions. By these decisions, refining the interpretation of patent law, more precisely: of 35 USC §§ 101/102/103/112 (abbr.: Substantive Patent Law, SPL) – such as to enable SPL precedents to robustly protect emerging technology inventions – the Supreme Court is aiming at providing to the society a resilient legal fundament for fostering its emerging technology inventions by patent law, in particular preventing them from being presented in a non-patent-eligible way.

10 All these arguments/comments were made by heavy-weight opinion leaders from the US community of patent business practitioners, including two former chief judges of the CAFC and top US representatives of economy and Academia.

15 The author's interpretations in this prolog – for his further interpretations of such reactions on these 3 decisions see the epilog – deal with both views at this groundbreaking development in the US National Patent System (NPS): The meanwhile dominating ones, seeing these Supreme Court decisions as clearly providing a framework of guidance rules for drafting and examining emerging technology inventions, as well as those ones arguing these 3 decisions were counterproductive. The latter was the almost sole view at the time of the *Mayo* decision, by now being much better understood, especially since *Biosig/Alice*.

20 I.e.: In this prolog the author will outline the reasons for the by now ●) substantial support of this rational framework for refining the classical claim construction provided by the Supreme Court – enabling a clear view at specificities of emerging technology inventions unavailable hitherto, evidently the reasons for the now ●) fading untenable belief that emerging technology inventions are served best by the classical claim construction, in spite of lacking any rationale how to overcome the enormous difficulties unavoidable on this way, due to their specificities.

25 In its below list of argument/comment interpretations, this prolog will refer to the explanations of both kinds of such arguments in this Report's main body. It thus will show the first kind's consistency with 35 USC SPL and its interpretation by the Supreme Court's *Mayo/Biosig/Alice* decisions, which clearly take into account these specificities and thus implied needs emerging technology inventions of robust patent protection. The second kind's reasoning, lacking any such uniform rationale, is logically unable to achieve consistency in SPL precedents.

30 A disclaimer is in place, here: The author nowhere claims this collection of current views were only close to being complete or the current refinement of claim construction, as established by the Supreme Court's framework, were already the final such refinement. As to the latter aspect: Further going refinements are indispensable, due to the inherently only partial understanding of the complete workings of most emerging technologies – while the knowledge about them is permanently substantially increasing.

As to the Supreme Court's framework, the below key rational pros and today still lingering key irrational cons, shall show the structure of this broad range of such arguing. Starting with the pros, this list's items vary between wishing – all what follows in the author's words – 'the Supreme Court had by Mayo/Biosig/Alice wiped the slate clean', as
5 opposed to 'it ought silently surrender' (the latter kind of arguments made by two former CAFC Chief Judges, the former one by the PTO and less involved observers of the scene from economy and Academia).

- Taking the first part of the headline of this SSBG Report: "The CAFC Rebellion is over". This statement originates from the introductory remarks into the panel session
10 "Software Patent Eligibility and Protection Scope' at the CASRIP [102,103], focused on these 3 Supreme Court decisions. This statement's message is unmistakable and needs no interpretation by the author.
- The same applies for the first speech in this panel session [103] delivering an analysis of the rationale carrying Mayo/Alice. While this analysis addressed only the main principles of this Mayo/Alice rationale**, it yet derived already thereof with absolute clarity
15 the decisive refinement of the claim construction for a claimed invention the Supreme Court insists in for its patent-eligibility, as described by these 2 decisions. But, this analysis did not yet explain the details¹⁾²⁾ of this refinement** indispensable for verifying by redundancies the correct interpretation of these 2 decisions, as expected by many.
- Moreover, during all the CASRIP conference, no question was really raised (for exceptions see below) as to remarks confirming the correctness of this message. Such as:
20 the Supreme Court is about to shift its focus, in these decisions, to the term/meaning of "usefulness" in § 101, or: it wanted this message to be clearly noticed, or: it would stand by Mayo/Alice [104,105], i.e. there is no way back. In total this means: The CAFC's rebellion against the Supreme Court's requirement to refine claim construction is over.
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- The politically perhaps most important indication that Mayo is going to prevail has been stated during the first speech in the second panel session [106]. Namely: By not having reacted on Mayo when releasing the AIA, the Congress unspokenly agrees with the Supreme Court, in spite of the furor it raised, thus implicitly acknowledging that the
30 CAFC's standstill – as to caring for emerging technology inventions' needs – is unacceptable and approving the Supreme Court's approach to this new challenge.
- Next, on this parting of the ways of the further development of the US NPS, besides the just outlined view of the Academia, the PTO's estimation/position is substantial, as it
35 must take also their pragmatics into account (as of its immediately preceding "Software" meeting [98-101]). And this position is formally absolutely clear: In the CASRIP conference [105] just as in the PTO's preceding hearing [98], both key PTO representatives presented their view of Mayo/Alice** and emphasized the PTO's determination to immediately implement these 3 Supreme Court decisions – i.e. without waiting for any
40 further CAFC precedents on their basis – for its examiners' and their decision makers^{o)}. I.e.: For the PTO, Mayo/Biosig/Alice hence seemingly does provide the needed guidance for its decision making. Yet, the advocatus diaboli right now would express concerns¹⁰⁾¹¹⁾.

After all these pros, concerning these 3 decisions: What happened to the cons?

- *The original hasty reaction after Mayo is well remembered: “The Mayo decision is incomprehensible and hence impractical” – public dissent in the US unknown.*
- *Similar strong but equally flat words were used, also recently, in comments on these 3 decisions [81,108] – though calling them “controversial” [109] now caused laughter.*
- *Though, also only recently asked, there are subtle questions, too – potentially decisive, if not answerable rationally, as about these Supreme Court decisions’ in compliance with the Constitution, which might invoke the Congress during its ongoing legislature. These questions are asked by the two preceding CAFC Chief Judges [110,111], which both rightfully enjoy an excellent reputation, and hence deserve attention.*

Their questions, put as statements, basically are that “... it has become difficult for lower court judges and litigators to know where the line is drawn on what can be patented” [111], resp. that this line – separating patent-eligible from patent-ineligible claimed inventions – is not clearly identified by these Supreme Court decisions and/or may not be clearly identifiable at all [110] such as to comply with the Constitution.

These questions embody two quite different qualities:

- I. *Since Archimedes’ relegation from the ancient Greek Academy – as he was unable to prove mathematically his law of water displacement – it is known that an alike question regularly comes up with any scientific insight helping to resolve a socially important problem and the practical application of this insight, notwithstanding that this application just has proven to be enormously advantageous. I.e., where these questions challenge the Supreme Court decisions’ in compliance with the Constitution, this seems to be another occurrence of this phenomenon – morally/ethically probably above any doubt, but what is not elaborated on in this contribution.*
- II. *The other quality of these questions is, whether these Supreme Court decisions enable to define sufficiently clearly i) the above quoted line and ii) where it is drawn. Both questions** have been clarified by the author immediately after the Mayo decision – recognizing that the Supreme Court suggested to proceed exactly as Advanced IT would do in this situation [7^a]) and which since then has been repeatedly discussed in FSTP publications (see the Reference list appended), always emphasizing that the FSTP-Test^{8.b}) enables determining precisely any claimed invention’s semantic facts (more precisely: its “patent law carrying semantics, plcs” facts [7]), which then are subject to “patent monopoly granting pragmatics, pmgp” [7] (to be determined by Highest Courts, not by AIT). For the correct/uniform recognition of which, throughout the US NPS, the US PTO’s guidelines would be indispensable. Issues i) and ii) will be summarized very briefly in^{3e}).*

This review – of the current pro/con structure as to the Supreme Court’s approach to solving the evident problems of the hitherto SPL precedents with emerging technology inventions by its Mayo/Biosig/Alice decisions – is concluded by an interesting brief report about a recent meeting of German and European global players, delivered at the CASRIP [107]. These problems, the US NPS struggled with, are seemingly now recognized there,

too, and were summarized in reporting that this meeting's unanimous statement also is that the current state in patenting emerging technology inventions simply is untenable.

And the author hears an even clearer – basically – “pro echo”^{**}) of the Supreme Court's Mayo/Biosig/Alice decisions, vastly comprising also its KSR/Bilski/Myriad decisions, when listening into the actual contributions provided, as to this formerly controversial issue, to the PTO's extremely valuable respective page inviting them. The PTO here proceeds as the Supreme Court^{7.a)} evidently expected, since KSR^{7.b)}. Commenting these actual contributions would blow the planned frame of this SSBG-Report. Yet, three observations derived from them are supported by this SSBG-Report

- 1) The respective guidelines comprise, of these Supreme Court decisions, several overbroad interpretations – from the Advanced IT point of view correctly criticized – simply being due to the PTO's assumption that its applying of its BRI in a claimed invention's claim interpretation were correct. But this BRI's current wording contradicts Mayo already.
- 2) The key requirement of Biosig is not recognized: It unmistakably requires replacing this BRI by the “broadest legal interpretation, BLI”, pre- and post-Mayo (see Section III.A).
- 3) Another key requirement of all 3 decisions is also often not recognized: To grant non-preemptive claims, only – as is warranted by the NAIO-Test (see ftn^{8.b)} and Section VI).

I.e.: For meeting the 3 decisions' requirements, 1)/2) are too broad and 3) is missing.

^{**}) This footnote shall indicate that, wherever it appears in this prolog, the author would like to emphasize: The marked-up passage fully concurs with the author's interpretation of the Supreme Court's Mayo/Biosig/Alice decisions. Thereby, any such “**)-concurrency statement” comprises, as to these 3 Supreme Court decisions, 4 crucial differences between this author's interpretation of one of their statements (addressed by this comment) and any “peer” interpretation by a respective other person/authority/conference/panel/... Namely (as compared to this author's interpretation) none of these peer interpretations of these 3 decisions

- 1.) attempts the complete identification of the meanings of the requirement statements comprised by anyone of these 3 decisions, which would comprise identifying these meanings logically implied notions – while this author's interpretation does and shows their principally tight proximities to established AIT notions;
- 2.) goes into clarifying – when determining of the so identified meanings (of these 3 decisions' requirement statements) – their SPL notional details¹⁾²⁾ (in their use for describing legal and/or technical relations between the intellectual/mental items¹⁾²⁾ these 3 decisions deal with);
- 3.) is today capable of translating – the so clarified detailed meanings of the 3 decisions' requirement statements – ●) first into terms/notions known from IT System Design/Specification, from the latter's unquestionably established (analytic philosophy based) principles of disaggregating compound concerns/requirements into elementary ones, and from (AI type) assumptions about the basic capabilities of human logic thinking repeatedly made in Highest Courts' SPL precedents (in the US e.g. the Supreme Court's KSR/Bilski/Mayo/... decision, in Germany the BGH's Spannschrauben and Gegenstandstraeger decisions [7^{4.a)}], ●) then into the FSTP-Test^{1)2)8.b)}, indicating for any claimed invention its satisfying 35 USC SPL or not;
- 4.) shows that and how the Biosig decision quite fundamentally clarifies and confirms requirements, met by any claimed invention iff it satisfies SPL, which were implied already by Mayo and now are explicitly confirmed by Alice – but this clarification/confirmation holding also independently of Mayo. Biosig thereby unmistakably qualifies the PTO's BRI in its current wording [14] as contradicting the US Constitution

whereby these steps are to be executed highly iteratively – until this whole translation is consistent, which is always achievable under only weak preconditions^{3.b)}.

I. THE DEFICIENCY OF THE CURRENT NPS

This petition presents to the Supreme Court the need to clarify that its *Mayo/Biosig/Alice* decisions terminated in the National Patent System (NPS) an anomaly as to 35 USC §§ 101/102/103/112 (abbr.: Substantive Patent Law, SPL). It arose over the years, and its final state is outlined as follows.

Normally, district courts, ITC, CAFC, and the PTO are supposed to apply the Supreme Court's interpretation of the U.S.C. Yet, uncertainty exists among the community of patent practitioners – also of these authorities – as to this Court's above 3 decisions: ●) Are they part of the scheme “US authorities consistently practice this Court's such interpretations of the U.S.C.”, or ●) are they views of ‘generalists’ on SPL [81], ‘not providing much help’ [99], from which the other authorities may derive claim constructions as needed by their specific businesses – thus encouraging these other authorities to strive on their own¹³⁾¹⁴⁾¹⁵⁾ for their own SPL precedents.

This anomaly has a cause^{a)}: Put simply, the “Broadest Reasonable Interpretation, BRI” Schism, in truth a grave “ClaimConstruction” Schism^{8.a)}.

I.e., there are two key annoyances: The BRI Schism between CAFC and PTO, and the ClaimConstruction Schism between the Supreme Court and CAFC (and PTO) – both ignoring the former’s requirements as to “emerging technology inventions”.

E.g., the CAFC applies to claims

- sometimes the broadest reasonable interpretation, BRI, of the PTO. *Biosig* now qualified this BRI as contradicting 35 USC. This ends the BRI Schism, and hence busts all CAFC decisions based on the BRI (see Sections IV/VI), or
- the CAFC’s own classical claim interpretation. By *Alice* this Court now qualified the classical claim interpretation as not yet satisfying *Mayo* (which requires further refining the classical claim construction for handling patent-eligibility exceptions 8.a), thus ending the ClaimConstruction Schism, and hence busting all CAFC decisions based on the classical claim construction (see Sections V/VI).

Below these hitherto unnoticed ‘refinements’ in SPL precedents are presented, as required by these 3 decisions of this Court, just as the broad/intensive concurring desire to increase claim clarity as

to emerging technology inventions [100] based on a refined understanding of claim construction [98]:

- I. identifies two key deficiencies in the current NPS.
- II. provides a survey about the BRI Schism, the Supreme Court's stepping in by its *Mayo* decision, and the resulting ClaimConstruction Schism.
- III. shows that scope(CI) of a "claim(ed invention), CI", depends on its BRI^{pto}, BRI^{phi}, or BRI^{mayo=BLL}.
- IV. explains why *Biosig* busts all BRI^{pto} based CIs – thus ending the BRI Schism.
- V. explains why *Alice* busts all BRI^{phi} based CIs – ending the BRI & ClaimConstruction Schisms.
- VI. clarifies the aftermath of *Mayo/Biosig/Alice* and – as to the PTO's current Guideline discussion – the NAIIO-test warranting a CI's nonpreemptivity.

Hence, the Petition asks the Supreme Court for confirming the framework for SPL precedents, it set forth by its *KSR/Bilski/Mayo/Myriad/Biosig/Alice* decisions^{a)} – on which SSBG scientifically researches since *KSR*, as invited by these decisions^{7.a)}.

^{a)} Notwithstanding^{10|11)}, the PTO is on the way of reconciling its decision making with this *Mayo* framework, but it evidently occasionally feels unsafe in using the terms/notions the Supreme Court requires to be used on this way.

SSBG hopes that the scientific insights provided here, achieved by AIT research on problems emerging technology do cause for hitherto SPL precedent, helps bringing the PTO onto the top of the state of the KR science³⁾ supporting inventions driven processes. The PTO thus dramatically increased stimulating the innovativity of the US economy.

All relevant information, here only referred to⁶⁾, is available on www.fstp-expert-system.com.

II. BRI SCHISM & ClaimConstruction SCHISM

“Claim interpretation”^{8.a)} of a CI is an important SPL term/notion. Yet, this term’s precise meaning is subject to the below outlined two schisms.

5 First scientifically: This compound term’s meaning is depending on the properties of two interdependent tools indispensable for interpreting a CI:

- The CI’s scope/reach oriented “elements’ semantics association basis” for this CI’s “claim terms”^{5.c)} resp.

10 “inventive concepts”^{1.c)} alias “elements”^{1.c)}, subject to the “BRI Schism”. • The CI’s qualities oriented “holistic semantics association basis” for this CI as a whole¹⁰⁾, subject to the “ClaimConstruction Schism”, due to this Court’s refined interpretation of §§ 101/

15 102/103/112 in *Mayo*, clarifying CI’s BRI, first of all.

Sections IV-VI elaborate on both schisms.

Now practically: In the second half of the 20th century, the BRI anomaly arose incidentally, stimulated by the PTO, and tolerated by the CAFC as a

20 minor issue. In the first decade of the 21st century, due to emerging technology (“**ET**”) inventions, the BRI issue led to controversies in the CAFC – e.g. *KSR/Bilski/Mayo/Myriad/Alice* – mistaken as being

caused solely by obviousness, patent-eligibility or definiteness issues, not noticing their being new kinds thereof as now model based, and hence ignoring that for clarifying and avoiding such controversies a refined claim interpretation resp. claim construction 5 8.a) is indispensable. This Court noticed this need and refined, by *Mayo*, its earlier interpretation of 35 USC §§ 101/102/103/112 for meeting the requirements these 4 §§ state as to needs of ET claim(ed invention)s (“CIs”), abbr.: “ET CIs”. These “modeling 10 needs” don’t exist with classical technology CIs⁸⁾.

The CAFC’s uncertainty about how to decide on such issues – caused by ET CIs – increased, when this Court asked it to reconsider some of its ET CI 15 decisions “*in the light of Mayo*”. *Mayo* had provided guidance for refining the classical claim construction for identifying its patent-eligible inventive concepts – for recognizing, what of a CI is patent-eligible (and potentially patentable). Insisting that *Mayo* deals 20 solely with patent-eligibility and nothing else, both authorities ignored *Mayo’s* such guidance to a refine-

⁸⁾ For preserving the integrity of legal argument chains, the “patent technique” explanations are put into ftns – references to them may identify sects/figs/ftns therein.

ment of the classical claim interpretation – and that *Mayo* unmistakably stated^{1.a)}: “A CI is patent-eligible”

¹ .a) As this Court invited⁷⁾, a scientific clarification is provided of the only thinkable ways of stating that a CI, allegedly meeting a SPL requirement, actually does meet it or not.

In a first and the logically simplest step, this statement may be presented declaratively (“non-operationally”) as a logic expression over logic functions, evaluating to T/F – just as most initial statements about anything are declarative.

In a second step, this declaration may always easily be broken down alias “refined” – due to^{3.b)} – into a procedural (“operational”) statement, i.e. an algorithm using these logic functions. Often this initial declaration is refined into a mixture of logic expression and algorithm, the latter always implementing a part of this first step’s declaration.

Any such statement may be evaluated to T/F. If it is declarative its evaluation is called ‘correctness proof’, if it is refined already to an algorithm its evaluation is called ‘test’.

Evaluating a declarative statement by a correctness proof – eventually to be put as a legal argument chain – is highly error prone, i.e. not trustworthy. By contrast, evaluating it by a test – i.e. presenting this first step declaration in a second step as algorithm, and then deriving a legal argument chain tightly from this algorithm – has proven to be much less error prone, i.e. as trustworthy. Hence, the strong desire, in SPL precedents, for algorithmic evaluations of statements as to CIs’ meetings SPL requirements.

Biosig’s definition of a CI’s definiteness is declarative (i.e. not operational). A classical claim construction is partly operational^{8.a)}, just as *Mayo*’s refined claim construction (though much more complete). The latter represented fully operationally is the FSTP-algorithm, casually: FSTP-Test^{8.b)}.

.b) *Mayo*, in *Alice* explication, proceeds in its refined claim construction^{8.a)} for a given CI, the other way around as the FSTP-Test^{8.b)}. In a first step, *Alice* determines^{1.c)1.d)} this CI’s at least one “patent-ineligible building block of human ingenuity”, before asking in a second step, for its “patent-eligible **inventive** concept(s)”. If one exists, this legally “transforms

ble if and only if it embodies a nontrivial patent-eligible inventive concept”. Now, this is confirmed by *Alice* – telling both authorities that this Court requires their classical claim construction^{8.a)} to be
5 adjusted accordingly.

the CI” into a patent-eligible “application of the patent-ineligible building block(s)” – potentially patentable.

.c) There is a logical/notional *Mayo/Alice* implication^{2.a)}, implemented by the FSTP-Test: The necessity to disaggregate CI’s “compound” building block(s) and inventive concept(s), each into conjunction(s) of “elementary” ones. I.e., *Mayo/Alice* initially consider both these notions to be represented (“instantiated”/“incarnated”) by compounds. Yet, the analysis of these instantiations’ intricacies as to their meeting SPL requirements shows: such statements are logically impossible without disaggregating the incarnations/instantiations of both notions into their elements^{2.a)}.

Alice indicates this need – in SPL testing a CI on the elementary level of notional resolution [5-8] – by identifying “elements” of claims^{2.a)}. Their “ordered combination(s)” are compound(s) alias building block(s) and inventive concept(s), needed for preserving it(them) over this disaggregation^{2.a)}, as it(they) often make-up a CI’s inventivity [7^{**}1)-4),18,19].

In other words: *Mayo’s/Alice’s* refined claim construction terminology is used “a priori”, when declaratively^{1.a)} starting analyzing a CI by its building block(s), in the first step of the *Mayo/Alice* framework. For its second step^{1.c)} – refining this declarative statement into an algorithm/test – this at least one building block may be still too complex for using it this way [6,7]. I.e.: This second step comprises its (their) disaggregation into (combinations of) elements, being precisely definable – as implied by this framework – and representing CI’s “a posteriori” notional clarity for its refined claim construction^{2.a)}. Thereby it is evident that both steps would be performed iteratively [101].

Yet, then, CAFC and PTO preserved their claim interpretation doctrines as they were: In spite of repeated advice, by SSBG, that AIT [2] sees this Court on the track of leveraging on the amenability of SPL precedents to scientification, and hence that its *Mayo's* thinking will prevail – while their classical claim constructions (just as any alike thinking elsewhere) are too deficient to survive^{8.a)}.

Ignoring all such information, the CAFC – and the PTO – undertook absolutely no effort to refine claim interpretation accordingly. This led to the “**ClaimConstruction Schism**” between this Court and the CAFC, starting in 2012.

Note: PTO and CAFC, occasionally mentioning *Mayo*, avoided the use of *Mayo's* decisive term/notion “inventive concept” – not surprisingly: There is a forerunner of it, the notion “claim term” created by the CAFC's *Phillips* decision^{5c)} in 2005, in the wake of which the PTO caused the “**BRI Schism**” between CAFC and PTO by completely ignoring it [78p.5-6].

Today, this Court's *Biosig* decision has brought the BRI Schism to an end – its *Alice* decision even both schisms, the ClaimConstruction Schism and the BRI Schism (the latter independently of *Biosig*).

I.e.: By *Mayo/Biosig/Alice* this Court refined its interpretation of §§ 101/102/103/112 such that it now enables a precise/complete and for both kinds of CIs uniform test for their satisfying these 4 §§²³.

² .a) The FSTP-Test also systemizes the terminology by denoting the patent-ineligible building blocks as “patent-ineligible (inventive) concepts”, as *Alice*. *Alice* decision, p.10. Any *Mayo/Biosig/Alice*-Test then must identify, just as the FSTP-Test, of a CI all its elementary inventive concepts, the patent-eligible just as -ineligible ones^{8.a)}.

This disaggregation/refinement of a compound into elements cannot be driven ad infinitum as it ends in *posc* or a non-disaggregatable non-eligible concept. Disaggregation may also stop above *posc*^{8.a)}: Namely, before generating depending of each other refined “inCs”^{8.b)}. The FSTP-Test filters away generative sets comprising dependent “inCs”.

Finally, there is an extremely important remark that must be understood for understanding *ftn*¹⁾: Initially, when beginning to analyze a CI the *Mayo/Alice* way, of its immediately recognizable building blocks some may evidently be elements already (as not further refinable, as just explained) and these would evidently be often qualifiable as patent-eligible or -ineligible inventive concepts [92,93,94]. But: Of a non-elementary building block it needs not be immediately clear, whether it is a compound of only patent-eligible elements or whether it comprises one (or several) non-patent-eligible elements [98] – as representing a natural phenomenon or an abstract idea. This can be clarified only, if it is disaggregated as far as possible into elementary inventive concepts alias elements.

.b) In its *Alice* decision this Court turned explicit – by its elaborations on the requirements stated by *Mayo* to be met by a CI – its in *Mayo* still implicit §§ 101/102/103/112 requirements to be met by a CI in the claim construction for it.

Thus, by *Alice* this Court confirmed, what it had recognized already by *Mayo*: That the classical §§ 101/102/103/112 interpretation is too coarse for basing on it a broad

consent how to test precisely/completely ET CIs under these 4 §§ – although this classical interpretation today underlies all such decisions of district courts, yet without enabling them to proceed, therein, in a commonly accepted way, about which their judges repeatedly complained, e.g. [84] – and that this Court hence refined already by *Mayo* its classical interpretation of these 4 §§ such that it provides to district courts this missing way for SPL testing of ET CIs.

.d) Claim interpretation “while its/their examination during patent application is still in progress” is not an issue, here. Applying, within the initial phases of examining a patent application the “heretic” **BRIP^{to}** – as deviating from the by the CAFC ordered **BRIP^{hi}** (see II) – is reasonable, as then not a clear definition of the scope of the CI but an improvement by the applicant of a claim wording is at issue, for thus excluding its false interpretation by the *posc*.

- ³ **.a)** The mathematical definition of the notion “inventive concept”, discussed in detail in [5-7], is a simplification of the powerful notion of “concept” in DL/KR [2-4]. It is customized for modeling Highest Courts’ SPL precedents, nothing else – which comprises modeling all thinkable properties of elements, e.g. as discussed by [92,93,94] – while the DL/KR notion of “concept” serves for general purpose recursively modeling of compound concepts by simpler ones.

By contrast, SPL precedents proceed the opposite way, for achieving these elements^{1d)} of a CI are defined definite, useful, independent^{8.b)} – logically impossible with compound elements^{1.c)}, by SPL precedents today not yet really noticed.

.b) Three preconditions are recognized and assumed as fulfilled by the CI to be tested, the first one also by the NPS. It got to be **●** of FFO type (“finite first order logic”), **●** non-pathological [58], **●** specified consistent to its application/problem^{8.b)} – [5,63,73,90].

.c) The *Mayo* thinking is not logically flawed and makes no assumption without being aware of it (both invited by the classical claim construction, e.g. by its incompleteness), is to mathematically model this thinking and its application [63,73,90]. All experience namely shows: Such deficiencies, if they exist at all, also strike practically (“Murphy’s law”).

.d) Thereby this mathematical modeling of the *Mayo* framework is there at its best, where its notions are scalable [94].

III. A CI's SCOPE DEPENDS ON ITS BRI

The notion of the term “scope(CI)” is crucial for 35 USC: For determining whether another invention, CI*, violates CI’s patent right by belonging to
 5 scope(CI), which requires determining first this CI’s meaning precisely – by construing its refined claim construction, e.g. based on *Mayo’s* inventive concepts, as described by the FSTP-Test^{8.b)}.

By its *Biosig* decision this Court defined, for a
 10 CI and both its pre-/post *Mayo* presentations, what constitutionally the relation is between the meanings of the terms “scope(CI)” and “CI is definite”.

SSBG’s Amicus Brief [58] had analyzed both notions already, if described by *Mayo’s* inCs^{8.b)} –

.e) The German [74.a)] and US *KSR/Bilski/Mayo* decision induced – by thinking of e.g. Kant/Russell/Wittgenstein/... [7**1)2)3)] – finding the way of defining a scientific metric of the amount of patent-eligible inventivity embodied by a CI. This metric counts the “independent and creative thoughts” mathematically modeled by BED-inCs^{8.b)}.

This cognition is enormous for the scientification of SPL precedents, as it enables often avoiding indefinite terms such as “enough” – as any metric does. Here, in indicating a CI’s ^{8.b)} nonobviousness or patent-eligibility [18,19]. E.g., Highest Courts could determine – see Section VI – that a CI, as described/defined over *posc* and prior art by a generative set of inCs, GS(CI), is patent-eligible if at least one inC of this GS is patent-eligible, and nonobvious if at least two inCs of this GS are patent-eligible (the latter coinciding with the above quoted German decisions).

which led to defining the *Mayo* based notion of scope^{8.b)} identical to that of *Mayo/Biosig/Alice*.

To begin with⁴⁾: The usually assumed notion of the term “scope(CI)” is very intuitive but fuzzy, as
 5 defining: “For a CI, its scope(CI) is the set of all CI* it comprises.” – whereby the meaning of the term “comprise” remains vague, if it is left unclear how to figure out, whether CI* is comprised or not^{5.a)6.a)}.

⁴ see³⁾

⁵ .a) Any claim interpretation trivially is a broadest one. But, the BRI of a CI yields several different inventions, if used with different reasonablenesses (Even a CI’s BRI with a sole reasonableness may yield different inventions and/or interpretations [58,63,73,90] – for simplicity skipped here).

.b) Enabling defining the notion of “preemption” precisely – in detail discussed in [5,58,63,73,90].

.c) The precedential *Phillips* decision is omitted here. As it explains best the emerging of this BRI Schism, it is elaborated on in [78.p.5-6]. There is shown: The wordings of all post-*Phillips*^{10.c)} versions of the PTO’s BRI guideline [14] vastly misrepresent *Phillips* as almost totally ignoring its key limitation over the BRI^{pto} – namely *Phillips*’ “claim term interpretation limitation”^{8.a)} – and moreover keeping pretending, the BRI^{pto} were precedential.

.d) For very dogmatic thinking, by the *Phillips* decision the CAFC deviates from the case law doctrine – the more the Supreme Court by *KSR/Bilski/Mayo/Myriad/Biosig/Alice* – as all these decisions reduce, for a CI, the interpretation of its claim terms to the meanings disclosed for the posc^{8.c)} by this CI’s specification (as of CI’s interpretation in its prosecution history). But, 35 USC and early Supreme Court decisions don’t mention such reductions in claim interpretations. Hence this thinking allegedly requires these meanings to be those the posc knows, often broader than

those the CI uses.

This thinking is irrational, as clinging to the originally ill-defined notion of *posc*^{8.a)}, as its knowledge is defined by an “all quantor” on an innumerable set. Its statements hence are “undecidable” – see Turing et al. This undecidability is removed here by limiting *posc*’s knowledge to the finite set of definite CI’s disclosures. I.e.: In the above decisions this “undecidability deficiency” that the original *posc* definition imports is reduced to a commonly/practically accepted degree by limiting *posc*’s knowledge to what is disclosed for it by the CI’s specification (read in the light of its prosecution history at its priority date), i.e. a finite set. CI’s specification thus limits the “elements’ semantics allocation basis” to the CI’s inventive concepts (usually derived from the CI’s claim terms as of *Phillips*) to a finite and hence clearly definable set used in^{8.b)}.

A side remark: Thus the risk of “over-claiming” the CI is excluded by the FSTP-Test, too, namely by its NAIO test.

- 6 .a) fuzzy, as the term “comprise” has different meanings, depending on the different meanings of the term “BRI”. Often this meaning is not operational, but just declarative.
- .b) The extent of this difference – between the meanings or the scopes of a CI caused by such limitations, and hence the “impact” on a court’s decision, ordinarily but more precisely: the “**bust**” for it – is depending on whether this CI deals with a classical or emerging technology invention. In the former case, notional ambiguities of a CI don’t exist as most of its elements’ properties are physical/visualizeable (implying that these differences between both interpretation doctrines often are small or not existing at all), while in the latter case many of its elements’ properties are invisible/intangible/non-physical, hence their description and/or understanding often is imprecise and/or incomplete, implying that said differences often are tremendous. Classical claim interpretation, totally based on the tangibility/visibility of their inventions, evidently did not really have this problem.
- .c) – though the CAFC is much less influential on this specific public, first of all striving for getting its patent applications granted by the PTO, whatsoever it defines its BRI^{pto}.

III.A The 2 Pre-Mayo Fuzzy Notions of “scope(CI)”

Since *Phillips*^{5.e)}, the above BRI Schism allocates to a CI two different meanings (and hence different scope(CI)s), depending on the authority – the PTO or the CAFC, each interpreting the CI by means of its authority specific BRI (see Section II):

- The PTO determines by [14] the $\text{scope}^{\text{BRI}^{\text{pto}}}(\text{CI})$ by its PTO specific BRI of a CI, called “**BRI^{pto}**”.
- The CAFC defines in *Phillips* a refined meaning of the BRI^{pto} , called “**BRI^{phi}**”, thus determining a tighter $\text{scope}^{\text{BRI}^{\text{phi}}}(\text{CI}) \subseteq \text{scope}^{\text{BRI}^{\text{pto}}}(\text{CI}) \forall \text{CI}$.

I.e.: The term “reasonable” in both BRIs is given a different meaning by both parties:

- One reasonableness is ‘since ever’ defined by the PTO’s BRI guideline [14], App. F., 178a. But, this alleged reasonableness encourages oversimplifying claim interpretation of ET CIs, potentially rendering them totally unreasonable, thus contradicting the socio/economic concerns of the NPS this Court reminded of by *Mayo*.

Nevertheless, the PTO clings to its misleading BRI guideline [14] and takes it as the basis of any other §§ 101/102/103/112 PTO guideline.

- The CAFC had early recognized this intolerable deficiency of the BRI^{pto}, e.g. if a CI's specification or even the wording of its claim uses a term, which outside of the CI has an additional meaning, differing from the one used by this CI, e.g. a broader one – what often occurs with ET CIs. Then the BRI^{pto} guideline encourages/insinuates (why explains [78.p.5-6]) to take into account this 'extrinsic' claim term's meaning, too, even if – as the *posc* recognizes – the CI doesn't work at all with the extrinsic meaning¹²⁾.

By *Phillips* the CAFC increased the BRI^{pto}'s reasonableness: It requires a CI's claim term interpretation to be limited to the meanings the CI uses.

Yet, due to the high reputation of the PTO it succeeded to establish against the CAFC^{6.c)}, in the US NPS, this anomaly alias "**BRI Schism**" as to the competence of legally determining the meanings of the 35 USC SPL (implied) term "claim interpretation".

Circuit Judge K. O'Malley commented on this BRI Schism by asking the PTO directly/publicly [21]:

5 *“[D]oes it really make sense to have different tribunals considering patent litigation yet not have them all operating under the same standards for claim construction? Would it not make sense to have the PTO use the actual construction of the claims of an issued patent during re-exam – as do the*
10 *courts and ITC – rather than a hypothetical “broadest reasonable” construction? It certainly would make it easier for us as a reviewing court to be able to apply one set of standards to all these IP tribunals.”¹²⁾*

15 Yet, even applying the BRI^{phi} to an ET CI still leaves serious questions unanswered. In particular, the BRI^{phi} does not – and by its *Phillips* definition, the BRI^{phi} logically cannot – provide a rationale for deciding whether a CI is patent-eligible or not.

20 The constitutionally foreseen reaction of this Court by its unanimous *Mayo* decision – on this intolerable anomaly in SPL precedents, threatening the wealth of the US – requires to take the only thinkable [74.a)] way alias rationale for overcoming,
25 for such CIs, this specific claim interpretation deficiency of the BRI^{phi}: Namely, to define for CIs a further refined claim construction, excluding this

deficiency, the way hinted at by *Mayo*^d. For the resulting “**BRI^{mayo}**” – perhaps more telling: “**broadest legal interpretation, BLI**”, instead of the unfortunate BRI – holds, by definition of the notion “inventive
 5 concept” (implying it is a refinement of the notion “claim term” introduced by *Phillips* [78]):

$$\text{scope}^{\text{BLI}}(\text{CI}) = \text{scope}^{\text{BRI}^{\text{mayo}}}(\text{CI}) \subseteq \text{scope}^{\text{BRI}^{\text{phi}}}(\text{CI}) \quad \forall \text{CI}.$$

Yet: *Mayo* didn’t explicitly define an operational “*Mayo*-Test”, as indispensable for determining
 10 for a given CI its refined claim construction^{1.a)}.

⁷ .a) see [68], e.g. p. 28, JUSTICE BREYER:

„... But I think it’s pretty easy to say that Archimedes can’t just go to a boat builder and say, apply my idea. ... Now we take that word ‘apply’ and give content to it.

And what I suspect, in my opinion, Mayo did and Bilski and the other cases is sketch an outer shell of the content, hoping that the experts, you and the other lawyers, and the -- circuit court, could fill in a little better than we done the content of that shell. ...

Now, will you at some point in the next few minutes give me your impression of, if it were necessary to go further, what could the right words or example be?”^{7.b)}

.b) [78³⁾] explains, why this hope^{7.a)} – manifesting itself in all decisions *KSR*/... /*Alice* of this Court – could not be fulfilled by its “exclusively legal” environment, yet by AIT [2], e.g. by SSBG with its strong AIT background, principally [e.g. 78^{3.b)}, 74.a), 2, 58, 63, 73, 90] and practically [e.g. 6, 7, 11, 43, 59] – seemingly worldwide the only party familiar with SPL precedents and its epistemological^{3.e)} problems, i.e. the problems of scientification SPL, strangely.

With the classical claim construction – based on the BRI^{pto} or the BRI^{phi} of this CI – intuition insinuates, without letting us know, that such a test algorithm is negligible/immaterial, as the classical
5 claim construction based on it may be easily construed in freestyle (using the well-known table on the lines of which the CI's 'claim limitations' are noted) – which *Mayo* requires to replace by construing the precise/complete refined claim construction.

10 For construing it – based on the CI's inventive concepts¹⁾²⁾ [18,19] – patent practitioners didn't know how to proceed^{7.b)}.

This encouraged many patent practitioners to jump to the conclusion that the *Mayo* requirements
15 are incomprehensible and hence impracticable – allegedly consequently also considering this Court's *Biosig/Alice* decisions as being of no help, too [81,99].

But all such postulations are totally wrong!
This is shown next.

20

III.B The Post-Mayo Precise Notion of “scope(CI)”

The FSTP-Test⁸, im-/explicitly backed-up by *Biosig/Alice*, is the allegedly nonexistent Mayo-Test.

-
- ⁸ .a) Construing, for a CI described by its compound inventive concepts¹⁾²⁾ [58], identified in CI’s specification by the “**posc**” alias (person of) pertinent ordinary skill and creativity, by
- the refined claim construction (i.e. testing it under §§ 112/101/102/103 as interpreted by *Mayo*) is performed by executing on CI the below FSTP-Test – yielding a statement why CI meets **exactly all** requirements stated by these 4 §§ or why not – while construing for this CI
 - the classical claim construction by testing it only under a small part of § 112 yields a statement why CI meets some of all the requirements stated by these 4 §§ or not. Then remains to be shown that CI passes also the remaining requirements stated by these 4 §§ [19,25,36,58] – hitherto never done completely. I.e.: The classical claim construction suffers from a series of logical “blind points”!

This Court never explicitly addressed this deficiency of the classical claim construction. But, it is not its business to identify/fix in detail a problem, but just to indicate it and how to remove it, both principally only! That is what this Court clearly did by *Mayo*⁷⁾. I.e.: In *Mayo* it clearly indicated the legal incompleteness of the classical claim construction and how to remove it – i.e.: Finer refining the classical claim construction than *Phillips* already required.

.b) The below “**FSTP-Test**” of a CI has the minimal, yet all by SPL needed^{5.b)}, “reasonableness limitations” for CI’s inventive concepts, “**inCs**”, defining this CI^{5.a)} [58]. It decides^{3.b)}, for any given definite CI, whether any given definite CI* belongs to $\text{scope}^{\text{BRIFSTP}}(\text{CI})$ or not, as required by *Biosig*. I.e.: $\text{scope}^{\text{BRIFSTP}}(\text{CI}) ::= \{\forall \text{CI}^* \mid \{\text{inC}^*\} \leq_{\text{RT}} \{\text{inC}\}\}$, meaning that any “realization tuple inC^* ” of CI* also is one of CI, as explained in [90] and is operationally checkable^{3.b)}.

Hence: “FSTP-Test=Mayo-Test=CLS-Test=Biosig-Test”).

While understanding in detail the FSTP-Test requires getting familiar with the above references, it yet shows that a refined claim construction is much more complete and

complex than a classical one. Yet, it may be automatically guided, is stereotypic, and partly based on “formalizable semantics” – overcompensating this increased complexity. Also, the FSTP-Test comprises all algorithms (modulo “redundancy”) deciding whether a CI meets all *Mayo/Biosig/Alice* requirements and only them – simplification impossible^{3.b)}. Having this total set supports optimizations [7,43].

- 1) **FSTP-Test** – executed for the set \forall CI interpretations, SoI, selected in (b)/(c), comprising 10 steps (this being #1):
 - (a) It prompts $\forall \text{SoI}, 0 \leq i \leq I, 1 \leq n \leq N \wedge \forall \text{SoI} \text{BAD}^{\text{SoI}} \underline{\text{X}}_{\text{in}} ::= \bigwedge_{1 \leq i \leq \text{SoI.IN}} \text{BAD-crCin}^{\text{SoI.in}}$ in doci-MUI’s;
 - (b) It prompts for justifying the **compound inCs definiteness \forall inC in SoI**, i.e. of $\forall \text{BAD-crCin}^{\text{SoI.in}}$;
 - (c) It prompts to disaggregate $\forall \text{BAD-crCin}^{\text{SoI.in}} \forall 0 \leq i \leq I \wedge 0 \leq n \leq N$ into $\{\text{BED-crCink}^{\text{SoI.in}} \mid 1 \leq k \leq \text{SoI.IN}\}$:
 $\text{BAD-crCin}^{\text{SoI.in}} = \bigwedge_{1 \leq k \leq \text{SoI.IN}} \text{BED-crCink}^{\text{SoI.in}} \wedge \text{BED-crCink}^{\text{SoI.in}} \neq \text{BED-crCink}^{\text{SoI.in}'} \forall k^{\text{SoI.in}} \neq k^{\text{SoI.in}'}$;
 - (d) It prompts for justifying this **disaggregation definiteness in (c)**;
 - (e) It automatically sets $K^{\text{SoI}} ::= \sum_{1 \leq 0n \leq 0N} K^{0n}$,
 $S^{\text{SoI}} ::= \{\text{BED-crC}^{0n} \mid 1 \leq k^{0n} \leq K^{0N}\}$, with
 $K^{\text{SoI}} = \{\text{BED-crC}^{0n} \mid 1 \leq k^{0n} \leq K^{0N}\}$;
- 2) It prompts for justifying \forall BED-crCs in S^{SoI} :
Their **lawful disclosures**;
- 3) It prompts for justifying \forall BED-inCs in S^{SoI} :
Their **definiteness** under § 112.6;
- 4) It prompts for justifying \forall BED-inCs in S^{SoI} :
Their **enablement**;
- 5) It prompts for justifying \forall BED-inCs in S^{SoI} :
Their **independence**;
- 6) It prompts for justifying \forall BED-inCs in S^{SoI} :
Their **posc-nonequivalence** (addressed by *KSR*) :
 - (a) It automatically sets if $|RS|=0$ then $\text{BED}^* \text{-inC}^{0k} ::=$ “dummy” else performing **b-d** $\forall 1 \leq i \leq |RS|$;
 - (b) It prompts to disaggregate $\forall \text{BAD-X}_{\text{in}}$ into $\bigwedge_{1 \leq k^n \leq K^n} \text{BED-inCik}^n$;
 - (c) It automatically sets $\text{BED}^* \text{-inCik}^n ::=$ either BED-iC^{0k^n} iff $\text{BED-inCik}^n = \text{BED-inC}^{0k^n} \wedge$ disclosed \wedge definite \wedge enabled, else “dummy(ik^n)”;
 - (d) It prompts for $\text{JUS}^{\text{posc}}(\text{BED}^* \text{-inCik}^n)$.

-
- 7) It prompts for justifying by NAI0 test^{*)} on $(S^{Sol}:P.0^{Sol})$: TT.0 is **not an abstract idea only**;
- 8) It prompts for justifying on \forall BED-inCs in S^{Sol} : TT.0 is **not natural phenomena solely**;
- 9) It prompts for justifying \forall BED-inCs on $(S^{Sol}:P.0^{Sol})$: TT.0 is **novel and nonobvious** by NANO test^{**)} on the pair $(S, \text{if } |RS| = 0 \text{ then } \{BED^{*}\text{-inC}0k \mid 1 \leq k \leq K\} \text{ else } \{BED^{*}\text{-inC}ik \mid 1 \leq k \leq K, 1 \leq i \leq |RS|\})$;
- 10) It prompts for justifying \forall BED-inCs in S^{Sol} : TT.0 is **not idempotent** by NANO test^{**)} on $S' \subseteq S$ (addressed by *KSR*).
- ^{*)} The "Not an Abstract Idea Only, NAI0" test basically comprises 4 steps, ignoring any prior art's inventions:
- 1) It prompts to justify the specification discloses a problem, $P.0^{Sol}$, to be solved by the claim(ed invention) as of S^{Sol} ;
 - 2) It prompts to justify, using the inventive concepts of S^{Sol} , that the claimed invention solves $P.0^{Sol}$;
 - 3) It prompts to justify that $P.0^{Sol}$ is not solved by the CI, if a BED-inC of S^{Sol} is removed or relaxed;
 - 4) if all verifications 1)-3) apply, then this pair <claim(ed invention), SoI > is "not an abstract idea only".
- The NAI0 test embodies a series of questions requiring the precise mathematical notation in [90] for avoiding mistakes. Nevertheless, two notes are in place here. **i)** The simplest $P.0^{Sol}$ is the $\square \forall BED\text{-inC}e^{Sol}$ BED-inC making steps 1)-4) trivial. **ii)** Otherwise steps 1)-3) are a 'logically' consistent CAIP^{Sol} (see Section VII) – or there is no rationality (i.e. NAI0-test).
- ^{**)} The "Novel And Not Obvious, NANO" test basically comprises 3 steps, checking of prior art all its "anticipation combinations, $AC^{Sol}s$ " as to S^{Sol} :
- 1) It automatically generates the ANC^{Sol} matrix, its lines representing for any prior art document, $i, i=1,2,\dots,I$, the relations between its invention ^{i} Sol 's BED-inCs to their peers of TT.0, represented by its columns, whereby S^{Sol} is derivable for any prior art document's invention in SoI ;
 - 2) It automatically derives from the ANC^{Sol} matrix the set of $\{AC^{Sol}s\}$ with the minim. number $Q^{plcs/Sol}$;
 - 3) It automatically determines \wedge delivers $\langle Q^{plcs/Sol}, \{AC^{Sol}\} \rangle$, being the creativity of the pair $\langle CI, SoI \rangle$.
- Finally: While *KSR/Bilski/Mayo*, induced the FSTP-Test and *Biosig/Alice* confirm it, the CAFC seems to still doubt about this Court's thoughts as to a CI's SPL¹⁵⁾ compliance [83].

IV. *Biosig* BUSTS ANY BRI^{pto} BASED LEGAL DECISION, HENCE ENDS THE BRI SCHISM^v

Biosig shows: PTO's claim interpretation by
 BRI^{pto} contradicts 35 USC – see the below para-
 5 graphs – thus ending the BRI Schism (not the
 ClaimConstruction Schism, see Sect. V).

^v Sections IV and V unfortunately must report: The PTO and
 many US patent holders are heading towards a big problem.
 10 While this Court's *Mayo/Biosig/Alice* decisions avoid blowing
 the NPS, they logically have no option – and there is none,
 whatsoever – but to bust many ten thousands of patents
 granted for emerging technology inventions, on which econo-
 mically depend primarily long-term profit makers of today's
 15 economies, i.e. sustainability-seeking investors into it.
 Beyond any doubt, this will have massively negative
 impacts on the meanwhile primary source of the US
 society's economic wealth, its innovativity.

This problem is similar to the known financial crisis –
 20 and it, too, will need the Congress for providing some relief
 from encountering this problem: E.g. legally granting a kind
 of extraordinary second chance to such patents, such as to
 preserve the investments allegedly protected by them. I.e.,
 the turmoil ahead, caused by ET patents granted already
 25 but now going bust, should be politically controllable, if the
 credibility of the NPS – which, as to emerging inventions,
 has got into jeopardy – is reestablished, as this Court clearly
 required by its above decisions. Yet, this writing on the wall
 cautions in particular against too much credulity for the
 30 looming irreconcilabilities in accelerating global develop-
 ments – here: misusing the so important NPS by legally
 granting preemptive monopolies to only partially understood
 ET inventions – necessarily hampering democratic societies.

This threat clearly manifested itself by bearing already
 35 these two schisms. They both must urgently be terminated,
 as having the potential to ruin the US NPS.

Put simpler: No patents, no broadly distributed wealth.

I.e.: By *Biosig* this Court explicitly confirms its “pro inventor” attitude in claim interpretation, as indicated by *Mayo*. *Biosig* therefore bans PTO’s permanent – and CAFC’s occasional – “incapacitation of the inventor” of a CI by the BRI^{pto}. This legal ban holds for a CI in pre-*Mayo* presentation, and results from *Biosig*’s:

- Emphasizing – referring to §112 – that a patent specification’s claims are “...*the subject matter which **the applicant** regards as [the] invention*”. *Biosig* at 3818. It thus quite directly reminds the CAFC and District Courts that they are not entitled to change a claim interpretation clearly disclosed by the specification, as it is “*the written specification that ‘represent[ed] the key to the patent.’ Markman 517 U.S.at 379*” and “*Markman, 517 U.S., at 389 (claim construction calls for ‘the necessarily sophisticated analysis of the whole document,’ and may turn on evaluations of expert testimony)*”). *Biosig* at 3818, and 3818.
- Even drastically stating: “*It cannot be sufficient that a court can ascribe some meaning to a patent’s claims; the definiteness inquiry trains*

on the understanding of a skilled artisan at the time of the patent application, not that of a court viewing matters *post hoc*.” *Biosig* at 3823. It thus also here states that a District Court or the
5 CAFC constitutionally must not apply the BRI^{pto}, as the latter may determine – what the BRI^{pto} guideline [14] frankly concedes to be its objective – “*some meaning*” of a claim, i.e. a meaning the inventor has not thought of at the priority date
10 as the specification provides no hint at it⁹), especially if it does not make the CI providing the usefulness the specification by § 101 disclosed¹²).

A CI satisfying SPL in a post-*Mayo* representation satisfies SPL in a pre-*Mayo* one, too. Hence,
15 the preceding argument holds \forall CIs satisfying SPL.

V. *Alice* BUSTS ANY BRI^{phi} BASED LEGAL
DECISION, HENCE ENDS THE
ClaimConstruction SCHISM

Sections II/III/IV told about the notion “CI”:

- 5 • It is based on two tools – interdependent on each other – indispensable for interpreting a CI: Its
 - “elements’ semantics association basis” for interpreting CI’s individual terms resp. inventive concepts, subject to the “BRI Schism”.
 - 10 ○ “holistic semantics association basis” for interpreting this CI as a whole¹⁰, subject to the “ClaimConstruction Schism”.
- pre-*Mayo*, a CI’s elements’ semantics association basis was fuzzy, due to the schisms about it
 - 15 between the CAFC and the PTO (BRI Schism), and its holistic semantics association basis was defined by the classical claim interpretation, i.e. was very incomplete (of which no awareness existed then, as today recognized in hindsight), but
 - 20 no schism existed as to it, yet, just broad frustration among all patent practitioners about the lack of predictability of the outcome of patent applications/reexaminations/litigations¹⁰.

- post-*Mayo*⁹, and due also to *KSR/Bilski*, the currently most urging class of problems in SPL – created by the deficiencies of the classical claim construction as to ET CIs – in principle vastly disappeared [1]. I.e., for a CI today both above
5 tools are precisely complete definable in prin-

⁹ Its 2. basis associates, to a CI's "SPL quality symbols", i.e. to the representatives of the society's concerns as to the patent law – as identified/defined by 35 USC and its interpretation by this Court for a CI, e.g. its usefulness^d, patent-eligibility^d, non-preemptivity^d, enablement^d, non-idempotency^d, novelty^b, nonobviousness^b, all being qualities of the CI as a whole, mirroring the concerns of 35 USC – the values T/F or better a scalar [94], derived from CI by a set of SPL precedents based respect. association rules.

This explains, why CI interpretation necessarily has two quite different semantics association bases – not yet recognized by *Phillips*. *Phillips*' single semantics association basis recognized only the meanings to be inferred into a CI's description syntax by its 'technical' needs, not yet those to be inferred into it by CI's needs for satisfying the "patent monopoly granting pragmatics, pmgp" (see II. in the prolog), outlined by the preceding paragraph.

Thereby post-*Mayo* the above set of rules is felt to be understood for stable legal decision indication as above qualified, i.e.: either **.b**) sufficiently, or **.c**) poorly, or **.d**) hardly.

This amount of non-noticed non-understanding in SPL precedents being really shocking, as there is no reason to assume that the lesser understood SPL problems are to be decided less frequently than the better understood ones.

I.e.: Besides the legal errors in SPL precedents committed unnecessarily – as sufficiently rationality exists in SPL precedents for avoiding them – in many actually occurring cases right cannot yet be rationally separated from wrong, as it has not been noticed yet (due to lack of scientification of SPL precedents) that they are not precisely understood, yet – though "residual irrationalities" are likely.

ciple: Its elements' semantics association basis, just as its holistic semantics association basis⁹. As they are interdependent on each other, they must guarantee that both bases permanently use
5 – during all the time of executing a CI's SPL test – only one complete set of inventive concepts generating the same interpretation of this CI. This “generative set” namely need not be unique, especially not with an ET CI [58].

10 In classical claim construction, this indispensable logical need of a “cross over check” (in any SPL compliance test of a CI between inventive concepts and testing the claim as a whole) never was clearly recognized, although this evidently is
15 a serious sloppiness – even if only a single such set exists (what only seldom occurs with ET CIs).

20 Yet, about *Mayo's* both key terms/notions – being the fundament of this reconciliation of SPL precedents¹⁰ by inducing this refined claim construction such that the frequent crucial properties typical for ET CIs are clearly identified – in 2012 the ClaimConstruction Schism arose between this Court and the CAFC (openly and silently also the PTO), until today not fixed¹⁰.

**VI. AFTERMATH OF *Mayo/Biosig/Alice* AND
THEIR NON-PREEMPTIVITY
REQUIREMENT**

5 As shown above, an ET CI principally meets
all SPL requirements, iff it passes the *Mayo*-Test as
elaborated on by *Biosig/Alice*, i.e. the FSTP-Test.

If the guidelines, which the PTO has set forth
for comments – required helping in drafting/exami-
ning ET CIs such that they would resp. whether they
10 do principally satisfy all SPL requirements –
actually meet this requirement, they are called
principally consistent to SPL, i.e. to these 3 Supreme
Court decisions.

Besides this principal consistency, these
15 guidelines ought to be consistent to these 3 Supreme
Court decisions also if the adjective “principal” is left
away. As this latter wish is illusionary, it is not (yet)
dealt with by the SSBG-Report, focusing on the prin-
cipal wish, ignoring [113] being ‘close to principal’.

20 Sections IV and V have shown already that
the current versions are principally inconsistent to
these 3 Supreme Court decisions. And removing this
type of principal inconsistency is not quite trivial, as
it requires their deeper understanding. Below follow

three examples of what this means, all three hitherto not being clearly addressed by the guidelines, yet.

- Both decisions need further elaborations¹⁰ [5,58,90] on the notion “refined claim interpretation” as set forth by *Mayo/Biosig/Alice*, eventually to be confirmed by this Court’s (or CAFC’s) precedents, for meeting today’s needs of ET CIs.

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E.g., this applies in *Alice* to its “categories of abstract idea, CAIs”. These may refer to the CI as a whole (CAI^{CI}), or to a single inC (CAI^{inC}), or to a combination of elements (CAI^{COE}), ...¹⁾²⁾. Of a CI’s interpretation (determined by SoI^{8.b)}), its “generative set of inCs” [58] solving its P^{SoI} – in *Alice* called “contour” of its CAI^{P.SoI}, being a patent-eligible invention – the NAIO-test would check whether this CI’s interpretation is not an abstract idea only^{8.b)}, i.e. is not preemptive but solves exactly its P^{SoI}. This shows – especially for “multi interpretation/RT” CIs – the necessity of BED-inCs for the NAIO-test, this Court’s rationale requires by *Alice*.

- These decisions bust the patent-eligibility of a CI only due to its lack or vagueness of identifying its inventivity in its specification – as in *Alice*.

This Court here raised the bar, as SSBG had not expected but wholeheartedly welcomes. This Court here rightfully criticizes (opinion on p.15) that nothing new and useful is identified for these claim terms (1)-(4) (opinion on p.14), separately or as a whole, just their a priori known functions. I.e., the specification fails to present, why providing these known functions in a distributed, open, and convenient environment poses tricky concurrency/deadlock and serious confidentiality problems. The system designers likely solved them such it is robust/trustworthy/resilient/... to a degree making it deserve the attributes new and useful. But the person drafting the specification thought these features are irrelevant for a patent application – didn't meet the resp. requirements stated by § 101. Clarity alone of its functioning does not disclose its particular usefulness, as created by its inventor.

Thus, these decisions don't threaten software or other ET CIs. They just want CIs to expose their patent-eligibility by inCs explaining their specific usefulness as created by their inventors – or else, abstract ideas patents were patented.

- Both preceding examples of the being of “patent monopoly granting pragmatics, pmgp”^{3.e)} – quite simply described by the immediately preceding sentence – clearly show the common requirement stated by these decisions: To make sure that CIs don’t practice any form of “over-claiming”, i.e. claiming, for a CI, a scope(CI) larger than what actually has been invented and disclosed by the inventor of this CI. Probably any ET CI comes along together with the temptation to practice some over-claiming, as it is mostly hard to describe precisely the boundary of its scope – due to the invisibility/intangibility of any ET invention, hence its being model based, often with a hardly understood model – and hence becoming preemptive is particular persuasive with them.

Passing, by a CI, the NAIO-test of the FSTP-Test^{8.b)} is necessary and sufficient for its nonpreemptivity in this sense – then a CI is an invention’s abstract idea only if it is preemptive. This absolutely indispensable simplest thinking enables investigating more complex notions of preemptivity, impossible without mathematical models [90] – required by ET CIs but not yet understood.

EPILOG

Finally, the author plays the role of the advocatus diaboli – see the epilog’s end.

This Petition should show that a Writ of Certiorari by this Court is urgently needed for avoiding that – based on the wording of the PTO’s BRI guideline [14], generating many problems – this Court’s groundbreaking decisions in KSR/Bilski/Mayo/Myriad/Biosig/Alice are ‘neutralized’¹⁰ by the PTO’s respective guidelines, e.g. [72], for several more years. This would not only further going increase the lack of trust into US SPL precedents and create additional confusion among patent practitioners already existing – caused by this BRI Schism also as to CIs from the grey area of CIs between classical and emerging technology – but also hamper the innovativity of the US society in all areas of emerging technologies, medium term putting its wealth into jeopardy.

There are, as to overcoming the unfortunate current situation of SPL precedents for ET CIs, three crucial aspects in Mayo/Biosig/Alice, i.e. not trying to find a way circumventing its scientification, namely:

- Most urgently is to stop the hearsay broadly accepted – as insinuating simplicity, hence felt most convenient, although causing nothing else but chaos – about the BRI^{pto} being approved by the CAFC for post-examination/reexamination. All invited and excellent panelists at a recent hearing of the PTO [76] uni sono stated that the PTO’s suggested implementation [72.a] of the Mayo/Myriad decisions – though clearly “Mayo aware” nevertheless, still based on the BRI guideline [14] in its current wording, diametrically contradicting Mayo/Biosig/Alice – would introduce that much unpredictability into patent business that it were an enormous innovation killer. All high-tech SMEs – that is what today’s flagships of the US economy all were a few years ago – don’t have the financial power for successfully competing or only surviving in a legally that risky environment.*

It hence were just consequent, this Court directly decided this Petition. This would reemphasize this Court’s determination to take the US SPL precedents to a level of development urgently needed by ET CIs¹¹.

¹⁰ *As long as such an “exception from patent-eligibility” guideline of the PTO is based on the current wording [14] of its BRI^{pto} guideline, i.e. in its claim interpretation for a CI, which indispensably must be performed first – as commented on in detail in [78p.5-6] – the outcome of the application of this exception guideline evidently enables the PTO to deliberately finding any such CI as non-patentable by associating some term of this CI with a meaning of this term that the pose would know from somewhere outsides of this CI but different from that it has in this CI – thus rendering this CI as lacking novelty or nonobviousness.*

[78p.5-6] showed in detail, how the PTO by its BRI guideline’s tricky wording [14] per lip service recognizes the CAFC’s precedential Phillips decision – which this Court by Mayo/Biosig/CLS implicitly confirmed as necessity but not sufficiency indicator for CI’s patent-eligibility (the latter achieved only by the more limiting Mayo/Biosig/CLS requirements, explained in Sections IV/V) – yet makes its examiners, the public, and even the CAFC^(5.c)5.e) often ignore Phillips. I.e.: By basing the upcoming “exception from patent-eligibility” guidelines on a BRI [14] recognizing Mayo not at all (as currently) or again only by lip service (in the future) would not terminate this BRI Schism.

This “double talking” – alias BRI Schism – by the PTO for many years is ended only by making the wording of this BRI guideline [14] consistent to the Mayo/Biosig/Alice decisions^{a)}.

- This would in particular provide to the PTO the firm ground it needs for designing its guidelines as to the natural phenomena and abstract idea exemptions consistent with this Court's pertinent precedents – requiring that it accordingly adapts the wording of its BRI guideline [14], i.e. its thinking it conveys to its public and examiners¹¹.
- The question then potentially remaining is, whether there is enough safety in legally enforcing this development of SPL precedents for supporting innovations as *KSR/Bilski/Mayo/Myriad/Biosig/Alice* require, i.e. in the accordingly refined claim construction.

Indeed, this safety does exist. The principles underlying this refined system of legal criteria consistent over all technologies are: Separation of legal concerns of 35 USC §§ 101/102/103/112, and disaggregation of compound inventive concepts, of an invention supposed to meet these concerns, into appropriate elementary ones, first of all. These principles are exactly those that underlie since the 70s any system design/specification technique of complex IT systems. Hence, no reasonable risk exists that this Court's such interpretation of these 4 §§ could fail: Namely, to apply these very IT system design principles – just shown to also underlie these 4 §§ outlined legal requirement statements – in testing claimed inventions, in particular of emerging technologies, for their satisfying SPL, i.e. for their meeting the requirements 35 USC §§ 101/102/103/112 state.

Rationality here speaks quite clearly: Sooner or later, this coherent thinking in SPL precedents – by and by extended to further §§ of 35 USC – will become an indispensable part of any textbook on patent law. The area of SPL precedents namely is, quite unusual for a law's precedents, extremely amenable to rewarding scientification [96]. Here, for 35 USC, this will substantially improve the efficiency of case law.

Concluding the epilog, the author restates a): It hopes this epilog was superfluous.

¹¹ [72.a)/.b)], just as [14], avoid using the decisive *Mayo* term “inventive concept”, in spite of this notion in *Mayo/Alice* being the sole carrier of the CI's patentable inventivity, just as in *Mayo*. Both decisions clearly indicate: only this term's meaning represents “patent-eligible creativity” of this CI. Avoiding this so rigorously limited term “inventive concept”^(8.a) from the alleged explanation [72.b)] of the *Alice* opinion achieves the opposite, as it obscures the latter. [72.b)] thus insinuates, this term is superfluous or extremely error prone if not misleading, while *Mayo/Alice* require the opposite, namely exposing by it CI's “increments of inventivity/usefulness” [18,19] (That in *FSTP* terminology these increments may be patent-eligible or not, is explained in^{1)2.a)}). I.e., this “inventive concept” abstinence of [72.b)] insinuates, the simpler classical claim construction were still sufficient – as to *ET* CIs, too – while it is not.

Thus, avoiding in [72.b)] the use of the term/notion “inventive concept” just as in [14]¹⁾³⁾ – strictly refusing to meet this Courts requirements stated by its *Mayo/Alice* decisions – leaves the door open for any examiner and the board of the PTO to deliberately qualify, by using the *BRI*^{pto}, practically any such CI in its patent application/reexamination as not novel or obvious over prior art¹⁾³⁾, i.e. grants to the PTO a power evidently so big and intransparent that it puts the whole 35 USC politically into jeopardy.

What, in [72.b)], is equally unacceptable as the omission of the key notion “inventive concept” is the misuse of the notion “element”: While this Court's *Alice* opinion strictly limits this notion to represent an elementary feature of the CI¹⁾²⁾, [14] insinuates there is no such restriction.

Just to be sure: This Court's *Alice* syllabus&opinion used the term “inventive concept” 5 times for identifying patent-eligible “elements”¹⁾²⁾ representing, for a CI, the crucial items created by the inventor of this CI for it, thus legally transforming this CI into an application of its building blocks, which the *Alice* opinion denoted as non-patent-eligible “concepts” – while [72] used this key term 0 times.

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