

## On the BRI-Schism in the US National Patent System (NPS) – A Challenge for the US Highest Courts –

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### Abstract

The US Supreme Court stirred up by its famous *KSR/Bilski/Mayo/Myriad* decisions and by its recently accepting a whole series of further emerging technology cases – here jointly denoted as its “SPL Initiative” (SPL = Substantive Patent Law), or better: “ET Initiative” – a long time lingering problem in the US NPS: Its schism as to the “**broadest reasonable interpretation, BRI**” of a patent claim.

By the four above landmark decisions, their discussions in the CAFC, and in particular by the new notions the Supreme Court introduced into SPL precedents, it induced into the FSTP project a rigorous Advanced IT analysis of the new problems stimulated by the so implied increased scrutiny required in SPL precedents. This Supreme Court induced analysis proved extremely fertile by enabling not only clarifying and partly removing evergreen obscurities from 35 USC SPL – as to the obscurity of this BRI Schism just its clarification, as its removal is a Highest Courts’ issue – but also developing practically amazingly powerful “patent technology”. All FSTP publications may be found on [www/fstp-project.com](http://www/fstp-project.com).

This paper is focused on showing the untenability of this BRI Schism and the threat that it now also poisons all the new guidelines the PTO is currently preparing for informing its examiners and the public about how it is planning to implement these Supreme Court decisions – vastly determining for all emerging technology inventions, what is necessary and sufficient for their patent-eligibility and patentability. (word count = 234)

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## I. INTRODUCTION

This paper shows the legal basis for correcting a disastrous anomaly that has developed in the US NPS over the last decades. Originally, this anomaly was incidentally stimulated by the PTO, tolerated by the CAFC – there recently causing serious clashes in interpreting emerging technology inventions in the light of *Mayo* – and now starts unfolding a fierce opposition against the PTO’s implementation under the AIA of these *Mayo/Myriad* decisions of the Supreme Court [72,76].

This anomaly gives a claim(ed invention) two different meanings depending on the authority interpreting it, the PTO or a court. This is due to a claim’s ‘broadest reasonable interpretation BRI’<sup>1.a)</sup>. Any claim has arbitrary many interpretations and would in general even have several broadest interpretations. Any BRI clearly needs a definition of what is ‘reasonable’<sup>1.a)</sup>, and even then it need not be unique. Today, two definitions of different such reasonablenesses are in use.

- One reasonableness is ‘since ever’ defined by the PTO’s BRI guideline [14]. Its wording oversimplifies claim interpretation to an extent rendering it totally unreasonable, as grossly misleading claim interpretations, especially of emerging technology claimed inventions, thus contradicting the socio/economic concerns of the NPS. Nevertheless, the PTO took it as the basis of any other §§ 101/102/103/112 PTO guideline for deciding a claim(ed invention)’s patent-eligibility and/or patentability.
- On the courts’ side, first the CAFC identified this total unreasonableness of the PTO’s BRI guideline, resp. the ‘**BRI**<sup>PTO</sup>’ it promulgates, and raised by its *Phillips* decision the reasonableness in claim interpretation to some degree, by imposing anyway logically necessary and overdue unreasonableness limitations on the ‘**claim terms**’ of a claim(ed invention). This BRI is here called ‘**BRI**<sup>CAFC</sup>’.

As the **BRI**<sup>CAFC</sup> still couldn’t achieve agreement about how (far) SPL should protect emerging technology inventions, the Supreme Court decided by *Mayo* how to end this claim interpretation conflict in the CAFC as to emerging technology inventions by adding additional limitations derived by its refining the interpretation of SPL. *Mayo* thus implicitly determines the broadest by §§ 101/102/103/112 reasonable BRI [18,19], i.e. being socio/economically optimal. It is here called ‘**BRI**<sup>MAYO</sup>’.

The wording of the PTO’s BRI guideline ignores the *Phillips* decision vastly and the *Mayo* decision completely (as shown in detail in Sections II.A and II.B). It thus caused in the US NPS this BRI Schism, which broadly is considered as being socio/economically of disastrous dimensionality [76].

Circuit Judge K. O’Malley commented on this BRI Schism more mildly by asking [21]:

*“[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 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.”*

## II. THE LEGAL UNTENABILITY OF THE BRI<sup>PTO</sup>

Thus, two questions about the post grant “Broadest Reasonable Interpretations, BRI” of claims urgently need clarifications by the Highest Courts<sup>1.a)</sup> – for ending the already wide spread and now even sharply increasing confusion, not to say chaos<sup>1.b)</sup> [76], caused by the multiple contradictions between

- the Supreme Court’s unanimous SPL precedents by its *KSR/Bilski/Mayo/Myriad* decisions, arising from emerging technology inventions’ needs for unfolding their socio/economic potentials<sup>1.c)</sup>, and
- the wording of the PTO’s BRI guideline [14] misrepresenting resp. ignoring Highest Courts’ precedents – for simplifying examiners’ work?, as asked at<sup>1.b)</sup> – thus making its examiners apply the PTO interpretation of SPL contradicting the CAFC’s and Supreme Court’s<sup>1.c)</sup> precedents and 35 USC.

Thus, this BRI Schism is caused by two legal questions<sup>2)</sup>, namely: “Is the BRI<sup>PTO</sup> of the PTO’s guideline in its current wording legally correct in interpreting a claim(ed invention) – in deciding on its granting, or in its post grant reexamination, or in a court proceeding to invalidate it – though using it means ignoring further legal requirements any BRI must meet, as stated by **A.)** the *Phillips* decision of the CAFC, i.e. its BRI<sup>CAFC</sup>, and/or **B.)** the *Mayo* decision of the Supreme Court, i.e. its BRI<sup>MAYO</sup> ?”

The confusion caused by the BRI Schism as to both legal questions heavily impacts also on the PTO’s new version of its “Natural Phenomena” guideline<sup>1.b)</sup>, as it is totally based on the BRI guideline. It is difficult to distinguish ‘natural phenomenon’ from ‘patent-eligible’ inventive concepts<sup>12)</sup> – what exactly ought to be achieved by the new “Natural Phenomena” guideline [72] – and is additionally obscured<sup>1.b)</sup> by this controversial wording of the current BRI guideline [14]. Instead, this new “Natural Phenomena” guideline gets itself into irreconcilable troubles by unnecessarily importing the wording deficiency of the BRI guideline into describing these difficult distinctions.

Note that this new guideline [72] thereby commits a terrific misunderstanding – just as any other PTO guideline starting with emphasizing that it is based on the BRI guideline, e.g. the PTO’s “Abstract Idea” guideline – of the constitutionally foreseen roles of courts (the ‘judicative’) and administrations (the ‘executive’). The BRI<sup>PTO</sup> is here applied not only for claim interpretation, but even for interpreting this Courts *Bilski/Mayo/Myriad* decisions! Practically this means a partial reversal of the normal hierarchy in the legal system: Instead of the ‘judicative’ interpreting it and the ‘executive’ just applying this outcome, here the ‘executive’ (i.e. the PTO’s examiners and its Board) completely replaces a crucial part of the ‘judicative’, namely the District Courts. I.e., the PTO as depending administration here plays their role as part of the absolutely independent ‘judicative’!

### 1 .a) Any reasonable interpretation of a claim claiming an invention is inevitably a broadest one, a BRI.

Any BRI defines one (or several) invention(s) by the reasonableness(es) defined for this BRI. The PTO’s guideline and the two *Phillips/Mayo* opinions define the 3 above reasonablenesses such that BRI<sup>PTO</sup> is broader than BRI<sup>CAFC</sup>, which is broader than BRI<sup>MAYO</sup>.

.b) The PTO organized an excellent hearing on 09.05.2014. The harsh attacks of panelists representing very important US IPR organizations or special purpose consortia or law firms, on the PTO’s current ‘natural phenomena guideline’ [72], can be fully recognized only from the video tape [76].

.c) The also precedential *Phillips* decision is omitted here – although it provides the best explanation of this BRI Schism – but elaborated on in detail below.

### 2 Just for avoiding an important potential misunderstanding: This Petition doesn’t consider claim interpretation “while its examination during patent application is still in progress”.

Though this anomaly would be limited to only such guidelines, it were – as these cover the whole area of emerging technologies – nevertheless a legislative effect, currently not sanctioned by the Congress but vastly changing the part of US NPS of largest socio/economic impact on the US society..

By maintaining the prologue<sup>2)</sup> of questions **A.)** and **B.)** throughout this paper, next:

- Section II.A shows that using the BRI<sup>PTO</sup> in claim interpretation hence is a legal error, as the BRI<sup>PTO</sup> ignores claim interpretation requirements stated by the CAFC's *Phillips* decision – therein to obey the limitations imposed by its<sup>5b)</sup> invention on its individual claim terms' meanings, these meanings being defined by a common baseline for determining them. Thus the BRI<sup>PTO</sup> contradicts *Phillips*..
- Section II.B shows that the BRI<sup>PTO</sup> also ignores further claim interpretation requirements *Mayo* implicitly states for emerging technology inventions: The BRI<sup>MAYO</sup> namely imposes further limitations on the meanings of this invention's individual claim terms<sup>5b)</sup>, which now also are to be represented as its "inventive concepts"<sup>12)13)</sup>. The BRI<sup>PTO</sup> thus contradicts BRI<sup>MAYO</sup> the more<sup>14)15)</sup>.
- Section II.C shows that using the BRI<sup>PTO</sup> for claim interpretation not only contradicts the SPL precedents established by *Phillips* and *Mayo*, but even contradicts 35 USC directly.
- The concluding Section III then briefly outlines what Highest Courts decisions were feasible for quickly and safely getting this BRI Schism terminated.

This preview on the rest of this paper is summarized as follows: Sections II.A and II.B show that the BRI guideline has often been modified [14], but never such that its claim interpretation reflects and leverages on the progress established by the landmark decisions of *Phillips* and *Mayo* in adapting SPL precedents to the technical needs of emerging technologies. Section II.C then shows the legal untenability of the current wording of the BRI guideline, nowhere supported in the US legislature but multiply contradicting principles of 35 USC.

Two words as to this just mentioned progress: *Phillips* identified an overdue technical necessity for controlling the description of an emerging technology invention – always being 'model based' – while *KSR/Bilski/Mayo/Myriad* clearly recognized the fundamental deficiencies of the current SPL thinking as to the patent-eligibility of creativity (*KSR*) and of inventivity (*Bilski/Mayo/Myriad*). This SPL thinking misconceives the purpose of a patent claim: It is a sophisticated socio/economically important contract, and not just an administrative act, optimizing the simplicity of the management of which is the highest command – even accepting unlawfulness of the US NPS, i.e. its BRI<sup>PTO</sup>. *Mayo*'s visionary hints at pretty simple mental tools – 'inventive concepts' and 'preemptivity'<sup>3)</sup> – induce overcoming this thinking's deficiencies: By a much more concise/precise and complete claim interpretation<sup>14)15)</sup>.

**3 .a)** In spite of all panelists' excellence<sup>1.b)</sup>: Without Mathematical KR/DL [3,4] they cannot translate heaven's hints in *Mayo* into natural language notions (now vastly available) facilitating the everyday day work of all kinds of high level patent professionals – as expected by this Court<sup>14)</sup>, though in a short time by nobody deliverable, who would not also know the meandering of such evolutions and the necessity of cuts, for sake of today's economical results, as typical for technical entrepreneurs.

**.b)** Alone this capability of mathematical thinking about a problem of analytical philosophy is today extremely rare: During the last decades, this capability has been considered as just a 'dinosaurs' qualification'. Scientizing SPL precedents – i.e. inventivity evaluation – is a sub-physics problem socially even more isolated than Einstein's scientizing the physical redshift problem (leading to Special Relativity Theory).

E.g.: Putting the above<sup>1.a)</sup> allegedly simple SPL issue into mathematical terms

–  $\forall$  claims:  $\text{scope}(\text{BRI}^{\text{PTO}}) \supseteq \text{scope}(\text{BRI}^{\text{PHI}}) \supseteq \text{scope}(\text{BRI}^{\text{MAYO}}) = \bigcup^{\forall \text{int}} \text{scope}(\text{BRI}^{\text{MAYO.int}})$ . –

has cost several years intensively working 24x7 [5,63,73]. Alone these terms' precise legal meanings are crucial to define as far as encountered already by Highest Courts' precedents – but some meanings not yet encountered there, though this will happen for sure.

**.c)** Finally: *Mayo* thus induced closing by Advanced IT the gap between the concerns/requirements stated by 35 USC §§ 101/102/103/112 and pre-*Mayo* SPL precedents, i.e. induced SPL scientification. The examiners' slight training effort as to "inventive concepts" – via another guideline – will be instantly outweighed by their dramatic increase of productivity and quality of work (due to 'Patent Technology' support [9]).

## II.A Using the BRI<sup>PTO</sup> in Claim Interpretation Contradicts *Phillips*

The CCPA has recognized already in *In re Kebrich*, 1953, that the BRI<sup>PTO</sup> of a claim is necessary for its invention's passing the SPL test. Its "reasonableness"<sup>1.a)</sup> then were not questioned. The CAFC's *Phillips* decision then recognized a technical necessity for a claim(ed invention)<sup>5.a)</sup> to pass its SPL test, i.e. an increased reasonableness (not yet sufficient for passing it) – its so tightened BRI<sup>CAFC</sup> only limits inventions not to contradicting its patent's invention disclosed by its specification<sup>4)</sup>. Only *Mayo* identifies – implicitly<sup>14)15)</sup>, as explicated e.g. in [25] – an again further tightened BRI<sup>CAFC</sup> reasonableness, such that this BRI<sup>MAYO</sup> is necessary and sufficient for its invention's passing the SPL test.

Thereby an observation is crucial as to an unsaid but undeniable 'eternal' antagonism of the "BRI guideline" [14] – being very popular because of its simplicity – against the BRI<sup>CAFC</sup> (not to speak against the BRI<sup>MAYO</sup>), manifesting itself as follows and ubiquitously lingering on today:

- After the CAFC's *Phillips* decision<sup>4)</sup>, the PTO did indeed release of its earlier "BRI guideline" an update, which modified it [14], allegedly such as to implement the *Phillips* precedent for its examiners. And indeed, this current BRI guideline opens by a quotation from the *Phillips* decision.
- Though – as shown below in detail in i.)-iv.) – this *Phillips* quotation is grossly misleading. By its wording the current BRI guideline just talks away from the decisive clarification provided by *Phillips*: That namely, in a claim interpretation, the meaning of anyone of its claim terms must be limited to its meaning as indispensably needed, i.e. necessary, for the working of the claim(ed invention)<sup>5.b)</sup> as disclosed by the specification. This important *Phillips* clarification – in particular its requiring that no in a claim interpretation determined meaning of a claim term must contradict the invention disclosed by the patent's specification<sup>5.c)</sup> – has then been broadly recognized [75] as a substantial and mandatory additional limitation of the BRI<sup>PTO</sup> as practiced by the PTO and the CAFC pre-*Phillips*<sup>5.c)</sup>.

To summarize this antagonism: The wording of the PTO's current BRI guideline [14] still clings<sup>5.c)</sup> to the original simple BRI<sup>PTO</sup> – just as courts and even the CAFC still work that way. This causes the by far most frequent reason why SPL cases end up at the CAFC<sup>6)</sup>: **The BRI<sup>PTO</sup> is the basis of any such dissent, due to the resp. non-*Phillips*, i.e. totally unreasonable, claim interpretation. Though, this is often not recognized<sup>6)</sup>.**

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4 None of e.g. the *Markman/Morris/Yamamoto/American Academy* decisions already noticed prior to *Phillips* that, in a claim interpretation by using a BRI<sup>1.a)</sup> of a claim, technically this requirement must be met by any claim term's meaning – as its BRI otherwise, i.e. its BRI<sup>PTO</sup>, may comprise so determined but absurd alleged inventions (as in the cases [62,]).

5.a) The term<sup>12)</sup> 'claim(ed invention)' has the meaning<sup>12)</sup> to represent a pair of a claim (claiming an invention) and an invention (claimed by this claim). A claim, though being a single sentence, may claim several different inventions, patent-eligible and patentable separately or not, and yet not be indefinite as ambiguous. Anyone of these uniquely identifiable claimed inventions may namely be nonambiguously defined by the specification (see [71]).

With emerging technology inventions this linguistic phenomenon is probably principally unavoidable – and pragmatically often also very desirable.

b) If a claim claims only a single interpretation and hence only a single invention – as evidently is the rule for classical technology inventions and probably is true also for most emerging technology inventions – it suffices to talk about a claim resp. its invention. Without loss of generality, this Petition assumes this simplification.

c.) A careful look into the revisions of the PTO's guideline [14] convincingly shows its antagonism against *Phillips*.

d.) It is just incredible that most lawyers and even judges, also of the CAFC, participated in this hearsay, just because the PTO insinuated the CAFC had confirmed anything alike.

6 E.g., in all 9 CAFC decisions discussed already in [7<sup>4.9)</sup>], just as in its recent decisions about SSBG's '902 and '453 patents [62], at least a panel or a group of judges even explicitly confirmed that they performed claim construction based on the BRI<sup>PTO</sup> – i.e. strictly against their own Court's precedents – and hence clearly dealt with claim terms in the pre-*Phillips* way. I.e.: Claim terms not used in a claim's wording then are often either completely ignored or if they are used therein the broadest meanings known by skill is determined for them, although in all these cases the claimed invention (in spite of being properly disclosed) then does not work, at all – which then often is not noticed by the resp. panels. I.e., their determinations of their claim terms' meanings contradict *Phillips*.

Note finally that it is not true, as occasionally stated<sup>1.b)</sup>, that an indefiniteness quality of an invention often may be put as its nonnovelty or nonobviousness quality: Logically/ Mentally these 3 qualities of inventions clearly differ from each other. Ignoring this represents error-prone sloppiness.

Keeping this just described unsaid antagonism<sup>5.c)</sup> in mind, the below paragraphs i.)-iv.) explain 4 independent reasons for the two main contradictions between the wording of the BRI guideline and the requirements stated by *Phillips*, hence being precedential.

i.) The '**Phillips opening statement**' says: "*The inquiry into how a person of ordinary skill in the art understands a CLAIM TERM provides AN objective baseline from which to begin claim interpretation*" (Emphasis added, here and below).

To "*understand a claim term*" indispensably requires determining the meaning of the claim term – otherwise one cannot understand it. This determination of the meaning of a claim term indispensably requires determining the meaning of the invention it claims, i.e. of the properties of its claim terms – otherwise one cannot determine the meanings of its claim terms, i.e. their properties. I.e.: This "claim term interpretation" is a part of "*claim interpretation*" of this invention.

These unique steps imply that this *Phillips* opening statement comprises two requirements a post-*Phillips* claim interpretation must meet: It must be performed by determining the

1) invention claimed by this claim such that

2) there is a common baseline for all claim terms interpretations of this invention<sup>14.b)</sup>.

Any claim interpretation based on the BRI<sup>PTO</sup> guideline [14] totally ignores both these requirements. It thus may interpret the invention's claim terms each by a baseline of its own, and thus fails to meet 2) and hence 1), i.e. **determines an invention by a BRI<sup>1)</sup>** contradicting *Phillips*.

ii.) Already the '**BRI<sup>PTO</sup> opening statement**' of the current BRI guideline starts misrepresenting *Phillips* by skipping its new<sup>13.b)</sup> and substantial claim interpretation requirements (in i.) just explained), i.e. its requirement of determining indispensably ● a claim term's meaning such as it is used in the claimed invention and ● a single baseline for all determinations for claim term's meanings. Instead, it allegedly explains *Phillips* by using old – i.e. pre-*Phillips* – text from the PTO's 37 CFR 1.75(d)(1): "... *terms and phrases used in the claims must find clear support or antecedent basis in the description so that the meanings of the terms in the claims may be ascertainable by reference to the description.*"

While nothing is wrong with this quotation, using it as opening statement in the BRI<sup>PTO</sup> guideline is misleading as it is crucially incomplete (explained below). More precisely: This old – as still pre-*Phillips* – text insinuates that the meanings of these terms may be determined as broadly as allowed by appropriate words in the specification. Namely, it is mute as to the two new<sup>13.b)</sup> and decisive additional *Phillips* limitations for meanings of claim terms (above identified by "●"), barring thus being misled.

It is evident that removing these two further *Phillips*-limitations enables determining for them much broader or even quite different meanings. I.e., *Phillips* quite rigorously limits the scope of their interpretation – not always but very often.

Consequently, this *Phillips* misrepresentation by the BRI<sup>PTO</sup> guideline also does not communicate that the *Phillips* decision – from its outset (as inferred into its above quoted 'opening statement', which tolerates no other understanding of this key part of its meticulous wording – repeatedly requires to exclude claim terms' interpretations "*in a vacuum*", *Phillips* p.10, i.e. enjoins 'invention independent' claim terms' interpretations. Thus, by *Phillips*, the determination of claim terms' meanings must result from tying these terms' interpretations tightly to the claimed invention – by a "*baseline*" (see above, explained in more detail in [71], and exemplified in [40,41]).

Summarizing i.) and ii.), the PTO guideline replaces the *Phillips* opening statement (comprising its two requirement statements) by the just explained BRI<sup>PTO</sup> opening statement, which insinuates that claim terms need not be subject to the – usually much tighter – limitations imposed on them by the *Phillips* opening statement. This may totally disable the limitations of the claim(ed invention) clearly disclosed by its specification – in spite of their being indispensable for the claim(ed invention)'s working.

- iii.) Immediately after its BRI<sup>PTO</sup> opening statement, the guideline starts encouraging all the old confusions about claim interpretation by referring to 5 pre-*Phillips* decisions (going back to 1969) and offering them the reader again – though preventing them for the future has been the main purpose of the *Phillips* decision! The BRI guideline thereby indeed becomes “hypothetical” [21] by quoting from these very early decisions a mysterious sentence, forbidding: “... thereby [to] narrow the scope of the claim by implicitly adding disclosed limitations which have no express basis in the claim” [14]. As an exact meaning of the underlined wording is absolutely indefinable, the BRI<sup>PTO</sup> thus endorses the lawfulness of pre-*Phillips* confused ideas about claim interpretation, which contradict the rationality of *Phillips*. It thus discards the clarification provided by *Phillips* and keeps promulgating the pre-*Phillips* broadly accepted but multiply irrational, totally unreasonable BRI<sup>PTO</sup>.
- iv.) The BRI<sup>PTO</sup> guideline contains still another misleading statement, by saying: “The court held that the PTO is not required, in the course of prosecution, to interpret claims in applications in the same manner as a court would interpret claims in an infringement suit.” [14]. When skipping the underlined words, this reference to *Morris* – i.e. pre-*Phillips* – insinuates the BRI<sup>PTO</sup> were precedential (see the CONCLUSION).

But, this is wrong: It is not precedential – this is just broadly believed hearsay! By this statement, the CAFC namely authorized the use of the BRI<sup>PTO</sup> for final decisions by the PTO only for the course of its prosecution of a patent application<sup>2)</sup>, i.e. as long as the applicant may fix a problem seen by the PTO with its application – but definitely not for a patent granted already.

The CAFC even nowhere accepted ignoring by the end of a claim’s prosecution<sup>2)</sup> its decisive claim interpretation limitations by *Phillips*.

## II.B Using the BRI<sup>PTO</sup> in Claim Interpretation Contradicts *Mayo*

As a side effect of showing that this headline is correct, it turns out<sup>7)</sup> that the Supreme Court designed its *Mayo* decision (intentionally and/or driven just by rationality) such that it is a straightforward refinement of the CAFC’s *Phillips* decision by the two in SPL precedents new notions “*inventive concepts*” of an invention and “*nonpreemptiveness*” of a claim.

Before getting started with showing that the BRI<sup>PTO</sup> (dealing with claim construction<sup>8)</sup>) indeed contradicts *Mayo* (allegedly dealing only with inventions’ patent-eligibility<sup>9)</sup>), this untenable but broadly accepted assumption must be fixed: Denying that by *Mayo* this Court also clearly stated claim interpretation requirements, at least for emerging technology inventions – just because *Mayo* originally has been triggered by a patent-eligibility issue – is unreasonable<sup>10)</sup>: Even though *Mayo* does not spell out it guiding, for an ET invention, to a properly refined claim construction – its such reasoning is just evident.

7 .a) The Supreme Court thus induced by its *Mayo* decision into the FSTP project (see the below Reference List) a mathematical analysis of the requirements stated by 35 USC SPL as well as by the current SPL precedents – to be met by claimed inventions of classical just as of ‘**emerging technologies, ETs**’. In the latter case – their inventions always are model based, i.e. intangible and invisible – they require a more sophisticated Knowledge Representation [2-5] than in classical technologies ever required.

.b) The brevity of this paper is vastly compensated by the fact that much of the here missing further reaching information has already been conveyed to the Supreme Court in earlier Amicus Briefs by SSBG., e.g. [18,19,45, 58]

.c) The analysis of .a) enabled a far reaching scientification of this particular area of patent jurisprudence by Mathematics [5,25,63], based on its fundamental insights into the being of innovations [6,7,18,19,36,58,70] and an amazingly powerful “Patent Technology” [9,11,15,23,33,34,46,47,71] – a university level textbook being planned. Due to this scientification of SPL precedents, for the cases currently before the Supreme Court and/or the CAFC<sup>9)</sup> – there they caused a by SSBG clearly predicted clashes (though not expected to become that harsh) as they all are BRI<sup>PTO</sup> based, applying non-adapted SPL precedents to ET inventions – most of their notional obscurities (whether their claimed inventions are indefinite, or an abstract idea/preemptive, or obvious) are completely clarified by these publications. Though, this clarification has been achievable only due to implications of hints provided in particular by *Mayo*<sup>14)</sup>.

8 Just for clarity: A ‘claim construction’ for a claim(ed invention) is the result of construing this construction by this claim(ed invention)’s interpretation, here the BRI<sup>Mayo</sup>.

9 *Mayo* clearly prescribes, how to proceed in claim construction for an emerging technology invention, for separating therein patent-eligible from non-patent-eligible inventive concepts<sup>12)</sup>. *Mayo* is mute as to what exactly the properties of non-patent-eligible inventive concepts are<sup>10)</sup>.

Having that said, this Section needs in principle solely to show that the *Mayo* decision imposes further limitations onto the claim(ed invention)'s claim terms, exceeding those imposed on them by the *Phillips* decision already. But, these *Mayo* limitations 'go to the heart and the brain' of the claim(ed invention) – whereas the *Phillips* limitations just went to its skin. Thus, it is worthwhile devoting to them some more attention. In spite of their explorative power, grasping them is as trivial as grasping the *Phillips* limitations – once one proceeds as the Supreme Court required by *Mayo*.

Recognizing that *Mayo* shows how irreconcilable obsolete the BRI<sup>PTO</sup> actually is, is facilitated by becoming aware of what enormous progress has been achieved by this Court's line of KSR/Bilski/*Mayo*/Myriad/Monsanto/CLS/Bancorp/Biosig unanimous decisions and hearings as to clarifying the vast obscurities arising from applying the BRI<sup>PTO</sup> to claim(ed ET invention)s interpretations. Hence, this line of decisions is here referred to as this Court's '**SPL Initiative**' alias '**ET Initiative**'.

Though describing this progress takes a few paragraphs and elaborate footnotes<sup>10</sup>, noticing it is worthwhile as it outlines the information a future BRI guideline of the PTO should provide to examiners and to the public as the Supreme Court's interpretation of SPL in 35 USC. Its SPL Initiative identified the (only) legally firm ground for supporting ET inventivity/innovativity to unfold its socio/economic beneficial effects for the US society by appropriately refining its interpretation of SPL within 35 USC. The Supreme Court recently explicitly confirmed this intent, e.g. in the *CLS* Hearing – sometimes in a highly metaphoric as very deep going language<sup>11</sup> – after earlier already having emphasized this necessity by asking the CAFC to reconsider its related decisions, by using the high voltage electrifying<sup>7.a)</sup> metaphor "in the light of *Mayo*" [7<sup>4.9</sup>]. Thus, the next paragraphs and footnotes first outline – before returning to this Section's true mission – what the legal requirements are to be met by a so redrafted BRI guideline.

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**10** It is very remarkable that a Panel of the CAFC recently explicitly stated – see the '902 decision in [62] - that it ignored *Mayo* as to claim construction, although SSBG had repeatedly presented that *Mayo* does state requirements to be met by the claim construction for an emerging technology invention – what the '902 invention clearly is. At its priority date, 1995, its 'VoIP technique' (this term then did not yet exist, but was denoted by the term 'intra\* technique' in the '902 patent) namely was not accepted by the market as considered too complex, both technically as well administratively – while since about 2,000 it is used by virtually all manufacturers of Internet telephony equipment.

For such inventions *Mayo* clearly states the requirement to identify the claimed invention's "inventive concepts" as early steps in its claim interpretation. Instead, the Panel insisted that *Mayo* only "addresses patentable subject matter under 35 U.S.C. § 101, rather than principles of claim construction." (Opinion in [62] at p. 15).

This view of the Panel at *Mayo* is untenable, as the CAFC had earlier recognized that "it will ordinarily be desirable – and often necessary – to resolve claim construction disputes prior to a § 101 analysis, for the determination of patent eligibility requires a full understanding of the basic character of the claimed subject matter." (emph. added) *Bancorp Servs., L.L.C. v. Sun Life Ass. Co.*, 687 F.3d 1266, 1273-74 (Fed. Cir. 2012). Exactly for this very reason repeatedly conceded by the CAFC, namely for "a full understanding of the basic character of the claimed subject matter" – as crucial in particular for an emerging technology invention – had *Mayo* clarified the "principles of claim construction". I.e., the Panel here strangely repudiates, what it elsewhere denotes as often necessary!

*Mayo*'s such "principles of claim construction" are indeed very useful for achieving "a full understanding of the basic character of the claimed subject matter". Namely, had the Panel obeyed the *Mayo* requirements and proceeded accordingly in construing the claim construction for the '902 claimed inventions – as requested and explained in great detail by SSBG in its brief to the CAFC, for presenting to it a show case for how to apply *Mayo*, i.e. for explaining to it what *Mayo*'s "inventive concepts" evidently are, which a claimed invention inevitable must embody for being patent-eligible and patentable, as explained by *Mayo* ([41], SSBG's '902 Opening Brief to the CAFC, 06.02, 2013, p. 12-20) – it had logically been barred from applying the BRI<sup>PTO</sup>. That this Panel actually applied it is stated above<sup>9</sup>).

In total this footnote shows that this Panel of the CAFC strictly refuses to meet the requirements stated by *Mayo*.

**11** 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?"<sup>3.a)</sup>

As to the impression communicated to Justice Breyer and this Court see the Section III..

Some more commenting is probably in place as to the *Mayo* decision's requirement statement to describe the inventivity embodied by a claim(ed ET invention) by 'inventive concepts' as explained in [18,19]<sup>12)</sup>, and its patent-eligibility potentially impacting properties by the notions 'preemptiveness'/'being an abstract idea'. 'Concepts' and 'abstract ideas' of something to be described are broadly known in Advanced IT [2-5] and there are used for denoting quite similar purposes [74-9]. In particular, the *Mayo* term/notion 'inventive concept' is of all overarching importance for the whole SPL Initiative – the reason why is indicated by the following paragraphs and footnotes – but sometimes questioned as to its provenience from and its tie into *Mayo*. This question is therefore briefly answered.

*Mayo* uses the term "inventive concept" only three times and often replaces it by synonyms or circumscribes it, e.g. in "... do the patent claims add enough <inventive concepts> to ...", or "... unless the process has additional features <alias: inventive concepts> that ...", or "What else <inventive concept> is there ...", or "Those steps <alias: inventive concepts> included ...". Thus *Mayo* tells<sup>13)14)</sup>: An invention's specification may refer to inventive concepts also by synonyms or only circumscribe them – these synonyms and circumscriptions also represent inventive concepts<sup>13)14)</sup>. I.e.: Decisive is not whether the term "inventive concept" is used: Any other term may refer to an inventive concept, if the referred to object only has the meaning of incrementally increasing the usefulness of the claim(ed invention) [18,19]. The below bullet points exemplarily evidence for the first 2 quotations in the preceding paragraph from the *Mayo* decision that their only purpose is to prescribe how to construe a refinement of the classical claim construction for its claimed invention. These quotations are synonyms to its inventive concepts<sup>13)</sup> and circumscribe these.

- "do ... claims add enough ...": This question's "enough" clearly requires integrating eventually all inventive concepts into the claim construction.
- "unless ... additional features ...": This "unless" states the same requirement.

Two more explanatory footnotes – as to the implications of *Mayo* – are in place<sup>14)15)</sup>, before the following paragraphs show that it just refines *Phillips* and hence complete the literal mission of this Section III, as announced by its headline. *Mayo* implicitly confirms the CAFC's *Phillips* requirements:

- α)** *Mayo* firstly confirms and refines the notion of *Phillips*' 'claim terms' and of its "baseline" – by explicitly requiring to identify the "inventive concepts" representing the claimed invention's increments of usefulness (potentially) patentable [18,19].
- β)** *Mayo* secondly requires – and this is crucial for *Mayo*'s emerging technologies concerns – to ensure that, due to its baseline of its "inventive concepts", the claim(ed invention) is
- nonpreemptive (i.e. not an abstract idea only [5,71]),
  - patent-eligible (i.e. comprises at least one patent-eligible inventi-

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**12** The mathematical definition of the notion "inventive concept" alias "claim term", discussed in detail in [5-11,36,63], is a dramatic simplification of the powerful notion of "concept" in DL/KR [2-4]. It here is customized for modeling just SPL precedents, nothing else, while in DL/KR concepts model recursively building compound concepts out of simpler ones.

By contrast, Highest Courts' SPL precedents proceed the opposite way: Modeling the properties of the elements of an invention precisely requires disaggregating its initially compound inventive concepts (modeling compound such properties) into elementary inventive concepts (modeling elementary such properties) [5-11], as §§ 112/101 require any such property to be clearly defined, e.g. to be definite, patent-eligible, useful, novel/nonobvious, independent – logically impossible with compound properties, often not yet noticed.

I.e.: An inventive concept is a pair of a legal concept and a creative concept (though often just the latter is meant).

Thus, the pragmatics of inventive concepts is that they serve for defining claim terms' meanings as required by SPL.

**13 ..a)** A term together with its meaning is a "notion". A notion hence defines its term's meaning. In *Mayo* a notion is called an "inventive concept", if its meaning has the pragmatics to serve for defining the claimed invention's "§ 101 usefulness", this pragmatics being disclosed by the claimed invention's specification (unless known a priori by the "person of ordinary skill and creativity, posc"). A notion – e.g. "inventive concept" – may be represented by different terms (= synonyms) or even implicitly, as just exemplified.

**.b)** In the '*Phillips* opening statement', its "claim term" is a term representing an inventive concept. *Phillips* deals only with such claim terms alias inventive concepts (though often leaving away the leading "claim" because of evidence). The BRIP<sup>TO</sup> guideline knows no such notion. *Mayo* emphasizes this notion by introducing the synonym "inventive concept" for it. That "inventive concepts" hence clearly are legal items including factual items – i.e. not just factual items<sup>12)</sup> – is explained in [5,7,11,36].

ve concept), and •) patentable (i.e. its patent-eligible inventive concepts indicate it deserves patentability), as explained by three Amicus Briefs [18,19] and by [25].<sup>14)15)</sup>

I.e., the BRI<sup>PTO</sup> fails meeting any *Mayo* requirement  $\alpha$ ) or  $\beta$ ), the BRI<sup>CAFC</sup> partially meets requirement  $\alpha$ ) but doesn't check  $\beta$ ), and (any [58,71]) BRI<sup>MAYO</sup> meets both. And: None of these clarifications added by *Mayo* to classical claim interpretation is reflected in the BRI<sup>PTO</sup> guideline [14]. The BRI<sup>PTO</sup> thus maintains a since *Phillips/Mayo* – at the latest – legally erroneous position that broadening of the meanings of claim terms by disregarding its specification were lawful.

Consistency and predictability of SPL precedents is impossible to achieve, if the BRI<sup>PTO</sup> guideline remains as it is and is used by courts – as the CAFC permanently does, strangely – as if it were Highest Court's SPL precedents. That it is not! This is just broadly accepted hearsay! I.e.: A claimed invention's test for satisfying SPL must be much more elaborate than just construing for it its classical claim construction by BRI<sup>PTO</sup>.

To summarize the presentations of Sections II.B and II.C: All these elaborations on the BRI intended to show that – when dealing with claimed emerging technology inventions – claim construction requires much more problem awareness and scrutiny than the BRI<sup>PTO</sup> guideline represents. The BRI<sup>PTO</sup> is absolutely untenable, at the latest since *Mayo* ended the BRI<sup>PTO</sup>'s endorsement of being less meticulous. *Mayo* namely stopped the misconception that the meanings of a claim's terms are uniquely derivable alone from this claim's wording, without reading the specification<sup>16)</sup>.

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14 Construing, for a claimed invention,

- the refined claim construction (i.e. testing it under §§ 112/101/102/103 as interpreted by *Mayo*) yields a construction satisfying SPL, while construing for it just
- the classical claim construction by testing it only under § 112 yields a construction satisfying SPL or not. I.e., of this rudimentary construction must be shown that its claimed invention passes also the other 3 §§'s tests [19,36,58].

In none of its decisions the Supreme Court explicitly addresses this deficiency of classical claim construction. But, it also is not its business to fix in detail a problem, but to indicate it and how to principally remove it! That is what this Court clearly did by *Mayo*. I.e.: In *Mayo* the Supreme Court indicated the lack of a legally proper claim construction and stated the requirements it must meet – thereby refining the CAFC's *Morris/Phillips* decisions, as well as the classical claim construction.

15 As interpreted by means of the claim(ed invention)'s inventive concepts, the BRI<sup>MAYO</sup> is, compared to BRI<sup>PTO</sup>, legally more

- **concise**, by first identifying its disclosed inventive concepts representing its by § 101 required novelty and usefulness increments – thus excluding legally erroneous technical meanings of its claim's terms – and
- **coherent**, by ensuring all their §§ 112/101/102/103 aspects are consistent.

**Not applying this scrutiny of BRI<sup>MAYO</sup> inevitably causes inconsistencies in SPL precedents!** See e.g. [58,71] for the scientification of the BRI<sup>MAYO</sup> to BRI<sup>FSTP</sup>, i.e. the FSTP-Test.

16 As to this misbelief, linguists hint at sentences like "John sees Jim with his binoculars on the mountain": Therein the terms "sees" and "his" have no unique meanings. Without knowing the meaning of this sentence a priori, the meanings of its terms are not uniquely determinable. I.e.: By Advanced IT, the meanings of the terms in a sentence, and hence the meaning of even a set of sentences may be uniquely determinable only, if its meaning is known up-front.

It hence was consequential that *Phillips* required – in line with what NL would indispensably require [2], see the preceding paragraph – that in claim interpretation the claimed invention's meaning, its "technical teaching", is known before determining the meanings **therein** of the claim's terms. I.e.: Patent judges/lawyers/examiners must precisely understand all principles the claimed invention embodies – and in order to achieve this precise understanding must read and grasp what the specification discloses about these principles – prior to finally fixing the meanings **therein** of the claim's terms.

Thus, ***Mayo* does absolutely nothing other than enforcing to proceed exactly as required by *Phillips***. It achieves this enforcement by its requirement to define a claim(ed invention)'s inventive concepts (i.e. also their meanings<sup>7)8)</sup>) for construing the claim construction for it by means of them, i.e. by  $\alpha$ ) above.

Addressing the uncertainties within the CAFC as to an inventive concept's being: By advanced IT it is the notional instruments indispensable for determining for one or several sentences its/their meaning(s)/meaning(s). I.e.: Scientifically there is no other way to determine the meaning(s) of this/these sentence/s.

I.e., the wording of the BRI<sup>PTO</sup> doesn't care for this clarification conveyed by *Mayo* and remains caught in this misbelief<sup>17</sup>). It simply ignores *Mayo* – even though its inventive concepts logically bar this misbelief, or just therefore.

## II.C Using the BRI<sup>PTO</sup> in Claim Interpretation Contradicts Title 35

The statutory basis for interpreting patent claims for whatever purpose are provided by 35 U.S.C. §§ 101/102/103/112. These statutory provisions are replete with references to the term “invention”, but do not mention that an “invention” should be analyzed differently depending on whether the patent is being considered by the PTO or a district court. Moreover: The patent statute also does not consider the process of initially examining a patent application nor does it care for the reexamination of an issued patent claim or its litigation – it does not distinguish between the “invention” being considered for its validity, examination, reexamination or infringement. Thus, nevertheless using, for legal claim interpretation, the BRI<sup>PTO</sup> in some such situations and in other ones the BRI<sup>CAFC</sup>, evidently violates this statutorily coded concept of a singular invention just explained

The Congress has clearly recognized the need of a uniform claim interpretation. *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 390 (1996). It even created the Federal Circuit, at least in part, for the sake of increased uniformity. *Id.*

Furthermore, in [67], though dealing with the AIA, on p. 15-17 arguments are provided that apply especially to this case, explaining the absence with the PTO of any SPL rule making authority – that promulgating the BRI<sup>PTO</sup> as SPL violates Title 35. The CAFC – just as the Congress – never transferred to the PTO the judicial competence enabling it to ignore CAFC decisions, e.g. as to broadening the BRI<sup>CAFC</sup> by ignoring *Phillips*. As this Court has recognized, Congress “does not alter the fundamental details of a regulatory scheme in vague terms or ancillary provisions – it does not one might say, hide elephants in mouse holes.” *Whitman v. American Trucking Associations, Inc.*, 531 U.S. 457, 468 (2001). If Congress had intended for the USPTO to use BRI<sup>PTO</sup>, the statute would clearly reflect such an intent.

## III. THE HIGHEST COURTS' CHALLENGES

This paper is focused on showing that an intervention by a Highest Court is urgently needed for avoiding that – based on the controversial and/or controversies generating PTO's BRI guideline [14] – the implementation of the Supreme Court's groundbreaking decisions in *KSR/Bilski/Mayo/Myriad* are ‘neutralized’ by the PTO's resp. new guidelines, e.g. [72]. This would not only further going increase the lack of trust into SPL precedents and create additional confusion among patent professionals already existing because of the BRI Schism, but also massively hamper the innovativity of the US society in all areas of emerging technologies, i.e. already medium term put into jeopardy its wealth.

Due to this focus, it does not provide a consistent and complete presentation of the existing ‘post-*Mayo*’ claim construction indispensably required for establishing consistency and predictability of SPL precedents as to claim(ed emerging technology invention)s. This ‘post-*Mayo*’ claim construction issue has earlier already been communicated to both Highest Courts by Amicus Briefs in related cases, e.g. [18,19,45,58]. In principle, the need of reconsidering claim construction has been suggested

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17. a) A patent specification may disclose several inventions. A consequence is that a claim seeking patent protection for one of them must identify which one(s). This one(several) then is(are) its “claimed invention(s)” – explained in [71].

b) While this need to focus on a claim's “claimed invention” was recognized already by *Morris*, it is only *Phillips* that recognized the second consequence: To focus in a claim interpretation also on interpreting its “claim terms”<sup>59</sup> just as on interpreting its “claimed invention”. *Markman v. Westview Instruments, Inc.*, 116 S. Ct. 1384 (1996) did not yet recognize this intricacy in claim construction, i.e. nowhere talks of “claim terms”, i.e. ignores that a claim interpretation may need to focus on its terms, too. Thus, a notational glitch sneaked into *Markman*, which *Phillips* fixed by explicitly complementing a quotation from *Markman* using a “term” to become using a “[claim] term”.

repeatedly also by Chief Circuit Judge Radar [77] – the best herald of increasing rationality in all kinds of patent businesses, especially in SPL precedents<sup>18</sup>).

In spite of this draw-back in becoming more specific as to the refined claim construction as may be required by claimed emerging technology inventions, this paper provides suggestions, by the following bullet points, how best to overcome the disastrous current situation, into which SPL precedents as to emerging technology inventions has got. Up-front this Petition asks for forgiving its directness practiced by European-type researchers, today unusual in the US:

- Most urgently is to stop the hearsay broadly accepted – as insinuating simplicity, hence felt utmost convenient, although causing nothing but chaos – about the BRI<sup>PTO</sup> being sanctioned by the CAFC. All invited panelists at the PTO's excellent recent hearing<sup>1.b</sup>) uni sono confirmed, ex- or implicitly referring to the PTO's BRI guideline, that expanding it to the implementation of the *Mayo/Myriad* decisions, amounts to becoming an enormous innovation killer. All 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 within this extended BRI Schism, as it has been named by this paper.
- Equally urgent is to provide by the Supreme Court more explicit guidance to the CAFC and hence to the PTO as to what the meaning is of the new notions introduced into SPL precedents especially by the *Mayo* decision (quoted above). This guidance should be provided without further oral hearings – as none of them, though all articulated dissatisfaction with the current situation – contributed any idea of helping the Supreme Court as it originally had expected it<sup>3,11</sup>). Instead the Supreme Court should make – by reconfirming its *Mayo* decision, thereby becoming somewhat more specific about the groundbreaking notions it introduced into SPL precedents – the CAFC as a whole, supported by the PTO, actually become again promoters of the US wealth creating engine, i.e. its innovativity. Without any question, both institutions are striving for getting back into this role based on the Supreme Court's reconciliation initiative, above called its "SPL Initiative" (legally) or "ET Initiative" (economically).

I.e.: The Supreme Court's request to the CAFC to decide the cases related to these issues "*in the light of Mayo*" – not only to the BRI issue (SSBG case), but also to the 'abstract idea' issue (CLS and BANCORP cases) and 'indefiniteness' issue (BIOSIG case) – ought to some extent be decided by itself, for proving its determination to take the US patent precedents to a level of development as evidently needed by claimed emerging technology inventions.

- The question then remaining is, whether there is enough safety in legally implementing the development of SPL precedents suggested by *Mayo*.

Indeed, this safety exists. The principles underlying the *Mayo* requirement statements, how to specify an invention's functional and non-functional properties precisely – separation of concerns as well as disaggregation of compound inventive issues into elementary ones, first of all – are exactly those that underlie since decades now the specification of IT system design. I.e.: There is no reasonable expectation that the Highest Courts' such directives would fail: Namely to apply these very IT system design principles, also underlying the *Mayo* requirement statements, in testing claimed inventions for their satisfying SPL, i.e. for their meeting the requirements stated by 35 USC §§ 101/102/103/112. Rationality here speaks quite clearly: Sooner or later, this coherent thinking will become an indispensable part of any textbook on patent law.

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<sup>18</sup> The rationality of this reasoning is perfect and fully concurring with regard to most requirements stated by the *Mayo* decision and anyway with rejecting any kind of oversimplifications in all related cases – as tried e.g. in *KSR* and *Bilski* – though recognizing this sometimes may cost a second look.

With regard to the language used by the *Mayo* decision, in particular to its further going scientification as practiced by SSBG, a feeling of unease or even significant misunderstanding is initially normal with everybody who has not encountered this language earlier – but should disappear after getting used to it, as then its advantages are felt as evident, by everybody. Thus initial mismatches don't apply only to the notion of 'inventive concept', but in particular to the notions of an 'abstract idea'/'preemptivity' or 'patent-eligibility' or 'definitiveness', as explained above and/or in the above quoted Amicus Briefs to the Highest Courts.

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- [76] Video of the Hearing on 09.05.2014 organized by the PTO\*).
- [77] R. Rader, Keynote Speeches at GTIF, Geneva, 2014 and LESI, Moscow, 2014

\*) see [www.fstp-expert-system.com](http://www.fstp-expert-system.com)