

By *Mayo/Biosig/Alice* (“*MBA*”)¹ the Supreme Court Induced the Scientification
●of Substantive Patent Law (SPL) for Emerging Technology Claimed Inventions (ET CIs),
●of the Patent-Eligibility Problem of SPL, and ●of this Problem’s Solution.
Yet: What is the Impact of *MBA* on USPTO, CAFC – and Next the US Supreme Court (USSC)?

Sigram Schindler,
TU Berlin & TELES Patent Rights International GmbH

I. SURVEY ABOUT THIS PAPER

This short [202] continuation paper elaborates on the above question: Is the, by the USSC prompted [202^{ftn3}], *MBA* of high value just for SPL’s scientification, or also for overcoming the current SPL confusion caused by ET CIs?

Indeed, the *MBA* based SPL scientification enables simply and clearly separating the wheat from the chaff in any pertinent brief by/to the USPTO, CAFC, USSC – shown by 8 highly topical such works on ET CI SPL precedents in Section IV.

Sections II and III briefly ■) recapitulate the *MBA* framework based SPL scientification for determining – for a given ET CI integrated with an application, as by *MBA* required – by its specification whether it is patent-eligible, and remind of parameters, on which the SPL scientification inevitably depends, of its “set screws” usable by courts for adjusting it e.g. to subject areas. ■) **outline** how the USSC initiated *MBA* impact – on the SPL precedents in favor of ET CIs – manifests itself today and tomorrow, explained by using an informal analysis of the post-*MBA* notion²) of patent-eligibility [204] and the formal analysis of all today’s pre-/post-*MBA* notions of SPL by [202]. Thus, Sections II and III skip the BRI issue¹⁾⁹) completely.

II. INEVITABLE PARAMETERS OF SPL SCIENTIFICATION

Sections III/IV elaborate on the above inquired impact of *MBA* by evaluating 6 pertinent highly topical CAFC and USPTO publications – allegedly being vastly *MBA* based, for what the Petition for Cert to the USSC seeks clarification, the latter by its *Teva* decision evidently setting new rules for this game. The firm ground for this game is provided by the scientification of SPL and its interrelations to the informal *MBA* framework. These are reminded by means of the FIGs 0-3 of [202]. These FIGs are repeated here without their detailed earlier explanations [194,202].

Yet, the key aspects of these SPL scientification based elaborations are easy to understand – only their mathematical confirmations must be postponed [142] – and clearly expose the hitherto hidden enormous intellectual complexity and sophistication embodied by the *MBA* framework⁴). (For its use cutting edge AIT is being developed, see Chief Justice Roberts’ resp. view [210] and the below FSTP Reference List.)

¹ For consolidating the current SPL precedents about ET CIs, also the Supreme Court’s *Biosig* decision is of decisive importance due to its 2 main points independent of each other: It not only bans ●the (indeed logical total nonsense) established “Broadest Reasonable Interpretation, BRI” of a claim⁹) as unconstitutional and ●the (indeed unverifiable) “irresolvable ambiguous test” as obscurity, but also ●states as to both issues legally and logically exemplarily clean and verifiable requirements how else to proceed. Both requirements are by boards of the CAFC not obeyed, simply by totally ignoring them⁹). See Section IV.

AD.1: A TTO's "generative set, S" represents ⁴⁾ :		TTO's FSTP-Test passes on $S^{leC} \wedge \exists ip-s^k \in S ::= \{\forall crCs \text{ of } \epsilon S^{leC}\}$.
AD.2: A TTO's "scope (TT0)" is defined to be ⁴⁾ :		$SR ::= \{\forall s^{Rv} \in SD\} ::= \{\forall <s^{Rv1} \in TS(s^1), \dots, s^{RvK} \in TS(s^K)\}$.
LD.1: A TTO is called "definite"	iff	$S^R = TT0$.
LD.2: A TTO* is called to be "equal, '=' to TT0	iff	$S^{*R} = SR$.
LD.3: A TTO* is called to "belong to scope(TT0)", i.e.	iff	$S^{*R} \subseteq SR$.
LD.4: A TTO* \notin scope(TT0) is called "violating" TTO	iff	$S^{*R} \cap SR \neq \Phi$.
AD.3: A TTO has an "improvement prone $s^{ip} \in S$ " means:		$TS(s^{ip}) \subset ^*TS(s^{ip})$.
AD.4: A TTO has the "transformation prone $s^{tp} \in S$ " means:	$\forall s^k \in S^{tp}$:	$TS(s^k) = ^*TS(s^k)$.
LD.5: A TTO comprises an "abstract idea"	iff $\exists ^*TS^{SD}(s^k)$:	$TS(s^k) \subset ^*TS^{SD}(s^k)$.
LD.6: A TTO comprises a "natural phenomenon"	iff $\exists ^*TS^{SD}(s^k)$:	$TS(s^k) \subset ^*TS^{SD}(s^k)$.
LD.7: A TTO is called "nonpreemptive"	iff	$\nexists ip-s^k$.
LD.8: A ATTO is called "(unlimited) preemptive"	iff	$\exists ip-s^k \wedge (\nexists A_{st}^{tp} \vee (A_{st}^{tp} \wedge AS = \Phi)) \vee Q_{pmgp}(ATTO) = 0$.
LD.9: A ATTO is called "(application) tied preemptive"	iff	$\exists ip-s^k \wedge (\exists A_{st}^{tp} \wedge (A_{st}^{tp} \wedge AS \neq \Phi)) \wedge Q_{pmgp}(ATTO) \geq 1$.
LD.10: A ATTO is called "patent-eligible/-noneligible"	iff	$ATTO = \text{non} \vee \text{tied preemptive} / ATTO = \text{preemptive}$.
LD.11: A ATTO has an "inventive (Alice) concept in ^{AC} " means:	$\exists in^{AC} ::= \prod \forall s^k \in A_{st}^{tp} (A_{st}^k):$	$ A_{st}^{tp} \geq 1$.
LD.12: A ATTO is called "substantially more than" Φ TTO	iff	$ A_{st}^{tp} \geq 1$.
LD.13: A ATTO (being patent-eligible) is called "patentable"	iff	$RS = \Phi Q_{pmgp}(ATTO) \geq 1$.

FIG 0: The Scientification of the Substantive Patent Law, i.e. of its pre- and post-Mayo/Alice Notions [202].

These notions' preciseness enables precisely defining the separation line between patent-eligible and -noneligible ET CIs, thus enables drafting not only nonpreemptive legally unassailable ET CIs, but even such ET CIs of customizable limited preemptivity, too, here called (e.g. application) 'tied preemptivity'. This scientification is configurable – by parameters alias set screws – for further adapting, as socially adequate, e.g. the ties on ET CIs' preemptivity imposed here. Such adequate preemptivity is to be defined by courts, e.g. subject area specifically [116,212,204].

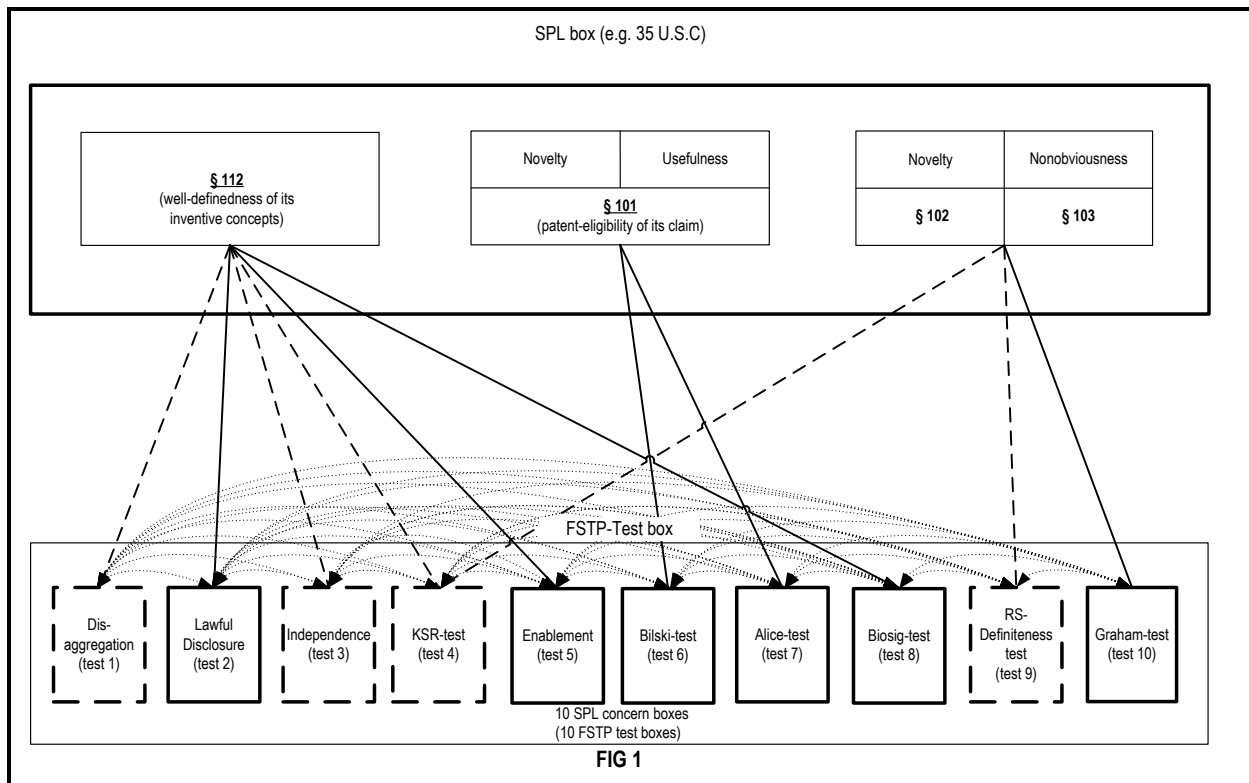


FIG 1: Outline of the logic carrying the FSTP-Test (going back to [5-7,202], shown by FIG 2).

Bold lines show the classical claim construction's test.i's, dashed ones what Mayo/Biosig/Alice additionally require (refined claim construction). ← show a "use hierarchy" of test.i's, → expand it to total dependency.

The **FSTP^{FFOLLIN}-Test** is a computer implemented method – defining also a system – for testing

- under a given Finite First Order Logic Legal Invention Norm, FFOLLIN, a given Claimed Invention, CI^{FFOLLIN}, which has a given interpretation TT0^{FFOLLIN}, represented by its Generative Set of TT0^{FFOLLIN}, S^{FFOLLIN},
- TT0^{FFOLLIN} – defined by $S^{BADFFOLLIN} ::= \{BAD-crC0n^{FFOLLIN} | 1 \leq n \leq N\} \wedge$
 $\wedge S^{FFOLLIN} ::= \{BED-crC0kn^{FFOLLIN} | 1 \leq n \leq N : BAD-crC0n^{FFOLLIN} = \wedge^{1 \leq kn \leq Kn} BED-crC0kn^{FFOLLIN}\}$,

whether this FFOLLIN is satisfied by TT0^{FFOLLIN} alias S^{FFOLLIN},

- whereby FFOLLIN is defined to comprise a conjunction of 10 given **FSTP^{FFOLLIN}-test.o** of TT0^{FFOLLIN} alias S^{FFOLLIN}, i.e. $\wedge^{1 \leq o \leq 10} FSTP^{FFOLLIN-test.o}$ – for brevity in the sequel the index “FFOLLIN” being omitted, any FSTP-test.o abbr. by just “o”, $1 \leq o \leq 10$, and for $6 \leq o \leq 10$ the stereotypic “over model and posc” omitted –

whereby the claimed invention for any TT0 prompts the CI’s user to input to it

- the given information ■) $\forall TT0$ -elements X0n of TT0, $1 \leq n \leq N$, $\wedge \forall$ binary abstract and elementary disclosed creative concepts of all X0n, BAD-crC0n resp. BED-crC0n ■) for $|RS| > 0$ also $\forall TTI$ - (dummy-)elements Xin peer to X0n, $1 \leq |I| = |RS| \wedge 1 \leq n \leq N$, $\wedge \forall$ binary abstract and elementary disclosed (dummy-)creative concepts, crCin, of all (dummy-)elements Xin, called BAD-crCin resp. BED-crCin, as well as ■) \forall below justifications, by stepwise prompting, i.e., for testing the S input to it as follows:

- 1) (a) $S^{BAD} ::= \{BAD-crC0n | \forall^{1 \leq n \leq N}\}$, $S ::= \{BED-crC0kn | 1 \leq n \leq N : BAD-crC0n = \wedge^{1 \leq kn \leq Kn} BED-crC0kn\}$;
 (b) $\text{justof}^{\forall^{1 \leq n \leq N}}$: BAD-crC0n is **definite**;
 (c) $\text{justof}^{\forall^{1 \leq n \leq N} \wedge \forall^{1 \leq kn \leq Kn}}$: BED-crC0kn is **definite** $\wedge \forall$ patent-noneligible BED-crC0kn* are identified;
 (d) $\text{justof}^{\forall^{S^{BADUS}}}$: $BAD-crC0n = \wedge^{1 \leq kn \leq Kn} BED-crC0kn$;
- 2) $\text{justof}^{\forall^{S^{BADUS}}}$: $s \in S \wedge BAD-crC0n \in S^{BAD}$ are **lawfully disclosed**;
- 3) $\text{justof}^{\forall^{S^{BADUS}}}$: **Independence-test passed** S is well-defined & independent over model;
- 4) $\text{justof}^{\forall^{S^{BADUS}}}$: **KSR-test passed** S is well-defined over posc;
- 5) $\text{justof}^{\forall^{S^{BADUS}}}$: **TT0’s implementation by S is enablingly/lawfully disclosed**;
- 6) $\text{justof}^{\forall^{S^{BADUS}}}$: **Bilski-test passed** TT0 is non-preemptive;
- 7) $\text{justof}^{\forall^{S^{BADUS}}}$: **Alice-test passed** TT0 is patent-eligible;
- 8) $\text{justof}^{\forall^{S^{BADUS}}}$: **Biosig-test passed** TT0 is definite;
- 9) $\text{justof}^{\forall^{S^{BADUS}}}$: **RS-Definiteness-test passed** RS is well-defined over TT0;
- 10) $\text{justof}^{\forall^{S^{BADUS}}}$: **Graham-test passed** TT0 is patentable.

FIG 2: The FSTP^{FFOLLIN}-Test, the passing of which is necessary and sufficient for a TT0 satisfying SPL [202]

In both cases – case **α**) applying the philosophy P when drafting a fresh ET CI’s specification, case **β**) applying P when drafting a patented ET CI’s continuation – is to establish, of a given pair ${}^A TT0 ::= \langle TT0, A \rangle$ of this ET CI, its patent-eligibility by its non/tied preemptivity, by drafting within its specification the sets SU and ${}^A ASD \supseteq {}^R ASD \neq \emptyset$ such that they bar anybody from promisingly contending, at ${}^A TT0$ ’s application or post-grant time, that ${}^A TT0$ is preemptive by alleging:

In case α) it would preempt

- some application $B \in \underline{A}$ as ${}^B TT0 ::= \langle TT0, B \rangle \notin {}^R ASD$, and/or
- for an application $B \in \underline{A}$ some ${}^B TT0 ::= \langle {}^+ TT0, B \rangle \notin {}^A ASD$.

In case β) it would preempt

- some application $B \in \underline{A}$ as ${}^B TT0^{**} ::= \langle TT0^{**}, B \rangle \notin {}^R ASD$, and/or
- for an application $B \in \underline{A}$ some ${}^B TT0^{**} ::= \langle {}^+ TT0^{**}, B \rangle \notin {}^A ASD$.

FIG 3: The “The Preemptivity/Patent-Eligibility Gap Overcoming” Philosophy, P, alias Test Suggested by [202], (included into this paper for emphasizing the importance of applications, but not discussed for brevity)

All *MBA* based terms/notions – used by SPL scientification in FIG 0 (S, S^{leC}, ip-s^k, crC, S^R, +TS, aTS, nTS, Q^{pmgp}) and FIG 2 (FSTP-test.1-5) – depend on set screws [182], which cannot be the same for all subject matter areas (see end of Section III).

A precise AIT construction of ideas (here: modelling the *MBA* based SPL pragmatics needed by ET CIs) enables developing accordingly configurable systems (i.e. IESes for SPL reasoning about ET CIs [198]) – by the Supreme Court expected even for general precedents sooner or later to take over much of legal reasoning [210].

III. MORE AND DEEPER SPL PARADIGM SHIFTS AHEAD?

ET CIs caused by their pre-*MBA* patent-eligibility problem the SPL paradigm shift²⁾ explained by [202]. This Section indicates: More and potentially deeper reaching SPL paradigm shifts are ahead, indeed, but these will only complement the SPL scientification [202], i.e. in no way contradict it. Thus, it clarifies how this complementation of the today clearly understood/formalized *MBA*-semiotics²⁾ by additional and today not yet clarified *MBA*-semiotics could and would be performed.

A recent paper by J. Lefstin [204] and an earlier one by R. Merges [212] there- by are of help³⁾⁴⁾: While [202] mathematically defined all the USSC identified (and by the FSTP-Project over the years hitherto clarified) *MBA*-semiotics, the informality of [204,212] enables considering also the today not yet clarified semiotics of post-*MBA* patent-eligibility, mentioned by the preceding paragraph⁴⁾. The informal patent-eligibility analysis in [204,212] thus is complementary to the formal one in [202].

² A "term" is an arbitrarily complex "identifier" alias "name" alias "element of an alphabet". A pair <"term", its "meaning"> is called the term's "notion". A term's meaning is also denoted as its "semantics" – and if this meaning/semantics is further restricted application specifically, as the notion's "pragmatics" (e.g. SPL pragmatics), application specifically refining its semiotics/semantics/...³⁾.

The meaning-making for terms is called "semiotics" – be its semantics-making or pragmatics-making. The notion of semiotics – and its derivatives, such as semiotical and semiotic – may be used as a substantive in singular or plural, or as adverb, or as adjectives, in present/past/future, ..., no grammatical alias syntactical limitation exists, just as for the notion "meaning-making".

I.e.: The term "meaning-making" alias "semiotics" may denote ●the process of creating and defining some single new meaning/semantics/pragmatics (e.g. for the post-*MBA* SPL notions of "preemptivity" or "application tied preemptivity" not existing pre-*MBA* in SPL), ●or ..., up to ● the total set of all created and defined such new meanings/semantics/pragmatics/semiotics, or ●a mixture of all. ●The pre-/post-*MBA* SPL semiotics (transformation) is also denoted as pre-/post-*MBA* SPL paradigm (shift).

The semiotics terminology originates from Formal Linguistics, the paradigms terminology from Analytic Philosophy. Both preceding lengthy AIT terms may be abbreviated by "SPL- or *MBA*-semiotics (transformation)" resp. "SPL- or *MBA*-paradigm (shift)".

³ It provides an informal analysis of the post-*MBA* patent-eligibility problem. It thereby, unlike [202], does not address all the pre- and post-*MBA* hitherto defined SPL semiotics²⁾ for an ET CI, e.g. neither its ●) scope, nor ●) definiteness (as quite fundamentally re[de]fined as to various totally independent respects by *Biosig*, see Section IV), nor ●) preemptivity gap and its solution, nor ●) inventive concept for assessing its patent-eligibility, nor ●) ...⁴⁾.

⁴ It is virtually impossible to become precise about any *MBA* defined SPL pragmatics by informal means only – not only due to natural language deficiencies, but also due to those of our human mind of instantly being precise when randomly accessing information well-known to us but being sophisticated/complex – as [202] showed by its definitions in FIGs 0 and 3, e.g. the most basic one, being the post-*MBA* notion of "inventive concept" as introduced in [202^{p.2},5-7].

There are different pragmatics of the semantics of the notion "inventive concept": ●) The pragmatics for general use (for describing a whatsoever invention, TT0, such that its patent-eligibility-exempted increments of its total inventivity are identifiable, as introduced by *Mayo*), and the ●) additionally very specific pragmatics of an inventive concept "in^cC" (formerly "in^AC") introduced by *Alice* – not for describing the resp. TT0 in a specific way, but embodying itself the quite specific and decisive *MBA*-semiotics, enabling it to achieve that the resp. patent-noneligible TT0's integration with an application is patent-eligible [202].

In telegraph style, 3 more comments on deficient statements in the Abstract of [204] caused by its being informal :

1) For anybody familiar with sciences' evolvments it is evident that, seen historically, *Mayo/Alice* is neither "a fundamental reorientation of the Supreme Court's jurisprudence" nor "effectively superseding the Court's earlier 101 cases" – but a necessary step forward taken by the Supreme Court in its responsibility to guarantee the evolvment of substantive patent case law for ET CIs does develop in the US as expected by the US society.

Thus, while part of the patent community indeed evaluates this jurisprudence by the Supreme Court as coming close to contradicting the US Constitution⁴⁾, it in truth is exactly what the US Constitution requires from it, hence not to be covered by provocative language, in particular as indeed being extremely beneficial for the US society.

2) Stating "... the structure of the *Mayo/Alice* test [indicates] a differentiated framework of 'inventive concept'" is strange.

What this 'structure' primarily indicates is that there is an application, as emphasized by [204], with which the TT0 is integrated, i.e. the pair <TT0,A>, plays a decisive role as to whether this pair's 'inventive concept' in^AC suffices for this pair's patent-eligibility, as explained by Section III of [202].

3) The often used phrase of "subject matter ... [being] patent-eligible" is intellectually really untenable.

The notion of patent-eligibility per se is – by *MBA*, and hence following from P – not directly related to the subject matter dealt with by a TT0 at issue. But, it is directly related to the application A integrated with this TT0 (see the preceding paragraph 2)), which together establish this potentially patent-eligible CI pair.

I.e., both papers' elaborations together provide a first survey about *MBA*'s actual and now clarified/formalized as well as further and not yet clarified/formalized impacts on the SPL semiotics for ET CIs – for thus achieving that SPL precedents would meet the requirements of inventors of and investors into ET CIs, as the US society expects and *Mayo/Alice* clearly describe.

This preliminary survey about the currently occurring *MBA* paradigm shift already enables, as to the question raised by this Section's headline, correctly recognizing – in Section IV in its *MBA* based evaluations of highly topical 6 USPTO and CAFC publications + 2 USSC related ones – which of them is how far consistent or inconsistent to the hitherto clarified/formalized pre-/post-*MBA* SPL pragmatics²⁾, resp. is even in need of additional *MBA*-semiotics for enabling courts to deal with ET CIs consistently. Therefore, this preliminary survey is briefly explained, next.

This explanation starts with stating that currently there still is an enormous pressure on the actual *MBA*-semiotics⁵⁾ – although it last year seemed to fade away [113] – exerted by the by far major part of the patent community: It does still not understand, why the *MBA* framework resp. the *MBA*-semiotics should embody a consensual notion of “patent-eligibility of ET CIs” catering to the needs of rapidly further developing ET CIs. I.e., this crowd ignores that the pre-*MBA* interpretation of 35 USC SPL has been disabled from meeting ET CIs' SPL protection requirements – as it caused courts to issue inconsistent and unpredictable SPL precedents, even the CAFC. The reason being that most ET CIs are intangible/invisible, i.e. only fictional and hence only model-based describable – whereby patentees/examiners/judges/... are usually not aware of the resp. models, and these mostly are plain metaphysics.

This is a dramatic paradigm change of the SPL pragmatics: With ET CIs the SPL pragmatics is inevitably located on a much higher intellectual level – no classical invention, being tangible/visible, needs a fictional/model-based description. I.e.: With ET CIs, this tangibility/visibility must be substituted by fictional/model-based descriptions, intellectually capable of handling such abstractions – and hence necessarily dealing with an accordingly refined SPL semiotics, which to this end inevitably must be split into a low and a high level⁶⁾. History tells: Such deep reaching paradigm shifts in large communities always take time.

History also tells: Such pressure, resulting from a deep reaching paradigm shift, does not distinguish between its lo-level shift (here, with *MBA*-semiotics, taken care of by [202], being SPL driven, and now clarified mathematically) and its hi-level

⁵ Very prominent members of the central panel of the recent, internationally well established IPBC 2015 [196] still kept bashing the Supreme Court as ruining the US patent system by its last years' SPL decisions, in particular issuing incredible opinions as to the notional quality of the *Alice* test – AIT [2] totally ignoring and hence just absurd [210] – predicting its soon end. The large audience of patent professionals nevertheless seemed to broadly share such opinions. Nobody contradicted or only wondered.

An implicitly diverging view was expressed – and fortunately also found some supporters, evidently – when the question was raised how this *MBA* discussion would fit into the international patent environment. Somebody from the audience claimed that this discussion is about 10 years ahead of what is understood in other national patent systems of inventions' exemptions from patent-eligibility caused by ETs. Worth remarking: Some representatives of worldwide operating enterprises evidently agreed.

shift (here, taken care of by [204] and earlier by R. Merges [116,212], not only SPL driven but also extrinsically, in [211] being elaborated on based on the firm ground and enlightening potential provided by the lo-level being mathematized [202]).

This absolute necessity⁶⁾ of separating concerns diverging is evident phenomenology in the evolvment of probably any knowledge area alias ontology, e.g. architecture vs. construction technology, or anatomy vs. neurology, or ... – here the small ontology comprising 35 USC SPL \wedge ET CIs/TT0s⁶⁾. All its notions (shown by FIGs 0 and 2) belong to its *MBA*-semiotics' lo-level, especially its “inventive concepts” [211].

The preceding elaborations of Section III on the *MBA*-semiotics transformation alias *MBA*-pragmatics shift – caused by ET CIs – reflect the AIT [2] thinking about testing them under SPL [202p.2,5-7]. It is fully confirmed by the Supreme Court's *MBA* interpretation¹⁾ of 35 USC SPL [150,151].

FIGs 0-3 in Section II represent this thinking's exact/precise⁷⁾ foundation, FIGs 0 & 2 together a consistent and uniform “*MBA*-evaluation” scheme⁸⁾ for ET CIs as to their patent(-application)s satisfying the SPL in *MBA* interpretation¹⁾, hence also for opinions on them, and alike – applied in Section IV to 6 highly topical works.

Finally, this AIT thinking immediately shows, as to the above recognized indeed more and deeper SPL paradigm shifts ahead: Structurally, there are two logically quite different kinds of potential stimuli of future and further *MBA*-semiotics transformations alias SPL-paradigms shifts: They may originate from beneath, i.e. from the set screws of Section II, or from beyond, i.e. have extrinsic sources⁶⁾.

⁶⁾ In any IT it is indispensable to split clarifications for any complex construct of ideas – as it is always established by any reality modelling part of any ontology, such as the *MBA*-semiotics/paradigms²⁾ – into at least levels, for thus clearly separating its often diverging yet complementary concerns. Here these are the concerns of catering ET CIs' needs of dependable SPL protection and – diverging & complementary to it – of e.g. politically supporting ET CIs also by social groups not involved in any ET business.

None of the works in Section IV – just as the crowd generating the pressure in the currently occurring *MBA*-paradigm shift – is aware of this fundamental principle in System Design, called “separation of concerns”, 1970 discovered by D. Parnas [122].

⁷⁾ “Exact” shall reemphasize that these definitions of new SPL meanings alias *MBA*-semiotics seamlessly represent the *MBA* framework, which the Supreme Court explicitly put forward, repeatedly as being required to be applied in SPL testing ET CIs.
 ● “Precise” shall reemphasize that the informal use of *MBA*-semiotics is extremely error-prone, therefore has undergone the type of scientification known from Mathematics, which in particular shows that its definitions of new SPL meanings don't stay within the semantics of pre-*Mayo/Alice* SPL semantics, but take an ET CI's SPL testing – by their enabling the quantification of the latter (as briefly mentioned by the legend to FIG 1, explained in detail by [e.g. 175]) – to a level of development and hence scrutiny, prior to this semiotic process just unthinkable by logical and intellectual reasons⁴⁾.

Both notions hence are meaningful only when dealing with ET CIs which passed the FSTP-Test. How far the FSTP-Test actually uses of the inCs \in S also the leCs or just the crCs will be implementation/configuration depending – being irrelevant here. Of an ET CI using informal inCs hence evidently cannot be determined, whether it is patent-eligible – which holds for the whole search for additional *MBA*-semiotics as long as these are not formalized.

One could start arguing that none of this Supreme Court decision requires the degree of preciseness/scrutiny as required here, i.e. the scientification of SPL precedents about ET CIs. But this would evidently mean nothing else but forgetting about striving for consistency in such precedents – i.e. failing to meet the social requirement the Supreme Court clearly described in *Mayo* to be unconditionally met by its accordingly refined interpretation of 35 USC SPL. I.e.: As usual in jurisprudence, its original *MBA*-semiotics would be seen – from the AIT point of view – to be metaphysical. But creating this *MBA*-semiotics by the Supreme Court represents only the unavoidable first steps to its exact/precise axiomatic definition by FIG 0. Not by such axiomatic definitions rationalized metaphysical meanings of terms should not be used in SPL precedents on ET CIs, i.e. not exist therein, as by their use any ET CI may be proven to be whatsoever, e.g. preemptive/patent-noneligible or non-novel/obvious.

IV. HIGHLY TOPICAL WORKS SEEN IN THE LIGHT OF *MBA-SEMIOTICS*

This Section reports – in telegraph style – about the application of this *MBA*-evaluation scheme⁸ to 6 highly topical works: To the USPTO's IEG [157], and the 5 much telling CAFC decisions in *Interval/DDR/Myriad/Biosig/Ariosa* by differing panels [154,156,159,205,209]. It terminates in the same style, by a recent Petition for Cert [206] and the crucial as game changing *Teva* decision by the USSC [172].

It thereby considers of the USSC's *Biosig* decision also its BRI issue⁹.

It remains mute, for the simplicity of this paper, as to the set screws hinted at above. In its enormous full complexity, this issue has not yet been explicitly addressed anywhere – solely by means of oversimplifying catchwords such as “software patents” or “life cycle patents” – and will short term probably achieve some preliminary clarifications only [211].

Finally, the below *MBA*-evaluations follow from the [202] SPL scientification.

(1) **USPTO's IEG [157]:** Applying the *MBA*-evaluation scheme to the IEG delivers:

The actual version of the IEG focuses exclusively on (just outlined) hi-level *MBA*-semiotics and exclusively of a TT0's patent-(non)eligibility. [157] hence need not mention that *Mayo/Alice* require – by AIT and common sense clearly implied, and by Chief Justice Roberts [210] and Justice Breyer [202^{ftn3}] implicitly confirmed – that an ET CI//TT0 is precisely described by “inventive concept(s)” making it up, which is a lo-level *MBA*-semiotics notion. Meeting this requirement avoids the hitherto practiced legal reasoning about a TT0 without having clarified, at all, the total inventivity it embodies. Not meeting it encourages its reader/examiner/judged to unlawfully ignore potentially important information from its specification as to TT0's inventivity, which may reduce fully grasping TT0.

- This applies especially as to the above mentioned *MBA*-semiotics set screws.
- This also clearly contradicts the Supreme Court's *Biosig* decision⁹.

In spite of these 2 serious deficiencies, the IEG currently is the – hitherto – best broadly discussed introduction into the ET CIs' patent-eligibility problem.

⁸ The AIT term „scheme“/„program scheme“/„algorithm scheme“/.... scheme“ is to be understood in a generic sense and may denote any mixture (not necessarily clearly defined) of a declarative and a procedural statement, i.e. is something between a logical formula and a T/F-check list.

⁹ The IEG avoids touching this also within the USPTO controversial issue, the “Broadest Reasonable Interpretation, BRI” of a claim – being very popular in the whole patent community because of its simplicity in generously entitling anybody to interpret an ET CI's TT0 by basing this interpretation on its own “broadest reasonability”. While the BRI, because of this logical absurdity – as such also clearly qualified by the Supreme Court's *Biosig* decision¹ – is totally untenable, it nevertheless is often applied by the CAFC (even explicitly [62] but more frequently just practicing it and ignoring *Biosig*), thus barring any reasonable analysis of a TT0 being patent-eligible or not, by destroying by claim construction the necessary condition for being patent-eligible by a priori rendering TT0 non-novel or obvious by applying the BRI.

(2) CAFC decisions – 3 in 2014: *Interval/DDR/Myriad*, and 2 in 2015: *Biosig/Ariosa*:

These decisions are easily *MBA*-evaluable: By AIT only *DDR* is fully *MBA* consistent – the other 4 ones are inconsistent to *Mayo/Alice*¹⁰, mostly as contradicting the Supreme Court’s *Biosig* decision by using CAFC boards’ specific BRIs.

The overall result is remarkable: After *DDR* not a single one of the CAFC’s decisions about ET CIs proceeded as the Supreme Court had required to proceed in SPL precedents about ET CIs – as shown next.

1. The CAFC’s *Interval* decision, 10.09.2014 [154], has already been “*MBA*-evaluated” (in this paper’s terminology) in detail in [138]. The result there: It is at best partially consistent to *MBA*-semiotics²), as it obeys *Biosig* as to the “BRI” issue¹) – indeed being a big step towards the *MBA* framework – but not at all as to the notions “inventive concept” (*Mayo*), “definiteness” (*Biosig*)¹), consequently also not as to the notion “substantially more” (*Alice*).
2. The CAFC’s *DDR* decision, 05.12.2014 [156], has already been “*MBA*-evaluated” in detail in [138], too, resulting in: It is totally consistent to the *MBA*-semiotics, as based on the notions of “inventive concept” (*Mayo*), “substantially more” (*Alice*), and of *Biosig* both on its notions¹) “BRI” and “indefiniteness”¹¹).
3. The CAFC’s *Myriad* decision, 17.12.2014 [159], has already been “*MBA*-evaluated” in detail in [163], resulting in exactly what its headline summarizes: “[*MBA*’s] *Overinterpretation vs. Oversimplification of ET CIs Interpretation*”.

More explicitly, this headline tells: This *Myriad* decision oversimplifies the claim interpretation of the *Myriad* claims (enabled by the board’s use of its own BRI, clearly forbidden by the Supreme Court’s *Biosig* decision), which then beautifully matches with its overinterpretation of the *Alice* claims (enabled by the board’s use of its own BRI, clearly forbidden by the Supreme Court’s *Biosig* decision).

As seen by AIT: This *Myriad* decision diametrically contradicts the Supreme Court’s *Biosig* decision just as the CAFC’s same time *DDR* decision.

p.s.: In the wake of this unlawfully taken liberty, the board can correctly conclude: The *Myriad* claims comprise no *Mayo/Alice*-like inventive concept.

¹⁰ They all are not aware of the *Mayo* implied necessity – due to common sense and AIT [210,202] – to identify TTO’s generative set S of inventive concepts (making TTO up completely, see FIG 2) as the central part of TTO’s claim interpretation, and then to start its claim construction by verifying the viability of S (by FSTP-test.1). This aspect is totally skipped here, for this paper’s brevity and simplicity.

¹¹ As the ET CI/TTO of *DDR* has a single inventive concept only – ... – for the postc its scope is also trivially defined by it and hence also immediately recognizable, as *Biosig* requires, whether some TTO* belongs to it or not.

4. The CAFC's 2015 *Biosig* decision, 27.04.2015 [205], continues – as *Myriad* already indicated – the reversal of the first weak and then stern “pro Supreme Court trend” in CAFC's precedents about ET CIs in *Interval* and *DDR*.

It namely provides only some lip service to the Supreme Court's *Biosig* decision, simply by totally focusing on its principally completely noncontroversial part, namely on the for AIT common place that patents' specifications never can be of absolute preciseness¹²).

Thereafter, this CAFC board just ignores both exemplarily clear main points of the requirement statements of the Supreme Court's *Biosig* decision¹⁾, both addressing in the patent community since long time very controversial issues [e.g. 68,58]: While they both are broadly established within the patent community⁹⁾, from the AIT point of view they both are absolutely untenable. I.e.: Instead of proceeding as the Supreme Court by *Biosig* explicitly required as to both issues when remanding the CAFC's preceding *Biosig* decision, the latter undertook nothing to achieve clarification in the BRI issue and the tightly related definiteness issue – but simply insists in its pre-*MBA* view.

5. The CAFC's most recent one of these 5 decisions, in *Ariosa*, 12.06.2015 [209], is a straight forward confirmation of the just *MBA*-evaluated *Biosig* decision, but not focused on the BRI/definiteness issues as there, but now on the patent-eligibility issue (evidently assuming these were separable from each other, logically being wrong anyway, as visible from FIGs 1 and 2, due to SPL being of FFOL) – and thus insists in the reversal of the by *DDR* clearly represented “pro Supreme Court trend”.

Thus, nothing really is needed to be added here, except to reject complaints, the Supreme Court's language were “sweeping”: It is not. It is metaphorical and exactly therefore clearly and unmistakable interpretable (not meaning it is easily interpretable, even for AIT!). The FSTP-Project proves it.

The probably consequence resulting from this reluctance of the CAFC to obey the constitutional hierarchy of developing jurisprudence, to which it constitutionally equally is entitled, will be briefly outlined in (4) below – again, as seen from an AIT point of view.

¹² which even is true to Mathematics!! As most patent practitioners never before heard this truth – not at all being a triviality but an insight achieved by Analytic Philosophy only in the 20th century's first half – it was extremely reasonable to the Supreme Court's *Biosig* decision, to convey it eventually to this crowd, from where it now made it into some boards of the CAFC: Just to take it, but not to overinterpret it as it recently is happening (see also *Ariosa*!).

- (3) **The Petition for Writ of Certiorari [206]**: It is a beautiful, correct, by patent professionals easily comprehensible presentation of only a part of the current problem caused by ET CIs' SPL precedents. This part is in no way small or negligible, as *Alice* provides an excellent guidance to understanding *Mayo* correctly by showing how pre-*Mayo* claim interpretation and claim construction must be refined for achieving consistent and predictable SPL precedents about ET CIs, too.

Moreover, it is retrospectively oriented and thus completely misses what Chief Justice Roberts [210] and Justice Breyer [202 ^{ftn3}] publicly communicate – and the unanimous groundbreaking decisions in *KSR/Bilski/Mayo/Myriad/Biosig/Alice* evidently confirm, as they all are clearly forward looking.

Thus, hopefully the Petition will be granted. Unless the Supreme Court directly intervenes again, the risk increases that SPL protection for ET CIs loses more and more of its trustworthiness: There is, within the patent community, the professionally very understandable but economically disastrous tendency, to keep clinging to the pre-*Mayo/Biosig/Alice* level of intellectual and technical development of SPL precedents that evidently proved to be incapable of consistently and predictably protect ET CI – as shown by the above *MBA* analysis of the USPTO's IEG and the currently prevailing trend manifesting itself in the above 5 CAFC decisions.

- (4) **The Supreme Court's *Teva* decision[172]**: The author does not approach this decision for the SPL interpretation it is based on per se or its guidance per se as to SPL scientification. But, although it primarily deals with an SPL precedents management issue, he expects that it is going to exert massive impacts on the SPL development, in the sense of the in (3) quoted SPL aspects communicated by the Supreme Court. Thus, the following lines are highly speculative and are kept very short – just hinting at its vague feelings.

In *Teva* the Supreme Court effectively redistributes the authority for claim interpretation and construction between the District Courts and the CAFC by reducing the CAFC's capability to overrule – by means of the magic word “de novo” – also the factual findings by the District Courts, without these being legally erroneous.

The most evident cons and pros of this change of power distribution are that it embodies the risk of District Court specific claim interpretations & construction, in particular as to ET CIs because of their above mentioned specificities vs.

unfolding, as to improving its various qualities, the productivity increasing principle of competition between the District Courts, thus potentially exceeding the productivity of just the CAFC.

It remains to be seen, whether this interpretation of *Teva* really comes to life and to what extent, after the never ending discussion about this issue, felt to have been settled by *Markman*.

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