## To Whom is Interested in the Scientification of SPL

Dear Addressee,

You surely noticed that the address of my paper as of 21.03.2014 was mixing up the themes of to Supreme Court hearings: The one on 31.03.2014 was devoted to the “Abstract Idea” issue in SPL, not its “Indefiniteness” issue.

The latter issue will be dealt with by the 28.04.2014 hearing. And the 21.03.2014 attachment was a research paper that showed that the scientification of SPL precedents has enabled completely solving the “Indefiniteness” problem – except the required Highest Courts’ precedents, the need and substance of which is also described in this research paper. Thus, the 28.04.2014 hearing will show how far you can get without a scientized understanding of the Supreme Court’s interpretation of 35 USC §§ 101/102/103/112 since *Mayo*.

Attached you may find an aftermath research publication to the 31.03.2014 hearing. It shows that the scientification of SPL precedents had completely solved the “Abstract Idea” issue, too. After this hearing, for most of you this may seem strange. But it isn’t. Just read it.

Finally, I would like to emphasize that these scientific solutions of these evergreen SPL problems will prevail – SPL is amenable only to rationality, on the long run at least.

I offer my apologies for my above mentioned sloppiness.

Comments are highly appreciated.

Best regards

Prof. Dr.-Ing. Sigram Schindler

# The Supreme Court's "SPL[1)] Initiative": Scientizing Its SPL Interpretation Clarifies Three Initially Evergreen SPL Obscurities

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## I. The Supreme Court's "SPL Initiative" is a Call for Refining SPL Precedents

The Supreme Court's hearing in *CLS vs. Alice* on 31.03.2014 [68] dealt with the first one of 3 SPL[1)] key issues of its "SPL Initiative", here denoting its line of *KSR/Bilski/Mayo/Myriad* decisions. What property makes a claimed emerging technology invention being **.)** an "**abstract idea**" and hence not patent-eligible, as in *Bilski*, **:)** "**indefinite**" (Supreme Court's hearing as to it on 28.04.2014, in *Nautilus vs. Biosig*, as broadly felt to be equally obscure as the first one), and/or **.:)** "**obvious**", initially also as key as obscure, and tackled by the Supreme Court's *KSR* decision launching this SPL Initiative. Its hitherto final decisions, *Myriad* and in particular *Mayo*, induced by its refined SPL interpretation the scientification of SPL interpretation [5,18,19,22,45,58,61] and provided the notional toolbox for scientizing also SPL applications of this scientized refined SPL interpretation, thus enabling finishing with these 3 evergreen SPL obscurities.

This paper shows, how this scientification of SPL precedents enables clarifying the meaning of the notion of a claimed invention being an "abstract idea", i.e. removing the initial obscurity of this issue.

## II. The Supreme Court's above Call – and Patent Professionals' Difficulties with it

This hearing [68] demonstrated what the community of patent professionals achieved since *Mayo* as to clarifying the "abstract idea" issue – namely: it still is not clear[2)]. The Supreme Court had asked for this clarification by remanding in 2012 a series of CAFC decisions, one of the new ones just being heard. It had provided also guidance for how to achieve this clarification: By reconsidering these decisions "in the light of *Mayo"*, i.e. it required to proceed thereby as explained in this unanimous decision.

But the patent professionals simply do not have the background indispensable for developing what the Supreme Court expected from them – a refined understanding of the SPL, based on the latter's refined interpretation in *Mayo*. And if they had asked for help scientists having the academic background enabling such a cognitive development, this would have been in vain, as getting them acquainted with the problem to be solved takes years: Such Advanced IT theoreticians/mathematicians first had to be familiarized with the established SPL precedents, and harder: with the needs in patenting emerging technology inventions.

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[1] SPL, "Substantive Patent Law", stands here for 35 USC §§ 101/102/103/112, in Europe for the peer EPC sections.

## III. Scientizing the Supreme Court's Interpretation of SPL and of its Application

Sweeping chances show up when looking at the SPL Initiative by the eyes of Advanced IT. These eyes would notice **i)** the principle simplicity of testing a claim(ed invention) – be it from an emerging or from a classical technology, the SPL is the same – for its satisfying the requirements stated by the SPL, as this is a finite and first order logic problem, though an intricate one; **ii)** the practical problems arising when the classical claim construction is applied without refining it appropriately in testing an emerging technology invention, and once noticed resolving them is straightforward; **iii)** the amenability to scientification of the issues raised by the Supreme Court's SPL Initiative – striving for "emerging technology inventions' SPL satisfiability testing" consistent to "classical technology inventions' SPL satisfiability testing".

This scientized view at "emerging technology inventions' SPL satisfiability testing" indicates that it does not pose a new problem, at all, as it solely disables taking the legal/logical "shortcuts" of the established "classical technology inventions' SPL satisfiability testing". I.e.: "Emerging technology inventions' SPL satisfiability testing" is complete and careful, not incomplete and sloppy, as practiced today with "classical technology inventions' SPL satisfiability testing" [45]. Hitherto unnoticed, these legal/logical shortcuts have been error-prone since ever. But their untenability becomes evident when dealing with emerging technology inventions, being "model based" [18,19] – i.e. they might prevail for simple classical inventions' SPL satisfiability testing, as now their deficiencies are known and hence eliminated if needed.

The Supreme Court's SPL Initiative thus induced Advanced IT research of "SPL satisfiability testing of inventions". This induction has been decisively amplified by its pre- and/or post-processing by often controversial CAFC decisions, sharpening the problem awareness and thus making this scientific research extremely fertile: It lead to an amazing amount of unquestionable knowledge about SPL precedents – and even enabled amazingly powerful "patent technology" (as the reference list shows by the end of this paper). Especially as to the question, what property of an invention makes it being an abstract idea, scientizing the Supreme Court's SPL initiative turned out to be very enlightening, as the next Section explains.

Terminating this Section beyond the scope of this "not an abstract idea only" minded paper: Also the other two obscure key issues of SPL quoted at its beginning – a claimed invention being "obvious" resp. "indefinite" – their beings and their quantifications have also already been clarified by the scientification of SPL precedents, [5-7] resp. [58,64]. In total, this shows the correctness of the hypothesis of this paper's headline and in particular proves the substantial acceleration of this clarification process asked for by the Supreme Court in 2012, addressed already in Section I – just as the inevitably extremely low pace of this process if it is to be performed by the patent professionals on their own.

## IV. Scientizing the Supreme Court's New SPL Notion of "An Invention being an Abstract Idea"

The questions asked by the Supreme Court during this hearing addressed several SPL issues [68], directly or indirectly related to specifically the "abstract idea" quality of an invention[2)]. Thereof, this Section considers only the first step in scientizing this latter issue, and thereafter outlines the then self-explanatory "not an abstract idea only, NAIO" test of the claim(ed invention).

This paper skips the phenomenon that the community of patent practitioners and its powerful organizations don't move faster in grasping the refined SPL understanding, as asked for by the Supreme Court – this phenomenon will disappear anyway, at the latest when the patent law technology enabled by the refined SPL understanding, an IES prototype, and a textbook explaining both will become available in 2015.

### IV.1. Scientifically Identifying an Invention's Property Qualifying It as being Not an Abstract Idea.

The transcript of this hearing shows [68] that all the questions asked by the Justices circled around how, in the light of *Mayo*, the controversy is to be seen between CLS and Alice about the patent-eligibility of the computer implemented invention (CII) at issue. CLS alleges this claimed invention were an abstract idea (only) and hence not patent-eligible, while Alice rejects this qualification of its patent as abstract idea (only) – whereby both parties refrain from defining what property of a claimed invention would render it being an abstract idea only.

The "only" appended, here, to the term "abstract idea" shall remind that an invention being an abstract idea does not meet one of the requirements stated by the Supreme Court's *Mayo* interpretation of the 35 USC SPL. Disregarding the commonly understood properties of an invention to be no law of nature or a natural phenomenon, the only other such *Mayo* requirement – the not meeting of which bars the invention at issue from patent-eligibility – is that the claim(ed invention) must not be preemptive[3)].

While it is impossible to prove the nonpreemptivity of a claim(ed invention) – one cannot prove the nonexistence of a preempted invention – the nonpreemptivity definition yet leads to the NAIO test, below.

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[2] The Supreme Court addresses only very principle questions, putting them very cautiously, often by metaphors or alike, thus asking for their practical clarifications by subsidiary entities and patent practitioners. This clarification did not happen, as outlined in Section II. For brevity, this paper refrains from showing that all the questions asked by the Justices – if understood correctly by the author – do have unquestionable and clear scientific answers, consistent to the Supreme Court's SPL Initiative, and is focused on the "abstract idea" issue therein. For the other initially obscure SPL issues see Section I and the references quoted in the final paragraph of Section III.

[3] The notion of a claim(ed invention) being not preemptive is evident for common sense. Mayo clearly, and mirroring common sense correctly, defines it as: The scope of the invention at issue must not comprise an invention, which is not more limited than the invention at issue and yet embodies at least the usefulness of the invention at issue. Thereby the usefulnesses of both inventions are defined by the conjunction of the respective inventive concepts completely describing both inventions, as explained in *Mayo* – here only put into scientized wordings.

I.e.: It makes no sense to call/define a claim(ed invention) to be not an abstract idea if it is nonpreemptive, as this property of the claim(ed invention) cannot be tested, see the preceding paragraph. But it turns out that the nonpreemptivity definition shows how to design for the claim(ed invention) a test such that its passing by the claim(ed invention) guarantees its being nonpreemptive. Indeed, [5] has proven mathematically, for this NAIO test, that a claim(ed invention) is nonpreemptive if and only if it passes this test.

Thus it makes sense to call a claim(ed invention) to be an abstract idea, if and only if it fails to pass the NAIO test – as it then is preemptive.

As a consequence, the property of an invention, which the Supreme Court tried to identify during this hearing for qualifying it as an abstract idea, has scientifically been precisely identified already. This property of this invention is to fail to pass the NAIO test – then and only then this invention is preemptive.

### IV.2. About the NAIO Test.

The NAIO test has been published for the first time in an Amicus Brief to the CAFC [10] then in many other academic publications, and also in Amicus Briefs to the Supreme Court, e.g. [19,45,58]. Its below description is from SSBG's Amicus Brief [58] to the Supreme Court in preparation of its upcoming hearing as to the indefiniteness issue on 28.04.2014, mentioned in Section I; this Amicus Brief puts the NAIO test into the general context of testing a claim(ed invention) under 35 USC SPL, just as a very recent publication [64]. The latter publication provides many more details and thus facilitates easily grasping its philosophy and its exact technical working – and that its general description and working is often much more complicated than shown in [58], as there the strong assumption is made that only a single claim interpretation alias set S exists (as explained in [64]).

Then the **"Not an Abstract Idea Only, NAIO"** test basically comprises 4 steps:

1) verifying that the specification of the claimed invention discloses a problem, P.0, described to be solved by it, the latter being described by S;
2) verifying, using the inventive concepts of S, that the claimed invention solves P.0;
3) verifying that P.0 is not solved by the claimed invention, if therein an inventive concept of S is removed or relaxed;
4) if all verifications 1)-3) apply, then this claimed invention is "not an abstract idea".

Thereby P.0 may also be taken as the conjunction of the inventive concepts of S, in total making-up the invention – which has to be decided by Highest Courts' SPL precedents. In the US probably the "conjunctive usefulness" version of the NAIO test would be preferred, trivializing steps 1) and 2). In both cases step 3) is key, as it requires that S represents the indispensable limitations the invention requires.

## V. Concluding Remarks about Further Problems Ahead in SPL Testing

Right now the scientification of the Highest Courts' SPL precedents might already impact on the cases underlying the Supreme Court's most recent and its next hearings in SPL cases. Enlightenment is effective. Scientifically sound views always prevail, though usually only eventually. Sometimes immediately.

Before looking into the potentially far future, a 1-sentence-summary of what definitively has been achieved already by the Supreme Court's *Mayo* update of SPL interpretation and Scientizing it is in place. Not only the 3 above evergreen SPL obscurities have been clarified in an unquestionable as scientific way – thus avoiding that such obscurities would on the long run evidently put into jeopardy the social foundation of the whole patent law – but the inspiration induced by this update's refined SPL understanding enabled designing a patent/innovation technology and a broad range of Innovation Expert Systems (IESes).

As to specific work items ahead next, there are two quite different categories, both first requiring scientized clarification and eventually Highest Courts precedents:

- The first category comprises clarifying the still remaining "glitches" in SPL precedents – probably none of them being a fundamental obscurity such as the 3 above mentioned ones – probably most of them by *Therasense* like decisions as shown by the CAFC.
- The second category would be ground breaking again: They would try to get rid of the unfortunate need of "composition of matter" patenting, protecting the interests of the investors but socially hardly defendable, and replacing them by a more sophisticated understanding of how model based inventions may be protected by SPL without putting into jeopardy the social contract carrying SPL by vastly neglecting other aspects of innovativity than invested money – though it must be protected, too.

Thereby, the scientification of SPL precedents does not mean mathematizing in yet another area the mental model it is based on – as indispensable for increasing rationality in any endeavor – but it decisively means, first of all, securing the model underlying the social contract on which incentivizing innovativity and the SPL are based, hence the wealth of our society [69,70]. It also means supporting exerting the enormous socio/economic impacts of innovativity on everyday life, based on open and dependable interaction with the Supreme Court and the CAFC in their adapting the SPL precedents to the needs of emerging technology inventions [69,70]. Thus, fostering the innovativity of the society and unfolding its socio/economic potentials requires the scientific interpretation [5,22,61,70] not only of the Highest Courts' SPL precedents, as induced by the Supreme Court's refined SPL understanding, but also applying this scientized refined SPL understanding in managing emerging technology innovations, i.e. in respective R&D control, IPR prosecution, IPR licensing, IPR litigation, …, and in accordingly developing all areas of daily life [70].

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(For convenience of accessing other materials of the FSTP project, it is provided as used therein)


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