

**THE SUPREME COURT'S 'SPL-INITIATIVE':
SCIENTIZING ITS SPL INTERPRETATION
REMOVES 3 EVERGREEN OBSCURITIES
– AND ENABLES AUTOMATION IN A
CI's [=claim(ed invention)'s] SPL TESTING/ARGUING**

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- V. SEMI-AUTOMATIC/AUTOMATIC GENERATION
from a CI's eKNOW ALL its SPL-TESTs/ARGUMENT-CHAINs

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ABSTRACT OF THIS PRESENTATION' FORMAT: SCREEN SHOTS & ABSTRACTS

For each of the 6 'screen shots' belonging to the speech, there is an abstract of its oral presentation. This abstract summarizes the message conveyed by the oral presentation of the screen shot, by explaining any non-evident topic thereon in more detail – thus *MAKING NOTES SUPERFLUOUS*.

This speech reports about a particular activity within the FSTP project, i.e. about the context of eKnowledge based groundbreaking "Patent Technology" developed therein and the prototype of an "Innovation Expert System (IES)" leveraging on this new technology. I.e.: Within this context it addresses, ●what a claim(ed invention)'s abbr. "**CI's**" semi-automatically generated eKNOW is, ●the clarifications induced by the Supreme Court's *KSR/Bilski/Mayo/Myriad/Biosig/CLS* decisions as to 3 evergreen obscurities in 35 USC §§ 101/102/103/112 (obviousness/patent-eligibility/indefiniteness), and ●how from this clarified eKNOW of this CI all/(modulo redundancies) its SPL-satisfaction tests- and argument chains may be generated semi-automatically or automatically, in calibration resp. in arguing mode.

For more information about all these aspects of the FSTP project see the Reference List on its blog, All its publications are available there (if this is legal), i.e. on www.FSTP-Expert-System.com.

I. A PATENT's eKNOW about a CI – KINDs & REPRESENTATIONs

- “Patent eKnowledge” is the blue print of any precise eKnowledge as to any subject matter – such as medicine, transportation, security, nano tech, ...
- “Patent eKnowledge” is **FINITE + FOL!!!**
- Knowledge kinds, KKs, in patent business:
 - Legal kinds – patent laws/precedents, PTOs' other bodies' directives, corporate/market rules, ... – **case independent.**
 - Technical kinds – patent at issue, prior art, marketing/user/maintenance information, ... – **case specific.**
 - Business kinds – R&D, Prosecution, Litigation, Licensing, Marketing – **case specific.**
- Knowledge kinds' representations, KKR, in patent business:
 - documentRs – in any doc.i, as known from everyday life.
 - logicRs – to be marked-up in doc.i's as identified by the inventor/posc,
 - brainRs – showing what our brains do, though we don't know how,
 - argumentChainRs – sequences of mixtures referring to the above KKR.

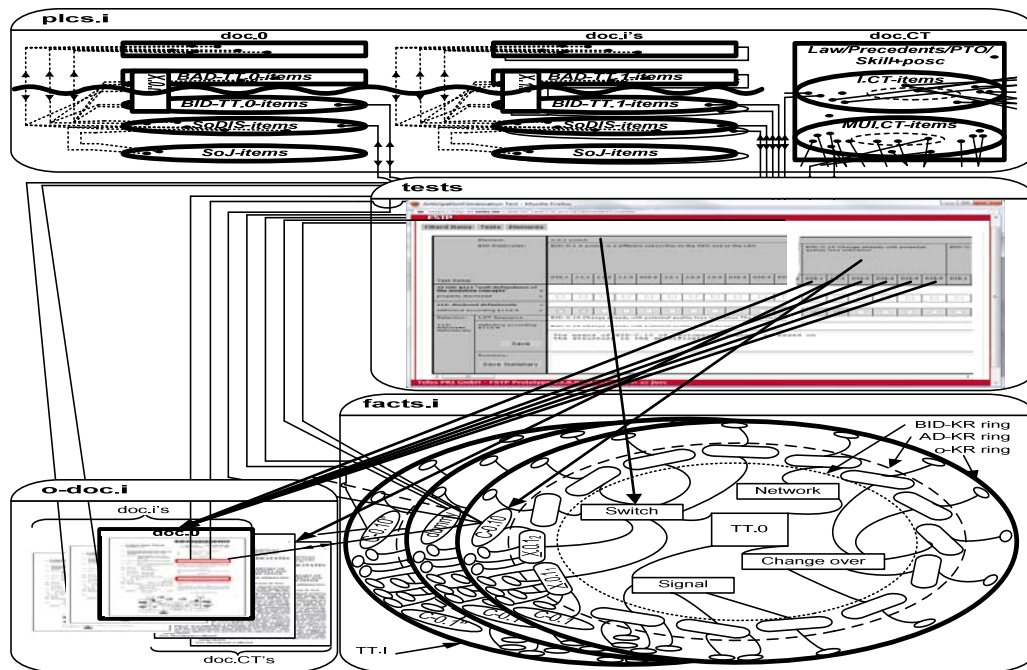
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ABSTRACT OF I.

- Patents in general are very simple, allegedly precisely described, practical solutions of problems.
- As usual in engineering, they are of “first order logic” and even finite – both probably indispensable for making the patenting philosophy work.
- For designing a technology efficiently supporting patent professionals, distinguishing between 3 elementary knowledge kinds is crucial – in KR never distinguished.
- Legal argument chains (LACs) then determine the eventually required kind of knowledge – it is highly personalizable as to its legal representation and its I/O features.
- Mathematical modeling provides the basis for the mathematical FSTP-Test outlined in III- VI.
- The legal correctness of such a system would be audited by PWC/EY/DT/... just as ERPs.
- The normal patent practitioner need not care for mathematical/technical “soundness” proofs.

II. A CI's TECHNICAL /SCIENTIFIC eKNOW REPRESENTATION



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ABSTRACT OF II.

- Above is shown a control screen shot and the 3 just explained different graphical representations, i.e. screen shots, of the 3 different kinds of information embodied by the same information.
- The LAC information is here graphically indicated on the bottom lines of the control screen shot.
- I.e., acoustic info rep is not shown here.
- The double headed arrows show examples, how the user may browse between these KKR's.
- No such arrows model that the user may browse, also within one KKR, between the different documents and their peer items therein.

III. SE.-AUTOM. GENERATION of a CI's eKNOW repr. its SPL-TEST

- test1** The FSTP-Test is executed for the set \forall claim interpretations, Sol, selected in (b)/(c), comprising the steps:
- (a) It prompts the user for the claim(ed invention)'s and prior art's docs with their "**marked-up items, MUIs**";
 - (b) It prompts \forall Sol and for any Sol's \forall BAD^{Sol}-X_{in}::= $\bigwedge_{1 \leq i \leq N} \text{BAD-crCin}^{Sol.in}$ in doci-MUI's, $0 \leq i \leq l, 1 \leq n \leq N$;
 - (c) It prompts for the **definiteness justification of \forall compound inCs in Sol**, i.e. of \forall AD-crCin^{Sol.in};
 - (d) It prompts to disaggregate \forall BAD-crCin^{Sol.in} $\forall 0 \leq i \leq l, 1 \leq n \leq N$ into $\{\text{BED-crCink}^{Sol.in} \mid 1 \leq k^{Sol.in} \leq K^{Sol.IN}\}$;
 $\text{BAD-crCin}^{Sol.in} = \bigwedge_{1 \leq k^{Sol.in} \leq K^{Sol.IN}} \text{BED-crCink}^{Sol.in} \wedge \text{BED-crCink}^{Sol.in} \neq \text{BED-crCink}^{Sol.in'} \forall k^{Sol.in} \neq k^{Sol.in'}$;
 - (e) It prompts for the **definiteness justification of its disaggregation in (d)**;
 - (f) It automatically sets $K^{Sol} ::= \sum_{1 \leq n \leq N} K^{0N}$, $S^{Sol} ::= \{\text{BED-crC0nk}^{Sol.0n} \mid 1 \leq k^{0n} \leq K^{0N}\}$, with $K^{Sol} = \{\text{BED-crC0nk}^{Sol.0n} \mid 1 \leq k^{0n} \leq K^{0N}\}$;
- test2** It prompts for justifying \forall BED-crCs in S^{Sol}: Their **lawful disclosures**;
- test3** It prompts for justifying \forall BED-inCs in S^{Sol}: Their **definiteness** under § 112.6;
- test4** It prompts for justifying \forall BED-inCs in S^{Sol}: Their **enablement**;
- test5** It prompts for justifying \forall BED-inCs in S^{Sol}: Their **independence**;
- test6** It prompts for justifying \forall BED-inCs in S^{Sol}: Their **posc-nonequivalence**:
- (a) It automatically sets if $|RS|=0$ then $\text{BED}^* \text{-inC0k} ::= \text{"dummy"}$ else performing **c-f** $\forall 1 \leq i \leq |RS|$;
 - (b) It prompts to disaggregate \forall BAD-X_{in} into $\bigwedge_{1 \leq k \leq K^n} \text{BED-inCik}^n$;
 - (c) It automatically sets $\text{BED}^* \text{-inCik}^n ::= \text{either } \text{BED-i-C0k}^n \text{ iff } \text{BED-inCik}^n = \text{BED-inC0k}^n \wedge \text{disclosed} \wedge \text{definite} \wedge \text{enabled}$, else "dummy(ik)ⁿ";
 - (d) It prompts for $\text{JUS}^{\text{posc}}(\text{BED}^* \text{-inCik}^n)$.
- test7** It prompts for justifying by NAO test¹⁾ on (S^{Sol}:P.0^{Sol}): TT.0 is **not an abstract idea only**;
- test8** It prompts for justifying on \forall BED-inCs in S^{Sol}: TT.0 is **not natural phenomena solely**;
- test9** It prompts for justifying \forall BED-inCs on (S^{Sol}:P.0^{Sol}): TT.0 is **novel and nonobvious** by NANO test²⁾ on the pair (S, if $|RS|=0$ then $\{\text{BED}^* \text{-inC0k} \mid 1 \leq k \leq K\}$ else $\{\text{BED}^* \text{-inCik} \mid 1 \leq k \leq K, 1 \leq i \leq |RS|\}$);
- test10** It prompts for justifying \forall BED-inCs in S^{Sol}: TT.0 is **not idempotent** by NANO test³⁾ on the pair $S' \subseteq S$
- ¹⁾ The "**Not an Abstract Idea Only, NAO**" test basically comprises 4 steps, ignoring any prior art's inventions:
- 1) It prompts to justify the specification discloses a problem, P.0^{Sol}, to be solved by the claim(ed invention) as of S^{Sol};
 - 2) It prompts to justify, using the inventive concepts of S^{Sol}, that the claimed invention solves P.0^{Sol};
 - 3) It prompts to justify that P.0^{Sol} is not solved by the claim(ed invention), if a BED-inC of S^{Sol} is removed or relaxed;
 - 4) if all verifications 1)-3) apply, then this pair <claim(ed invention), Sol> is "not an abstract idea only".
- ²⁾ The "**Novel And Not Obvious, NANO**" test basically comprises 3 steps, checking all "anticipation combinations, AC^{Sols}" of S^{Sol}:
- 1) It automatically generates the ANC^{Sol} matrix, its lines representing for any prior art document.i, $i=1,2,\dots,l$, the relations between its inventionⁱ:Sols BED-inCs to their peers of TT.0^{Sol}, represented by its columns, whereby S^{Sol} derivable from any prior art documents' invention in Sol;
 - 2) It automatically derives from the ANC^{Sol} matrix the set of $\{AC^{Sols}\}$ with the minim. number $Q^{plcs/Sol}$;
 - 3) It automatically determines and delivers $\langle Q^{plcs/Sol}, \{AC^{Sols}\} \rangle$, being the creativity of the pair <claim(ed invention), Sol>.

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ABSTRACT OF III.

- The FSTP-Test consists of 10 FSTP test.o, in total checking of a CI, whether it is patent-eligible and patentable. This is the case iff it meets the 11 concerns legally encoded by SPL, i.e. by 35 USC §§ 101/102/103/112. I.e.: iff this CI passes all the 10 FSTP test.o by at least one set of its BED-inCs. Any such set represents an interpretation of this CI, int(CI), and is called int(CI)'s "generative set".
- It prompts the user to input, for this CI from doc0, first its elements X0n and their modeled compound inventive concepts BAD-X0n and as many elementary inventive concepts BED-crC0nk as it is able to identify, $1 \leq n \leq N$, $1 \leq k \leq K^n$, from which it later derives and checks all generative (sub)sets.
- [It takes, in principle, peer steps to those of doc.0 for any prior art document.i, $1 \leq i \leq l$, if there is any].
- Its test.1 checks 2 such SPL concerns, the remaining 9 test.o check each 1 such concern. Thereby the concerns encoded by § 112 are checked by test.o, $1 \leq o \leq 6$; those encoded by § 101 are checked by test.o, $7 \leq o \leq 8$; those encoded by §§ 102/103 are checked by test.o, $9 \leq o \leq 10$.
- It thus is the maximal meaningful "check list" of CI satisfying SPL: It sorts all user/posc input into the sequences as logically required by argument chains (modulo redundancies) of showing that CI does or does not satisfy SPL – whereby its NAO and NANO tests execute, controlled by user/posc input – a series of additional transformations of the generative set at issue.
- The FSTP-Test is the canonical procedure for acquiring all technically and legally relevant information about a CI (based on input of its user/posc) such that
 - any meaningful question about CI satisfying SPL can instantly be answered by it, and
 - CI is indicated as satisfying SPL for exactly those generative sets enabling all justifications, whereby the evaluation of this answer resp. this indication is subject to judicial evaluation. It is subject to such scrutiny, just as any other test discussed hitherto – TSM, MoT, IA, Its difference is: It is complete – while all the other tests tried some irrational as not (separately) existing indication.

IV. 3 EVERGREEN SPL-OBSCURITIES of a CI: LOCATIONs & BEINGs

- test11** The FSTP-Test is executed for the set \forall claim interpretations, Sol, selected in (b)/(c), comprising the steps:
- (g) It prompts the user for the claim(ed invention)'s and prior art's docs with their "**marked-up items, MUIs**";
- (h) It prompts \forall Sol and for any Sol's \forall BAD- \bar{X} in $::= \wedge^{1 \leq \text{Sol.in} \leq \text{Sol.in}} \text{BAD-crCin}^{\text{Sol.in}}$ in doci-MUI's, $0 \leq i \leq l, 1 \leq n \leq N$;
- (i) It prompts for the **definiteness justification of \forall compound inCs in Sol**, i.e. of \forall AD-crCin $^{\text{Sol.in}}$;
- (j) It prompts to disaggregate \forall BAD-crCin $^{\text{Sol.in}} \forall 0 \leq i \leq l \wedge 0 \leq n \leq N$ into $\{\text{BED-crCink}^{\text{Sol.in}} | 1 \leq k \leq \text{Sol.in} \leq K^{\text{Sol.in}}\}$;
 $\text{BAD-crCin}^{\text{Sol.in}} = \wedge^{1 \leq k \leq \text{Sol.in} \leq K^{\text{Sol.in}}} \text{BED-crCink}^{\text{Sol.in}} \wedge \text{BED-crCink}^{\text{Sol.in}} \neq \text{BED-crCink}^{\text{Sol.in}} \forall k^{\text{Sol.in}} \neq k^{\text{Sol.in}}$;
- (k) It prompts for the **definiteness justification of its disaggregation in (d)**;
- (l) It automatically sets $K^{\text{Sol}} ::= \sum_{1 \leq n \leq \text{ON}^{\text{ON}}}$, $S^{\text{Sol}} ::= \{\text{BED-crC0nk}^{\text{Sol.0n}} | 1 \leq k^{\text{0n}} \leq K^{\text{0n}}\}$, with $K^{\text{Sol}} = \{\text{BED-crC0nk}^{\text{Sol.0n}} | 1 \leq k^{\text{0n}} \leq K^{\text{0n}}\}$;
- test12** It prompts for justifying \forall BED-crCs in S^{Sol} : Their **lawful disclosures**;
- test13** It prompts for justifying \forall BED-inCs in S^{Sol} : Their **definiteness** under § 112.6;
- test14** It prompts for justifying \forall BED-inCs in S^{Sol} : Their **enablement**;
- test15** It prompts for justifying \forall BED-inCs in S^{Sol} : Their **independence**;
- test16** It prompts for justifying \forall BED-inCs in S^{Sol} : Their **posc-nonequivalence**;
- (e) It automatically sets if $|\text{RS}|=0$ then $\text{BED}^* \text{-inC0k} ::= \text{"dummy"}$ else performing **c-f** $\forall 1 \leq i \leq |\text{RS}|$;
- (f) It prompts to disaggregate \forall BAD- \bar{X} in into $\wedge^{1 \leq k \leq K^n} \text{BED-inCik}^n$;
- (g) It automatically sets $\text{BED}^* \text{-inCik}^n ::= \text{either } \text{BED-i-C0k}^n \text{ iff } \text{BED-inCik}^n = \text{BED-inC0k}^n \wedge \text{disclosed} \wedge \text{definite} \wedge \text{enabled}$, else "dummy(ik n)";
- (h) It prompts for $\text{JUS}^{\text{posc}}(\text{BED}^* \text{-inCik}^n)$.
- test17** It prompts for justifying by **NAIO** test¹⁾ on ($S^{\text{Sol}}; P, 0^{\text{Sol}}$): TT.0 is **not an abstract idea only**;
- test18** It prompts for justifying on \forall BED-inCs in S^{Sol} : TT.0 is **not natural phenomena solely**;
- test19** It prompts for justifying \forall BED-inCs on ($S^{\text{Sol}}; P, 0^{\text{Sol}}$): TT.0 is **novel and nonobvious** by **NANO** test²⁾ on the pair
 $(S, \text{ if } |\text{RS}|=0 \text{ then } \{\text{BED}^* \text{-inC0k} | 1 \leq k \leq K\} \text{ else } \{\text{BED}^* \text{-inCik} | 1 \leq k \leq K, 1 \leq i \leq |\text{RS}|\})$;
- test20** It prompts for justifying \forall BED-inCs in S^{Sol} : TT.0 is **not idempotent** by **NANO** test³⁾ on the pair $S' \subseteq S$
- ¹⁾ The "**Not an Abstract Idea Only, NAIO**" test basically comprises 4 steps, ignoring any prior art's inventions:
- 5) It prompts to justify the specification discloses a problem, $P, 0^{\text{Sol}}$, to be solved by the claim(ed invention) as of S^{Sol} ;
 - 6) It prompts to justify, using the inventive concepts of S^{Sol} , that the claimed invention solves $P, 0^{\text{Sol}}$;
 - 7) It prompts to justify that $P, 0^{\text{Sol}}$ is not solved by the claim(ed invention), if a BED-inC of S^{Sol} is removed or relaxed;
 - 8) if all verifications 1)-3) apply, then this pair <claim(ed invention), Sol> is "not an abstract idea only".
- ²⁾ The "**Novel And Not Obvious, NANO**" test basically comprises 3 steps, checking all "anticipation combinations, AC^{Sol} " of S^{Sol} :
- 4) It automatically generates the ANC^{Sol} matrix, its lines representing for any prior art document $i, i=1,2,\dots,l$, the relations between its invention i^{Sol} 's BED-inCs to their peers of TT.0^{Sol} , represented by its columns, whereby S^{Sol} derivable from any prior art documents' invention in Sol;
 - 5) It automatically derives from the ANC^{Sol} matrix the set of $\{\text{AC}^{\text{Sol}}\}$ with the minim. number $Q^{\text{plcs}}^{\text{Sol}}$;
 - 6) It automatically determines and delivers $\langle Q^{\text{plcs}}^{\text{Sol}}, \{\text{AC}^{\text{Sol}}\} \rangle$, being the creativity of the pair <claim(ed invention), Sol>.

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ABSTRACT OF IV.

- The **locations** – within the FSTP-Test of a CI for satisfying SPL – of the now (basically) clarified yet hitherto obscure parts of a CI's SPL test (due to the incompleteness of the classical claim construction) are highlighted by: **blue** (CI' definiteness), **green** (CI's semantic height over posc), and **red** (CI's patent-eligibility). After having achieved some familiarity with the working of the FSTP-Test, as unmistakably prescribed by §§ 101/102/103/112 – in total, not in sequence of executing its test.i's – one easily recognizes that a separate test for none of them doesn't exist (though many patent practitioners are longing for such simplicity), as "everything is by constitution meshed with everything".
 - The **being** of the FSTP-Test is realizable, i.e. it is completely executable, only under a series of preconditions holding, today always assumed in SPL precedents – without being aware of it (as with classical inventions always holding) – not necessarily holding or only clear for "Emerging Technology CIs". They are not explained here (see [90]), but their exemplary key words are: The CI must be of ●'FFOL' and ●'non-pathological', the CI's usefulness must have a ●convex 'control space' with this usefulness being a ●monotone function over the ●size of the domain of any inC belonging to a generative set of CI, whereby ●all these definitions must tolerate some 'equivalence interval'.
- It is not quite clear, whether the need of this preciseness has occurred today already in SPL precedents – though there are strong indications that this has happened e.g. in *Myriad* and alike cases [92,93,94]. Yet, without this precision, patents on ET CIs are kind of grab bags!

Some important implications of these preconditions are:

- Any legally meaningful SPL argument is (equivalent to) a logical conjunction of the test.o.,
- Any alleged argument, after calibration, may automatically be recognized/generated in realtime and – in customized form – interact/cooperate with the user in many kinds.

V. SEMI-AUTOMATIC/AUTOMATIC GENERATION from a CI's eKNOW its SPL-TESTs/ARGUMENTCHAINS

The following ladder of bullet points shows increasingly powerful capabilities of an "Innovation Expert System, IES", its "high end" as of science fiction, its "low end" going online later this year, its spokes not being consecutive.

- *Graphics prompting* through *selected legal q-a*
- Graphics/*Acoustic* prompting through *all reasonable q-a*
- *Assessing legal correctness capability* – all being "self-catalytic systems"
- *Self-contained interactive graphics/acoustic "responsivity"*
- *Realtime* self-contained interactive graphics/acoustic responsivity
- *Personalizable/Moderatable* realtime self-contained interactive graphics/acoustic responsivity
- *In-/Extrinsic user-counseling* in realtime self-contained graphics/acoustic interactive responsivity = self-inflammable self-catalytic system = **HAL!!**

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ABSTRACT OF V.

- Most IES functions for its "calibration"/"comfort" mode, few for its "engagement"/"combat"/"court" mode – on request working step/stream wise, also overlapping, all KR oriented UI supported.
- All the information eventually output by the IES in engagement mode is input before in calibration mode by an IES user – i.e., is already marked-up (by MUIs), or marked-up and linked, or marked-up and later linked during calibration by a user. This applies to all KRs of any information.
- In a Patent IES all the invention independent information would already carry its audited MUIs.
- Also MUIs to be provided by the inventor/posc are vastly stereotypic – once the invention's inventive concepts are identified – as then the FSTP-Test prompts the user through the complete check whether a CI satisfies SPL.