

**A Hitherto Unnoticed AI Requirement Met by the Supreme Court's PE Philosophy — Implying:
By the Supreme Court's Framework a Preemptive ETCI is ⁿPE. Not yet so by the USPTO's 2019 PEG Update.**

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The Supreme Court in its framework decisions explicitly requires limiting ETCIs' preemptivity ('PRE') for being PE^{1.a)} — here downed to 'PRE ETCIs are ⁿPE'. Yet, currently the CAFC just as the USPTO are totally "PRE mute, 'pm'". This PE-mail explains ●the PE-distinction between the USPTO's 2019 PEG Update (with & without its 'Supreme Court completion') vs. the CAFC's PE decisions^[e.g. 574_and_its_recent_predecessors_since_552] & ●the USPTO's *currently* incomplete exclusion of all PRE ETCIs from PE, as threatening the US NPS vs. the CAFC's *principal* nonexclusion of this threat.

This PE problem solution is the scientific FSTP-Test resp. its AI. They both determine an ETCI's PE/ⁿPE as required by the Supreme Court's framework. I.e.: For any ETCI, the set of **all** SPL requirements — ex- or implicitly stated by the framework decisions — is by **all** this FSTP-Test resp. AI 1.) necessary & 2.) sufficient^{b)}.

All 1.) & 2.) satisfying ETCIs meeting **all** requirements of the Supreme Court's Solomonian *Alice* PE specification, 3.) render **all** their correct SPL precedential decisions {4.) consistent & 5.) predictable & 6.) axiomizable/rationalizable/mathematizable & [totally resp. vastly]^{c)} {7.) robust^{c)} & 8.) automatable^{c)}} & 9.) without one of them potentially socioeconomically threatening the US NPS by 'clustering applications'^[562], as 10.) **all** being ⁿPRE & 11.) **all** being of minimal invasivity into the scope of § 101, as the FSTP-Theorem shows^{d)}. I.e.: Alone here 11 (basically nonindependent) different FSTPtech statements exist — and additional ones for **all** DNAETCIs & CRISPRETCIs.^{e)}

This unexpected scientific/mathematic richness^{f)} of FSTPtech and its huge practical patenting advantages seemingly totally confuse alerters to strangely warn that 'the Supreme Court's framework decisions were easily overinterpretable'. Such voices are really surprising (at least^{g)}): All framework interpretations have hitherto been catastrophic subinterpretations — unintentionally caused by the public authorities of the CAFC and USPTO — as clearly evidenced in^[480].

Key conclusions for the 2019 PEG Update: For rendering it fully *Alice* conforming, it must take also FSTP-test5-7 into account, i.e. the PE specification provided/defined/required by the Supreme Court's *Alice* decision. Otherwise ETCIs will emerge that by the today 2019 PEG Update are PE, but ⁿPE by *Alice*'s PE specification. For excluding such inconsistencies, carrying over to an ETCI's PE-testing, its 'SPL framework conformance' is inevitable (as the FSTP-Test's Legend shows) — just as that simplifying an ETCI passing it or 'reducing its § 101 invasivity' is impossible.

In total: The Supreme Court's all above SPL satisfaction requirements to be met by PE ETCIs are even in ISL [e.g.372,570/ftn1.b)] not quite trivial but now easily comprehensible, as the FSTP-Test's Legend shows. I.e.: Whoever complains about the FSTP-Test's complexity being too hard to understand has not seriously tried to grasp it. Otherwise she/he would have noticed that using it is much easier than driving a 'clutch car' — both once grasped.

^{1.a} All Supreme Court framework related notions necessarily used but not defined here — including their key implications, such as "notional resolution|refinement, ..." — are defined in recent or earlier FSTP mails. Cognitionally, these notions enable defining what **patent-eligibility** eventually implies: **improving or using usual metarational thinking or reasoning by (!)AI presumes rationalizing the former.**

^b — except for the gross failure in SPL thinking frequently committed if it ignores its embodied Mathematics.

This gross failure of the classic CI is that it assumes the original notional resolution of an ETCI's specification never needs a notional refinement. This error occurs, if an ETCI specification is so coarse that one of its properties cannot be determined precisely. This requires the specification's notional refinement of its original coarse notional resolution into its elementary one, abbr.: of its O-crCs into its E-crCs.

Gutenberg recognized already in the 15th century this 'refinement problem' of books — hampering their production. For eliminating it, he created the epochal invention of his "movable types"^[Internet] as books' elementary refinement units of 'knowledge dissemination'.

The Supreme Court recognized this 'refinement problem' now again — for ETCIs: By its *Mayo/Myriad/Alice* decisions' "inventive concepts" it created for ETCIs the similarly fundamental notion as the 'millennium invention' of 'movable types' in printing business. To complete this analogy: Due to progress, the mechanical movable types, i.e. the elementary notion of 'knowledge dissemination', is being totally replaced by the abstract & much more versatile semiotic notion of 'elementary inventive/creative concept, E-crC' of 'knowledge creation & handling'.

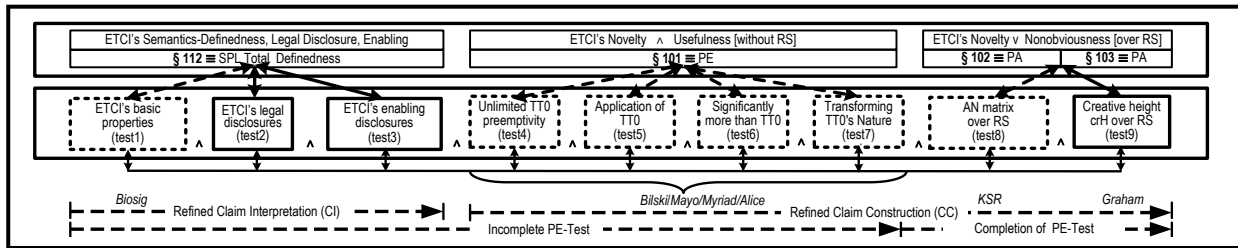
^c — the ETCI's legal properties 'totally', its factual properties 'vastly' —

[fin cont'd on p.2](#)

The FSTP-Test

(Upfront please note that the FSTP-Test's KR has been slightly changed without changing its meaning)

What follows explains for 'rat&matSPL & mrat&rat&matETCIs' their "bird's eye view", i.e. their mrat&rat&matCOM(ETCI)"[2,570/ftn2.b)], greatly helping to comprehend 'interpreting an ETCI over SPL' — and hence ETCIs' PE problem.



Metarational Claim Interpretation, mratCI: <external input ::= mratCI in ISL or not, internal output ::= a COM(mratETCI)> & begin:

- 1) if [COM(mrat&ratETCI) is factually (E-complete∧-correct∧-definite)∧(mrat&ratO-crC0n = ((mrat&rat, 1≤m≤K, E-crC0k)∧ncrC0n)/1≤n≤N, Σ1≤n≤N Kr=K)] then go on;
- 2) if [((mrat&ratO-inC0n, E-inC0k) | ∀1≤n≤N ∧ 1≤k≤K) are ex- or implicitly lawfully_disclosed] then go on;
- 3) if [mrat&ratO-crC0n, ∀1≤n≤N are ex- or implicitly enablingly_disclosed] then output mrat&ratE-crCS = COM(mrat&ratETCI) & stop.

(Meta)Rational Claim Construction, ratCC: <internal input ::= COM(mratETCI), external output ::= COM(ratETCI)> & begin:

- 4) if [COM(mratETCI) is mrat'directed to an exceptional concept', i.e. rat'comprises in the 'PE TTO an E-xcrC'] then go on;
- 5) if [COM(mratETCI) is mrat'an application of those concepts, i.e. an rat'application that 'uses' TTO'] then go on;
- 6) if [COM(mratETCI) is mrat'significantly more than ...', i.e. rat'E-crCS^{ETCI/TTO} basically independent of E-crCS^{TTO}] then go on;
- 7) if [COM(mratETCI) is mrat'transforming the nature of the claim', i.e. rat'transforming the 'PE claim of TTO into the PEETCI'] then input COM(RS^{mat}) := Φ and go on;
- 8) if [COM(mratETCI) has a rat'definable A/N-Matrix over RS and determine it'] then go on;
- 9) if [COM(mratETCI) has a rat'non-cherry-picking creative height, crH ≥ 2] then output 'COM(ETCI)^{rat}' is PE' & stop;

Mathematical Claim Construction, matCC: <internal input ::= COM(ratETCI), external output ::= COM(matETCI)> & begin:

- 4') if [E-xcrCS^{TTO} ≠ Φ] then go on;
- 5') if [((IT^{TTO}scope(E-crCS^{ETCI}) ⊆ scope(E-crCS^{TTO})) ∧ ((∃ E-crC° ∈ ETCI/TTO) ∧ (∃ E-crC°° ∈ TTO)) : E-crC° || E-crC°°)] then go on;
- 6') if [(∃ E-crC* ∈ E-crCS^{ETCI/TTO}) ∧ (E-crC* ≠ E-crCS^{TTO})] then go on;
- 7') if [(E-crCS^{ETCI} \ (E-crC*))^{pm} = Φ] then input COM(RS^{mat}) := Φ and go on;
- 8') if [∀^{i,n,k} ∃ Δ^{i,n,k} ::= if (E-crC^{i,n,k} = E-crC^{0n,k}) then 'A' else 'N' is mathematically defined] then go on;
- 9') if [crH ::= Σ^{1≤n≤N} (min^{∅≠I⊆[1..N]} |{<Δ^{i,n,1}='N', ..., Δ^{i,n,Kn}='N'>|} |) ≥ 2] then output 'COM(ETCI)^{mat}' is PE' & stop;

Legend: The top box shows ●by bold continuous and dashed double headed arrows (indicating US SPL's pre resp. post KSR), how the conjunction of all creative semantics of any ETCI are by the Supreme Court's framework decisions required to be tested by 35 USC/SPL's conjunction of test0's, 1≤o≤9, and ●by horizontal arrows the test semantics of the FSTP-Test's CI and CC — all arrows existing only mentally & TTO standing for Alice's "PE invention".

The above FSTP-Test — by its test0, o=1,...,9, testing an ETCI's E-crCS^{KR} as a whole for its satisfying SPL — is 'isomorph' to its AI, i.e. there is a multitude of 1-on-1 mappings between {test0, o=1,...,9} and {AI's 9 logic statements derived 1-on-1 from test0's conditions}, but each mapping defined by another subset of the ETCI's set of all its K-tuples, each preserving both their structures. I.e.: A meaning's 'test scheme' of some knowledge passing it represents its procedural KR, this meaning's AI represents its declarative KR (For more explanations see the ANNEX and^[508]).

mratCI: Parts of test1)-3) need to be executed only once, if the ETCI in mratCI is given in ISL^[372], otherwise usually twice, pre-mratKR and post-ratKR. Thereafter these 3 lines are self-explaining. Yet an E-xcrC is not (yet) enableable — by its definition to be 'exceptional' (as being an abstract idea or a natural phenomenon)^{2.a)}. I.e.: Its ISL-KR comprises or is a non-enabled character string, which represents an mrat/rat/matmeaning^[508].

ratCC: Though rat^{test}4)-9) are by definition mathematizable, they need in part not be rewritten to " " -peers, e.g. as already mathematized/axiomized, i.e. in matKR (as is unavoidable with e.g. DNAETCIs' FSTP-Tests^[508]). Otherwise, it reminds where mat^{test}4')-9') comes from.

matCC: The matKR exposes easily & unmistakably the Supreme Court's Alice requirements as to the ETCI's E-crCS. I.e., it enables easily recognizing, where therein Metaphysics is residual (i.e. in E-crCS' E-xcrC(s))^{a)}. Therefore, the meanings of test4'-9' are often explained by also test4'-9'.

- .d For BIO & DNA & ...ETCIs, the FSTP Theorem is dramatically simplified^[FSTP,508], delivering further theorems.
- .e Several '11+ statements' would be wrong, if the framework's notional granularity were widened (e.g. for increasing simplicity)!
- .f By the self-explaining qualification of a technology's 'exact scientific fertility', FSTPtech is extremely fertile — as it is a vastly rationalized exact science on top of (almost solely) Mathematics. It thus is a kind of 'Physics of Innovation', or 'ETCI Physics', or 'ETCI Maths'.
- .g This author has attended dozens of US conferences on PE, without ever having heard at least one attempt to overinterpret Alice's PE specification. The contrary is true: Wherever he raised his voice for indicating the USPTO's or CAFC's underinterpretation^[428] of it, as ignoring the Supreme Courts 'limited PRE' or 'minimal § 101 invasivity' requirement — thereby interpreting it by the since the late 70s worldwide sole scientific system specification technique, i.e. the unique international US developed^[278] standard in System Design^[2], which considers any ETCI as IT-system of very simple design — his contribution has been demonstratively ignored.

^{2. a} — potentially requiring further semiotic determinations and/or notional refinements of these mrat/ratE-xcrCs' meanings.

test4/4': Its '≠' means "Does its left side comprise a *rat*'abstract idea' or *rat*'natural phenomenon'?"^{3.a)} This sentence also is one of the enquiries of the 2019 PEG Update — according to *Alice*'s *mat*PE specification. It thus contributes to rationalizing *Alice*'s *mat*PE specification (p.7, l.6), i.e. its original enquiry, whether the *mat*'*nPE*invention, *nPE*inv' (alias TTO) is "*mat*'directed to one of those *nPE* (exceptional) *mat*'concepts".

Hitherto & in⁵⁷⁴⁾, its meaning is explained by many often vague *mat*'wordings — hence principally useless, moreover being superfluous, as anyway incapable of unquestionably rationalizing it. Whatever subject matter this ETCl may be made of, this easily & unquestionably answerable question is required to be able to definitively confirm or not that this ETCl comprises for any address1 that it accepts, exactly 1 *E-xcrC*' of its *nPE*inv1's that reaches address1 only over 1 application^{b)}. Otherwise this patented ETCl were useless as due to synchronization errors⁴⁹⁹⁾ not working.

test5/5': For its condition's left part, i.e. left of its first "∧", the *nPE*inv-projection of scope(ETCl)^{fSTP)} must not exceed scope(*nPE*inv), as otherwise the ETCl would comprise not only an application of *nPE*inv but also its modification. I.e. the *nPE*inv then were no longer granted (via its application) a patent, but *nPE*inv's modification. For its condition's right part, i.e. right of its first "∧", the ETCl's application of *nPE*inv 'uses' *nPE*inv — the meaning of which is rationalized by System Design²⁷⁸⁾ & here denoted by the symbol '||' between 1 ∈ of each.

Now assume there is no Supreme Court framework's requirement of the second part of test5' & the ETCl were PE, patented by a patent X. Further assume, X'es application of *nPE*inv had applied it for an *nPE*inv such that the result of running it is not 'used'²⁷⁸⁾ by this application^{c)}, although in X'es patent(application)'s specification it is associated to *nPE*inv. The patenting this ETCl would contradict the meaning of the Supreme Court's PE specification in *Alice* — as this ETCl still may threaten the US NPS. It namely does not exclude that it potentially would participate with another (structurally identical as this one) ETCl with a same *nPE*inv & another application, thus clustering both & their ETCl's.

test4/4' & test5/5' is the baseline of the philosophy underlying (and having been searched by^{500/ftn1.d))} the Supreme Court's framework decisions for excluding, its refined § 101 interpretation would threaten the whole US NPS by preemptive patented ETCl's — as the classic one does.

test6/6' & test7/7' are key for assessing that a patented ETCl is not preemptive — for not threatening the US NPS, as the Supreme Court in *Mayo* rightly required.

test6/6': The '≠' stands for the "ETCl's application comprises an *E-crC** basically independent of TTO^{552.562)}, i.e. an *E-Alice*inC alias *E-crC**". By its basic independence^{fSTP)} of TTO (enabled by *E-crC*ST^{m)}, the ETCl's dimensionality is increased by 1, i.e. the ETCl is "... significantly more than ..." *nPE*inv³⁵⁴⁾.

test7/7': Its set is defined such that it comprises only a single *E-crC*, in *Alice* called "[elementary *Alice*'s] inventive concept, [*E-Alice*inC]" alias *E-crC**, being an ∈ of *E-crC*SETClinPEinv (as otherwise the ETCl's application were not using *nPE*inv). *E-crC** is by **test7/7'** rendered "inventive" in the sense explained there, being one of its application's *E-crC*'s, i.e. one ∈ of its *E-crC*SETClinPEinv. For excluding PRE in {vETCl's} alias 'clustering applications' in patented ETCl's, it suffices to define that additionally holds {v(PE *E-crC*SETClinPEinv \ {*E-crC**)} are_patenting_mute(=pm) = ∅}. This maximally relaxed for maximizing the subset {v PE ETCl's} ⊂ {v ETCl's}.

This ●enables claiming in this patent's specification several different ETCl's (by e.g. their pairs <*E-crC*°, *E-crC*°>) with same *E-crC*Ses — impossible without this definitory construct to declare such ETCl's as different, in spite of their *E-crC*Ses being the same (yet their both ∈s having different additional properties) — and ●assesses that the so single PE ETCl disables granting a patent also to another ETCl with its own *E-crC*S, i.e. thus causes 'application clustering', potentially threatening the US NPS.

test8/8' & test9/9' are irrelevant for an ETCl's PE test (but needed for its SPL satisfaction test over a given "Reference Set, RS").

The familiarization with FSTPtech and ^{fSTP}AI, established by the above explanations of the FSTP-testo's & ANNEX, enables trivial proofs of the FSTP-Test Theorem and its Lemma (FSTP proven earlier already, but without AI):

The FSTP-Test Theorem: An ETCl is PE iff it embodies the ^{fSTP}AI, i.e. passes the FSTP-Test.
The FSTP-Test's § 101 Invasivity Lemma: An ETCl passing the FSTP-Test is of minimal § 101 invasivity.

Proof of the theorem: For an ETCl being PE holds that its patent's specification original KR, equals to its above^[p.2/third_box/left] *mat*KR (by the latter's definition), which is isomorph to its above^[p.2/third_box/right] FSTP-Test's *rat*KR (by the latter's explanation of testo's), being isomorph to its *mat*KR (also by the latter's explanation of testo's). **q.e.d.**

Proof of the lemma: Follows trivially from assuming the contrary (also by the latter's explanation of testo's). **q.e.d.**

An aftermath: For inventors and investors, FSTPtech discovered — induced by the Supreme Court's framework decisions — an 'eighth earthly continent'. Although it is not a material but a notional one, it evidently is their paradise. The reason being that it is unlimited in terms of ●size, ●dramatic improvement of productivity and its quality by AI and automation, ●set of business opportunities, ●return of investments, ●other increases of incentives, ●.... FSTPtech moreover provides to them, right from its outset and due to its easily manageable scientificity, the assets for legally protecting her/his Constitutional IPR in her/his creations, if approved by FSTPtech.

^{3.a} As introduced by *Alice*, both terms are to be axiomized as being of self-explanatory meaning⁵⁰⁸⁾, just as natural numbers, with their elementary creative concepts alias *E-crC*'s being their prime numbers. **Note:** 'an sich' such terms have no meanings, but are by an axiom system as self-explaining rationalized — as all named material or fictional items, such as 'table', 'spoon', ...⁵⁰⁸⁾.

Thus, all the questioning about the meanings of these two terms — esp. of 'abstract idea' — are simply beside the point. Interrelations between incarnations of *E-xcrC*'s will be sooner or later defined, as since Newton & Leibniz in classic Physics done between its by axiomization rationalized self-explaining elementary terms/names/...^{fSTP)} 'time'/'distance'/'speed'.

^b (although e.g. the ETCl potentially has another *nPE*inv2, and/or *nPE*inv1 potentially has another *E-xcrC*'s, and/or the ETCl potentially has another application2).

^c — e.g. as the mission of the running of X'es *nPE*inv is by the latter's manager determined to pretend to other applications' users, *nPE*inv were already overloaded as busy for them, or *nPE*inv were so error prone that for the ETCl even a minimal quality of service cannot be guaranteed, or —

ANNEX: Endeavors' Wealth Control by All their Related Knowledge-Area's ^{IAI}ETCIs Lattices.^{f)}

This ANNEX does not elaborate on the evergreen catch word 'AI', since the 70s being as popular as phony. Instead, 3 bullet points remind that FSTPtech comprises all its 'ideal AIs, IAIs' (= optimal & scientific & automatable AIs) alias ^{FSTP}AI, being indispensable for any product on the emerging (countably infinite) 'mass market of individualizable and/or individualized ETCIs'.

- Many of the early high flying ambitions as to AIs' problem solving have longtime been designed too broadly for delivery^{4.a)} already today. By the change of centuries, the — in usual 'robot AI' extremely successful^{b)} — pragmatic (i.e. nonideal) 'best practice' solutions of AI problems still did not embody perspectives as to ideal ones, IAIs. In particular, if the then AI problem solutions had to be automatically executable.
- Nevertheless, already at the time of KSR, the Supreme Court noticed that the classic SPL interpretation cannot robustly protect ETCIs as being notionally too coarse. The reasons being that ETCIs by definition always are based on emerging technologies that always have 'fictional' novel properties of this ETCI's ETCI-elements (as used in test4-7), the definitions of which often require other (i.e. totally 'head-born', 'fictional') models^{c)}, mentally providing these properties^{d)} to its COM(ETCI)s' CI — to be qualified by § 112.
- A key point of the FSTP-Test's definition, especially of its IAI, is — besides the dramatic capabilities of its semantics discussed in great length in preceding FSTP mails — that it provides a complete **addressing scheme for systematically/scientifically locating & creating & unfolding in the space of this new 'inventions continent' with all imaginable ^{IAI}ETCIs**. The reason being that any location in this scheme, of the endeavor at issue, is a unique combination of a subset of the finite set of terms from its total posc and pertinent prior art, determining the set of all nonredundant ^{IAI}ETCIs and their corresponding COM-KRs.

In e.g. ^{DNA}ETCIs/^{DNA}COM-KRs these combinations model sound just as mutated genes as separated combinations and the development steps between them, thus showing their development traces. This justifies the vague hope that the nature drives the bulk of such developments controlled by the harmony popular in many areas of life, e.g. thinking, creating, guessing, thinking, ... — i.e. many of them basic FOL & Physics & random driven. Such systems may molecularly model and monitor parts of a living body for occurring cellular events indicating deviation from soundness. Such future indications may be really groundbreaking! ^[575,576]

Finally, in the Supreme Court's framework SPL, this PE mail has a 'two points summary', namely:

The FSTP Test (resp. its IES^[FSTP]) is by^[508] ● √ ETCIs in COM-KR their IAI solution of their PE problem, and by^[575] ● √ ^{BIO}ETCIs in COM-KR superfluous, as a priori being SPL ^{IAI}satisfying.

Excerpt from the FSTP-Project's Reference List (07.12.2019)

Many FSTP-Project mails, including this one, are written in preparation of the textbook^[182] — i.e. are not fully self-explanatory independent of other FSTP-mails.

<p>[9] S. Schindler: "Patent Business — Before Shake-up", 2015, 2017, 2019/04. [182] S. Schindler: "AI Based Patent Technology", Textbook, to be publ. in 2020. [372] S. Schindler: "ISLs & KR, and Easily Drafting&Testing Patents for Robustness", pbl. 16.05.2017) [374] Justice Thomas: Friendly Comment on FSTPtech, 04.12.2015) [504] USPTO: The 2019 §§ 101&112 Guidelines, 07.01.2019) [508] B. Wittig, S. Schindler: "UC's vs. Broad/MIT/Harvard's CRISPR Patents & the Supreme Court's Framework — Graphical Support in ^{ME}ETCI Specification, Part V", , to be pub. in Dec. 2019. [550] S. Schindler: "A Comment on Two Heavyweight Letters to the Congressional Subcommittee", pub. 05.08.2019) [552] S. Schindler: "CAFC's Anew Legal Errors in ... Need Supreme Court Clarification.", publ.15.10.2019) [562] S. Schindler: "CAFC's & USPTO's ETCI-Patenting Fails Rationalizing", publ. 24.10.2019).</p>	<p>[566] USPTO: The 2019 § 101 October PE Guideline^[504], 18.10.2019) [570] S. Schindler: "US SPL & its ETCIs are Deterministic Maths — i.e. Applied Maths.", publ.31.10.2019). [572] S. Schindler: "No 101-Panel as Any Other", publ. 04.11.2019). [573] S. Schindler: "An Unnoticed AI Requ. Met by the Supreme Court's PE Philosophy ...", publ.09.12.2019). [574] CAFC Decision in KPN v. Gemalto, 15.11.2019) [575] B. Wegner, S. Schindler, B. Wittig, C. Negrutiu, D. Schönberg, J. Schulze, R. Wetzler: „Math. Mod. the Meaning of FSTPtech Specifications of ETCIs", in preparation. [576] S. Schindler: "A Venture's Wealth Control by All its Knowledge-Areas ^{IAI}ETCIs Lattices", pub. on.08.01.2020. *) <i>The complete FSTP Ref. List & √ documents on www.FSTP-expert-system.com</i></p>
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- as technically (i.e. computer power) and cognitively (i.e. scientifically) quantitatively & qualitatively then not yet supported —
- That does not mean that all today AI publications are trustworthy, as since 20 years this support has been provided in abundance.
- — than the classical physics' ones used in classical SPL's claim interpretation ('CI'), i.e. models like for defining "being more than" —
- — that pre-framework had been unknown and hence by E-crCs not yet modeled as physical properties in classic CIs, and thus post-framework being rationalized to (pseudo) physical elementary properties and thus used in ETCIs' specifications⁹⁾ —
- In^[508,575,182] this PE-mail's explanation of the FSTP-Test will be elaborated on in more detail, yet for laymen reducing its comprehensibility.
- This ANNEX provides an excerpt off^[576].