THE SUPREME COURT'S "*MBA* FRAMEWORK"[1.a)] IMPLIES "LEVELS OF ABSTRACTION" or[5.a)]

THE *MBA* FRAMEWORK TRANSFORMS • FUNCTIONAL SPECIFICATION BY § 112(6/f) • CLAIM INTERPRETATION & CONSTRUCTION FROM SPECULATIVE METAPHYSICS INTO RATIONALITY

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I. *MBA* Framework Based Testing Inventions under SPL Implies 3 Levels of Abstraction & The Supreme Court Replaces in SPL its Today's Speculative Metaphysics with Rationality[2.a)]

The 13.-16.04.2016 Berkeley symposium on Software IP clearly indicated the still vast uncertainty within the patent community about the Supreme Court's *MBA* framework[1.a)] and that this uncertainty is broadly felt to be increased by the CAFC's *Williamson* § 112(6/f) decision.[1.b)] [274-277] The Supreme Court's hearing on 25.04.2016 seemingly reduced this uncertainty as to the BRI[PTO]'s future[279]. The USPTO's Patent Quality Community Symposium on 27.04.2016 showed that implementing the *MBA* framework into its EPQI[2.c)] meanwhile greatly developed – but preserves both uncertainties.[280-281]

Sections I.1/2 outline these Berkeley & DC/Alexandria uncertainties and Sections II.1-3 end them: By the *MBA* framework's enforcing •"layers of abstraction" in ETCIs' tests under SPL, and hence an implied •"SPL paradigm shift". The patent community will accept both notions, long needed, as illustrating transforming SPL precedents about ETCIs from their today's home, speculative Metaphysics, into Rationality[2.a)] – as without the latter, consistency of SPL precedents about ETCIs remains impossible.

I.1 The Berkeley Uncertainties about § 112(6/f) – and the *MBA* Framework

The CAFC's *Williamson* § 112(6/f) decision ignores the *MBA* framework, is hence in itself contradictory, and thus implicitly confirms the necessity of the Supreme Court's SPL interpretation by its *MBA* framework: That – put in *MBA* framework notions[3.a)] – an ETCI's SPL test must be based on the ETCI's inventive concept(s) making it up, i.e. modeling its inventivity, for testing an ETCI under § 112(6/f) on a higher degree of rationality[2.a)] than *Williamson* (and its classical claim interpretation&construction) can achieve.[1.d)]

By not first identifying inCs modeling its ETCI's inventivity, *Williamson* can't recognize: **ANY** ETCI-inC, functionally needed by an ETCI's specification[6.c)] forcibly induces into this inC 3 notional levels of abstraction:[1.d)] The O-level provides this O-inC's functionality on top of abstract/compound A-inCs' functionalities (= its A-level) it needs for its own realization, the realization of any such A-inC's functionality abstracts from elementary E-inCs'/-non-inCs' functionalities (= its E-level) realized on top of posc & prior art.

Section II shows: This "*MBA* **framework 3 levels of abstraction**" structure in any ETCI's SPL test necessarily[2.a)] transforms this ETCI's "classical claim interpretation&construction" by its thus increased notional refinement[6.c)] from its today's home, speculative Metaphysics, into Rationality[1.d)] – then called "refined claim interpretation&construction".

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[1] **.a** *Mayo* [here: *Mayo/Biosig/Alice*, *MBA*] **framework** is a notion introduced by the Supreme Court, meaning SPL's 'post-*MBA* pragmatics';[3.a)], **SPL** stands for 'Substantive Patent Law' (as understood by the Supreme Court's *MBA* framework), e.g. 35 USC §§ 101/102/103/112, or EPA §§ 52-57/83/84.
.b Indeed, the CAFC nowhere tries to define the meaning of the term "functional specification" of part(s) of the total inventivity of an ETCI, i.e. of a "**model based**"[3.b)] invention, such that this definition could consistently be used also for the general form of "functional specification" – as indispensable in any "level of abstraction structured" system,[1.d)] e.g. in any ETCI's *MBA-framework-based* SPL test. Instead, its controversial discussions of the § 112(6/f) specific form of "functional specification", keep quoting earlier uses of this term of inconsistently defined meanings and reasoning by means of these, ...[6.c)]
.c **ET**/**CT** abbreviates 'emerging/classical technology', **ETCI/CTCI** 'ET/CT based claimed invention', **FSTP** 'Facts Screening/Transforming/Presenting'.
.d The reason being that rationalizing[2.a)] the meaning of the term "functional specification" is extremely intriguing[6.c)] – as figured out in the 70s/80s in System Design Technology. The latter has been developed only for getting the notion of "functional specification" theoretically and practically under control.[124,125,278] It has been considered settled since the late 80s. And a test of an ETCI for its satisfying SPL establishes just another such system[6.c)].

Thus, since the end of the 80s, the "structured system design" of a complex system is uniformly recognized as an absolute must for understanding it dependably: Its set of functions must define levels of abstraction ordered by a clear notional "user hierarchy" between them.[122, 278] This "(use) structured functional specification" is one of the two most important principles of "structured system design" – the other one being "separation of concerns".[278]

Any human mental/intellectual perception, seen as a system, i.e. also any ETCI description, stereotypically is based on the 3 above outlined O-/A-/E-levels of notional resolution alias granularity alias abstraction[6.c)] – of only a single "use hierarchy" (see FIG2). Thus, also the specific ETCI test system gets along with only these 3 levels of abstraction (see FIG3), and everything said here about functional specification holds also for § 112(6/f).[6.c)]

System Design Technique does not know only these 3 levels of abstraction. Any complete system design refines any of them into many levels.[278]

I.2 The DC/USPTO Uncertainties about the BRI^{PTO} – and the *MBA* Framework

Section I.1 clarified one of the tips of the "*MBA* framework" iceberg in SPL tests of ETCIs: Its § 112(6/f) meaning. But this iceberg's tailwater impact on such tests is also clear. Namely that the *MBA* framework requirements represent for any ETCI's SPL test a fundamental paradigm shift: from its today's comfortable speculative Metaphysics into Rationality[2.a)] – simply by refining this test to the FSTP-Test.

This enormous increase in the quality of ETCIs' SPL tests, by refining an ETCI's O-level inC(s),[1.d)II.1] is enabled by the *MBA* framework's leveraging the decisive "axiom-like" phenomenon[6.c)] that any ETCI specification provides: In addition to its native O-level of abstraction and its O-inC(s)[II.1], it provides its notional refinement(s) into A-/E-inCs[1.d)]. These rationalize the ETCI's SPL test to its FSTP-Test[4.a)], i.e. to the ETCI's "refined claim interpretation and construction".

By contrast, the USPTO and its BRI^{PTO} ignore these A-/E-inCs in ETCIs' specifications and hence provide no basis for qualifying any ETCI's SPL test whatsoever as rational – thus leaving this ETCI in Metaphysics.[2.b)] It thus deprives ETCIs from dependable SPL protection, as leaving them metaphysical.[2.b)]

One main reason the USPTO clings to the BRI^{PTO} is that it first implements its, indeed, important EPQI, as covering a much broader patent problem area than adjusting its BRI^{PTO} to ETCIs' needs. Yet refining the BRI^{PTO} to the BRI^{MBA} – potentially with the BRI^{PHI} as an intermediate step[258] – may happen soon, as the BRI^{PTO} will keep SPL precedents about ETCIs inconsistent & incomprehensible, causing clashes in/between courts, thus hampering the EPQI by disincentivizing reaching its targets.[2.c)II.3]

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[2] **.a** Understanding what is done in testing an ETCI for its satisfying SPL, requires clarifying the 4 notions[3.a)] "transcendental"/"metaphysical"/"rational"/"reasonal", i.e. Kant's approach to thinking[203,230,282] based on their qualities "necessity" and "sufficiency", as needed when it is reduced to testing an ETCI for its SPL satisfaction[237] and finite FOL. This clarification supports the "person of pertinent ordinary skill and creativity, **pposc**" in thinking about such testing. These 4 below terms' capitals indicate that these 4 notions' axiomatic recursive definitions are intended for use only in this specific testing context.[3.a)]

A "**transcendental**"/"**metaphysical**"/"**rational**" item (e.g. notion) of an ETCI is not/partially/fully correctly&completely pposc intelligible. Any fully mathematically described – for short: mathematical – item is seen as intelligible; yet nothing mathematical of it is necessary for its intelligibility. Its stages of intelligibility suppose some decomposability of no/some/any part of it into an equivalent conjunction of its properties axiomatically[II.2] defined by models.

An ETCI's "**Rationality**" comprises any of its such items with notional properties necessary and sufficient for identifying it completely, "**Metaphysics**" any item with at least 1 only necessary notional property (i.e. not rationally identifying it), "**Reason**" alias "**Reasonality**" any item of Rationality or **scientific** Metaphysics (i.e. of **non-speculative** = "alternativeless" Metaphysics). An item without a necessary property is of "**Transcendency**". "Rationality"/"Metaphysics"/"Reason"(= "Reasonality") is the set of all rational/metaphysical/reasonal notions, called rational/metaphysical/reasonal "**Knowledge**" about this ETCI. While Reasonality and Rationality mathematically have evidently different meanings, in this context they are seen as being the same, i.e. as synonyms. Thus – as with Kant – only one term is used, here: Rationality (while he needed for his generality the broader notion Reason).

A "**rationalized item**" is a set of items wholly encapsulated within a set of rational notions, each defined by an axiom, rendering this item's conjunctive notion ∈ Rationality potentially non-decomposable and totally hiding any transcendent or speculative item(s) it shields – if any comprised.

Any ∈ Rationality (by Kant: ∈ Reasonality/Rationality) comprises, additional to its cognitive meaning, also ethical meaning here irrelevant.[237]

This rationalization of an item is achieved by a set of models (see Legend3) metaphysically assumed to be capable of realizing the set of items to be "**rationalized**". Any rational item – allegedly correctly&completely intelligible by a human being, such as the fictive pposc – results from his/her brain having internalized that this model "trivially" has this highly speculative metaphysical capability to realize it. But that is how rationality works, understood only since the 19th/20th century and its recognizing the capabilities of axiomatization of notions. Nevertheless, this rationalization of ETCIs enables consistency in SPL precedents about them. How to represent model-independent "**absolute rationality**" hasn't been recognized yet – if it should exist.

In *Alice* terms: The *MBA* framework, being classical SPL's application to ETCIs, transforms it into "significantly more" than before – into the rational and ethical "**Substantive Patent Law Science**, **SPLS**", the sole axiomized sub-physical and socially fair purely mathematical cognitive science[6.a)[9.b]].

.b – making extremely likely that using the BRI^{PTO} by different parties in an ETCI's claim interpretation, being of only metaphysical quality, would lead to contradictory results in deciding by the claim construction (based on this metaphysical claim interpretation), whether this ETCI does satisfy SPL or not.

The Supreme Court's *Biosig* decision therefore has already earlier banned by the Constitution the use of the BRI^{PTO} from any legal decision.[258] And CHIEF JUSTICE ROBERTS now calls the BRI^{PTO} e.g. ".. *a bizarre way to ... decide a legal question.*" (Supreme Court's *Cuozzo* hearing.)[279]

Finally, there is an AIT[2] argument proving the indefiniteness of the BRI^{PTO}, i.e. proving its constitutionally legal untenability: Its set of interpretations, SoBRI^{PTO}, is defined for any ETCI by the unlimited use of the 'all quantor' [2] and thus may invoke some antagonisms for its SoBRI^{PTO}, e.g. the barber antagonisms [218], rendering it an abstract idea (in the pathological sense, not fixable by the PEGG algorithm [260]) and hence patent-noneligible. I.e.: By [258] holds SoBRI^{PTO} ⊇ SoBRI^{PHI} ⊇ SoBRI^{MBA} – and only the SoBRI^{MBA} guarantees consistency in SPL precedents for any ETCI, beginning with all its E-inCs.

To put this latter statement in terms of the *MBA* framework: The BRI^{PTO} is just an abstract idea of an ETCI's claim interpretation.

.c There are also stumbling blocks for the *MBA* framework's rapid and broad acceptance by the US patent community, hardly removable by USPTO's "**Enhanced Patent Quality Initiative**, **EPQI**". It necessarily is primarily focused on entry-level education and thus cannot address the educational needs of potentials, implying over this whole spectrum the loss of motivation driven by professionally ambitious and groundbreaking visions as to un–folding own individual aspirations. E.g., its foreground cannot emphasize game-changing information about the *MBA* framework, clearly stating that

- ETCIs, due to their peculiarities[3.c)], simply cannot be precisely&completely described by the manifoldly deficient notions known from classical claim interpretation & construction – as too coarse & inflexible,
- the ubiquitous assumption is false that the natural language of ETCIs' specifications always causes ambiguous ETCIs, i.e. that guaranteeing virtually absolutely robust ETCI patents is impossible – not to mention the totally irrational reservations, resulting from oversimplifying recipes from cookbooks on classical SPL testing of CTCIs (e.g. "never read limitations from the specification into the claim's meaning") or from over-speculative Metaphysics (e.g. "an abstract idea is everything that I do not understand").
- this paradigm shift is the only way to adapt the quality of ETCI patents, as well as that of SPL precedents about ETCIs, to the needs of investors into high-volume long-term high-risk R&D research.

Yet cutting-edge AIT[2] based FSTP[1.c)] technology has trailblazing qualities in practically overcoming all such problems.[9]

II. Notions Necessary for Describing an ETCI's SPL Test – and the USPTO's EPQI

This Section II clarifies the for the *MBA* framework necessary notions[3.a)] "**inventive concept(s)**" of an ETCI and "**canonical representation**" of an ETCI's SPL satisfaction test induced by them. It also elaborates on an ETCI's metaphysical initial "**Knowledge Representation**, **KR**" in its specification and its by refined claim interpretation&construction rationalized[2.a)] KR – i.e.: on transforming an ETCI's KR from "**Metaphysics**" into "**Rationality**", if possible – and how this relates to the USPTO's EPQI.[2.c)II.2/3]

II.1 The *MBA* Framework's Basic Notion of "Inventive Concepts" of an ETCI

Describing an ETCI by using its "inventive concepts, inCs" is like describing a chord by using notes identifying the tones making it up.[3.b)] The canonical test of any ETCI for satisfying SPL, the FSTP-Test (FIG2), rests on this notion of inC(s) – logically enforced by the peculiarities unavoidable with ETCIs.[3.c)]

Any inC consists of a "creative concept, crC" and a "legal concept, leC". This pair is notionally located on the A(=abstract)-level of notional resolution and the E(=elementary)-level refining it[1.b)]. For modeling what the *MBA* framework implies as the meaning of all O-/A-/E-inCs of an ETCI – the total inventivity it embodies[3.b)] – suffices to clarify the meanings of all E-inCs, as those of all O-/A-inCs then are evident.

An ETCI's E-crC is an elementary mental/intellectual creation as represented by a term of "atomic" meaning, i.e. by an "*independent idea*" created by the ETCI's inventor for finding the ETCI.[3.d)]

Any of the Supreme Court's *MBA* framework decisions (including even *KSR*) ex- or implicitly requires using, for describing/modeling/.../... an ETCI's meaning, the notion of "inventive concept, inC". I.e., the ***logical sum of all E-inCs of this ETCI completely and definitively describes this ETCI's total inventivity, i.e. the ETCI's meaning.*** Thereby any E-crC/-leC precisely models a creative/legal increment of the ETCI's creativity/legality – whereby Legend2[II.2] explains: "as understood by whom".

The meaning of an ETCI, as understood by its inventor, is required by the *MBA* framework's *Biosig* decision to be considered as disclosed for the pposc (=person of posc) by the ETCI's specification. Hence, *Biosig* implied this also for the meanings of all E-crCs of this ETCI, in particular in light of the Supreme Court's preceding *Mayo* decision. This enables a powerful redundancy check of the completeness and definiteness of the ETCI description by the E-crCs identified/defined by/for it.

Verifying this fundamental statement (in bold italic letters) about an ETCI description is logically impossible in classical claim interpretation, as it uses "limitations" of something not defined at all – and then often ignores one or more E-crCs/-leCs or misinterpret their meaning(s), thus misrepresenting what this ETCI's inventor determines by them as her invention's creativity/inventivity.

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[3] **.a** A '**term**' is an arbitrary '**identifier**' alias '**name**' alias '**acronym**'. A pair <'term', its 'meaning'> is called '**notion**', denoted by its name. The term '**item**' may be used as an unspecific alias for any of the just highlighted strings, i.e. its occurrence is always context sensitive. A notion's meaning, assigned to its term/name, is called its '**semantics**', if refined for an application's need, its '**pragmatics**'. Making/Creating new meanings/semantics/pragmatics is called '**semiotics**'. Thus, the *MBA* framework performs 'SPL semiotics' by refining the classical SPL notions/pragmatics – as SPL needs for ETCIs.

.b This metaphor is often an oversimplification, as the notes have an a priori given and chord independent meaning (at least 1 frequency).

By contrast, for an ETCI, its set of inCs must first be defined, based on it, such that their logical sum meticulously describes this ETCI's inventivity. This definition is always model based[1.b)] – see FIG3. The number and functionality of inCs, may be hard to derive from an ETCI's specification (as disclosed by it), aggravated in that this by the *MBA* framework introduced new notion of inC(s) also requires defining its(their) O-/A-/E-levels of (notional) resolution[6.c)], and the models underlying them for their definition may be described by referring to quite different reference systems, as outlined by Legend3[II.2]. Ideally, such an ETCI-embodied "coordinate system" for its test, its "**Generative Set**, **GS(ETCI)**", is to be provided as part of the patent (application's) specification.

.c By contrast to wholly material/tangible/visible CTCIs, [1.c)] any ETCI namely is in part or as a whole immaterial/intangible/invisible, i.e. solely mental/spiritual/fictional/abstract– otherwise it is not an ETCI but a CTCI. Thus, an ETCI is inevitably "model based", i.e. intellectually defined on top of a model, which provides some abstract service and also exists only virtually. As a consequence of this at least partially total abstractness of ETCIs, their claim interpretation and claim construction require a degree of scrutiny never encountered before – as there is no human intuition completing this ETCI's incomplete description.

For enabling this scrutiny, the Supreme Court's *MBA* framework introduced the notion of an ETCI's "inventive concept(s)" – especially for excluding that unlimited preemptivity may come along with ETCIs due to the "natural phenomenon" issue they potentially embody and notionally related issues, first of all the "abstract idea" issue. ETCIs' such indispensable constituents namely raise extremely serious social concerns hardly addressed by CTCIs.

By the Supreme Court's *MBA* framework, the FSTP-Test qualifies an ETCI's E-crCs as ●potentially rendering the ETCI patent-noneligible as unlimited preemptive (if it models a "natural phenomenon" and/or an "abstract idea"), and ●potentially compensating an ETCI's patent-noneligibility by limiting its unlimited preemptivity to an application A* – by its *Alice* decision, the ETCI's application A* then "transforms its TT0 to significantly more".[260]

.d This German BGH *Gegenstandstraeger* decision stated – after some of its similar nonobviousness decisions, at the same time as the US Supreme Court's *KSR* decision – that an ETCI is nonobvious over posc and prior art, if creating it requires at least 2 "**independent ideas**" (not contradicting the ETCI specification) for finding it, the adjective "independent" requiring that these ideas are by the pposc logically not derivable from posc, from prior art, o from each other.

II.2 The "Canonical Representation" of *MBA* Framework Based ETCIs' SPL Satisfaction Tests

FIG1 shows the complete relation – visualized by double-headed arrows – between SPL and the social concerns it embodies, put as requirement statements defined by the Supreme Court's *MBA* framework. The FSTP-Test of FIG2 exactly implements this relation's veri-/falsification. Thus holds: The FSTP-Test's passing on an ETCI's properties is necessary and sufficient for this ETCI to satisfy SPL[4.a)].

The 3 bold solid arrows show which properties of CTCI-elements are seriously regarded by classical claim interpretation&construction. Additional 6 bold dashed & 8 fine arrows show the *MBA-framework-based* refined claim interpretation&construction checks. I.e.: The *MBA* framework substantially refines the SPL's CTCI paradigm to its ETCI paradigm[I.2] – thus adjusting the interpretation of 35 USC SPL to the needs of ETCIs.

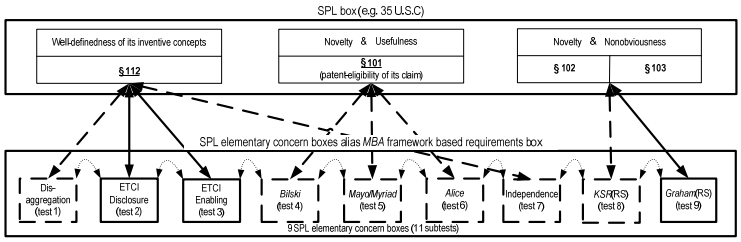

FIG1: *The 9 Necessary∧Sufficient FSTP-testo's of an ETCI for its Satisfying 35 USC SPL – as Interpreted by the Supreme Court*

Legend1: As to granting by SPL a temporary monopoly on an ETCI, the 4 Sections of 35 USC SPL (in the SPL box) are the legal implementation of social concerns, made up of 9 elementary social concerns independent of each other. Any elementary concern is an *MBA* framework requirement statement that is to be met by ETCI's properties for satisfying SPL. Thus, the SPL elementary concern boxes alias *MBA-framework-based* requirements box shows 9 testo's, checking any ETCI for its meeting these 9 requirements for its socially deserving legal protection as Congress determined by 35 USC SPL §§ 112/101/102/103 and the Supreme Court interpreted. The 8 transitive logical consistency relations between them totally intermesh all 9 elementary social concerns of 35 USC and all ETCI properties.

1)	(a) input:	COM(ETCI#)	::=	values of I,N,K[1],…, K[N], and user-names for the ETCI and (optional) for ∀ ϵ of the set A-crC::= {A-crC0n | 1≤n≤N} ∪ E-crC::= {E-crC0nk| 1≤n≤N ∧ 1≤k≤K[n] };
	(b) justof[∀1≤n≤N]:	A-crC0n''	=	∧[1≤k≤Kn]E-crC0nk, 1≤n≤N, whereby A-crC0n''::= A-crC0n mod({∀ϵE-ncrC0n});
	(c) justof[∀ϵCOM(ETCI#)]:	COM(ETCI#)		is (definite over posc) ∧ (E-COM(<TT0,Φ>#)describes a useful ∧ E-COM(ETCI#) describes a new&useful invention);
	(d) justof:	***Biosig*-test**	**is passed:** iff	this COM(ETCI#) is definite∧complete;
2)	justof[COM(ETCI)]:	**ETCI Disclosure-test**	**is passed:** iff	∀ϵCOM(ETCI#) are lawfully disclosed: COM(ETCI#)=> COM(ETCI);
3)	justof[∀1≤n≤N]:	**ETCI Enabling-test**	**is passed:** iff	∀ϵA-crC0n its implementability is disclosed "for being E-crC tested ";
4)	justof:	***Bilski*-test**	**is passed:** iff	E-crC\E-crCmod(A*#) ≠ Φ;
5)	justof:	***Mayo-/Myriad*-test**	**is passed:** iff	[ULP]E-crC::=∀ϵ {E-crC unlimitedly preemptive} are identifiable;
6)	justof:	***Alice*-test**	**is passed:** iff	(**1)-5)** hold) ∧ ∄ϵ(E-crC\[ULP]E-crC) that is unlimitedly preemptive;
7)	justof[∀1≤n≤N∧1≤k≤Kn]:	**Independence-test**	**is passed:** iff	∀ϵ {E-crC0nk | 1≤n≤N ∧ 1≤k≤K[n]} are independent of each other;
8)	justof[∀111≤ink≤INKn]:	***KSR*(RS)-*test***	**is passed:** iff	∀ ANM(i,n,k)::= if (E-crCink = E-crC0nk or equal within their tolerances) then "A" else "N";
9)		***Graham*(RS)-test**	**is passed:** iff	<∀[nk]ϵ = A> ∉ {∀AC over ANM}.

FIG2: *The FSTP-Test – Checking an ETCI for its Meeting all 9 Requirements Stated by the MBA Framework*

Legend2: The horizontal dashed line separates – for an ETCI alias pair of <an invention/TT0, its application/A*> alias "**patent (non)eligible subject matter**" – its refined claim interpretation (above it) from its refined claim construction (below it).[5.a)] The latter potentially skips test4-test8 (in particular below the horizontal double line iff RS=Φ). This tight interplay of an ETCI's refined claim interpretation with its refined claim construction has nowhere ever been shown before. For more information about where the input in line 1)(a) is generated, why test1 has 3 subtests, and why the O-level is omitted see [273].

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[4] **.a** In IT, a program presented as a logic conjunction of statements – the FSTP-Test basically – would be called "program scheme' (of this conjunction), as comprising all sequential interpretations (of this conjunction) by "programs". For an ETCI, its FSTP-Test's logic conjunction of test1-9 – i.e. if its sequentialization is reversed by just anding test1-9 (thus guaranteeing that they all use the same GS(ETCI)[2.a)] alias COM(ETCI#)) – would more concisely be called an "FSTP-Test scheme". It evidently comprises all SPL satisfaction tests of this ETCI. Hence, it here is rightfully called "canonical".

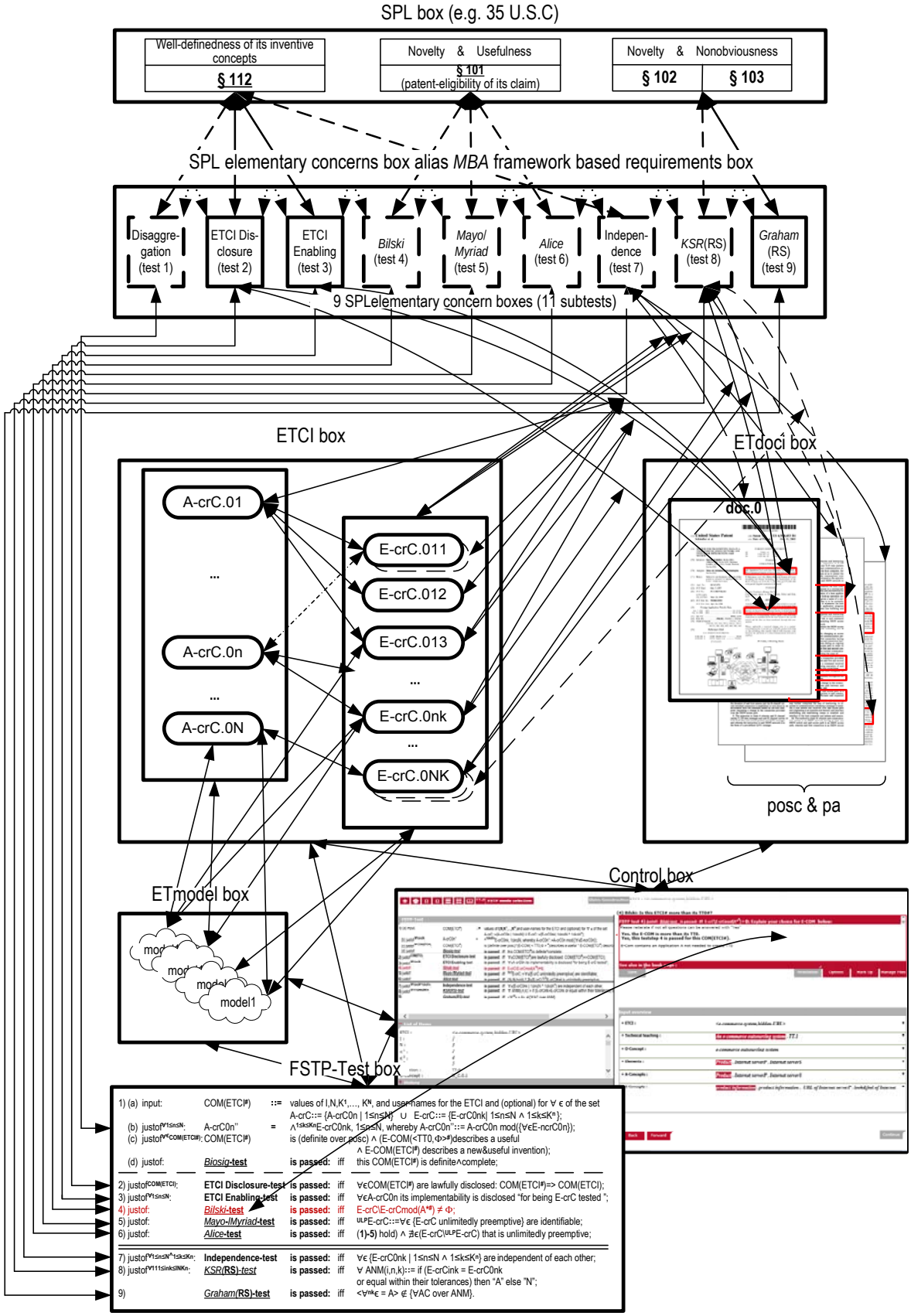

FIG3: *Necessary Mental Relations between the MBA Framework Required Notions in an ETCI's Test for Satisfying SPL or*[5.a)]
MBA Framework Implied Metaphysical Invention/Creation/ Rationalization of this ETCI ('s Generative Set[3.b)]*)*

[5] **.a** This subtitle is bipartite, just as this paper's headline, both parts being *MBA-framework-based*: The first/second one also notion/action oriented.

Legend3: This FIG3[6.a)] and this Legend3 shall light up the 3 steps of the intellectual process – controlled by an ETCI's refined claim interpretation&construction – which a highly metaphysical[2.a)] "**knowledge representation**, **KR**" of this ETCI provided by its patent(application)'s specification must pass for transforming it[6.b)] into this ETCI's rational KR[6.c)], the latter basically being the "Data Structure, DS(ETCI)" defined earlier.[7] Hence, it achieves an enormous quality improvement of its classical claim interpretation&construction, being unachievable by the latter – due to its lack of an ETCI's A-/E-crCs.[258-260]

In short once more: The quality of a patent specifying an ETCI is enormously increased by the 3 steps of its refined claim interpretation&construction: from the ETCI's KR initially being highly metaphysical to finally being rational.[6.c)]

Achieving this quality increase of a patent on an ETCI is subject to knowing its A-/E-crCs. But, today the reader of a patent (application) and its specification – or a judge, and before him an examiner – is not used to identify/define on her own an ETCI's crCs, before them comes often the patent drafter, and before him even the ETCI's inventor. FIG3 and this Legend3 shall make them aware of the intellectual activities its 3 KR transformations that need to be performed, including defining the ETCI's crCs.

To begin with: •In the first step, performed by the inventor, she also describes her invention by (incrementally/iteratively) identifying and (incrementally/iteratively) defining this ETCI's COM(ETCI#) of the FSTP-Test, starting with COM(ETCI#)=Φ. •The second step, performed by the USPTO's examiner, applies the FSTP-Test, starting with COM(ETCI#) as delivered by the ETCI's inventor and disclosed by the drafter of the patent(application) in its specification or prosecution records. If no inventor provided COM(ETCI#) exists, the examiner must derive it from the patent and pposc, starting with COM(ETCI#)=Φ.[6.c)]

I.o.w.: Recognizing the work to be performed on both these stages is greatly facilitated by observing how the rationalization of KR(ETCI#) is distributed: •The inventor initially, and then quasi freehanded and not legally binding, rationalizes an already tentatively assumed as existing but only metaphysically understood and/or described ETCI. Thereafter (possibly partially overlapping) •the examiner, and then based on the inventor provided COM(ETCI#) and legally binding by its final rejection/allowance, rationalizes that the ETCI meets all requirements stated by 35 USC SPL(in *MBA* framework interpretation).

A few more words about FIG3: It shows an ETCI KR as to its test for satisfying SPL by the FSTP-Test, i.e. in "brain representation"[6.b)]. It shows only items/relations representing •creativity issues – omitting all procedural aspects – and within the ETCI its A* is not separated from its TT0, i.e. is comprised by TT0, though the inventor knows about it.[FSTP-test1(c)/4]

All double-headed arrows •between items in the 'SPL box', in the 'SPL elementary concerns box' alias '*MBA* Framework based Requirements box', in the 'FSTP-Test box', in the 'ETCI box', in the 'ETdoc.i box', in the 'Control box', in the ETmodel box and •within these boxes represent relations that our brain establishes and uses when interacting with the ETCI, e.g. when inventing it, modifying/reiterating it, thinking about it, preparing its SPL test, rationalizing it, licensing it, ...

These interactions are performed by the persons responsible for the interactions just mentioned, i.e. by the R&D manager of an ETCI's invention, an investor into it, its inventor, the patent lawyer/pposc dealing with it, its examiner/administrator/ judge/...,[6.c)] potentially most of them irrelevant at the point in time of an interaction.

Yet in any of these persons and in any stage of the development of this KR(ETCI), these boxes are of potentially dramatically differing Metaphysics or Rationality. Some entries from the so defined matrix will be elaborated on in papers to come.[273,91]

A first and only brief hint at the ETmodel box: ETmodels are supposed to facilitate defining the ETCIs' inCs. Their SPL-model is evidently the same for all ETs, any SPL^{precedents}model applies to a given set of ETs and therein is the same for all resp. ETCIs' E-leCs. Imodels and Smodels enable defining, on top of them, crCs of the inCs, by **i**ndividually tailored or **s**tandardized models – if they exist, as is the case with communications technology inventions, having the standardized Reference Model for Open Systems Interconnection[246,287],being the same for all ETCIs from its ET area.

"*MBA* framework models" enable by a "meta language"[286] describing all ETCIs' A-/E-inCs. In FSTP-Technology it is the rationalized/axiomized "Mathematical Inventive Intelligence, MII" natural language, implemented in a small subset of ACE[288], allowing rigorously simplified natural English sentences to be automatically translated. MII is also any such model's "object language"[286] for describing the properties of any ETCI's A-/E-inCs referred to by it. Using MII in an ETCI's description[156,127] enables rationally deciding whether it satisfies SPL. Iff so, this ETCI is of maximal legal robustness.[II.3/[273]]

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6 **.a** It is a refined view of the brainR in FIG. 3 of the "Red Brochure"[9]. Items in FIG3 are self-identifying and/or have as identifiers arrow heads pointing at them. Any arrowhead pointing at an item identifies it thereby. Many more relations/arrows exist than those shown.

.b The assumption about the initial status of the ETCI and its specification is that they exist already, be it completely as provided by a printed patent document, or incompletely as just created/drafted by their inventor/author. I.e., this ETCI's creation and the drafting of its specification is not considered here. However, this process may cause feedback into the ETCI and/or its specification, i.e. iteratively change one or both of them in these KR transformations or not.

.c "**Knowledge Representation**, **KR**" science[2] comprises performing KR transformations, both formal/mathematical ones[3,4] or less formal ones.

An ETCI's SPL^{MBA} satisfaction test ≡ ETCI's refined claim interpretation&construction ≡ ETCI's 3 KR transformations, as explained here, next.

Here only *MBA-framework-based* KR^{MBA}s and KR^{MBA} transformations of an ETCI are considered. The postfix "^{MBA}" is omitted in the future.

When talking below about refining an ETCI's claim interpretations&constructions, this always is the notional refinement and phenomenologically enforced by any ETCI's "*MBA* framework 3 levels of abstraction" of "**functional specification**" of a system, here based on systems' O-/A-/E-inCs/non-inCs.[1.c)]

The output of the refined claim interpretation of an ETCI is significantly, and then that of its refined claim construction on this basis is totally, rationalized[2.a)]. In more detail: •The refined claim interpretation is an informal KR transformation, mapping an ETCI's highly speculative KR onto its rationalized KR=COM(ETCI#), independently of whether the inventor/drafter/... or an examiner/judge/...performs this KR transformation, whereby the latter's COM(ETCI#) may deviate from the former's, and •the refined claim construction based on this rationalized COM(ETCI#) is a fully mathematical KR transformation, mapping the latter KR – legally to be provided by the examiner/judge/... – into its rationalized DS(ETCI) or its DS(PTR(ETCI)).[7]

Thereby the inventor– if he is familiar with the FSTP-Test – may already check on his own whether the COM(ETCI#) he intends to provide will pass the FSTP-Test, and whether any changes of the invention he considers and alike are in line with other in-house requirements. If the inventor is also familiar with the USPTO's EPQI,[281] she may moreover check that her presentation and disclosure in the patent application also meet their MRF needs. But even if she is not familiar with the EPQI, the IES will automatically prompt the inventor, the pposc, the patent lawyer, ..., the examiner, the judge, the licensee – whoever is involved however by the configuration of the IES for this ETCI – to reply also to the relevant questions of the MRF.[273]

.d Finding a crC's peer leC is skipped here, as this normally would be straightforward having the FSTP-Test in mind, once all crCs are assumed known.

.e The stereotypic postfix "... alias *MBA-framework-based* ..." or alike, belonging to virtually all items used next, is omitted in what follows here.

II.3 The USPTO's EPQI "Master Review Form, MRF" and Rationalizing an ETCI by the IES

During the last year, the USPTO achievedhuge progress in launching its EPQI[280,281]2.c) – which was supposed to work instantly. By contrast, the IES is focused on the medium-term view of developing/drafting/prosecuting/litigating/... ET patents. [9]7.a) It is designed to seamlessly interoperate with the USPTO's MRF program via the Internet as to its SPL support, in particular during prosecutions of patent applications/reexaminations/.... Here it is assumed, the MRF program part concerning the ETCI of this prosecution's stakeholder will be accessible to her – at least as regards the MRF's SPL sections. Depending on entitlements, the IES user could thus cooperate end-to-end and in realtime with the USPTO about these MRF sections.

The IES will start dealing with an ETCI – in whatever state of its development – by facilitating getting acquainted with its classical claim interpretation&construction aspects, as checked by the MRF. It is important to note that an IES/FSTP user, clinging to the classical claim interpretation&construction, may run the unchanged FSTP-Test not only on a ETCI but also on an CTCI – i.e. simply ignore the separation line between CTCIs and model-based ETCIs1.c), sometimes blurring anyway – and then need not care about ETCI's inCs, but stay with the classical claim interpretation's "limitations" of a CTCI/ETCI. In this case the FSTP-Test is even considerably simplified – by taking its O-inCs as these today common limitations and O-/A-/E-inCs as identical7.b) – yet meaningless, as allegedly passing the FSTP-Test by an ETCI does not guarantee the legal robustness of a patent granted for such an ETCI this way.7.c)

Otherwise, this activity just outlined would nevertheless be a practically important entry-level step7.b) in launching this ETCI's subsequent refined claim interpretation&construction by the IES as shown by FIG2, i.e. ETCIs' SPL satisfaction test (in the Supreme Court's *MBA* framework1.a) interpretation), performed by an examiner/judge/... or before by its inventor/drafter/..., skipped by experienced IES users.

The IES thus establishes, for any user whatsoever, a smooth approach to getting acquainted with

- initially tentative and then in-depth/safe-side understanding of the MRF's Q/A part (questioning the outcome of the ETCI's classical claim interpretation&construction, in particular on the basis of the MPEP, IEG, and related USPTO support material), by thereafter
- tightly guiding this user through this complete *MBA-framework-based* test – this refined claim interpretation&construction for this ETCI, being required by the Supreme Court to be used in testing ETCIs for satisfying SPL – and thereby
- enabling this user to be context sensitively taken back any time by the IES to the peer Q/A part of the MRF supported by the USPTO and potentially commented on by the user for conveniently reiterating her previous such input for assessing the consistency of both kinds of claim interpretation& construction and for communicating on questions raised by the examiner.

The IES thus evidently also establishes, in particular for its "high potential" users, a smooth approach to getting acquainted with a more innovations fostering view of his ETCI and its specification on the one hand, and on the other hand, with their *MBA-framework-based* SPL environment, making it potentially very awarding for patent applicants to cooperate with examiners to this end.

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7 **.a** The IES shall become ready for being broadly used by the end of 2017 – for drafting and/or prosecuting legally maximally robust patents on ETCIs as well as for litigations about ETCIs – though friendly testers of the IES prototype as described in[261,283-285] should get access to it by the end of this year.
.b In this case, FSTP-test1(b) is trivially passed, but FSTP-test1(d) makes absolutely no sense, as there is no way of rationally deriving from a series of limitations, whether it yields a definite result or whether this result is what the inventor had in mind as his/her invention when she/he disclosed it in her/his resp. specification – as is evident for a model-based invention, i.e. ETCI.

Also e.g. FSTP-test3 is vastly meaningless alias of highly speculative Metaphysics2.a), again due to not having a specification of the tested ETCI as a sum of its inventive increments alias inCs, but only as a conjunction of limitations of something not defined at all – just as FSTP-testo, o=4-9.

I.e.: It can be of no surprise that granting patents based on this highly speculative Metaphysics often leads to legal controversies. These can be avoided only by granting patents based on Rationality.2.a)

.c Today, also passing the FSTP-Test by an ETCI does not guarantee total robustness. While today legal errors could already (theoretically) be excluded completely (as far as this finite problem has already been settled by the Supreme Court's precedents), factual statements about an ETCI would still depend on the pposc's statements about its crCs as interpreted by a DC (on nothing else, *Teva* here clarified details.[172,217,225])

Focusing on this problem only should already enable formal Semantics research within the coming years to automatically and correctly translate these factual statements written in MII[273] and integrate them into the FSTP-Test – which would render superfluous pposc's confirmations of them.

The FSTP-Project's Reference List

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