

A Comment on the 2016 IEG Update : Suggesting More Scrutiny or IEG's Two-Step Test, Interpreting the *Alice* Test, Needs Reconsideration

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I. The Scrutiny Gap in Patent-Eligibility Testing

This comment starts with an explicit acknowledgement of the USPTO's IEG document and its 2016 update: It provides the best guidance possible as to the application of *Alice*'s "Two-Step" test^{1.a)} to an ETCl^{1.b)} – if one refrains from using therein the notion^{1.c)} of "inventive concept(s)". Yet it finds this "inventive concept(s) abstinence" by now problematic, after the CAFC's *DDR/Enfish/TLI* decisions and their *MBA* framework orientation,^{1.d)} especially in light of the USPTO's recent MEMO about them.^{1.292]}

The evident reason for this concern is brought to mind below, before setting the scene for eliminating it. Then Sections II/III show •the much higher clarity achievable for the descriptions of an ETCl (e.g. the *DDR-Myriad-Enfish-TLI*-ETCIs), if it is described solely through its inventive concepts^{1.e)} – even higher than in the 4 CAFC decisions, •that the *Alice* test may be represented in such a way that applying it to a thus described ETCl renders this application next-to-trivial and its outcome unquestionable.^{1.f)} This terminates the uncertainties about the Supreme Court's "Two-Step" test in *Alice* and the IEG's 2S test.^{1.g)}

This indicates that unquestionably deciding an ETCl's patent-eligibility requires investing more scrutiny – into deriving its inventive concepts for its description from its specification and prosecution record – than required by determining its classical claim interpretation, which evidently requires (almost) none.^{1.h)}

After the preview of this comment, the drawback of applying the 2S test to an ETCl "as is" is shown – as occurs today in testing its patent-eligibility, as the "inventive concept(s) abstinence" implies that the 2S test must be applied to an ETCl on its specification's "original level of notional resolution."^{1.i)}

But when applying the 2S test to such an ETCl, its weakness becomes apparent: While it is easy to grasp how the three CAFC boards in their 3 decisions proceeded in applying the 2S test, uncertainty arises for the entire community, as to whether an own application of the 2S test to a new ETCl is unquestionable. And this uncertainty must remain^{1.j)} – whatever scrutiny on an ETCl's O-level one invests in this own 2S-test application. All the principally useful tips that the IEG provides for clarifying an ETCl's patent-eligibility through its 2S test – all necessarily based on the ETCl's specification of its patent (application) and its prosecution record, i.e. resting solely on the ETCl's O-level description – cannot remove this uncertainty.^{1.j)}

¹ .a here abbreviated as "2S test"

.b "ETCl/CTCl" abbr. "emerging/classical technology claimed invention". An ETCl is a pair (TT0=invention, its A*={application,add. inventive concept}).

.c A 'term' is an arbitrary 'identifier' alias 'name' alias 'acronym'. A pair <term>, its 'meaning' is called 'notion', denoted by its term/name. A term/name may be unspecific or a structured string, such as a sentence, e.g. a claim's wording. 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 protecting ETCIs.^{1.b)} Interpreting a term stands for determining the term's meaning by deriving it from its "semantics base" alias "interpretation base", i.e. for assigning to it semantics/pragmatics.

If this term's meaning is significant for an ETCl's meaning, this basis is the ETCl's inventor within the framework disclosed by the ETCl's specification, as it is understood by the 'person of pertinent ordinary skill and creativity, **pposc**' – as required by the Supreme Court's *KSR* and *Biosig* decisions.

.d The *MBA*-framework notionally arose from the Supreme Court's decisions in *KSR/Bilski/Mayo/Myriad/Biosig/Alice*. "MBA" abbreviates this string. In what follows, a term/notion "refined ..." indicates that it is *MBA*-framework-based.

.e instead of vastly describing it by only implicitly using earlier patent-eligibility decisions' implicit inventive concepts – as do also the 3 CAFC decisions.

In the *MBA* framework^{1.d)} an ETCl is described by the description of its total inventivity, being the conjunction of all its inventive concepts – as this is exactly all that matters of this ETCl tested for satisfying SPL.

.f many ETCIs' patents even as "absolutely robust", not elaborated on here^[291ftn5.e]

.g – caused by not investing the required scrutiny for achieving this clarity.^{2.e)}

.h Thus enforcing construing a "garbage in, garbage out" claim construction for this ETCl.

.i i.e. on the ETCl's original level of abstraction, here called its "O-level".^[293]

.j which will become evident through the following elaborations. Indeed, the most serious and common complaint about the IEG is that it does not enable deriving from these principally useful examples how exactly to argue for showing, by this own 2S test, this new ETCl is unquestionably patent-eligible.

While this comment has so far stated only this "O-level alone" deficiency in testing an ETCl for patent-eligibility, the remainder of this introductory Section now introduces two specific refinements of this O-level, enabling Sections II&III to show how this uncertainty is indeed removed and replaced with unquestionable certainty.^{1.f)} Achieving such refinements requires for any ETCl the notion of its inCs for representing its description through these inC(s) on its O-level, as well as on its A- and E-levels.^{2.a)}

Actually, these are 2 steps of straightforward^{2.b)} notionally incremental refinement of the ETCl's O-level: From the O-level to the A-level, and from the A-level to the E-level of notional resolution, whereby A and E abbreviate "aggregated" and "elementary", resp. i.e.: Any O-inCs of an ETCl are transformed into a logic conjunction of the ETCl's A-inCs, and then each of these A-inCs is transformed into a logic conjunction of the ETCl's E-inCs, whereby O-inCs are informal and A-/E-inCs mathematically formalizable predicates^{2.c)} of their elements, and all O-/A-/E-inCs are disclosed by the ETCl's specification. I.e., for an ETCl, its A-/E-levels of abstraction of its description incrementally refine its O-level description^{2.d)}. So any one of the O-/A-/E-level representations of the knowledge (KRs) about an ETCl describes the same inventivity of this ETCl, implying that an ETCl's 2S test is applicable to any of its O-/A-/E-KRs,^{2.e)} i.e. to the ETCl's O-/A-/E-level representations. Therefore, an ETCl's E-KR is called the ETCl's – not necessarily unique – "**canonical description**" alias "**canonical representation**" alias "**canonical form**".

One of the several enormous advantages coming with these additional A-/E-levels is that they both enable investing incrementally refined scrutiny into the A- and E-KRs of the 2S test (once for all ETCl's) just as in any individual ETCl to be tested for patent-eligibility. As will be shown by Sections II&III, based on the notion of "inventive concept(s)" and the implied notion of "levels of abstraction" alias "levels of notional resolution", these refinements enable completely removing any uncertainty – complained about above – as to one's own application of the 2S test to a new ETCl and its result.^{2.f)}

Thus, although presently an ETCl's description on its O-/A-/E-levels of abstraction is still unknown, the IEG should already start encouraging •investing this additional A-/E-level scrutiny in testing an ETCl for its patent-eligibility, and •getting familiar with what this means at all up front. The thus achievable increase in efficiency and quality of one's patent work (and improvement of one's personal career) provides plenty of incentives. The great facilitation thereby is: This investment is notionally and legally minimal, as well as stereotypically the same, for all ETCl's.

Achieving the broad and fast dissemination of this "advanced patent technology" should be possible on top of the USPTO's EPQI/PE2E program^[293] – or without it. The IES will support this dissemination by presenting all challenging IEG's sample ETCl's in their canonical description as training material.

² .a) thereby eventually forgetting the ETCl's O-level description by its "limitations" – as practiced by its today's claim interpretation.^{1.h)}

.b) We all know the O-/A-/E-levels of abstraction (i.e. of notional resolution) from our daily life, although we are usually not aware of them: Whenever a person perceives anything whatsoever, she usually becomes aware of this perception on this anything whatsoever's O-level and usually communicates about it through its O-inC(s). Here this anything is disclosed by "mark-up units, MUIs" in the ETCl's specification in natural language and graphical presentations. Identifying/Delimiting/"Compiling" such MUIs is no business of FSTP technology, but assumed to be done up front, ideally by its inventor or applicant.

Only when required to become precise about this anything whatsoever, has this person no option but to describe this anything's O-inC(s) through mathematical predicates, i.e. on its A-level.^{1.d)} Yet when it comes to assessing this anything whatsoever's patent-eligibility – being the issue of the IEG – also the A-inCs conjunctions by E-inCs are needed.^{3.b)} This aspect is taken care of by determining the refined claim interpretation for an ETCl (see FIG1).

.c) *Mayo/Alice* clearly require (though implicitly only) preciseness of the description of the ETCl and all its inCs, as any other claim interpretation (such as the BRIP²⁰) enables contradictions in itself – as mathematically easily proven.^{2.a)}

.d) This comment on the IEG is not meant to be complete and/or precise as to all the issues it tackles. Instead, it shall stimulate some understanding of them. For the complete and mathematically precise descriptions of these issues see the resp. earlier and coming FSTP publications.^[5,64,142,182]

Even if this mathematically precise description through predicates is on the E-level replaced by so-called "atomic" meanings in natural language representation, these notions' informal descriptions may nevertheless be used to grant mathematical precision on the A-level – as is known from Mathematics.

.e) Note that •an ETCl's E-KR, i.e. its E-level description alias canonical description, does not only comprise its E-inCs, but also their combinations into A-inCs (see the FSTP-test1 of FIG1) – and the A-inCs' combinations into O-inCs, as the Supreme Court through *Alice* requires, and •on the O-level it is not quite evident how the *Alice* test works in detail, in spite of its clear preemptivity annotations, also already in *Mayo* with even more emphasis.

.f) Section III shows that this uncertainty – caused by the IEG's vast 'inventive concept abstinence' – is no longer tenable as avoidable: This problem may be fixed soon as recommended by the penultimate paragraph of Section II, and explained in detail in Section III.

II. The Canonical Descriptions of the DDR-/Myriad-/Enfish-/TLI-ETCIs – and the CAFC Decisions

This Section shows in detail where in the CAFC's decisions in *DDR/Myriad/Enfish* the resp. (implicit) refinements of the notional O-/A-levels into E-levels^{2.a)} occasionally were deficient. It thus explains how this vastly stereotypical investing scrutiny in an ETCI goes: Its O-/A-/E-scrutiny in determining the ETCI's canonical description E-KR^{2.a)}, i.e. in determining the E-KR of/about the ETCI – whereby the IEG's examples are often helpful by hinting at where such scrutiny is needed.

The starting point of such determinations of E-KRs is: Before launching an ETCI's 2S test^{3.a)}, executing the 3 steps indicated in Section I is indispensable for determining^{2.b)}

- on the ETCI's O-level the ETCI's single "O-inC",
- for O-inC, one or several "elements X0n", 1 ≤ n ≤ N, and for any X0n its precise meaning by representing this meaning as a formal predicate,^{2.b)} called "A-inC0n",
- for any A-inC0n its precise meaning by representing the latter as a conjunction of a set of formal predicates, called "E-inC0nk", 1 ≤ k ≤ Kⁿ, whereby any E-inC0nk represents an atomic increment of the ETCI's total inventivity – defined as the logical sum of all inC's of this ETCI (eventually being the conjunction of all its A- and E-inCs).

These 2 steps of refinement, which *Alice* implicitly requires, are to be performed without any available guidance (except the ETCI's specification) in identifying a combination, COM(ETCI) or COM(ETCI#), and may be repeated for iteratively improving this combination when the one currently tested does not pass the subsequent refined claim construction. Subsection II.5 questions the finality of these refinements.

As all following presentations make use of the FSTP test, it is recapitulated next, from^[293].

1) (a) input:	COM(ETCI#)	::=	values of I,N,K ¹ ,..., K ^N , and user-names for the ETCI and (optional) for $\forall \epsilon$ of the set A-crC ::= {A-crC0n 1 ≤ n ≤ N} ∪ E-crC ::= {E-crC0nk 1 ≤ n ≤ N ∧ 1 ≤ k ≤ K ⁿ };
(b) justof $\forall 1 \leq n \leq N$:	A-crC0n"	=	$\wedge^{1 \leq k \leq K^n} E-crC0nk$, 1 ≤ n ≤ N, whereby A-crC0n ::= A-crC0n mod({ $\forall \epsilon E-ncrC0n$ });
(c) justof $\forall \epsilon \in \text{COM(ETCI\#)}$:	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 $\forall \epsilon \in \text{COM(ETCI\#)}$ are lawfully disclosed: COM(ETCI#) => COM(ETCI);
3) justof $\forall 1 \leq n \leq N$:	ETCI Enabling-test	is passed:	iff $\forall \epsilon \in A-crC0n$ its implementability is disclosed "for being E-crC tested";
4) justof:	Bilski-test	is passed:	iff E-crC \ E-crC mod(A*#) ≠ Φ;
5) justof:	Mayo-/Myriad-test	is passed:	iff $\forall \epsilon \in E-crC$::= $\forall \epsilon \in \{E-crC \text{ unlimitedly preemptive}\}$ are identifiable;
6) justof:	Alice-test	is passed:	iff (1)-5) hold) ∧ $\nexists \epsilon \in (E-crC \setminus \forall \epsilon \in E-crC)$ that is unlimitedly preemptive;

7) justof $\forall 1 \leq n \leq N \wedge 1 \leq k \leq K^n$:	Independence-test	is passed:	iff $\forall \epsilon \in \{E-crC0nk \mid 1 \leq n \leq N \wedge 1 \leq k \leq K^n\}$ are independent of each other;
8) justof $\forall 1 \leq i \leq n \leq k \leq K^n$:	KSR(RS)-test	is passed:	iff $\forall ANM(i,n,k)$::= if (E-crCink = E-crC0nk or equal within their tolerances) then "A" else "N";
9)	Graham(RS)-test	is passed:	iff $\langle \forall n^k \epsilon = A \rangle \notin \{ \forall AC \text{ over ANM} \}$.

FIG1: The FSTP Test – Checking an ETCI for its Meeting all 9 Requirements Stated by the MBA Framework^{3.b)}

³ .a in the IEG understood classically, here suggested^{6.b)} to be refined^{1.a)}

.b **Legend1:** The horizontal dashed line separates the refined claim interpretation (above it) from the refined claim construction (below it).

A) This holds also for the classical claim interpretation and classical claim construction. But, due to the classical negligence in interpreting 35 USC SPL also for ETCIs (not only CTCIs),^{2.c)} both notions degenerate to a very high degree, shown by^[274,291]: By ignoring all the by *Mayo* and *Alice* clearly required refinements of an ETCI's claim interpretation, first of all by substituting an ETCI's thus required inC(s) by per se meaningless limitations, hence barring the subtle questions caused by an ETCI's properties (requiring a hitherto unknown high degree of scrutiny), although noticed by the Supreme Court and in the refined claim construction checked by FSTP test4-8 – resulting in an ETCI's classical claim interpretation being meaningless and moreover inseparably jammed with classical claim construction, while both notions are fundamentally separate, as logically evidently implied by §§ 112/101/102/103.

As a consequence, the classical claim interpretation/construction is something intellectually hopelessly premature.

B)The Supreme Court's *MBA*-framework fixes this intellectual deficit of the classical claim interpretation/construction by requiring describing an ETCI by its inC(s). This enforces into an ETCI's description the O-/A-/E-levels of abstraction alias notional resolution.^[272,291]

Limiting Kant's thinking to the problem here at issue,^[291fn2.a)] the O-level models the knowledge representation (KR) of an ETCI's description in speculative Metaphysics, the A-level models its KR pseudo-rationally, and the E-level models its KR rationally.^[291,296]

i.e.: An ETCI's functionality is the same in all its 3 KR's, yet on its O-/A-/E-level described speculatively/pseudo-rationally/rationally, respectively.^[291fn2.a)]

C)The *Alice* test models an ETCI's KR totally on its O-level. By contrast, the FSTP test models pseudo-rationally transforming an ETCI's A-KR into its rational E-KR and rationally transforming this E-KR back into its then rational A-KR. Thereby evidently holds: If an ETCI's A-level is as abstract as possible without losing the rationality of the just mentioned KR transformation then – with all (speculatively metaphysical) likelihood – the non-rationality in an ETCI's KR is minimal, as only an ETCI's KR transformation from its specification in the patent (application) is of speculative Metaphysics. i.e., an ETCI's such A-KR filters out – from the ETCI's description by its specification, which today still is of O-level quality^[291fn5.a)] – "as much Mathematics as this ETCI embodies", freely after Kant.

Often, some of an ETCI's O-inCs and/or A-inCs are the same as its E-inCs – rarely even all. Nevertheless this is often assumed due to insufficient scrutiny^[296]: All classical patent knowhow commits this erroneous assumption – except in the just mentioned rare case – that an ETCI's O-KR in its patent(-application)'s specification is already rational, i.e. is intellectually flawed as stated in A).

II.1 The Canonical Description of the *DDR*-ETCI – as seen by the CAFC

In *DDR*, the CAFC board intuitively met all *MBA* framework requirements. Yet this intuitivism is highly risky, as many other CAFC decisions prove – which is why Section I asked to stay on the firm ground of rationality in *MBA* framework-based testing of an ETCI for its patent-eligibility, as exemplified next, following^[160].

The (presently missing) scrutiny has to clarify what the *DDR*-ETCI's invention=TT0 and its $A^*=\{\text{application, inventive concept}\}^{1.b}$ are – by identifying this ETCI's A-/E-crCs, i.e. its COM(ETCI#) alias E-KR:^{2.e)}

- *DDR*'s ETCI is made up of $N::=3$ ETCI-elements (in FIG 1 named X1/X2/X3, dropping TT0's "0", as \nexists TiCRS in patent-eligibility tests), representing: X1::= product, X2::= Internet serverP, X3::= Internet serverS,^{1.c)}
- their 3 aggregated potentially creative properties completely describing it, disclosed in the *DDR* specification, are for:
X1 modeled by A-crC1::= X1's id, and for
X2 modeled by A-crC2::= (X1's id \wedge X2's URL \wedge X2's look&feel \wedge X3's URL) for all X1 comprised of X2^{4.a)}, and for^{4.b)}
X3 modeled by A-crC3::= (X1's id \wedge X2's URL \wedge X2's look&feel \wedge X3's URL) \wedge (hiding X2's URL for all X1 \in X3).

The *DDR*-ETCI is completely described by X1/X2/X3 and A-crC1 \wedge A-crC2 \wedge A-crC3. Yet this A-KR would not usually expose TT0's inCs and the additional inC coming with A^* , i.e. the *Alice* test is not applicable. Such problems must be overcome by disaggregating the A-crCs into conjunctions of E-(n)crCk, yielding:

E-ncrC1 ::= id, E-ncrC2 ::= X2's URL, E-ncrC3 ::= X2's look&feel, E-ncrC4 ::= X3's URL, E-ncrC5 ::= X3 hides X2's URL – whereby the E-crC1-4 in^[160] unfortunately are seen as crCs, due to E-crC5 – enabling describing *DDR*'s E-KR as follows:

- A-crC1 ::= E-ncrC1 \wedge
- A-crC2 ::= E-ncrC1 \wedge E-ncrC2 \wedge E-ncrC3 \wedge E-ncrC4 \wedge
- A-crC3 ::= E-ncrC1 \wedge E-ncrC2 \wedge E-ncrC3 \wedge E-ncrC4 \wedge E-ncrC5,

For the *DDR*-ETCI's "(sales) service outsourcing" TT0 holds: COM(<TT0, Φ >) is obvious and hence patent-noneligible^{5.b)} – creatively applied in COM(<TT0, A^* >) with $A^*=\{a^{DDR},E\text{-crC5}\}$.^{4.c)}

I.e.: The *Alice* criterion is applicable to the *DDR*-ETCI in canonical form and transforms *DDR*'s patent-noneligible invention/TT0 by $A^*=\{a^{DDR},E\text{-crC5}\}$ into the patent-eligible *DDR*-ETCI = (TT0, A^*).

II.2 The Canonical Description of the *Myriad*-ETCI – not as seen by the CAFC

In the *Myriad*-ETCI the A-level properties of *Myriad*'s elements are, i.e. *Myriad*-A-KR reads:^[160]

- *Myriad*'s ETCI has $N::=3$ elements, X1/X2/X3 representing: X1::= SO testee, X2::= SO wild-type, X3::= BRCA1 indicator,
- their aggregated potentially creative properties completely describing this ETCI, disclosed by *Myriad*'s specification, are for:
X1 modeled by A-crC1::= {SO ¹BRCA1 gene} \vee {SO ¹BRCA1 RNA} \vee {SO ¹BRCA1 cDNA}, and for
X2 modeled by A-crC2::= {SO ²BRCA1 gene : H(SO ²BRCA1 gene) = ²BRCA1 gene allele} \vee
{SO ²BRCA1 RNA : H(SO ²BRCA1 RNA) = ²BRCA1 RNA allele} \vee
{SO ²BRCA1 cDNA : H(SO ²BRCA1 cDNA) = ²BRCA1 cDNA allele}, and for
X3 modeled by A-crC3::= T if {H(SO ¹BRCA1 gene, ²BRCA1 gene)} \vee {H(SO ¹BRCA1 RNA, ²BRCA1 RNA)} \vee
{H(SO ¹BRCA1 cDNA, SO ²BRCA1 cDNA)} contains a resp. allele.

This *Myriad*-ETCI has the same problems in its A-KR as explained in II.1 above for the *DDR*-ETCI, hence:

E-ncrC1 ::= SO¹BRCA1 gene, E-ncrC2 ::= SO¹BRCA1 RNA, E-ncrC3 ::= SO¹BRCA1 cDNA, E-ncrC4 ::= SO²BRCA1 gene : H(SO²BRCA1 gene) = ²BRCA1 gene allele, E-ncrC5 ::= SO²BRCA1 RNA : H(SO²BRCA1 RNA) = ²BRCA1 RNA allele, E-ncrC6 ::= SO²BRCA1 cDNA : H(SO²BRCA1 cDNA) = ²BRCA1 cDNA allele, E-ncrC7 ::= H(SO¹BRCA1 gene, ²BRCA1 gene), E-ncrC8 ::= H(SO¹BRCA1 RNA, ²BRCA1 RNA), E-ncrC9 ::= H(SO¹BRCA1 cDNA, ²BRCA1 cDNA), E-crC10 ::= a procedure that decides whether the resp. set contains an allele, all disclosed by *Myriad*'s specification, enabling *Myriad*'s E-KR as follows:

- A-crC1 ::= {E-ncrC1} \vee {E-ncrC2} \vee {E-ncrC3} \wedge
- A-crC2 ::= {E-ncrC4} \vee {E-ncrC5} \vee {E-ncrC6} \wedge
- A-crC3 ::= ({E-ncrC7} \vee {E-ncrC8} \vee {E-ncrC9}) \wedge E-crC10.

For the *Myriad*-ETCI's TT0 holds: COM(<TT0, Φ >) is obvious and hence patent-noneligible^{5.b)} – creatively applied in the COM(<TT0, A^* >) with $A^*=\{a^{Myriad},E\text{-crC10}\}$.

I.e.: The *Alice* criterion is applicable to the *Myriad*-ETCI in canonical form and transforms *Myriad*'s patent-noneligible invention/TT0 by $A^*=\{a^{Myriad},E\text{-crC10}\}$ into the patent-eligible *Myriad*-ETCI = (TT0, A^*).

⁴ .a The *DDR*-ETCI specification does not express clearly that X2 must not sell X1 over the Internet – then all said here would evidently hold all the more.
.b All terms right of the preceding "::<=" must not be oversimplified: Identifying the meanings that their components indicate, e.g. "X2's look&feel" and more crucial "non-transferring X2's URL for all X1 \in X3", and recognizing that they are determinative for the ETCI's inventivity, requires investing substantial scrutiny into finding them and verifying their such impacts, and once more on the E-level. Yet investing this scrutiny is worthwhile: The *Alice* test can namely unfold its amazing simplification only on an ETCI's E-KR, i.e. is itself refined to this end to "*Alice* test's canonical form" (see Section III).
.c A further E-crC6 is "hiding the producer's identity" (as also hidden). In a^{DDR} ::= "clicking a product on X3 shows X2-look&feel", i.e. E-ncrC3 is a crC.
.d a^{Myriad} ::= "known mechanical steps of the test" modeled by E-ncrC1-9 does unfortunately not comprise the decision procedure, modeled by E-crC10.

II.3 The Canonical Description of the *Enfish*-ETCI – as seen by the CAFC

In the *Enfish*-ETCI the A-level properties of *Enfish*'s elements are,^{5.a)} i.e. *Enfish*-A-KR reads:^{1291]}

- The *Enfish*-ETCI has 2 ETCI-elements, representing: X1::= an information storage, X2::= a self referencing capability,
- their aggregated potentially creative properties completely describing it, disclosed by the *Enfish* specification, are for:
 - X1 modeled by A-crC1::= being a logical matrix of cells for the information stored,
 - X2 modeled by A-crC2::= a row including an OID identifying it, represents a record of this information stored, which in particular may point to another row, and a column including an OID identifying it.

This *Enfish*-ETCI has the same problems in its A-KR as explained in II.1 above for the *DDR*-ETCI, hence:

E-ncrC1 ::= information in a cell is accessed by (row OID, column OID), E-ncrC2 ::= if (a row's type = "field") then any of its cells identifies a column indicating a specific attribute in whatever record, or otherwise it comprises all attributes of this record, and E-crC3 ::= if a new record is stored and it comprises an attribute for which the matrix comprises no column, this new column is generated and if a record stored already contains it, this is noted in the intersection cell of this record and this new column, yielding

- A-crC1::= E-ncrC1 \wedge
- A-crC2::= E-ncrC1 \wedge E-ncrC2 \wedge E-crC3.

For the *Enfish*-ETCI's TT0 holds: COM(<TT0, Φ >) is obvious and hence patent-noneligible^{5.b)} – creatively applied in COM(<TT0,A*>) with A* = {a^{Enfish}, E-crC3}.

I.e.: The *Alice* criterion is applicable to the *Enfish*-ETCI in canonical form and transforms *Enfish*'s patent-noneligible invention/TT0 by A* = {a^{Enfish}, E-crC3} into the patent-eligible *Enfish*-ETCI = (TT0,A*).

II.4 The Canonical Description of the *TLI*-ETCI – not as seen by the CAFC

The *TLI*-ETCI embodies no inC, whatsoever: Its specification discloses solely non-inCs, i.e. non-inventive concepts, as known by the pposc^{1.c)}. Thus, there is no inventive *Alice* concept. Hence the *TLI*-ETCI does not pass FSTP-test1, implying that it is patent-noneligible, as per the *Alice* criterion.

II.5 Two Remarks as to the Finality of these Refinements

Firstly: None of the 4 CAFC decisions notices that the Supreme Court's description of its *Alice* test is based on 3 separate parts – *Alice* test's invention/TT0 being patent-noneligible, its TT0 application a^{Alice}, and its inventive concept jointly achieving this famous transformation^{5.c)} – but none of them clearly identifies these 3 parts. Its scrutiny to this end would increase the evidence that they are *Alice*-based.

Secondly: Having the ETCI's O-/A-/E-levels, the question is evident as to whether the ETCI's E-KR is further meaningfully refinable through E-level scrutiny – as indeed possible in *DDR/Myriad/Enfish*^{4.c1/4.d1/5.d} and then may increase the ETCI's patent-eligibility (and/or patentability). If an O-/A-crC is already an E-ncrC – or its further refinement delivers only E-ncrCs – its refinement is meaningless in the sense of SPL.

^{5. a} An ETCI in canonical form/representation is its COM(ETCI#) as of FSTP test1 in FIG1. It describes in a specific way – as its E-KR^{2.f)} – a patent-(non)-eligible subject matter. By the *MBA* framework, the latter is an invention of the form <invention TT0,application A*> with TT0 patent-(non)eligible.

The *Alice* test in canonical form/representation assumes that an ETCI to be tested by it is in canonical form. It is the basis of the PEGG test^[144SecV].

^b The notion of preemption is explicitly mentioned in the *Alice* opinion, but not in its description of an ETCI's *Alice* test, thus recognizing preemption is an "E-level notion" – as the CAFC now also found in applying the *Alice* test to the ETCIs of *DDR* and *Enfish*. The IEG's 2S test, not caring about both highest courts' use of ETCI's E-level notions – completely ignores preemption and insofar misses the point with the Supreme Court's *Alice* test.^{5.g)}

This is explained in detail below. (and could have happened only by also here, in interpreting the *Alice* test, applying the unfortunate BRIP⁷⁰⁾).

The Supreme Court through its *MBA* framework explicitly does not distinguish between ETCI's patent-eligibility -noneligibility through their coarse O-level notions – often complained about within the patent community, but cognitively impossible (as the often questioned and indeed really vague term "directed to" evidences)^{2.g)} – yet implicitly it does make exactly this distinction through the ETCI's finer E-level notions. Namely, by requiring checking whether an ETCI is patent-eligible or not by this ETCI's kind of preemption according to 35 USC § 101 – and this requirement must not be ignored in any legal business.

Any kind of preemption of an ETCI is always caused by its comprising an abstract idea or a natural phenomenon inC. The important dichotomy is "unlimited preemption" on the one hand and "limited or no preemption" on the other hand. For understanding the *MBA* framework's dichotomy of ETCI's non/limited preemption vs "unlimited preemption" and this dichotomy's relation to an ETCI's patent-(non)eligibility one must grasp

• firstly, the notion^{1.c)} of "nonpreemption": "A patentable and patent-eligible ETCI is called nonpreemptive iff its specification implies that its scope – when and after its patent being granted and valid – is disjoint to the scope of another otherwise patentable and patent-eligible patent or of a combination of the latter with the teaching of some printed document accessible to the public."

• secondly, the notion of "unlimited preemption": "An otherwise patentable and patent-eligible ETCI is called unlimited preemptive iff its specification implies that its scope – when and after its patent otherwise being granted and valid – comprises no segment (identified and defined by the ETCI's specification) that is disjoint to the scope of another otherwise patentable and patent-eligible patent or of a combination of the latter with an above described document", and

• thirdly, the notion of "limited preemption": "A patentable and patent-eligible ETCI is called limited preemptive iff it is neither nonpreemptive nor unlimited preemptive as comprising a finite number of known segments non-disjoint to thus excluded scopes",

thereby leveraging knowing that the scope of an ETCI is just another finite KR of its E-KR, namely its "realization tuple KR, RT-KR"^[244 fn 9] and moreover assuming ETCI's notions of "enablement" are well defined^[174], as otherwise the preceding definitions are legally non-enforceable or even meaningless^[174].

By this preemption definition, a noninventive TT0 alias <TT0, Φ > is patent-noneligible – as from its non-inventivity follows its being nonpatentable as anticipated or obvious over posc and/or prior art, implying that its set of inCs is empty, by its *Alice* test implying that <TT0, Φ > = TT0 is patent-noneligible.

^c – by the CAFC's *DDR/Enfish* decisions, see Section II, in particular II.2 for fixing also its *Myriad* decision.

^d As the CAFC noticed, the '604 specification also elaborates on further increments of the total inventivity embodied by the *Enfish*-ETCI.

III. Applying the *Alice* Test to an ETCl, Both in Canonical Form, is Trivial and Unquestionable

This Section first shows why this headline is true, and then exemplifies it through the 4 cases of Section II.

To begin with, the patent community assumes there is a “missing link” in the *MBA* framework – rendering it an alleged “patent-eligibility dilemma”. The truth is that there would be a “social dilemma” if ●patent-noneligible ETCLs, being of unlimited preemptivity^{6.b)} (patenting which under *Mayo* is socially intolerable for very strong reasons^{6.c)}), were not transformable into ●patent-eligible ETCLs, being of no or limited preemptivity (urgently needed by investors and supported by social consensus, as the Supreme Court’s *Mayo* decision recognized). But through its *MBA* framework the Supreme Court outlined this transformation, marking the line separating patent-eligibility and -noneligibility, shared now by the CAFC.^{6.d)}

Mayo/Alice emphasize the deep socioeconomic problem in granting patents to sweepingly preemptive ETCLs. Yet neither requires granting patents only to nonpreemptive ETCLs. And *Alice* even shows the broad way of eliminating this social dilemma (and the alleged patent-eligibility dilemma) by stating that a patent-noneligible invention/TT0 may be transformed – by an application of TT0 and an inventive concept, jointly called A^* – into a patent-eligible ETCL, whereby this pair $\langle TT0, A^* \rangle$ is “**significantly more**” [than α)TT0 \wedge β)avoiding for all inventors of such TT0s this social dilemma].^{6.a)}

If an ETCL’s canonical representation has already been determined (as in Section II), *Alice*’s patent-eligibility criterion $\alpha) \wedge \beta)$ – applied to this ETCL in E-KR – reads quite simply:^{6.b)}

“An ETCL alias subject matter $\langle TT0, A^* \rangle$, with TT0 = $\langle TT0, \Phi \rangle$ patent-noneligible, is by A^* transformed to patent-eligibility iff the ETCL passes the FSTP-test $1-5 \wedge \text{COM}(A^*TT0) \text{COM}(\Phi TT0) \neq \Phi$.”

By this criterion the notion of “inventive *Alice* concept, $\langle TT0, A^* \rangle \text{inC}^{Alice}$ ” is defined to be the set of \forall “elementary inventive concept(s), $\langle TT0, A^* \rangle \text{inC}^{Alice} ::= \{ \langle TT0, A^* \rangle \text{E-inC}^{Alice} ::= \text{COM}(A^*TT0) \setminus \text{COM}(\Phi TT0) \}$.”^{6.c)}

This “*Alice*’s patent-eligible criterion in canonical form” for an ETCL in canonical form is unquestionable – just as the “*Alice* test in canonical form” alias “refined *Alice* test” trivially derived from it is.

The by the *Alice* test here enabled main advantages are briefly summarized as follows: [t^{6.d)}

- reduces the difficult ethical justification of an ETCL’s patent-(non)eligibility to its simple rational test.
- is a Solomonic solution, favoring ETCL inventors/investors to the utmost and avoiding excrescences.^{6.e)}
- is through its “forward protection” capability – and the grace period – a potential “20 year limit extender”.
- by its simplicity greatly facilitates the mass training in and usage of “advanced patent knowhow”. [293]

All in all: This *Alice* criterion is a game changer in patenting an ETCL – substantially increasing the quality of patents by its additional scrutiny compared to classical claim interpretation.^{6.f)}

Finally, the simplicity of applying the *Alice* test to an ETCL if both are in canonical form: As evident from Section II, the inventive *Alice* concept in the CAFC’s decision in *DDR* is trivially {E-crC5}, in *Myriad* is trivially {E-crC10}, in *Enfish* is trivially {E-crC3}, and in *TLI* trivially is Φ .

^{6.a)} The content of [...], defining the meaning of the term “significantly more”^{1.c)} is necessary for the *Alice* decision to achieve by its *Alice* test the objective that the Supreme Court evidently is up for by this decision, namely to bar ETCLs of unlimited preemptivity from being patented, but not ETCLs of limited preemptivity^{6.b)} – in line with *Mayo*’s earlier use of this notion “significantly more”. The latter and this [...] content thus do not only mean an evident purely quantitative property of the subject matter $\langle TT0, A^* \rangle$ (by its number of inCs compared to that of $\langle TT0, \Phi \rangle$), but also a qualitative “more” property, as *Alice*’s A^* guarantees by the additional inC coming along with it, as it models $\alpha)$ and $\beta)$.

^{6.b)} as, based on FIG1 and $\text{COM}(A^*TT0) \setminus \text{COM}(\Phi TT0) ::= \text{COM}(\langle TT0, A^* \rangle) \setminus \text{COM}(\langle TT0, \Phi \rangle)$, easily provable by assuming the contrary.^{2.e), [244 SecVI, 142, 182]}

^{6.c)} $\langle TT0, A^* \rangle$ is then guaranteed to be patent-eligible, not $TT0 = \langle TT0, \Phi \rangle$, and TT0’s preemptivity/noneligibility remains unchanged. I.e., TT0 is by the *Alice* test not checked for being “patent-eligible subject matter”, as the IEG’s 2S test occasionally is misunderstood.^{6.b)}

^{6.d)} – being carved out by scientifically^[291ff, 5.e, 273] interpreting the Supreme Court’s *MBA* framework –

^{6.e)} – as shown by Section II and eventually coming down to solving the problem that unlimited preemptive ETCLs must not be protected by patent law, but protecting them by it is necessary by socioeconomic reasons. The Supreme Court solved this problem in an utmost ETCL inventors/investors friendly way by solely requiring its unlimited preemptivity is “neutralized” by an inventor identified and described application. I.e., this solution’s rationale is to truly “non-invasively” (for the innovativity of the US) disable unlimited preemptive ETCLs to unfold their excrescences to threaten the patent system by their social unacceptability^[119] – by encapsulating them into inventions creating^{6.e)} and clearly specified applications satisfying 35 USC SPL.

^{6.f)} – implied by the need that the ETCL as well as the *Alice* test are to be brought into canonical form, which moreover represents a fundamental scientific insight into precisely describing ET-based innovations that in any future such business will become indispensable socioeconomic knowledge.

