ANGELIC II Domain Model: Inventive Step in European Patent Law

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1 Introduction

This document presents an ANGELIC Domain Model (ADM) for the legal domain of assessing the inventive step of a patent, based on the European Patent Office (EPO) Guidelines. The model is constructed following the ANGELIC II methodology, which structures legal knowledge into a hierarchy of issues, abstract factors, and base-level factors. This work is based on the ANGELIC II paper (Atkinson & Bench-Capon 2023) and on a handcrafted document of extensive defeasible inference rules for the domain.

2 Main Analysis: Inventive Step

This section details the primary logical flow for determining if an invention involves an inventive step.

2.1 Issue Table

The Issue Table contains the highest-level legal questions for the main analysis.

Table 1: Issue Table for Inventive Step

ID	Issue	Children	Acceptance Condi-	Source	Value
			tions		
T-1	InvStep	I2, F29, F27,	REJECT IF F29	r43, r44	(LC, UPQ)
I1		F28, I3, F47	REJECT IF I2	[p. 21]	> TP
			ACCEPT IF F27 AND		
			F28 AND I3 AND F47		
			REJECT		
	Obvious	F55, AF12	ACCEPT IF F55	r42 [p.	UPQ, FC
I2			ACCEPT IF AF12	21]	
			REJECT		
	Novelty	F25	ACCEPT IF F25	r9 [p.	UPQ
I3			REJECT	6]	

2.2 Abstract Factor Table: Skilled Person

Table 2: Abstract Factors for Foundational Concepts

ID	Factor	Children	Acceptance	Condi-	Sour	ce	Value
			tions				
A Est	Person	F5, F6, F7	ACCEPT IF F5		r1	[p.	UPQ
AF1			ACCEPT IF F6		3]		
			ACCEPT IF F7				
			REJECT				

Table 2 – continued from previous page

ID	Factor	Children	Acceptance Condi-	Source	Value
			tions		
ATO	SkilledPerson	F1, F2, F3, F4, AF1	ACCEPT IF F1 AND F2	r1 [p.	UPQ
AF2			AND F3 AND F4 AND	3]	
			AF1		
			REJECT		
A T20	CommonKnowledge	F8, AF4	ACCEPT IF AF4	r2 [p.	LC, FC
AF3			REJECT IF F8	3]	
			ACCEPT		
A.T.4	DocumentaryEvidence	F9, F10, F11, F12	REJECT IF F9	r3 [p.	LC
AF4			ACCEPT IF F10	3]	
			ACCEPT IF F11		
			ACCEPT IF F12		
			REJECT		

2.3 Abstract Factor Table: Closest Prior Art

Table 3: Abstract Factors for Main Analysis

ID	Factor	Children	Acceptance Condi-	Source	Value
			tions		
4.775	RelevantPriorArt	F13, F14, F15, F16	ACCEPT IF F15	r4 [p.	UPQ
AF5			ACCEPT IF F16	4]	
			ACCEPT IF F13		
			ACCEPT IF F14		
			REJECT		
ATTO	ClosestPriorArt	AF5, F19, F20, F21	ACCEPT IF AF5 AND	r5 [p.	UPQ, LC
AF6			F19 AND F20 AND F21	5]	
			REJECT		
A.D.=	CombinationDocum	F22, F17, F18, F23,	ACCEPT IF F22 AND	r6 [p.	UPQ
AF7	ents	F24	F17 AND F23 AND F24	5]	
			ACCEPT IF F22 AND		
			F18 AND F23 AND F24		
			REJECT		
ATO	ClosestPriorArtDoc	AF6, AF7	ACCEPT IF AF6	r7 [p.	UPQ, LC
AF8	uments		ACCEPT IF AF7	6]	
			REJECT		

2.4 Abstract Factor Table: Problem-Solution Approach

Table 4: Abstract Factors for Main Analysis

ID	Factor	Children	Acceptance Condi-	Source	Value
			tions		
1.70	Combination	F28, F45, F46	ACCEPT IF F28 AND	r22 [p.	TP
AF9			F45 AND F46	12]	
			REJECT		
	PartialProblems	AF9, F28	REJECT IF AF9	r25, r26	TP
AF10			ACCEPT IF F28	[p. 13,	
			REJECT	p. 14]	
A Francisco	CandidateOTP	AF9, AF10	ACCEPT IF AF9	r24, r26	TP
AF11			ACCEPT IF AF10	[p. 13,	
			REJECT	p. 14]	

${\bf 2.5}\quad {\bf Abstract\ Factor\ Table:\ Secondary\ Indicators}$

Table 5: Abstract Factors for Main Analysis

ID	Factor	Children	Acceptance Condi-	Source	Value
			tions		
A E 10	SecondaryIndicator	AF13, AF14, AF15,	ACCEPT IF AF13	r35 [p.	FC
AF12		AF17, F75, AF19	ACCEPT IF AF14	18]	
			ACCEPT IF AF15		
			ACCEPT IF AF17		
			ACCEPT IF F75		
			ACCEPT IF AF19		
			REJECT		
AF13	PredictableDisadvan	F59, F60, F61	REJECT IF F61	r32 [p.	TP > FC
AF 15	tage		ACCEPT IF F59 AND	17]	
			F60		
			REJECT		
AF14	BioTechObvious	F63, F62, F67, F68	REJECT IF F62	r33 [p.	TP > LC
AI 14			ACCEPT IF F63 AND	17]	
			F67		
			ACCEPT IF F63 AND		
			F68		
		1510 507 500	REJECT		
AF15	AntibodyObvious	AF16, F65, F66	REJECT IF F66	r34 [p.	TP > FC
711 10			ACCEPT IF AF16 AND	17]	
			F65		
	0.1125	Pag Pag	REJECT	2.4	LIDO
AF16	SubjectMatterAntib	F63, F64	ACCEPT IF F63 AND	r34 [p.	UPQ
711 10	ody		F64	17]	
	T/ 1/	E00 E50 AE10	REJECT	2.0	D.C.
AF17	KnownMeasures	F69, F70, AF18	ACCEPT IF F69	r36,	FC
111 11			ACCEPT IF F70	r37, r39	
			ACCEPT IF AF18	[p. 18,	
	Vn oven Us	F71, F72, F73, F74	REJECT ACCEPT IF F71	p.19] r38 [p.	FC
AF18	KnownUsage	F (1, F (2, F (3, F (4	ACCEPT IF F71 ACCEPT IF F72	r38 [p. 19]	l LC
			ACCEPT IF F72 ACCEPT IF F73 AND	19]	
			F74		
			REJECT		
	ObviousSelection	F76, F77, F78, F79	ACCEPT IF F76	r41 [p.	FC
AF19	Obviousselection	1 10, 111, 110, 119	ACCEPT IF F70 ACCEPT IF F77	20]	1.0
-			ACCEPT IF F77 ACCEPT IF F78	20]	
			ACCEPT IF F78 ACCEPT IF F79		
			REJECT		
			TEJEC I		

2.6 Sub-Model 1 - Technical Contributions

Table 6: Abstract Factors for Sub-Model 1 $\,$

ID	Factor	Children	Acceptance Conditions	Source	Value
I4	FeatureReliableTech nicalEffect	AF23, F42, F43, AF22, AF20, AF21	REJECT IF AF21 REJECT IF AF22 REJECT IF AF20 ACCEPT IF AF23 AND F42 AND F43 REJECT	r10 [p. 7]	LC > FC > TP
AF20	ImpreciseUnexpecte dEffect	F56, F57	REJECT IF F57 ACCEPT IF F56 REJECT	r10 [p. 7]	LC > TP
AF21	SufficiencyOfDisclos ureIssue	F43, F44, F80	REJECT IF F43 ACCEPT IF F44 and F80 REJECT	r19[p.10]	LC
AF22	Bonus Effect	AF23, F56, F58	ACCEPT IF AF23 AND F56 AND F58 REJECT	r20 [p. 11]	FC
AF23	FeatureTechnicalCo ntribution	AF24, AF26, AF27	ACCEPT IF AF24 ACCEPT IF AF26 ACCEPT IF AF27 REJECT	r10 [p. 7]	TP
AF24	NormalTechnicalCo ntribution	F30, F31, F32, AF25	REJECT IF F32 REJECT IF AF25 ACCEPT IF F30 ACCEPT IF F31 REJECT	r10 [p. 7]	UPQ >
AF25	ExcludedField	F33, F34, F35, F36	ACCEPT IF F33 ACCEPT IF F34 ACCEPT IF F35 ACCEPT IF F36 REJECT	r11 [p. 7]	UPQ
AF26	ComputationalCont ribution	F33, F41, F34, F38	ACCEPT IF F33 AND F41 ACCEPT IF F33 AND F37 ACCEPT IF F34 AND F37 ACCEPT IF F34 AND F38 REJECT	r12 [p. 7]	TP
AF27	MathematicalContri bution	F35, AF28,F41	ACCEPT IF F35 AND AF28 ACCEPT IF F35 AND F41 REJECT	r13 [p. 8]	TP
AF28	AppliedInField	F39, F40	ACCEPT IF F39 AND F40 REJECT	r14 [p. 8]	TP, LC

2.7 Sub-Model 2 - Objective Technical Problem

Table 7: Abstract Factors for Sub-Model 2

ID	Factor	Children	Acceptance Condi-	Source	Value
			tions		
TH	WouldHaveArrived	AF29, F53, F54	ACCEPT IF F53 AND	r30 [p.	FC, UPQ
I5			AF29	16]	
			ACCEPT IF F54 AND		
			AF29		
			REJECT		
A F200	ObjectiveTechnical	AF31, AF30	ACCEPT IF AF31	r29 [p.	UPQ, LC,
AF29	ProblemFormulatio		ACCEPT IF AF30	15]	FC
	n		REJECT		
A E00	ConstrainedProblem	AF31, F26	ACCEPT IF AF31 AND	r28 [p.	FC, UPQ
AF30			F26	15]	
			REJECT		
A F-0.1	WellFormed	F51, F52, AF32	REJECT IF F52	r27 [p.	LC >
AF31			ACCEPT IF F51 AND	14]	UPQ
			AF32		
			REJECT		
A E 00	BasicFormulation	F48, F49, F50	ACCEPT IF F48 AND	r24, r26	UPQ, LC
AF32			F49 AND F50	[p. 13,	
			REJECT	p. 14]	

3 Base-Level Factor Table & Question List

3.1 Base-Level Factor Table

Table 8: Base-Level Factor Table

ID	Factor	Value	Dimension	Required Answer	Prerequisite
	SkilledIn	UPQ	Skilled	Q6(a)	AF5
F1			Person		
			Attributes		
	Average	UPQ	Skilled	Q7(a)	
F2			Person		
			Attributes		
	Aware	UPQ	Skilled	Q8(a)	AF3
F3			Person		
			Attributes		
	Access	UPQ	Skilled	Q9(a)	AF5
F4			Person		
			Attributes		
	Individual	UPQ	Skilled Per-	Q10(a)	
F5			son Nature		
	ResearchTeam	UPQ	Skilled Per-	Q10(b)	
F6			son Nature		
	ProductionTeam	UPQ	Skilled Per-	Q10(c)	
F7			son Nature		
	Contested	FC	CGK Status	Q4(a)	
F8					
F9	SinglePublication	LC	CGK Evi-	Q5(d)	
ГЭ			dence		
F10	Textbook	LC	CGK Evi-	Q5(a)	
F 10			dence		
E11	TechnicalSurvey	LC	CGK Evi-	Q5(b)	
F11			dence		<u> </u>

		Table 8 – cont			
ID	Factor	Value	Dimension	Required Answer	Prerequisite
F12	PublicationNewField	LC	CGK Evidence	Q5(c)	
F13	SimilarPurpose	UPQ	Prior Art	Q1(a)	
Г 13			Relation-		
	SimilarEffect	UPQ	ship	00(-)	
F14	SimilarEffect	UPQ	Prior Art Relation-	Q2(a)	
			ship		
	SameField	UPQ	Prior Art	Q3(a)	
F15		, - -	Field	4 (*)	
E16	SimilarField	UPQ	Prior Art	Q3(b)	
F16			Field		
F17	SameFieldCPA	UPQ	Combination	Q14(a)	AF6
1.11	G: :1 E: 11GDA	LIDO	Field	014/1)	AFC
F18	SimilarFieldCPA	UPQ	Combination Field	Q14(b)	AF6
-	SingleReference	LC	Prior Art	Q11(a)	
F19	Singletwichene	10	Form	&11(a)	
	MinModifications	UPQ	Prior Art	Q12(a)	
F20		, - -	Form		
F24	AssessedBy	UPQ	Skilled Per-	Q12(a)	AF2
F21			son Perspec-		
			tive		
F22	CombinationAttempt	UPQ	Combination	Q13(a)	AF6
1 22	CombinationMotive	IIDO	of Art	015(-)	AEC AEO
F23	CombinationMotive	UPQ	Combination of Art	Q15(a)	AF6, AF2
	BasisToAssociate	UPQ	Combination	Q16(a)	AF6, AF2
F24	Dasis for issociate	01 &	of Art	Q10(a)	111 0, 111 2
	DistinguishingFeatu	UPQ	Novelty	length of Distin-	AF8
F25	res	•	· ·	guishingFeaturesList	
				> 1	
F26	NonTechnicalContri	FC	Contribution	accept if factor	(Sub-Model 1: 6)
F 20	bution		Nature	FeatureTechnical-	
				Contribution not	
				present in ≥ 1 submodel instantiation	
	TechnicalContributi	TP	Contribution	accept if factor	(Sub-Model 1: 6)
F27	on	11	Nature	FeatureTechnical-	(Sub-Model 1. 0)
				Contribution present	
				$in \geq 1$ sub-model	
				instantiation	
E00	ReliableTechnicalEff	TP	Effect Relia-	accept if accept root	(Sub-Model 1: 6)
F28	ect		bility	in ≥ 1 sub-model in-	
	a con a company	T. C.	D: 1	stantiation	(0.1.1/
F29	SufficiencyOfDisclos	LC	Disclosure	accept if factor	(Sub-Model 1: 6)
- - -0	ure		Sufficiency	SufficiencyOfDis- closureIssue present	
				$in \geq 1$ sub-model	
				instantiation	
	IndependentContrib	TP	Contribution	Q17(a)	AF2
F30	ution		Type	• ()	
D01	CombinationContrib	TP	Contribution	Q18(a)	AF2
F31	ution		Type		

ID	Factor	Value	Dimension	Required Answer	Prerequisite
	CircumventTechPro	UPQ	Subject	Q20(a)	
F32	blem	·	Matter	• ()	
			Nature		
	ComputerSimulation	UPQ	Subject	Q19(a)	
F33		01 &	Matter	&15(a)	
			Type		
	NumericalData	UPQ	Subject	Q19(b)	
F34	NumericaiData	UFQ	Matter	Q19(b)	
	25.11	LIDO	Type	010()	
F35	MathematicalMetho	UPQ	Subject	Q19(c)	
1 00	d		Matter		
			Type		
E-2.6	OtherExlusions	UPQ	Subject	Q19(d)	
F36			Matter		
			Type		
	IntendedTechnicalU	TP	Technical	Q22(a)	
F37	se		Character		
	TechUseSpecified	TP	Technical	Q23(a)	
F38	The state of the s		Character	• • (*)	
	SpecificPurpose	TP	Technical	Q24(a)	
F39	specifici di pose	11	Character	&21(a)	
	FunctionallyLimited	LC	Technical	Q25(a)	
F40	FunctionaryEmited	LC	Character	Q25(a)	
	TD 1 : 14 1	TID.		001/	
F41	TechnicalAdaptation	TP	Technical	Q21(a)	
1 11			Character		
F42	Credible	LC	Effect Relia-	Q29(a,c)	AF23
F 4Z			bility		
T. 40	Reproducible	LC	Effect Relia-	Q29(b,c)	AF23
F43			bility		
	ClaimContainsEffect	UPQ	Effect Relia-	Q30(a)	
F44			bility		
	FunctionalInteraction	TP	Effect Na-	Q33(a)	F28
F45			ture	• ()	
	Synergy	TP	Effect Na-	Q32(a)	F28
F46	Syneigy	11	ture	\$02(a)	120
	ObjectiveTechnical	TP	Sub-Model	accept if factor	(Sub-Model 2: 7),
F47	Problem	11	2 Output	Objective Technical-	AF11
	1 Toblem		2 Output	ProblemFormulation	AFII
				$present in \geq 1$	
				sub-model 2 instan-	
				tiation	
F48	Encompassed	UPQ	OTP For-	Q34(a)	AF11
1.40			mulation		
E-40	Embodied	UPQ	OTP For-	Q35(a)	AF11
F49			mulation		
	ScopeOfClaim	LC	OTP For-	Q36(a)	AF11
F50			mulation		
	WrittenFormulation	UPQ	OTP For-	Q37(a)	AF32,
F51		, - ,	mulation	V = 1 (11)	- ,
	Hindsight	LC	OTP For-	Q38(a)	AF32, AF2
F52	111110218110	10	mulation	&00(a)	111 02, 111 2
	WouldModify	FC		Q39(b)	AF2, AF5, AF8,
F53	wouldiviouily	rU	Motivation	Q 39(D)	
200			to Modify		AF29

TT	T. B. (ntinued from p		D
ID	Factor	Value	Dimension	Required Answer	Prerequisite
F54	WouldAdapt	FC	Motivation to Modify	Q39(a)	AF2, AF5, AF8, AF29
F55	OTPObvious	FC	Sub-Model 2 Output	accept if reject for sub-model 2 is < 1	(Sub-Model 2: 7)
F56	UnexpectedEffect	TP	Effect Na-	Q26(a)	AF23
1 00	D . T	T. C.	ture	007()	ATION
F57	PreciseTerms	LC	Effect Na- ture	Q27(a)	AF23
F58	OneWayStreet	FC	Effect Na- ture	Q28(a)	AF23, AF2, AF8
F59	DisadvantageousMod	FC	Disadvanta geousMod	Q40(a)	AF8
F60	Foreseeable	FC	Disadvanta geousMod	Q41(a)	AF2
F61	UnexpectedAdvanta	TP	Disadvanta	Q42(a)	AF2
	ge	TID.	geousMod		(C 1 35 114 a)
F62	InventionUnexpecte dEffect	TP	Sub-Model 1 Output	$ \begin{array}{cccc} accept & if & factor \\ Unexpected Effect \\ present & in & \geq & 1 \\ sub-model & 1 & instantiation \\ \end{array} $	(Sub-Model 1: 6)
F63	BioTech	UPQ	Biotech Specifics	Q43(a)	
	A 4:1 1	LIDO	Biotech	044(-)	
F64	Antibody	UPQ	Specifics	Q44(a)	
F65	KnownTechnique	FC	Biotech Specifics	Q47(a)	AF5
F66	OvercomeTechDiffic ulty	TP	Biotech Specifics	Q48(a)	
F67	PredictableResults	LC	Biotech Specifics	Q45(a)	
F68	ReasonableSuccess	LC	Biotech Specifics	Q46(a)	
	GapFilled	FC	Known	Q49(a)	AF5, AF2
F69	Gaprined		Measures	Q43(a)	AFO, AFZ
F70	WellKnownEquivale	FC	Known	Q50(a)	AF5
F 70	nt		Measures		
F71	KnownProperties	FC	Known Measures	Q51(a)	
F72	AnalogousUse	FC	Known Measures	Q52(a)	
F73	KnownDevice	FC	Known Measures	Q53(a)	
F74	AnalogousSubstituti on	FC	Known Measures	Q55(a)	
F75	ObviousCombination	FC	Obvious Combina- tion	Q54(a)	F73
F76	ChooseEqualAlterna tives	FC	Obvious Selection	Q56(a)	
F77	NormalDesignProce	FC	Obvious Selection	Q57(a)	
- · ·	dure SimpleExtrapolation	FC	Obvious Se-	Q58(a)	AF5

ID	Factor	Value	Dimension	Required Answer	Prerequisite
F79	ChemicalSelection	FC	Obvious Se-	Q59(a)	
			lection		
F80	SufficiencyOfDisclos	LC	Effect Relia-	Q31(a)	F44
	ureIssue		bility		

3.2 Values

The ADM's reasoning is underpinned by four core legal values. These values represent the competing purposes of patent law and help to justify the preferential ordering of the acceptance conditions.

- Legal Certainty (LC): This value promotes patents which are clear, predictable, and reliable. It requires that patent claims are supported and that their technical contributions work as claimed and are reproducible. This promotes legal certainty by ensuring the public can clearly understand the scope and validity of a granted patent.
- Upholding Patent Quality (UPQ): This value is concerned with ensuring that patents are granted only for genuine, non-obvious inventions which represent a meaningful technical contribution over the prior art, thereby maintaining public trust in the patent system.
- Technical Progress (TP): This value focuses on promoting inventions that provide a real, substantive technical contribution beyond the existing state of the art, often indicated by a credible technical effect or synergy.
- Fair Competition (FC): This is a protective value emphasising the role of safeguarding the public domain from the grant of monopolies on advances that are trivial, obvious, or non-technical, ensuring that routine engineering choices remain in the public domain.

3.3 Question List

1. Relevant Prior Art

These questions establish the relevant prior art to the invention.

- Q1 Do the candidate relevant prior art documents have a similar purpose to the invention?
- (a) They have the same or a very similar purpose.
- (b) They have a different purpose.
- Q2 Are there similar technical effects between the candidate relevant prior art documents and the invention?
- (a) It produces a similar technical effect.
- (b) It produces a different technical effect.
- Q3 What is the relationship between the candidate relevant prior art documents and the invention's technical field?
- (a) It is from the exact same technical field.
- (b) It is from a closely related or analogous technical field.
- (c) It is from an unrelated technical field.

2. Common General Knowledge (CGK)

These questions establish the source and status of the background knowledge in the field.

- Q4 Is the assertion of what constitutes Common General Knowledge being contested?
- (a) Yes
- (b) No

- Q5 (if Q4(a)) What is the primary source of evidence cited for the CGK?
- (a) A standard textbook
- (b) A broad technical survey
- (c) A single publication in a very new or rapidly evolving field.
- (d) A single publication in an established field.
- (e) No documentary evidence is provided.
- (f) Other

3. The Skilled Person

These questions define the person who is skilled in the art. This a hypothetical concept rather than a real person, nevertheless this must be established and reasoned through.

- Q6 Is the practitioner skilled in the relevant technical field of the prior art?
- (a) Yes
- (b) No
- Q7 Does the practitioner possess average knowledge and ability for that field?
- (a) Yes
- (b) No
- Q8 Is the practitioner presumed to be aware of the common general knowledge in the field?
- (a) Yes
- (b) No
- Q9 Does the practitioner have access to all documents comprising the state of the art?
- (a) Yes
- (b) No
- Q10 What is the nature of this practitioner?
- (a) An individual practitioner
- (b) A research team
- (c) A production or manufacturing team

4. The Closest Prior Art

These questions help to identify the closest prior art (CPA) documents

- Q11 Is the closest prior art document a single reference?
- (a) Yes
- (b) No
- Q12 Does the closest prior art document require minimal modifications to the invention as assessed from the perspective of the skilled person??
- (a) Yes
- (b) No
- Q13 Is there a reason to combine other documents with the CPA to attempt to demonstrate obviousness?
- (a) Yes
- (b) No
- Q14 (if Q13(a)) How are the other documents to be combined related to the CPA's technical field?
- (a) They are from the same technical field.
- (b) They are from a similar technical field.
- (c) They are from an unrelated field.

Q15 (if Q13(a)) Would the skilled person have a clear and direct motive to combine these specific documents?

- (a) Yes
- (b) No

Q16 (if Q13(a)) Is there a reasonable basis for the skilled person to associate these specific documents with one another?

- (a) Yes
- (b) No

5. Technical Contribution & Effect

These questions analyse the nature of the invention's technical differences from the prior art.

- Q17 Does the feature make an independent technical contribution to the invention?
- (a) Yes
- (b) No
- Q18 Does the feature make a contribution in combination with other technical features to the invention?
- (a) Yes
- (b) No
- Q19 What is the primary nature of the distinguishing feature?
- (a) A computer simulation.
- (b) The processing of numerical data.
- (c) A mathematical method or algorithm.
- (d) Other excluded field
- (e) None of the above
- Q20 Is the feature a technical implementation of a non-technical method i.e. game rules or a business method, and does it circumvent the technical problem rather than addressing it in an inherently technical way?
- (a) Yes
- (b) No
- Q21 Is the feature a specific technical adaptation which is specific for that implementation in that its design is motivated by technical considerations relating to the internal functioning of the computer system or network.
- (a) Yes
- (b) No
- Q22 (If Q19(a) or Q19(b)) Is there an intended use of the data resulting from the feature?
- (a) Yes
- (b) No
- Q23 (If Yes Q22) Is the potential technical effect of the numerical data either explicitly or implicitly specified in the claim?
- (a) Yes
- (b) No
- Q24 Does the technical contribution have a specific technical purpose i.e. produces a technical effect serving a technical purpose. Not merely a 'generic' purpose i.e. "controlling a technical system".
- (a) Yes
- (b) No
- Q25 Is the claim functionally limited to the technical purpose stated either explicitly or implicitly?
- (a) Yes

- (b) No
- Q26 Is the technical effect unexpected or surprising?
- (a) Yes
- (b) No
- Q27 (If yes to Q26) Is this unexpected effect described in precise, measurable terms?
- (a) Yes
- (b) No
- Q28 (If yes to Q26) Is the unexpected effect a result of a lack of alternatives creating a 'one-way street' situation? I.e. for the skilled person to achieve the technical effect in question from the closest prior art, they would not have to choose from a range of possibilities, because there is only one-way to do x thing, and that would result in unexpected property y.
- (a) Yes
- (b) No
- Q29 Are the technical effects credible and/or reproducible?
- (a) Credible
- (b) Reproducible
- (c) Both
- (d) Neither
- Q30 (if Q29(a,d) Does the claim contain the non-reproducible effect i.e. if the claim says the invention achieve effect E, but this is not reproducible.
- (a) Yes
- (b) No
- Q31 (if Q30) Is there an issue with sufficiency of disclosure regarding this feature?
- (a) Yes
- (b) No
- Q32 How do the invention's features create the technical effect?
- (a) As a synergistic combination (effect is greater than the sum of parts).
- (b) As a simple aggregation of independent effects.
- Q33 (if Q32(a)) Is the synergistic combination achieved through through a functional interaction between features?
- (a) Yes
- (b) No

6. The Objective Technical Problem

This section covers the establishment and solution of the objective technical problem.

- Q34 Would the skilled person, consider the the technical effects identified to be encompassed by the technical teaching?
- (a) Yes
- (b) No
- Q35 Would the skilled person, consider the the technical effects identified to be embodied by the same originally disclosed invention?
- (a) Yes
- (b) No
- Q36 Are the technical effects achieved across the whole scope of the claim, and is this claim limited in such a way that substantially all embodiments encompassed by the claim show these effects?
- (a) Yes

- (b) No
- Q37 Can we construct a written formulation of the objective technical problem?
- (a) Yes
- (b) No

Q38 Has the objective technical problem been formulated in such a way as to refer to matters of which the skilled person would only have become aware by knowledge of the solution claimed?

- (a) Yes
- (b) No

Q39 Would the skilled person have arrived at the proposed invention by adapting or modifying the closest prior art, not simply because they could, but because they the prior art would have provided motivation to do so in the expectation of some improvement or advantage?

- (a) Would have adapted from the prior art
- (b) Would have modified from the prior art
- (c) Neither

7. Common Obviousness Arguments

This section covers standard lines of reasoning used to establish that an invention is obvious.

Q40 Does the invention involve a disadvantageous modification of the prior art?

- (a) Yes
- (b) No

Q41 (if Q40) Was this disadvantageous modification of the prior art foreseeable to the skilled person?

- (a) Yes
- (b) No

Q42 (if Q40) Did the disadvantageous modification result in an unexpected technical advantage?

- (a) Yes
- (b) No

Q43 Is the subject matter of the invention biotech?

- (a) Yes
- (b) No

Q44 (if Q43) Does the subject matter concern antibodies?

- (a) Yes
- (b) No

Q45 (if Q43) Were the results obtained clearly predictable?

- (a) Yes
- (b) No

Q46 (if Q43) Was there a 'reasonable' expectation of success in obtaining the results?

- (a) Yes
- (b) No

Q47 (if Q44) Were the antibodies arrived at exclusively by applying techniques known in the art?

- (a) Yes
- (b) No

Q48 (if Q44) Does the application of the antibodies overcome technical difficulties in generating or manufacturing them?

- (a) Yes
- (b) No

Q49 Does the invention merely fill an obvious gap in an incomplete prior art document which would naturally occur to the skilled person?

- (a) Yes
- (b) No

Q50 Does the invention differ from the prior art in regard to substituting one well-known equivalent for another (e.g., a hydraulic for an electric motor)?

- (a) Yes
- (b) No

Q51 Is the invention merely the new use of known properties of a well-known material i.e. A washing composition containing as detergent, a known compound having the known property of lowering the surface tension of water.

- (a) Yes
- (b) No

Q52 Does the invention just apply a known technique in a closely analogous situation?

- (a) Yes
- (b) No

Q53 Does the invention rely on known devices?

- (a) Yes
- (b) No

Q54 (if Q53(a)) Is the invention a simple juxtaposition of the known devices, with each performing their normal, expected function?

- (a) Yes
- (b) No

Q55 (if Q53(a)) Does the invention rely within a known device, simply substituting in a recently developed material suitable for that use?

- (a) Yes
- (b) No

Q56 Does the invention result from a choice between equally likely alternatives?

- (a) Yes
- (b) No

Q57 Does the invention consist in choosing parameters from a limited range of possibilities arrived at through routine design procedures?

- (a) Yes
- (b) No

Q58 Is the invention a result of a simple, straightforward extrapolation from the known art?

- (a) Yes
- (b) No

Q59 Does the invention just consist in selecting a specific chemical compound or composition from a broad field?

- (a) Yes
- (b) No