Skilled-Person and Background Assumptions

Saturday, June 20, 2026

Person having ordinary skill in the art (skilled artisan, PHOSITA) (United States and Europe)

(1) Ask what problem does the invention aim to solve? Illumina v. MGI [2021] EWHC 57 (Pat) (Mr. Justice Birss), paragraph 68, first Illumina question for use in identifying the skilled person.

(2) Consider what the established field which existed was, in which the problem in fact can be located. Illumina v. MGI [2021] EWHC 57 (Pat) (Mr. Justice Birss), paragraph 68, second Illumina question for use in identifying the skilled person.

(3) Identify the notional person or team in that established field which is the relevant team making up the person skilled in the art. Illumina v. MGI [2021] EWHC 57 (Pat) (Mr. Justice Birss), paragraph 68, third Illumina question for use in identifying the skilled person.

(4) The educational level of the inventor factor. Environmental Designs, Ltd. v. Union Oil Co., 713 F.2d 693, 218 USPQ 865 (Fed. Cir. 1983). The inventor's educational background is guidance for educational level of active workers in the field. The inventor is not considered be a person having ordinary skill in the art.

(5) The type of problems encountered in the art factor. Environmental Designs, Ltd. v. Union Oil Co., 713 F.2d 693, 218 USPQ 865 (Fed. Cir. 1983), citing Jacobson Brothers, Inc. v. United States, 512 F.2d 1065, 185 USPQ 168 (Ct. Cl. 1975), noting the various prior art approaches employed.

(6) The prior art solutions to the problems encountered in the art factor. Environmental Designs, Ltd. v. Union Oil Co., 713 F.2d 693, 218 USPQ 865 (Fed. Cir. 1983), citing Jacobson Brothers, Inc. v. United States, 512 F.2d 1065, 185 USPQ 168 (Ct. Cl. 1975), noting the kinds of solutions found previously.

(7) The rapidity with which innovations are made factor. Environmental Designs, Ltd. v. Union Oil Co., 713 F.2d 693, 218 USPQ 865 (Fed. Cir. 1983), citing Jacobson Brothers, Inc. v. United States, 512 F.2d 1065, 185 USPQ 168 (Ct. Cl. 1975), noting the speed or rapidity of innovation in the art.

(8) The sophistication of the technology factor. Environmental Designs, Ltd. v. Union Oil Co., 713 F.2d 693, 218 USPQ 865 (Fed. Cir. 1983), citing Jacobson Brothers, Inc. v. United States, 512 F.2d 1065, 185 USPQ 168 (Ct. Cl. 1975), noting sophistication of the technology involved.

(9) The educational level of active workers in the field factor. Environmental Designs, Ltd. v. Union Oil Co., 713 F.2d 693, 218 USPQ 865 (Fed. Cir. 1983), citing Jacobson Brothers, Inc. v. United States, 512 F.2d 1065, 185 USPQ 168 (Ct. Cl. 1975), noting the educational background of those actively working in the field. In the biomedical arts, the level of skill of a person having ordinary skill in the art is acknowledged to be high. The education level required will be higher for those involved in drug discovery.

(11) A person of ordinary skill in the art is a hypothetical person who is presumed to have known the relevant art at the time of the invention. Manual of Patent Examining Procedure § 2141. The person having ordinary skill in the art had access to everything in the prior art at the time, including the documents cited in a search report. See European Patent Office Technical Board of Appeal cases T4/98,

T143/94, and T426/88. The skilled person is presumed to have had access to everything in the "prior art", in particular the documents cited in the search report, and to have had at their disposal the means and capacity for routine work and experimentation which are normal for the field of technology in question. If the problem prompts the person skilled in the art to seek its solution in another technical field, the specialist in that field is the person qualified to solve the problem. See Guidelines for Examination in the European Patent Office, Chapter VII, 3. Person skilled in the art.

(12) The person skilled in the art is aware of what was common general knowledge in the art at the relevant date. See European Patent Office Technical Board of Appeal cases T4/98, T143/94, and T426/88. The "person skilled in the art" should be presumed to be a skilled practitioner in the relevant field of technology, who possesses average knowledge and ability and is aware of what was common general knowledge in the art at the relevant date. See Guidelines for Examination in the European Patent Office, Chapter VII, 3. Person skilled in the art.

(13) The person having ordinary skill in the art had at their disposal the means and capacity for routine work and experimentation which are normal for the field of technology in question.

(14) The skilled person may be expected to look for suggestions in neighboring and general technical fields. See European Patent Office Technical Board of Appeal cases T176/84 and T195/84. The law presumes that the hypothetical person having ordinary skill in the art thinks along the lines of the conventional wisdom in the art. Standard Oil Co. v. American Cyanamid Co., 774 F.2d 448, 454 (Fed. Cir. 1985).

(15) The skilled person may be expected to look for suggestions even in remote technical fields, if prompted to do so. See European Patent Office Technical Board of Appeal case T560/89. The law presumes that the hypothetical person having ordinary skill in the art thinks along the lines of the conventional wisdom in the art. Standard Oil Co. v. American Cyanamid Co., 774 F.2d 448, 454 (Fed. Cir. 1985).

(16) The skilled person is involved in constant development in their technical field. See Guidelines for Examination in the European Patent Office, Chapter VII, 3. Person skilled in the art. See also European Patent Office Technical Board of Appeal cases T774/89 and T817/95.

(17) The predictability of an art indicates the skill of a PHOSITA. Predictability is about how much can be anticipated from what is known of the art. As explained by the PTO, “[i]f one skilled in the art can readily anticipate the effect of a change within the subject matter to which the claimed invention pertains, then there is predictability in the art.” M.P.E.P. § 2164.03 (9th edition, June 2020). Predictability also makes a “qualitative” difference for the question of whether a genus claim can be enabled by one single embodiment: “In mechanical cases, . . . broad claims may be supported by a single form of the apparatus disclosed in an applicant’s application.” In re Vickers, 141 F.2d 522, 526–27 (C.C.P.A. 1944). Predictability of the art in N. Telecom, Inc. v. Datapoint Corp., 908 F.2d 931, 941-43 (Fed. Cir. 1990), holding certain claims valid, in the context of enablement, although the specification did not disclose a key subroutine in a program because the court found that one of ordinary skill would understand how to write such a subroutine without undue experimentation. To solve a problem of type X in computer programming, it may be typical to apply algorithm Y. The algorithm may have many parts, requiring a sophisticated understanding of mathematics to know when it should be applied. Yet the algorithm will often work in a new context as a PHOSITA expects, making developments using the algorithm more likely to be found obvious. See, e.g., id.

(18) The skilled person has the same level of skill for assessing inventive step and sufficient disclosure. See European Patent Office Technical Board of Appeal cases T60/89, T694/92, and T373/94.

(19) Assessment of whether the solution involves an inventive step must therefore be based on that specialist's knowledge and ability. See European Patent Office Technical Board of Appeal case T32/81.

(20) The person having ordinary skill in the art can be a team of individuals (consult aggregate patent data to determine how many people would constitute the typical team). There may be instances where it is more appropriate to think in terms of a group of persons, e.g., a research or production team, rather than a single person. See European Patent Office Technical Board of Appeal cases T164/92 and T986/96.

(21) The person having ordinary skill in the art can be of a size consistent with teams inventing similar technologies (some technology areas might be dominated by one discipline, whereas others will commonly bring together two or three), and

(22) The person having ordinary skill in the art can be representing ordinary skills commonly found in the invention of related technologies (this can help determine how much new knowledge team members can be expected to gain from one another).

(23) Does the specification refer to the idea of the PHOSITA or skilled artisan?

(24) Does the specification make factual findings on the skill level or knowledge of the PHOSITA?

(25) Does the specification use expert evidence to inform its factual findings on the PHOSITA determination?

(A) The skilled person in Illumina v. MGI ([2021] EWHC 57 (Pat) (Birss J) was “a team working on research into sequencing.” Illumina, paragraph 96. See EP (UK) 3 109 258 and EP (UK) 2 222 710.

(A) Skilled Team. The Patent is directed to a team comprising a clinician with an interest in treatments for MS ("the Skilled Neurologist"), a virologist with knowledge of JCV ("the Skilled Virologist") and an immunoassay development scientist ("the Skilled IDS", referred to by Biogen as the Skilled Assay Expert). The slight dispute concerned Biogen's contention that the Skilled Team would not necessarily include a virologist with knowledge of JCV, but Mr Baldwin and Dr Molyneux attributed to the Skilled Neurologist and the Skilled IDS a degree of knowledge of virology and JCV, so there was almost no practical difference. Generally, I will refer to the Skilled Team, with two exceptions: first, where the issue specifically engages a particular member of this notional Team and second, when considering what the Patent meant to or taught the Team - in that context I prefer to refer to the Skilled Reader of the Patent, but it is the same Team. Sandoz AG & Ors v. Biogen MA Inc [2024] EWHC 2567 (Pat) (11 October 2024). This trial was principally concerned with EP (UK) 3 575 792 ('EP792' or 'the Patent').

(B) PHOSITA in the computer science art. Northern Telecom v. Datapoint, 9 U.S.P.Q.2d 1577 (N.D. Tex. 1988). The court found unpersuasive the argument that the level of skill in computer science was high because of rapid technical evolution and a high level of sophistication in the technology. Id. at 1625. Instead, the court relied primarily on the education of active workers in the field and their experience to ascertain the skill level of PHOSITA. Id. See Joseph P. Meara, Notes and Comments, Just Who Is the Person Having Ordinary Skill in the Art? Patent Law's Mysterious Personage, 77 Wash. L. Rev. 267 (2002).

(C) PHOSITA in the organic chemistry art. Imperial Chem. Indus., PLC v. Danbury Pharmacal, Inc., 777 F. Supp. 330, 371 (D. Del. 1991) (finding PHOSITA to be a Ph.D. organic chemist) (highly advanced, like those involved in drug discovery.).

(D) PHOSITA in the polymer chemistry art, using the rapidity of innovation factor. Studiengesellschaft Kahle mbH v. Dart Industries, Inc., 549 F. Supp. 716 (D. Del. 1982). The accused infringer argued that the invention, a method of making polymers, was obvious because of rapid progress by a third party toward the same invention. Id. at 727. The court rejected this characterization, in part because it rejected the implied assumption that the inventor, later a Nobel laureate, and the third party, DuPont, were representative of ordinary skill in the art of polymer chemistry. See id. at 732, 735.

(E) PHOSITA in the satellite communications art. In re Rouffet, 149 F.3d 1350 (Fed. Cir. 1998) The court ignored the sophistication of the satellite communications technology and focused on the motivation/suggestion test. See id. at 1355-59. Although the PHOSITA was found to be highly skilled, the court affirmed that motivation cannot come solely from a high level of skill in the art. Id. at 1356-57, 1359. The motivation to modify or combine prior art references can come from knowledge of one of ordinary skill in the art.

(F) PHOSITA in the art of fly wraps for the legs of horses. Graham v. Gun-Munro, No. C-99-04064 CRB, 2001 U.S. Dist. LEXIS 7110, *19 (N.D. Cal. May 22, 2001) (finding PHOSITA to be a person with some formal education but no special skills or training in the relevant art).

(G) PHOSITA in the loudspeaker design art. Bose Corp. v. JBL, Inc., 112 F. Supp. 2d 138 (D. Mass. 2000). PHOSITA of loudspeaker design held a "bachelor of science degree in either electrical engineering, physics, mechanical engineering, or possibly acoustics." The Bose court, for example, found that PHOSITA was "familiar with aerodynamics, fluid flow mechanics, and acoustics, and would have worked as a loudspeaker designer for two to three years." Id. at 155.

(H) PHOSITA in the polymer chemistry art. Studiengesellschaft Kahle mbH v. Dart Industries, Inc., 549 F. Supp. 716 (D. Del. 1982). The accused infringer argued that the invention, a method of making polymers, was obvious because of rapid progress by a third party toward the same invention. Id. at 727. The court rejected this characterization, in part because it rejected the implied assumption that the inventor, later a Nobel laureate, and the third party, DuPont, were representative of ordinary skill in the art of polymer chemistry. See id. at 732, 735.

(I) PHOSITA in the underwater salvage art, using the prior art factors in a level of ordinary skill inquiry. Jacobson Brothers, Inc. v. United States, 512 F.2d 1065 (Ct Cl. 1975), adopting opinion originally published in 184 U.S.P.Q. (BNA) 181 (Ct Cl. 1974)). In Jacobson, the licensee of a patent for an underwater salvage device employing closed-circuit TV sued the U.S. Navy for infringing the patent in its use of three deep-water torpedo recovery rigs. See id. at 1066-07. Among its defenses, the Navy asserted that Jacobson's patent was invalid for obviousness. Id. at 1068. The court agreed that the Navy devices would infringe the licensee's patent if the patent were valid. See id. The patented and infringing devices each consisted of an underwater television camera and lights mounted on a frame with a grasping claw. See id. at 1067-68. The rig was maneuvered on the ocean floor by means of a system of cables, pulleys, and winches. Id. at 1067. This maneuvering system was critical for maintaining the stability of the rig in deep water operations. Id. at 1069. The point of dispute was whether it was obvious to combine an underwater salvage device equipped with a TV camera and lights with a maneuvering system comprised of cables, pulleys, and winches. Id. at 1068-69. The Court of Claims, adopting the trial court's opinion, found the patent invalid for obviousness. Id. at 1073. Because it had no other evidence, the Court of Claims evaluated the level of skill by considering the prior art references containing the main elements of the invention-the salvage rig with underwater TV and the maneuvering system. Id. at 1071. The court approached this task by comparing the prior art problem to the problem

solved by the invention. Id. It found that each problem concerned the maneuvering of a device in the presence of underwater currents and tides. In the absence of evidence to the contrary, the court assumed that a frame-mounted TV camera did not present any maneuvering or stability problems different from those of a diving bell. Id. The court compared the prior art solution to the patented solution and found them to employ essentially identical systems of cables, pulleys, and winches. Id. at 1071-72. Hence, the court reasoned inductively from the prior art problems/solutions, deciding that the logical gap was small between the invention and prior art. Id. Therefore, the invention was obvious to PHOSITA. Id. at 1073.

(J) PHOSITA in the asbestos removal art, using the prior art problems/solutions factors in a nonobviousness analysis. In re GPAC Inc., 57 F.3d 1573, 1579 (Fed. Cir. 1995), finding that the level of skill in asbestos containment systems was high because of the hazardous and difficult nature of the work and because it is a highly regulated industry. The applicant appealed a final rejection by the Board of Patent Appeals and Interferences (BPAI) for obviousness in a re- examination of a patent for an asbestos removal containment system. Id. at 1575. A reexamination occurs when the PTO examines an issued patent again in light of new prior art or new argument by the patentee or a third party. See 35 U.S.C. §§ 301-02 (1994 & Supp. 1999). See GPAC, 57 F.3d at 1576; see also Ex parte GPAC Inc., 29 U.S.P.Q. 2d 1401, 1401 (B.P.A.I. 1993). BPAI had not made a "specific finding" on the ordinary skill in the art but instead cited the factors of Environmental Designs and relied on the level of skill displayed by the prior art. GPAC, 57 F.3d at 1579; Ex parte GPAC, 29 U.S.P.Q. 2d at 1432 (citing the Environmental Designs factors as set forth in Custom Accessories, Inc. v. Jeffrey-Allan Industries, Inc., 807 F.2d 955, 962 (Fed. Cir. 1986)). The applicant argued that the board had ignored its expert evidence of a low skill level in the field, apparently based on education level of active workers. GPAC,57 F.3d at 1579; Ex parte GPAC,29 U.S.P.Q 2d at 1432. The Federal Circuit upheld the Board's finding of obviousness. GPAC, 57 F.3d at 1584. The Federal Circuit did not follow the sort of analysis the Court of Claims made in Jacobson. Instead, the Federal Circuit found that one of the prior art references showed the prior art problems and potential solutions to be "somewhat sophisticated" because asbestos is a hazardous material and is therefore difficult to work with. Id. at 1579. The court also commented that because asbestos removal was a highly regulated industry, a high level of skill was required. Id. For these reasons, the court found no clear error in the Board's determination, despite contradictory evidence of a low level of skill proffered by the appellant. Id. at 1579-80. Therefore, the Federal Circuit upheld BPAI's finding of a high level of skill in the art and a conclusion of obviousness, based in part on a subjective characterization of the prior art problems and solutions rather than on what those problems and solutions taught one of ordinary skill in the art. See id.

(K) PHOSITA in the automotive art. Uniroyal, Inc. v. Rudkin-Wiley Corp., 837 F.2d 1044, 1053 (Fed. Cir. 1988). The predictability of the art (finding that the inability of an expert in the field ''to predict the result the invention would have on a tractor-trailer vehicle" suggests the nonobviousness of the invention).

(M) PHOSITA in the antisense DNA technology art. Enzo Biochem, Inc. v. Calgene, Inc., 188 F.3d 1362, 1373-75 (Fed. Cir. 1999) (holding that claims for antisense DNA technology in mammalian cells were invalid for Jack of enablement when the specification only provided examples in bacterial cells because of the unpredictable nature of the technology).

(N) PHOSITA in the antibody-drug conjugate chemistry and biochemistry art. Petitioner states that, as of the filing of the provisional applications to which the ’039 patent claims priority through July 2019, a person of ordinary skill in the art of the field of the ’039 patent “would have had either (1) a Ph.D. in

biochemistry or a similar field, or (2) a master's degree in biochemistry or a similar field with at least two to three years of experience with ADC design," and that "[m]ore education can supplement practical experience, and vice-versa." Pet. 20 (citing Ex. 1002 ¶ 20). For purposes of this Decision, we accept Petitioner's proposed definition, which is supported by Dr. Lambert's testimony (Ex. 1002 ¶ 20) and is consistent with the scope and content of the '039 patent and the asserted prior art. See AstraZeneca Pharmaceuticals LP v. Sweegen Inc., PGR2021-00042. Patent 10,808,039 B2.

(O) PHOSITA. Sunrise Med. HHG, Inc. v. AirSep Corp., 95 F. Supp. 2d 348, 401-02 (W.D. Pa. 2000). Some courts have also made findings on the length of experience and the knowledge of sub-disciplines in which PHOSITA specializes.

Common General Knowledge

The relevant legal principles regarding Common General Knowledge were set out in KCI Licencing Inc v. Smith & Nephew plc [2010] EWHC 1487 (Pat), [2010] FSR 31 at [105]-[112]. To form part of the Common General Knowledge, information must be generally known in the art and regarded as a good basis for future action. Material that would be found by routine research while developing the cited prior art may be considered in assessing obviousness, but it is not Common General Knowledge as such.