

Using Patents to Find the Terminology You Need

By Bruce D. Popp

As a patent translator, you can benefit from the public availability of target-language patents. Today, patents and published patent applications are widely available on the Internet. In addition to helping you solve terminology issues, looking at target-language patents can help improve your writing style in the target language and subject area knowledge. Read on to find out how to identify specific target-language patents that can help you find relevant terminology.

Art Appreciation

Patents are understood and examined by comparing the invention being

How does the translator match the “exact terms” from the source language to the target language?

patented to the existing art, and more specifically the prior art. In this context, art has nothing to do with Picasso. Here, it refers to the scientific and technical arts. More specifically, art means the body of publicly available scientific and technical knowledge relating to a specific subject pertinent to the invention. This knowledge is often

written and published in scientific or technical journals, industry standards, trade magazines, and in other patents or published patent applications anywhere in the world. Information can also become known to the public through conference presentations, demonstrations at trade shows, or product trials. As such, the art is

always changing. A very relevant article may appear in a journal today; a new product may be introduced tomorrow. Be that as it may, examining this material provides a rich source of terminology for patent translators.

How It Works

When a patent application is examined or an issued patent is being opposed months or years after the application was filed, all that matters is what was known in the art when the application was filed (or at the time of invention). The patent is being compared to what came before it. Anything that became part of the art after the application date is irrelevant. This is the distinction that “prior” makes in the term “prior art.”

During the patent application examination, the relation of its subject matter to the prior art must be understood. This is important because when it is compared to the prior art, the invention must prove to be novel¹ and nonobvious² (or involve an inventive step³). This means that a patent practitioner—for example, a U.S. or European patent agent, U.S. patent attorney, or French *conseil en propriété industrielle*—preparing a patent application must research the art. This search includes the sources provided on page 21 and at the end of this article, but most notably published patent applications and patents. The practitioner must establish: 1) what portion of the art was known prior to the invention; and 2) which source documents the closest prior art. After identifying the prior art, the patent practitioner who prepares the application must describe the prior art—typically this will include the numbers of one or more patents—and cite the reference(s) documenting the closest prior art. During the examination of the patent application, a patent exam-

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iner—usually a civil servant working within a patent office—will also search the prior art to determine whether the application should become a patent. If the examiner finds different or closely related items, he or she may require the patent practitioner to revise the application to address the prior art found. If an invention has been described in the prior art, a patent will not be granted.

The Translator’s Task

When subsequently translating the patent application, as a patent translator, you must understand the terminology used in the patent, as well how to render it correctly in the target language. Title 35 of the United States Code (“U.S. Patent Law”) section 112 states that the “specification [the part of a patent application that describes the invention and how it is different from what was known before] shall contain a written description of the invention...in such full, clear, concise and exact terms...”⁴ On the face of it, this would seem to make patents a very desirable source text for translation. What translator would not love to have a source text that is required by law to be “full, clear, [and] concise?” (No more complaining about bad writing, right?)

The Other Shoe

Those last two words, “exact terms,” however, hint at a bigger problem. How do you match the

“exact terms” from the source language to the target language? The U.S. Patent Law continues: “...as to enable any person skilled in the art to which it pertains...to make and use the same.” This is where the other shoe drops. The target audience is “any person skilled in the art.” Therefore, the focus of your terminology research should be the “exact terms” in the target language that enable “any person skilled in the art” to make the invention. This means that you need to find the terms a person skilled in the art would use.

Where and how can you find the exact terms from the art? As a patent translator, you need a variety of tools to do this successfully, including routinely consulting available dictionaries, glossaries, and other reference works. In addition to references, there is another way of finding the exact terms: using the results from the searches conducted by the patent practitioner and patent examiner to identify closely related target-language patents from the art.

Unlike a patent examiner, you do not need to be concerned about dates or “priority” when researching terminology. Something that comes later—for example, a reference that cites the patent being translated—can still be useful for terminology. Clearly this tool will not work all the time, and it might work only on rare occasions in certain language combinations. When it works, however, it can be a ➡

Figure 1: The References Cited from the Cover Sheet of U.S. Patent 5,406,549

| | | | |
|--|--------|-------------------------|-----------|
| [56] | | References Cited | |
| U.S. PATENT DOCUMENTS | | | |
| 4,683,563 | 7/1987 | Rouse et al. | 370/16.1 |
| 5,179,548 | 1/1993 | Sandesara | 370/16.1 |
| 5,218,604 | 6/1993 | Sosnosky | 370/85.14 |
| 5,278,824 | 1/1994 | Kremer | 370/16.1 |
| 7,855,795 | 3/1992 | Kremer . | |
| OTHER PUBLICATIONS | | | |
| <p>“SONET Add-Drop Multiplex Equipment (SONET ADM) Generic Criteria for a Unidirectional, Path Protection Switched, Self-Healing Ring Implementation”, Bellcore Technical Advisory TA-TSY-000496, Issue 3, Aug. 1990 pp. i-8-1.</p> <p>“Ring Interworking Issues, Solutions and Product Implications and FT-2000” Engineer’s Notes by W. Kremer, AT&T, Mar. 23, 1993 8 pages.</p> <p>“SWB Ring Interconnection Architecture Issues and Proposed Interim Solutions”, Contribution to T1 Standards Project, T1X1.2, by Joseph Sosnosky and Jonathan A. Morgan, Bellcore, Mar. 1, 1993 pp. 1-6.</p> <p>“SONET Ring Interworking Issues” Committee T1 Contribution, T1X1.2/93-003 by Barbara E. Smith Southwestern Bell Technology Resources, Inc., and Cliff Yackle, Southwestern Bell Telephone Company, Mar. 1, 1993 pp. 1-18.</p> <p>“Ring Interworking With A Bidirectional Ring” Contribution to T1 Standards Project, T1X1 . . 5/91-043, by W. Kremer, AT&T, Apr. 15, 1991 26 pages.</p> | | | |

Figure 2: Citation of the Prior Art in French Patent 2,666,348

On a déjà proposé d'emballer les détergents à l'intérieur de sachets constitués d'un film protecteur à base d'un composé organique ionique polyhydroxylé et soluble dans l'eau. A cet effet, on peut se référer notamment au brevet CA 510.555.

30 Les brevets US 3.198.740 et US 4.626.372 décrivent l'un un sachet constitué d'un film d'alcool polyvinylique rempli d'un détergent contenant du tripolyphosphate de sodium (US 3.198.740) et l'autre, des films d'alcools polyvinyliques solubles dans des solutions de borates (US 4.626.372) c'est-à-dire adaptés pour

35 emballer les compositions détergentes contenant du perborate comme agent de blanchiment.

valuable and authoritative source of exact terms of art in the target language.

Looking for Art in All the Right Places

As you begin searching for relevant terminology, it is important to remember that the patent itself must disclose the closest prior art.

In U.S. patents and published patent applications, the cover sheet provides a bibliography prepared by the U.S. Patent and Trademark Office using information provided by the applicant. For example, consider U.S. Patent 5,406,549. The relevant section of the cover sheet from this patent appears in Figure 1, and you can download a copy using one of the online resources listed on page 21. In Figure 1, the “[56]” is the numbered field code, or INID (Internationally Agreed Numbers for the Identification of Data), for the “list of prior art documents” appearing on the cover sheet.⁵ Here, the list of prior art documents cites five other U.S. patents and an equal number of documents presented to U.S. standards bodies. In this example, all of the references are in English, so they are unlikely to be useful if you are translating the patent out of English. You should not stop the search at the references, however, as there are a few more areas to check out.

Mining the Resources of the European Patent Office

In European and other patents, a discussion of the prior art generally starts after the first few paragraphs. This is the best place to start looking for sources of relevant terminology. Consider, for example, French Patent 2,666,348 in Figure 2.⁶ The last two paragraphs on the first page in Figure 2 list two U.S. and one Canadian patent as relevant prior art. These are

Figure 3: Bibliographic Information from the European Patent Office for U.S. Patent 5,406,549

The screenshot shows the European Patent Office (EPO) website interface in Internet Explorer. The browser address bar displays the URL: <http://v3.espacenet.com/publicationDetails/biblio?KC=A&date=19950411&NR=5406549A&DB=EPC>. The page title is "Bibliographic data - Windows Internet Explorer".

The main content area is titled "Ring interworking between path-switched ring transmission systems". Under the "Bibliographic data" tab, the following information is displayed:

- Publication number:** US5406549 (A)
- Publication date:** 1995-04-11
- Inventor(s):** KREMER WILHELM [US]
- Applicant(s):** AT & T CORP [US]
- Classification:**
 - international: H04J3/08; H04L12/46; H04Q11/04; H04J3/08; H04L12/46; H04Q11/04; (IPC1-7): H04L12/42; H04L12/66
 - European: H04J3/08A; H04L12/46B; H04Q11/04S2
- Application number:** US19930141172 19931022
- Priority number(s):** US19930141172 19931022

On the right side, under "Also published as:", the following patents are listed:

- JP7212385 (A)
- JP7212385 (A)
- JP3126606 (B2)
- JP3126606 (B2)
- EP0654923 (A2)

Under "Cited documents:", the following patents are listed:

- US4683563 (A)
- US5179548 (A)
- US5218604 (A)
- US5278824 (A)
- US7855795 (A)

The "Abstract of US 5406549 (A)" section contains the following text:

The possibility of passing off apparent "good" higher level digital signals that may include corrupted or failed lower level digital signals because of inter-ring grooming of the lower level digital signals from one path-switched ring to another path-switched ring employing at least a first shared node and a second shared node is minimized by dual feeding communications circuits from one path-switched ring to the other via the shared nodes and by provisioning at least one inter-ring groomed communications circuit from a secondary ring node of one of the shared nodes (secondary communications circuit) of a particular ring to be supplied to a primary ring node in the other shared node of the same ring. The at least one secondary communications circuit is obtained in the primary ring node and demultiplexed so that the lower level digital signals in the at least one communications circuit can be evaluated on a one-to-one pairwise basis with corresponding lower level digital signals in the corresponding at least one communications circuit (primary communications circuit) being supplied from the inter-ring grooming apparatus associated with the primary ring node. The the "best" of the lower level signals in each are selected and are combined into a "new" primary communications circuit which is dual fed in the primary ring node in one direction to its termination ring node and in the other direction through the

To the right of the abstract is a schematic diagram of a ring network. It shows two path-switched rings (PSR) connected via shared nodes. The diagram includes labels for "CENTRAL OFFICE EQUIPMENT", "RING NODE", "PATH-SWITCHED RING", "SHARED NODE", "DIGITAL SIGNAL-CONVERTING DEVICE (DSC)", and "DIGITAL SIGNAL-CONVERTING DEVICE (DSC)". Various nodes and connections are numbered, such as 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200.

useful for translating this patent from French into English.

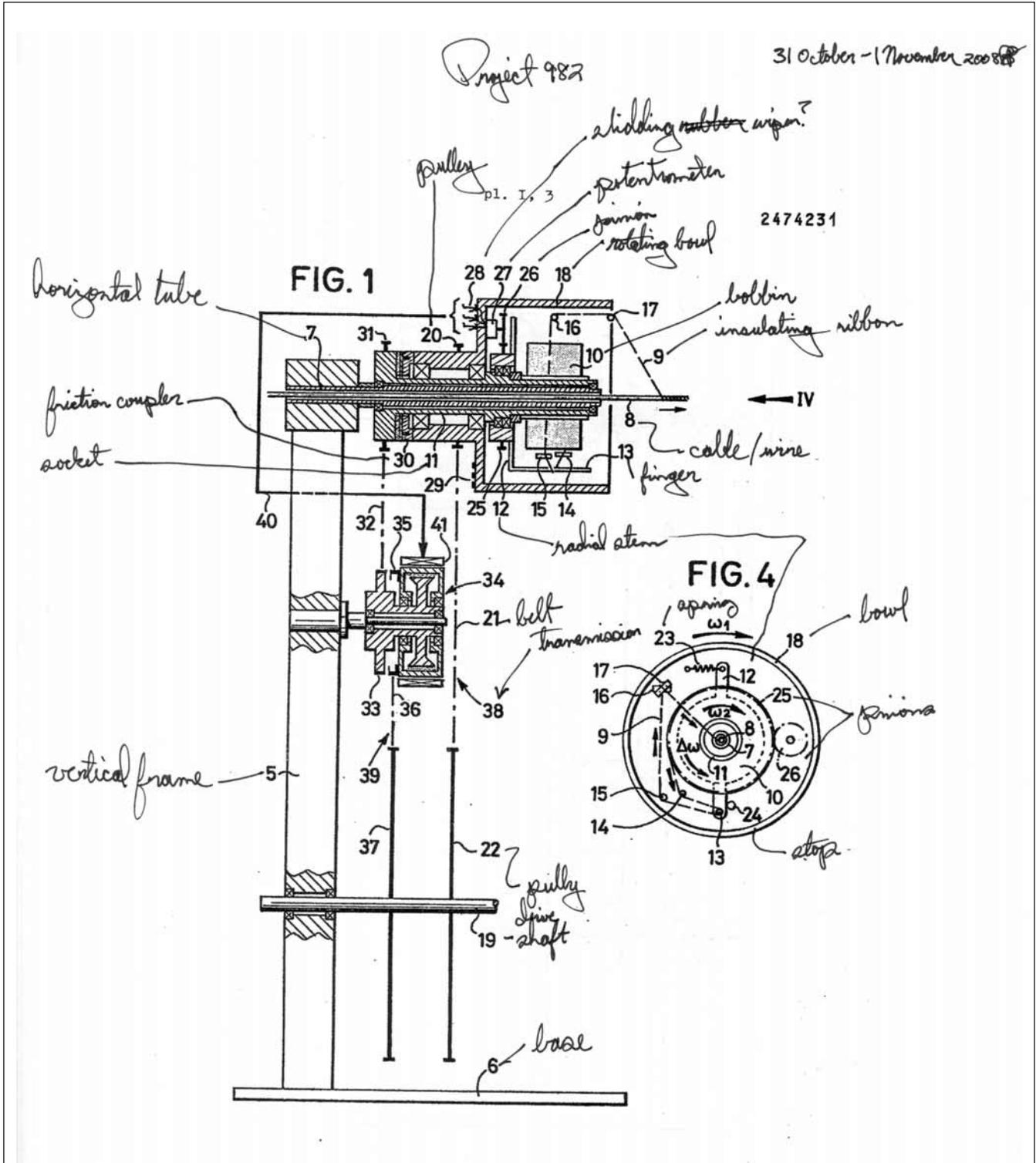
One important advantage of the European Patent Office website is that it provides bibliographic information as part of the entry for a patent. As an example, we can look up the U.S. patent from Figure 1 on the website.

(Tip: In the Number Search field on the site, remember to put US before the patent number, and remove any spaces or commas.) The "Bibliographic data" tab from the search result is shown in Figure 3. On the right within the blue background, we can see the list of patents cited; it is the same list as pro-

vided on the cover sheet of the patent itself. Under the "Also published as," we see that this patent was published in Japan and Europe (the European patent application is in English).

In the lower left corner of the area with the blue background, there is a link to "View list of citing docu-

Figure 4: Terminology Notes Written Directly on a Drawing from a Patent



ments.” (Since these documents cite the patent being discussed, they are part of the later, not prior, art, but they are still highly relevant for the translator.) This link brings up a list of 18 published patent applications and patents. It turns out that this is a rather significant patent in telecommunications. Of the 18 patents listed, 15 are U.S. patents and two more are written in English; one is written in German. Thus, this one page has two lists of

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useful bibliographic information: the “also published as” and “cited documents” lists. Together, the biblio-

graphic information at this URL holds promise for translators working from English into German or Japanese.



Additional Sources

Published Resources

The Patent Translators Handbook (American Translators Association, 2007),
www.atanet.org/publications.

Internet Resources

Free Patents Online

www.freepatentsonline.com

U.S., European Patent Convention (EPC), Patent Cooperation Treaty (PCT), and patent abstracts of Japan (English interface).

Patent Blog

www.patentlyo.com

A leading U.S. patent blog.

Patent Searches

<http://ep.espacenet.com>

EPC, U.S., and many other countries (English/French/German interface).

World Intellectual Property Organization

www.wipo.int/pctdb/en

PCT applications (interfaces in various languages).

World Intellectual Property Organization

National Office Databases

www.wipo.int/patentscope/en/search/national_databases.html

Offers links to national patent offices.

Sources for Legislation, Regulation, and Treaties

United States Patent and Trademark Office

www.uspto.gov/web/offices/pac/mpep/mpep.htm

Title 35 of U.S. Code and Title 37 of Code of Federal Regulation, also *Manual of Patent Examination Procedure*.

European Patent Convention

www.epo.org/patents/law/legal-texts/epc.html

The EPC (governs European Patent Office) published in three languages, presented in parallel.

World Intellectual Property Organization

Patent Cooperation Treaty Resources

www.wipo.int/pct/en/

Available in various languages.

Legifrance

www.legifrance.gouv.fr/initRechCodeArticle.do

On the drop-down menu, choose *Code de la propriété intellectuelle*.

Points to Keep in Mind

- When a patent application is examined, the relation of its subject matter to the prior art must be understood. This is important because the invention must be novel and nonobvious (or involve an inventive step) in comparison with the prior art.
- When subsequently translating the patent application, the translator must understand the terminology used in the patent, as well as its correct rendering in the target language.
- The focus of the translator's terminology research should be the "exact terms" in the target language that enable "any person skilled in the art" to make the invention. This means that the translator needs to find the terms a person skilled in the art would use.
- As the translator begins searching for relevant terminology, it is important to remember that the patent itself must disclose the closest prior art.
- In European and other patents, a discussion of the prior art generally starts after the first few paragraphs. This is the best place to start looking for citations of patents from the prior art.
- One important advantage of the European Patent Office website (www.epo.org) is that it provides bibliographic information as part of the entry for a patent.
- Reading issued patents and published patent applications for style and vocabulary is useful for improving your skill and the quality of your work as a patent translator.
- Skimming the discussion of the prior art on the first few pages of the patent is a useful way to begin looking for terminology.

Using Patents from the Art

Having found a patent from the art in the target language, it is then necessary to explore it for the needed terminology. As far as I know, there is no magic bullet for this, but in addition to helping you find the target-language terminology you need, searching these patents may also expand your knowledge of the subject matter itself, which can be a significant advantage. I often find skimming the discussion of the prior art on the first few pages of the patent to be a useful way to begin looking for terminology. If the patent you are translating and the patent from the art have chemical formulas or drawings, these can be a useful way of lining up terminology between the two documents. The reference numbers in the drawings can be particularly helpful.

I usually print copies of drawings from the patent I am translating and make notes on terminology choices next to the reference numbers. (See Figure 4 on page 20.) A list of the reference numbers with the name of the corresponding parts or assemblies may be provided in the discussion of the figures, and is even encouraged by some legal practitioners, though I have never seen it in practice.

A Broader Perspective

Beyond solving your immediate terminology problems, it is useful to review target-language patents for broader issues pertaining to patent-specific vocabulary, conventions, and writing style. In some cases, it can be difficult to find examples of target-language documents that are comparable to the source-language text you need to translate. Since issued patents and published patent applications are in the public domain and readily available on the Internet, reading them for style and vocabulary is

In some cases, it can be difficult to find examples of target-language documents that are comparable to the source-language text you need to translate.

useful for improving your skill and the quality of your work as a patent translator. When I started translating patents, I looked for a patent to study in a subject area that I knew well and chose the one used in the first example (U.S. Patent 5,406,549). (Here, I had an advantage because, starting a few years after the patent was issued, I worked for several years in the same Bell Labs department with the inventor, so I already knew him.) You may want to do the same and look for a patent in your target language in a subject matter that you know well.

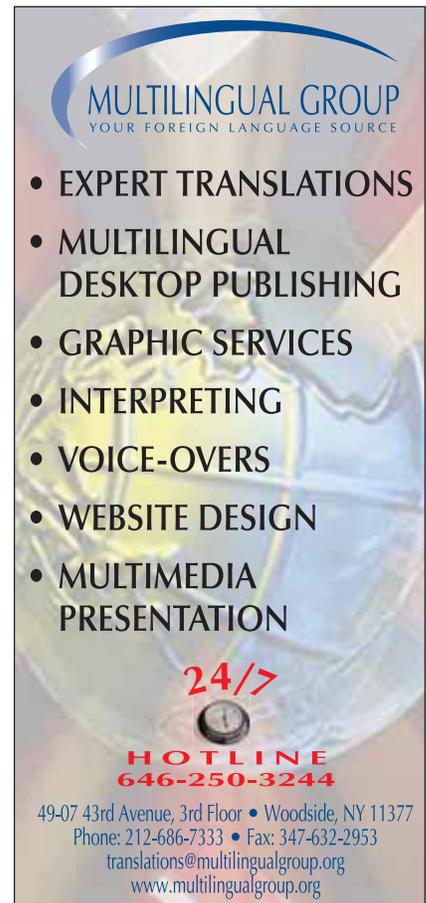
If you are a patent translator, seeking out and consulting patents can have enormous benefits. You can look for related patents in the target language as a source of terminology, and for well-written patents that can strengthen your understanding of general issues of patent-specific vocabulary, conventions, and writing style. Reading patents in your target language is sure to make you a better patent translator.

Notes

1. See Title 35 United States Code [hereinafter Title 35 USC] §102(a); European Patent Convention [hereinafter EPC], 13th edition, July 2007, Article 54; and Patent Cooperation Treaty [hereinafter PCT] as currently amended, Article 33(2).

2. See Title 35 USC §103(a).
3. See EPC Article 56 and PCT Article 33(3). Here and elsewhere—e.g., French *Code de la propriété intellectuelle*, *Partie législative* Article L611-14—inventive step is defined in terms of being nonobvious to a person skilled in the art.
4. EPC Article 83 and PCT Article 5 impose similar requirements. For the patent practitioner and examiner, the main emphasis is on enabling, while acknowledging that clarity is also required.
5. Numbered field codes on the cover page, or INID Numbers are available at www.wipo.int/standards/en/pdf/03-09-01.pdf. INID is an acronym for “Internationally Agreed Numbers for the Identification of (bibliographic) Data.”
6. This patent can be downloaded in its entirety from <http://ep.espacenet.com>, a resource maintained by EPO. Click on Number Search on the left and then enter FR2666348 in the field with no embedded commas or spaces; this website can be a little finicky about having exactly the format that it expects.

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