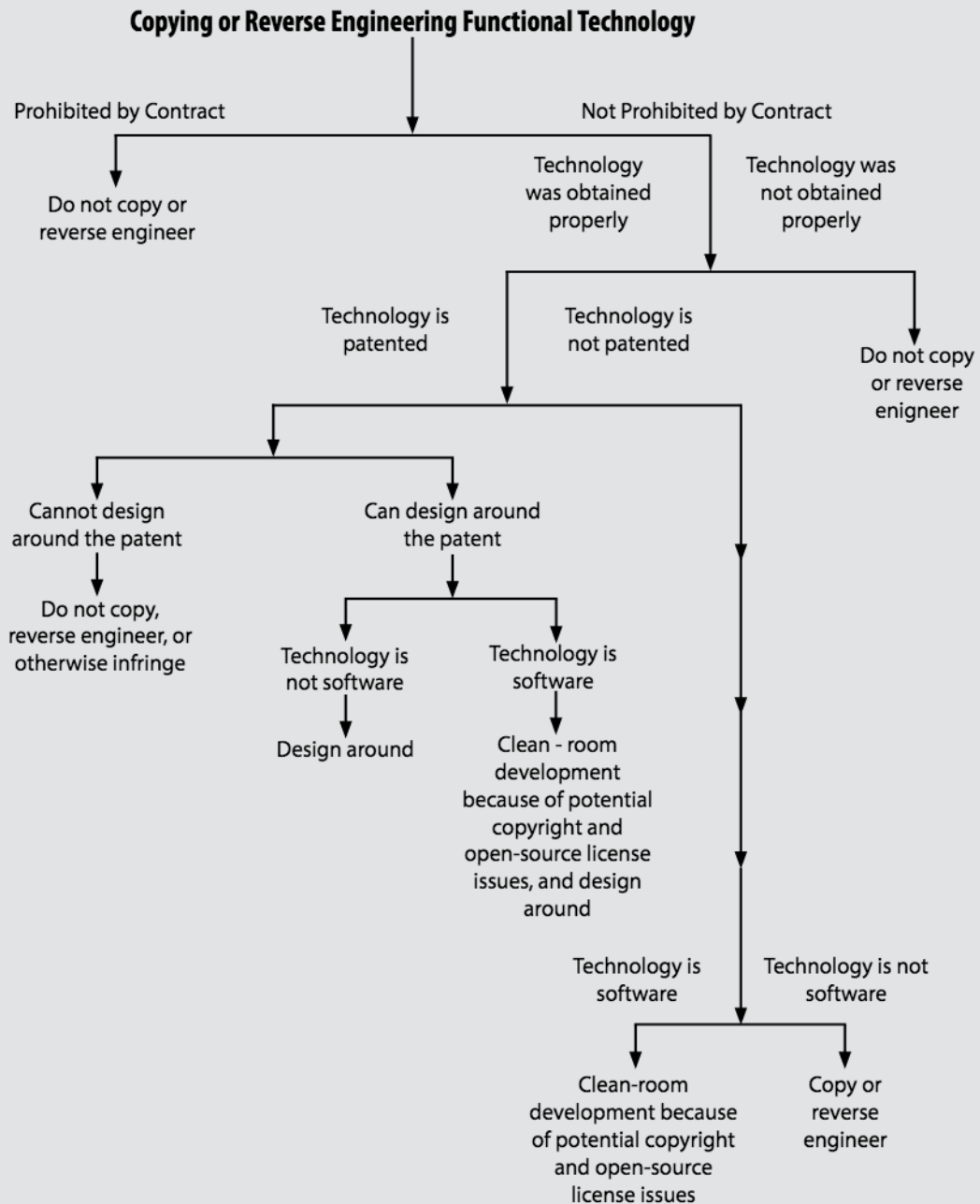# Copying or Reverse Engineering Functional Technology[1]
by David E. Rogers

Many functional products and processes are not protected by intellectual property and can be copied or reverse engineered. The chart below maps some basic issues to analyze before proceeding.

Copying or Reverse Engineering Functional Technology

Prohibited by Contract → Do not copy or reverse engineer

Not Prohibited by Contract

Technology was obtained properly

Technology was not obtained properly → Do not copy or reverse enigneer

Technology is patented

Technology is not patented

Cannot design around the patent → Do not copy, reverse engineer, or otherwise infringe

Can design around the patent

Technology is not software → Design around

Technology is software → Clean - room development because of potential copyright and open-source license issues, and design around

Technology is software → Clean-room development because of potential copyright and open-source license issues

Technology is not software → Copy or reverse engineer

Summary of the Basic Issues

Before copying or reverse engineering a functional product or process[2] analyze each of the issues below. It is best to consult an experienced patent attorney during this analysis.

I. Is there a Contract Preventing the Use of the Information, or from Competing?

Check agreements into which you, your company, employees, or contractors may have entered for any contractual restriction, such as a restriction on the disclosure or use of the information you plan to use to copy or reverse engineer, or a non-compete provision. If there is a binding contractual restriction, abide by it.

II. Was the Information Obtained Properly?

To help avoid an allegation of trade secret misappropriation, information used to copy or reverse engineer must be obtained through proper means. If the information was disclosed in confidence and is not generally known, do not disclose or use it in any unauthorized manner, including using it to develop competitive technology. The safest course is to use only publicly-available information, such as information published on a website, product packaging, or products themselves.

III. Is the Information Patented?

Before copying or reverse engineering search for potential conflicting patents and published patent applications. If none are found, proceed with the caveat that (1) no patent search is perfect and something may have been missed, and (2) a patent application covering the competitive technology may be pending, but not yet published, so it would not be located in a search.

IV. If there Is Patent Protection, You Can Probably Design Around It.

It is estimated that over 90% of patents have no value,[3] usually because the claims are too narrow, and it is simple to design around them.[4] To design around a patent, entirely eliminate one or more claim limitations from the design-around product or process. If a design-around product or process entirely lacks, literally and by equivalents, at least one limitation of each patent claim it cannot infringe the patent. This analysis should always be done by a seasoned patent attorney.

V. The Best Practice Is to Use Clean-Room Development for Software.

Copying software presents the additional, potential issues of copyright infringement and open-source license obligations. If software is copied, the copy would include the functional *and* non-functional code, which may be subject to copyright

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2 If a product or process is purely functional, it could not be protected by non-functional intellectual property such as design patents, trade dress, or copyrights (copyrights are a possible exception for software), and you technically need not be concerned about them. But, it still makes sense to check for potential non-functional intellectual property violations before copying or reverse engineering.

3 *See* Jackie Huttler, *Strategic Patenting Part 1: Why So Few Patents Create Real Value*, IP Asset Maximizer Blog (Jan. 24, 2014) (only an estimated 5% of patents of the most sophisticated companies create strategic value).

4 Alternatively, a competitive patent could potentially be licensed, cross licensed, or purchased.

protection. The copy would also include any open-source code, which may be subject to open-source license restrictions and copyrights.

Copyright infringement and open-source license obligations can be avoided by not copying. Copyright infringement requires *actual copying*.[5] If software is not copied, but developed independently without reference to existing software or open-source code, it would not infringe a copyright or be subject to an open-source license. During this independent (also called "clean-room") development, software programmers who have never had, and are never provided, access to the existing software, are tasked with developing "new" software that duplicates the functionality of existing software.

VI.   Conclusion.

If there is no contract prohibition, and knowledge of functional technology was obtained by proper means (e.g., the information is publicly available), and the technology is not patented, you can likely copy or reverse engineer it. For software, clean-room development is best in order to avoid potential copyright and open-source license issues. Before copying or reverse engineering, best to contact an experienced patent lawyer and work through the intellectual property issues.

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[5] Not so for patent or trademark (including trade dress) infringement, each of which is a strict-liability offense.

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Dave Rogers is a registered patent attorney with over 20 years of experience. He practices patent, trademark, trade secret and unfair competition law, including: litigation and arbitration; trademark oppositions, cancellations and domain name disputes; preparing manufacturing and technology contracts; and patent and trademark preparation and prosecution.