

Decrypting the code: CJEU SAS vs. World Programming

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Tatiana Synodinou (University of Cyprus)

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"The ruling confirms the exclusion of ideas from software copyright protection and enlightens certain grey zones of the Software Directive."

The protection of computer programs is one of the nicest paradoxes of copyright law. Even if the protection of the computer programs as literary works has been established in the European and in the international legal order (Software Directive 91/250, codified by 2009/24, TRIPS), it is still strange to observe that a computer program which proposes travel packages is granted the same type and duration of protection as the most captivating literary edifices of our century. Even stranger is to realize that even though computer programs are by their nature functional works- thus works which are created in order to make a machine perform a particular function-, their commercial essence which lies in the functionality that they serve is outside of the scope of the awarded protection.

Except for the definition of the criterion of originality as "the author's own intellectual creation" in article 1 par. 3 of the Software Directive, the idea/expression dichotomy is also a key element for the delineation of the object of protection. According to article 1 par. 2, copyright protection shall apply to the expression in any form of a computer program; ideas and principles which underlie any element of a computer program, including those which underlie its interfaces are not protected by Copyright.

The principle of exclusion of ideas from the scope of copyright protection is not a copyright exception, but it shall be considered as an internal limit of copyright protection itself. While it is undeniable that this natural limitation of copyright law is primordial for the creative freedom and the perpetuation of intellectual creativity, the demarcation of the borderline between the unexpressed ideas and the protected form of expression is a delicate task, specifically in intellectual fields where the idea is part of the essence of the intellectual creation, such as in abstract art and software protection. Especially as regards software, this rule is further clarified in Rec. 14 of the Software Directive which states that in accordance with the principle that only the expression of a computer program is protected by copyright, to the extent that logic, algorithms and programming languages comprise ideas and principles, those ideas and principles are not protected under the Software Directive. The implementation of this principle in software copyright protection takes also the form or more specific rules, such as the establishment of a right of the lawful user of a computer program to observe, study or test the functioning of a computer program in order to determine the ideas and principles which underlie any element of the program which is provided by article 5 par. 3 of the Directive.

The application of this fundamental axiom of copyright law to computer programs is in the center of the legal argumentation in the case brought in front of the CJUE in the SAS Institute Inc.v World Programming Ltd case (CJEU, 2 May 2012, Case C-406/10). The facts were grosso modo the following. SAS Institute, a developer of analytical software, has developed an integrated set of computer programs that enables users to carry out a wide range of data processing and analysis tasks, in particular statistical analysis ("the SAS System"). "Base SAS", the main component of the SAS System enables users to write and run their own application programs in order to adapt the SAS System to work with their data (scripts). Such scripts are written in the 'SAS Language', a language which is peculiar to the SAS System. World Programming Ltd produced the 'World Programming System' which is alternative software capable of executing application programs written in the SAS Language. More specifically, the 'World Programming System' is designed to emulate the SAS components as closely as possible in that, with a few minor exceptions, it attempted to ensure that the same inputs would produce the same outputs. This would enable users of the SAS System to run the Scripts which they have developed for use with the SAS System on the 'World Programming System'.

The High Court of Justice of England and Wales, Chancery Division, referred 9 questions to the CJUE. Since it was not established that World Programming Ltd had access to the source code of the SAS components, that it copied any of the text of that source code or copied any of the structural design of the source code, the central question was to determine whether the acts of World Programming Ltd which resulted to the creation of a competitive software which replicates the functions of the SAS System, more particularly the acts of observing, studying and testing the functioning of the SAS System or/and reading a manual created and published by the author of the SAS System which describes the functions of it, constituted copyright infringement.

Nonetheless, in order to answer this question it is first necessary to consider whether the functionality of a computer program and the programming language and the format of data files used in a computer program in order to exploit certain of its functions constitute a form of expression of that program and may, as such, be protected by copyright in computer programs for the purposes of the Software Directive. The CJUE, in its decision of 2nd May 2012, gives a straightforward answer to these legal interrogations.

By referring to its previous *Bezpečnostní softwarová asociace* ruling (Case C-393/09 [2010] ECR I 0000, paragraph 35), the Court makes it clear that neither the functionality, the programming language and the format of data files used in a computer program in order to exploit certain of its functions constitute a form of expression of a computer program, since they are not part of the source code, the object code or the preparatory design material which is capable of leading, respectively, to the reproduction or the subsequent creation of a computer program. Protecting the functionality of the program would result to the undesirable effect of monopolizing ideas to the detriment of technological progress and industrial development (par. 40 of the judgment). Nevertheless, it is necessary to make a distinction between the functionality of a computer program and the programming language and the format of the data files.

The Court obviously rejects the protection of SAS language and the format of SAS Institute's data files as parts of the form of the expression of a computer program. But at the same time the Court points out that the possibility that these elements might be protected as works by copyright under Directive 2001/29, if they are their author's own intellectual creation, cannot be excluded. This finding is in line not only with the *Bezpečnostní softwarová asociace* case, where it was held that graphic user interfaces could be protected distinctively as works, but also with recital 14 of the Software Directive which does not exclude copyright protection for programming languages and algorithms in general, but only for the ideas and principles which are comprised in algorithms and programming languages. Indeed, new and original languages could be protected by copyright law, as is the case for languages and dialects which have been created for the fictional universes of romans, such as the elvish of Tolkien's fantasy works or the multiple languages of Star wars. As regards algorithms, it is useful to remind that only the abstract ones are not protected by copyright law, since computer programs derive from the combination and complex synthesis of series of algorithms which under this concrete form constitute part of the computer program's expression.

Another question referred to the CJUE was whether a licensee of a computer program is entitled, without the authorization of the owner of the copyright in that program, to observe, study or test the functioning of that program in order to determine the ideas and principles which underlie any element of the program, in the case where that person carries out acts covered by that license with a purpose that goes beyond the framework established by the license.

According to article 5 par. 3 of the Directive, a licensee is entitled to determine the ideas and principles which underlie any element of the computer program if he does so while performing any of the acts of loading, displaying, running, transmitting or storing that program which he is entitled to do. As the Court concludes, it follows that the determination of those ideas and principles may be carried out within the framework of the acts permitted by the license. In other words, the acts of loading, displaying, running, transmitting or storing that program shall be permitted by the license in order to serve as a basis for the exercise of the lawful user's right of article 5 par. 3. Nevertheless, this interpretation which is based on the letter of article 5 par. 3 could result to the neutralization of the exercise of this right in case the use of the program is permitted by the license only for very restricted ends. In order to provide article 5 par. 3 with real effectiveness, the Court conducts a systematic and coherent interpretation of articles 5 par.3, 5 par. 1, 6 par. 1, 9 par. 1 and of the recitals 17 and 18 of the Directive.

Loading and running a computer program are acts which constitute reproduction of the program on the basis of article 4 (a) of the Directive. However, these acts are at the same time necessary for the use of the computer program (recital 18). Indeed, using a software prerequisites a serious of temporary reproductions which fall into the scope of the restricted acts defined by article 4 of the Directive. The strict application of this rule could result to the absurd situation where every single use of a computer program, even the simple running or loading the program, ought to have been previously authorized by the right holder. The exception of article 5 par. 1 was intended to cure this irrationally restrictive regime.

Equally absurd should have been to accept that observing, studying or testing the functioning of a computer program while performing acts of loading and running this program which are necessary for the use of it by a lawful user, in our case a licensee, can be prohibited by contract. Accordingly, the Court concludes that the owner of the copyright in a computer program may not prevent, by relying on the licensing agreement, the person who has obtained that license from determining the ideas and principles which underlie all the elements of that program in the case where that person carries out acts which that license permits him to perform and the acts of loading and running, and on condition that that person does not infringe the exclusive rights of the owner in that program (par. 59). Admitting the contrary would have a serious counteracting effect for the already weak right to observe, study and test of the lawful user. Indeed, this right has been seriously criticized as a right which just entitles the lawful user to see what the latter is already permitted to do, since copyright law cannot restrict the intellectual access to the computer program in case the user does not intervene with the form of the expression of the program, thus the source code, the object code, the flow chart or other preparatory design work which is capable of leading to the development of the computer program. The right to observe, study or/and test is indeed a right of "analysis" of the computer program perceived in a broader and less offensive way. It permits to discover the ideas and principles underlying the computer program by studying and testing the inputs and the outputs (black box analysis), but it does not entail any acts of reproduction or translation of the computer program, as it is the case of the right of decompilation which is provided by article 6 of the Software Directive.

For these reasons, in reality the exercise of this right can efficiently lead to the determination of ideas and principles which underlie the computer program only in certain cases of specific software which is destined to a restricted kind of users and are accompanied by rich and very detailed user manuals. This must have probably been the case of the "Learning Edition" of the SAS system which was used by World Programming Ltd in order to develop its own competitive software. As the Court reminds, copyright in a computer program cannot be infringed where the lawful acquirer of the license did not have access to the source code of the computer program to which that license relates, but merely studied, observed and tested that program in order to reproduce its functionality in a second program.

Preliminary questions 8 and 9 are about the copyright protection of the user manual for a computer program. The manual does not constitute a part of the expression of the computer program, but it is an independent form of literary expression which could be separately protected by copyright law. The Court refers to the Infopaq decision (Case C 5/08 Infopaq International [2009] ECR I 6569), in order to ascertain the criterion of originality for this kind of work. As the Court pinpoints, the keywords, syntax, commands and combinations of commands, options, defaults and iterations consist of words, figures or mathematical concepts which, considered in isolation, are not, as such, an intellectual creation of the author of the computer program (par. 66). It is only through the choice, sequence and combination of those words, figures or mathematical concepts that the author may express his creativity in an original manner and achieve a result, namely the user manual for the computer program, which is an intellectual creation. It is a matter for the national court to

ascertain whether the reproduction, in a computer program or a user manual for that program, of certain elements described in the user manual for another computer program protected by copyright is capable of constituting an infringement of the copyright in the latter manual in case that reproduction constitutes the expression of the intellectual creation of the author of the user manual for the computer program protected by copyright.

The ruling confirms the exclusion of ideas from software copyright protection and enlightens certain grey zones of the Software Directive, such as the scope of application of the lawful user's right of article 5 par. 3. It also confirms the plurality of copyright regimes which might apply to software: on the one hand this of graphic user interfaces, programming languages, user manual (protection as literary works in accordance with Directive 2001/29) and on the other hand the protection of the form of the expression of the computer program (source code, object code and preparatory design material) by the Software Directive. Moreover, it promotes a unifying approach of the concept of lawful user of a computer program despite the terminological differentiations found in the three paragraphs of article 5 of the Directive (lawful acquirer, person having a right to use a computer program). It is a pity that the Court did not examine more profoundly this innovative concept in order to set up the criteria for defining who can be a lawful user, especially if it is taken into consideration that the concept of lawful user is also established in the Database Directive. While it is clear in the decision that the licensee and the person who has purchased a copy of the computer program is a lawful user, the Court did not explore other possible legal grounds for the ascertainment of lawful use.