Court of Justice EU, 6 October 2021, Top System v Belgium

SOFTWARE COPYRIGHT

Article 5(1) of the Software Directive must be interpreted as meaning

- **that the lawful purchaser of a computer program is entitled to decompile all or part of that program in order to correct errors affecting its operation, including where the correction consists in disabling a function that is affecting the proper operation of the application of which that program forms a part.**
- **that the lawful purchaser of a computer program who wishes to decompile that program in order to correct errors affecting the operation thereof is not required to satisfy the requirements laid down in Article 6 of that directive.**

However, that purchaser is entitled to carry out such a decompilation only to the extent necessary to effect that correction and in compliance, where appropriate, with the conditions laid down in the contract with the holder of the copyright in that program.

Source: **ECLI:EU:C:2021:811**

Court of Justice EU, 6 October 2021
(E. Juhász, C. Lycourgos,I. Jarukaitis)

JUDGMENT OF THE COURT (Fifth Chamber)
6 October 2021 (*)
(Reference for a preliminary ruling – Copyright and related rights – Legal protection of computer programs – Directive 91/250/EEC – Article 5 – Exceptions to the restricted acts – Acts necessary to enable the lawful purchaser to correct errors – Concept – Article 6 – Decompilation – Conditions)
In Case C-13/20,
REQUEST for a preliminary ruling under Article 267 TFEU from the Cour d'appel de Bruxelles (Court of Appeal, Brussels, Belgium), made by decision of 20 December 2019, received at the Court on 14 January 2020, in the proceedings
Top System SA
v
Belgian State,
THE COURT (Fifth Chamber),
composed of E. Regan, President of the Chamber, M. Ilešič (Rapporteur), E. Juhász, C. Lycourgos and I. Jarukaitis, Judges,
Advocate General: M. Szpunar,
Registrar: A. Calot Escobar,
having regard to the written procedure,
after considering the observations submitted on behalf of:

– Top System SA, by É. Wery and M. Cock, avocats,
– the Belgian State, by M. Le Borne, avocat,
– the European Commission, by É. Gippini Fournier and J. Samnadda, acting as Agents.

after hearing the Opinion of the Advocate General at the sitting on 10 March 2021,
gives the following

Judgment

1. This request for a preliminary ruling concerns the interpretation of Article 5(1) of Council Directive 91/250/EEC of 14 May 1991 on the legal protection of computer programs (OJ 1991 L 122, p. 42).
2. The request has been made in proceedings between Top System SA and the Belgian State concerning the decompilation by SELOR, the Selection Office of the Federal Authorities (Belgium), of a computer program developed by Top System and forming part of an application in respect of which that selection office holds a user licence.

Legal context

EU law

3. Recitals 17 to 23 of Directive 91/250 state:

'*Whereas the exclusive rights of the author to prevent the unauthorised reproduction of his work have to be subject to a limited exception in the case of a computer program to allow the reproduction technically necessary for the use of that program by the lawful acquirer;*

Whereas this means that the acts of loading and running necessary for the use of a copy of a program which has been lawfully acquired, and the act of correction of its errors, may not be prohibited by contract; whereas, in the absence of specific contractual provisions, including when a copy of the program has been sold, any other act necessary for the use of the copy of a program may be performed in accordance with its intended purpose by a lawful acquirer of that copy;

Whereas a person having a right to use a computer program should not be prevented from performing acts necessary to observe, study or test the functioning of the program, provided that these acts do not infringe the copyright in the program;

Whereas the unauthorised reproduction, translation, adaptation or transformation of the form of the code in which a copy of a computer program has been made available constitutes an infringement of the exclusive rights of the author;

Whereas, nevertheless, circumstances may exist when such a reproduction of the code and translation of its form within the meaning of Article 4(a) and (b) are indispensable to obtain the necessary information to achieve the interoperability of an independently created program with other programs;

Whereas it has therefore to be considered that in these limited circumstances only, performance of the acts of reproduction and translation by or on behalf of a person having a right to use a copy of the program is legitimate and compatible with fair practice and must therefore be deemed not to require the authorisation of the rightholder;

Whereas an objective of this exception is to make it possible to connect all components of a computer system, including those of different manufacturers, so that they can work together;
Whereas such an exception to the author's exclusive rights may not be used in a way which prejudices the legitimate interests of the rightholder or which conflicts with a normal exploitation of the program'.
4. Article 1 of the directive provides:
'1. In accordance with the provisions of this Directive, Member States shall protect computer programs, by copyright, as literary works within the meaning of the ... Convention for the Protection of Literary and Artistic Works[, signed in Berne on 9 September 1886 (Paris Act of 24 July 1971), in the version arising from the amendment of 28 September 1979]. For the purposes of this Directive, the term "computer programs" shall include their preparatory design material.
2. Protection in accordance with this Directive 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 under this Directive
3. A computer program shall be protected if it is original in the sense that it is the author's own intellectual creation. No other criteria shall be applied to determine its eligibility for protection.'
5. Article 4 of that directive, under the heading 'Restricted Acts', provides:
'Subject to the provisions of Articles 5 and 6, the exclusive rights of the rightholder within the meaning of Article 2, shall include the right to do or to authorise:
(a) the permanent or temporary reproduction of a computer program by any means and in any form, in part or in whole. In so far as loading, displaying, running, transmission or storage of the computer program necessitate such reproduction, such acts shall be subject to authorisation by the rightholder;
(b) the translation, adaptation, arrangement and any other alteration of a computer program and the reproduction of the results thereof, without prejudice to the rights of the person who alters the program;
(c) any form of distribution to the public, including the rental, of the original computer program or of copies thereof. The first sale in the [European Union] of a copy of a program by the rightholder or with his consent shall exhaust the distribution right within the [European Union] of that copy, with the exception of the right to control further rental of the program or a copy thereof.'
6. Article 5 of that directive, under the heading 'Exceptions to the restricted acts', provides:
'1. In the absence of specific contractual provisions, the acts referred to in Article 4(a) and (b) shall not require authorisation by the rightholder where they are necessary for the use of the computer program by the lawful acquirer in accordance with its intended purpose, including for error correction.
2. The making of a back-up copy by a person having a right to use the computer program may not be prevented by contract in so far as it is necessary for that use.
3. The person having a right to use a copy of a computer program shall be entitled, without the authorisation of the rightholder, to observe, study or test the functioning of the program in order to determine the ideas and principles which underlie any element of the program if he does so while performing any of the acts of loading, displaying, running, transmitting or storing the program which he is entitled to do.'
7 Article 6 of Directive 91/250, under the heading 'Decompilation', reads as follows:
'1. The authorisation of the rightholder shall not be required where reproduction of the code and translation of its form within the meaning of Article 4(a) and (b) are indispensable to obtain the information necessary to achieve the interoperability of an independently created computer program with other programs, provided that the following conditions are met:
(a) these acts are performed by the licensee or by another person having a right to use a copy of a program, or on their behalf by a person authorised to do so;
(b) the information necessary to achieve interoperability has not previously been readily available to the persons referred to in subparagraph (a);
and
(c) these acts are confined to the parts of the original program which are necessary to achieve interoperability.
2. The provisions of paragraph 1 shall not permit the information obtained through its application:
(a) to be used for goals other than to achieve the interoperability of the independently created computer program;
(b) to be given to others, except when necessary for the interoperability of the independently created computer program;
or
(c) to be used for the development, production or marketing of a computer program substantially similar in its expression, or for any other act which infringes copyright.
3. In accordance with the provisions of the ... Convention for the protection of Literary and Artistic Works, the provisions of this Article may not be interpreted in such a way as to allow its application to be used in a manner which unreasonably prejudices the rightholder's legitimate interests or conflicts with a normal exploitation of the computer program.'
8. Article 9(1) of that directive provides:
'... Any contractual provisions contrary to Article 6 or to the exceptions provided for in Article 5(2) and (3) shall be null and void.'
9. Directive 91/250 was repealed and codified by Directive 2009/24/EC of the European Parliament and of the Council of 23 April 2009 on the legal protection of computer programs (OJ 2009 L 111, p. 16). However, Directive 91/250 is applicable ratione temporis to the facts of the dispute in the main proceedings.

Belgian law

10. The loi du 30 juin 1994 transposant en droit belge la directive européenne du 14 mai 1991 concernant la

protection juridique des programs d'ordinateur (Law of 30 June 1994 transposing into Belgian law the EU Directive of 14 May 1991 on the legal protection of computer programs) (Moniteur belge of 27 July 1994, p. 19315), as amended by the loi du 15 mai 2007 relative à la répression de la contrefaçon et de la piraterie de droits de propriété intellectuelle (Law of 15 May 2007 on the repression of counterfeiting and piracy of intellectual property rights) (Moniteur belge of 18 July 2007, p. 38734) ('the LPO'), provided in Article 5:

'Subject to Articles 6 and 7, property rights shall include:

(a) the permanent or temporary reproduction of a computer program, in whole or in part, by any means and in any form. In so far as loading, displaying, running, transmission or storage of the computer program necessitate such reproduction of the program, such acts shall be subject to authorisation by the rightholder;

(b). the translation, adaptation, arrangement and any other alteration of a computer program and the reproduction of the results thereof, without prejudice to the rights of the person who alters the program;

…'

11. Article 6 of the LPO provided:

'§1. In the absence of specific contractual provisions, the acts referred to in Article 5(a) and (b) shall not be subject to authorisation by the rightholder, where those acts are necessary for the use of a computer program by the person entitled to use it, in accordance with its intended purpose, including for error correction.

…

'§3. The person having a right to use a computer program shall be entitled, without the authorisation of the rightholder, 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, if he or she does so while performing any of the acts of loading, displaying, running, transmitting or storing the program which he is entitled to do.'

12. Article 7 of the LPO provided as follows:

'§1. The authorisation of the rightholder shall not be required where the reproduction of the code and translation of the form of that code within the meaning of Article 5(a) and (b) are indispensable to obtain the information necessary to achieve the interoperability of an independently created computer program with other programs, provided that the following conditions are met:

(a). the acts of reproduction and translation are performed by a person having a right to use a copy of a program, or on their behalf by a person authorised for that purpose;

(b). the information necessary to achieve interoperability is not already readily available to it;

(c). acts of reproduction and translation are confined to the parts of the original program which are necessary to achieve such interoperability.

'§2. The provisions of paragraph 1 shall not permit the information obtained through its application:

(a). to be used for goals other than to achieve the interoperability of the independently created computer program;

(b). to be given to others, except when those communications are necessary for the interoperability of the independently created computer program;

(c). or, to be used for the development, production or marketing of a computer program substantially similar in its expression, or for any other act which infringes copyright.

'§3. This Article may not be interpreted in such a way as to allow its application to be used in a manner which unreasonably prejudices the rightholder's legitimate interests or conflicts with a normal exploitation of the computer program.'

The dispute in the main proceedings and the questions referred for a preliminary ruling

13. Top System is a company governed by Belgian law that develops computer programs and provides IT services.

14. SELOR is the public body, which is responsible in Belgium, for selecting and orienting the future personnel of the authorities' various public services. Following SELOR's integration into the service public fédéral 'Stratégie et Appui' (Policy and Support Federal Public Service), the Belgian State replaced that body as the defendant in the main proceedings.

15. Since 1990, Top System has collaborated with SELOR, on whose behalf it provides IT development and maintenance services.

16. In order to fulfil its tasks, SELOR has gradually put in place IT tools to enable applications to be submitted and processed online.

17. At the request of SELOR, Top System developed several applications which contain (i) functionalities originating from its framework software called 'Top System Framework' ('the TSF') and (ii) functionalities designed to meet SELOR's specific needs.

18. SELOR has a user licence for the applications developed by Top System.

19. On 6 February 2008, SELOR and Top System concluded an agreement for the installation and configuration of a new development environment as well as the integration of the sources of SELOR's applications into, and their migration to, that new environment.

20. Between June and October 2008, there was an exchange of emails between SELOR and Top System about operating problems affecting certain applications using the TSF.

21. Having failed to reach agreement with SELOR on the resolution of those problems, on 6 July 2009, Top System brought an action against SELOR and the Belgian State before the tribunal de commerce de Bruxelles (Commercial Court, Brussels, Belgium) seeking, inter alia, a declaration that SELOR had decompiled the TSF, in breach of Top System's exclusive rights in that software. Top System also claimed that SELOR and the Belgian State should be ordered to pay it damages for the decompilation of and copying of the source codes from that software, together

with compensatory interest, from the estimated date of that decompilation, that is to say, from 18 December 2008 at the latest.
22. On 26 November 2009, the case was referred to the tribunal de première instance de Bruxelles (Court of First Instance, Brussels, Belgium) which, by judgment of 19 March 2013, in essence, dismissed Top System's application.
23. Top System brought an appeal against that judgment before the referring court, the cour d'appel de Bruxelles (Court of Appeal, Brussels, Belgium).
24. Before that court, Top System submits that SELOR unlawfully decompiled the TSF. According to the applicant, under Articles 6 and 7 of the LPO, decompilation can be carried out only with the authorisation of the author, the successor in title of that author, or for interoperability purposes. On the other hand, decompilation is not permitted for the purpose of correcting errors affecting the functioning of the program concerned.
25. SELOR acknowledges that it decompiled part of the TSF in order to disable a defective function. However, it submits, inter alia, that, under Article 6(1) of the LPO, it was entitled to carry out that decompilation in order to correct certain design errors affecting the TSF, which made it impossible to use that software in accordance with its intended purpose. SELOR also relies on its right, under Article 6(3) of the LPO, to observe, study or test the functioning of the program concerned in order to ascertain the underlying ideas and principles of the relevant TSF functionalities in order to be able to prevent the blockages caused by those errors.
26. The referring court takes the view that, in order to determine whether SELOR was entitled to carry out that decompilation on the basis of Article 6(1) of the LPO, it is for that court to ascertain whether the decompilation of all or part of a computer program comes within the acts referred to in Article 5(a) and (b) of the LPO.
27. In those circumstances, the cour d'appel de Bruxelles (Court of Appeal, Brussels) decided to stay the proceedings and to refer the following questions to the Court of Justice for a preliminary ruling:
'(1) Is Article 5(1) of [Directive 91/250] to be interpreted as permitting the lawful purchaser of a computer program to decompile all or part of that program where such decompilation is necessary to enable that person to correct errors affecting the operation of the program, including where the correction consists in disabling a function that is affecting the proper operation of the application of which the program forms a part?
(2) In the event that that question is answered in the affirmative, must the conditions referred to in Article 6 of the directive, or any other conditions, also be satisfied?'

Consideration of the questions referred

The first question

28. By its first question, the referring court asks, in essence, whether Article 5(1) of Directive 91/250 must be interpreted as meaning that the lawful purchaser of a computer program is entitled to decompile all or part of that program in order to correct errors affecting the operation of that program, including where the correction consists in disabling a function that is affecting the proper operation of the application of which the program forms a part.
29. Under Article 4(a) of Directive 91/250, which establishes, inter alia, the exclusive rights of authors of computer programs, the holder of the copyright in a computer program has the exclusive right to make or to authorise the permanent or temporary reproduction of that program, in whole or in part, by any means and in any form, subject to the exceptions laid down in Articles 5 and 6 thereof.
30. Subject to those exceptions, Article 4(b) of Directive 91/250 grants the rightholder the exclusive right to make or authorise the translation, adaptation, arrangement and any other alteration of a computer program and the reproduction of the results thereof.
31. Article 5(1) of Directive 91/250 provides, however, that, where the acts referred to in Article 4(a) and (b) of that directive are necessary for the use of the computer program by the lawful purchaser thereof in accordance with its intended purpose, including for error correction, they do not require authorisation from the rightholder, except for specific contractual provisions.
32. Under Article 6 of Directive 91/250, under the heading 'Decompilation', the authorisation of the rightholder is also not required where the reproduction of the code or the translation of the form of that code, within the meaning of Article 4(a) and (b) of that directive, is indispensable to obtain the information necessary to achieve the interoperability of an independently created computer program with other programs, provided that certain conditions are met.
33. It should be noted that decompilation is not mentioned, as such, among the acts listed in Article 4(a) and (b) of Directive 91/250, to which Article 5(1) thereof refers.
34. That being so, it must be ascertained whether, notwithstanding that fact, the acts necessary for the decompilation of a computer program are capable of coming within the scope of Article 4(a) and/or (b) of that directive.
35. To that end, it should be noted at the outset, as the Advocate General observed in point 39 of his Opinion, that a computer program is initially written in the form of a 'source code' in a comprehensible programming language, before being transcribed into a functional form that the computer can understand, that is to say, into the form of an 'object code', by means of a specific program called the 'compiler'. The process of transforming the source code into the object code is called 'compilation'.
36. In that regard, it should be borne in mind that the source code and the object code of a computer program, since they are two forms of expression thereof, are entitled to be protected by copyright as computer programs under Article 1(2) of Directive 91/250 (see, to that effect, judgment of 22 December 2010, **Bezpečnostní softwarová asociace, C-393/09**, EU:C:2010:816, paragraph 34).

37. Conversely, 'decompilation' is intended to reconstruct the source code of a program from its object code. Decompilation is carried out by means of a program called a 'decompiler'. As the Advocate General stated in point 41 of his Opinion, decompilation does not generally enable access to the original source code, but to a third version of the program concerned called 'quasi-source code', which can, in turn, be compiled into an object code, allowing that program to function.
38. Decompilation therefore constitutes an alteration of the program's code, which involves a reproduction – at least a partial and temporary one – of that code, and a translation of the form of that code.
39. Consequently, it must be held that the decompilation of a computer program involves the performance of acts, namely the reproduction of the program code and the translation of the form of that code, which in fact come within the exclusive rights of the author, as defined in Article 4(a) and (b) of Directive 91/250.
40. This interpretation is supported by the wording of Article 6(1) of Directive 91/250 which, while referring, in its heading, to decompilation, makes express reference to the 'reproduction of the code' and to the 'translation of its form within the meaning of Article 4(a) and (b)' of that directive. It follows that the concept of 'decompilation', within the meaning of that directive, does indeed fall within the exclusive rights of the author of a computer program set out in the latter provision.
41. Under Article 5(1) of Directive 91/250, the lawful purchaser of a computer program may perform all the acts listed in Article 4(a) and (b) of that directive, including those consisting in the reproduction of the code and in the translation of the form of that code, without prior authorisation from the rightholder, provided that that act is necessary for use of that program, including for the correction of errors affecting the functioning of that program.
42. It follows, therefore, from the foregoing considerations that Article 5(1) of Directive 91/250 must be interpreted as meaning that the lawful purchaser of a program is entitled to decompile that program to correct errors affecting the functioning of that program.
43. This interpretation is not called into question by Article 6 of Directive 91/250 which, contrary to Top System's submission, cannot be interpreted as meaning that the only permitted decompilation of a computer program is that effected for interoperability purposes.
44. As is apparent from its wording, Article 6 of Directive 91/250 introduces an exception to the exclusive rights of the holder of the copyright in a computer program by allowing the reproduction of the code or the translation of the form of that code without the prior consent of the holder of the copyright where those acts are indispensable to ensure the interoperability of that program with an independently created program.
45. In that regard, in the first place, it should be borne in mind that recitals 20 and 21 of that directive state that, in certain circumstances, a reproduction of a computer program code or a translation of its form is indispensable to obtain the information necessary to achieve the interoperability of an independently created program with other programs and that 'in these limited circumstances only', the performance of those acts is legitimate and compatible with fair use, so that it should not require the authorisation of the holder of the copyright.
46. It is apparent from Article 6(1)(b) and (c) of Directive 91/250, read in the light of recitals 19 and 20 thereof, that the EU legislature thus intended to limit the scope of the exception for interoperability, as laid down in that provision, to circumstances in which the interoperability of an independently created program with other programs cannot be carried out by any other means, but only by means of decompilation of the program concerned.
47. Such an interpretation is supported by Article 6(2) and (3) of Directive 91/250 which prohibits, inter alia, the use of information obtained by means of such decompilation for goals other than achieving such interoperability or developing similar programs, and which further excludes, in general terms, any use of such decompilation that would unreasonably prejudice the rightholder's legitimate interests or conflicts with a normal exploitation of the computer program concerned.
48. On the other hand, it cannot be inferred either from the wording of Article 6 of Directive 91/250, read in conjunction with recitals 19 and 20 thereof, or from the scheme of that article, that the EU legislature intended to exclude any possible reproduction of the code of a computer program and the translation of the form of that code other than where those acts are carried out in order to obtain the information necessary to achieve the interoperability between an independently created computer program and other programs.
49. In that regard, it should be noted that, while Article 6 of Directive 91/250 concerns the acts necessary to ensure the interoperability of independently created computer programs, the objective of Article 5(1) of that directive is to enable the lawful purchaser of a program to use it in accordance with its intended purpose. Those two provisions therefore have different purposes.
50. In the second place, as the Advocate General observed, in essence, in point 59 of his Opinion, this analysis is supported by the travaux préparatoires for Directive 91/250, from which it is apparent that the addition, to the European Commission's initial proposal, of the current Article 6 of that directive was intended specifically to govern the question of the interoperability of programs created by independent authors, without prejudice to the provisions intended to enable the lawful purchaser of the program to use that program normally.
51. In the third place, an interpretation of Article 6 of Directive 91/250 to the effect suggested by Top System would undermine the effectiveness of the faculty expressly afforded to the lawful purchaser of a program by the EU legislature, in Article 5(1) of Directive 91/250, to correct errors preventing the use of the program in accordance with its intended purpose.
52. As the Advocate General stated in point 79 of his Opinion, the correction of errors affecting the operation of a computer program, in most cases, and in particular

where the correction to be effected consists in disabling a function that is affecting the proper operation of the application of which that program forms a part that, necessitates access to the source code or, at the very least, to the quasi-source code of that program.

53. In the light of the foregoing considerations, the answer to the first question referred is that Article 5(1) of Directive 91/250 must be interpreted as meaning that the lawful purchaser of a computer program is entitled to decompile all or part of that program in order to correct errors affecting its operation, including where the correction consists in disabling a function that is affecting the proper operation of the application of which that program forms a part.

The second question

54. By its second question, the referring court asks, in essence, whether Article 5(1) of Directive 91/250 must be interpreted as meaning that the lawful purchaser of a computer program who wishes to decompile that program in order to correct errors affecting its operation must satisfy the requirements laid down in Article 6 of that directive or other requirements.

55. In that regard, it must be borne in mind that, as stated in paragraph 49 of this judgment, the exception laid down in Article 6 of Directive 91/250 has a different scope and purpose to that laid down in Article 5(1) thereof. Consequently, the requirements laid down in Article 6 are not, as such, applicable to the exception laid down in Article 5(1) of that directive.

56. However, it must be held that, in the light of the wording, scheme and purpose of Article 5(1) of Directive 91/250, the performance of acts which, together, constitute the decompilation of a computer program is, when carried out under that provision, subject to certain requirements.

57. In the first place, in accordance with the wording of that provision, those acts must be necessary for the use of the computer program concerned by the lawful purchaser in accordance with its intended purpose, including for 'error' correction.

58. In the absence of reference to the law of the Member States and of a relevant definition in Directive 91/250, the concept of 'error', within the meaning of that provision must be interpreted in accordance with its usual meaning in everyday language, while also taking into account the context in which it occurs and the purposes of the rules of which it is part (judgment of 3 June 2021, Hungary v Parliament, C-650/18, EU:C:2021:426, paragraph 83 and the case-law cited).

59. In that regard, it should be noted that, in the field of computing, an error commonly designates a defect affecting a computer program which is the cause of the malfunctioning of that program.

60. Furthermore, in accordance with the purpose of Article 5(1) of Directive 91/250, referred to in paragraph 49 of this judgment, such a defect, as constitutes an error within the meaning of that provision, must affect the use of the program concerned in accordance with its intended purpose.

61. In the second place, it follows from the wording of Article 5(1) of Directive 91/250 that decompilation of a computer program must be 'necessary' for the lawful purchaser to be able to use that program in accordance with its intended purpose.

62. In that regard, it should be noted that, as stated in paragraph 52 of this judgment, the correction of errors affecting the use of a program in accordance with its intended purpose will, in most cases, involve modification of the program code and the implementation of that correction will require access to the source code or, at the very least, to the quasi-source code of that program.

63. However, decompilation of a program cannot be regarded as 'necessary' where the source code is lawfully or contractually accessible to the purchaser.

64. In the third place, in accordance with its wording, Article 5(1) of Directive 91/250 allows errors to be corrected subject to 'specific contractual provisions'.

65. In that regard, it should be noted that, under recital 18 of Directive 91/250, neither the acts of loading and running necessary for the use of the copy of a program that has been lawfully acquired nor the correction of errors affecting the operation of that program may be prohibited by contract.

66. Accordingly, Article 5(1) of Directive 91/250, read in conjunction with recital 18 thereof, must be understood as meaning that the parties cannot prohibit any possibility of correcting those errors by contractual means.

67. On the other hand, under that provision, the holder and the purchaser remain free to organise contractually the manner in which that option is to be exercised. Specifically, that holder and that purchaser may, in particular, agree that the rightholder will ensure the corrective maintenance of the program concerned.

68. It also follows that, in the absence of specific contractual provisions to that effect, the lawful purchaser of a computer program is entitled to perform, without the prior consent of the rightholder, the acts listed in Article 4(a) and (b) of Directive 91/250, including decompilation of that program, in so far as it is necessary to correct errors affecting the operation of that program.

69. In the fourth place, the lawful purchaser of a computer program who has decompiled that program in order to correct errors affecting its operation cannot use the result of that decompilation for purposes other than the correction of those errors.

70. Article 4(b) of Directive 91/250 grants the holder of the copyright the exclusive right to carry out and to authorise not only 'the translation, adaptation, arrangement and any other alteration of a computer program', but also 'the reproduction of the results thereof', that is to say, in the case of decompilation, that of the source code or quasi-source code resulting therefrom.

71. Thus, any reproduction of that code remains subject, under Article 4(b) of Directive 91/250, to the authorisation of the holder of the copyright in that program.

72. Article 4(c) of that directive also prohibits the distribution to the public of a copy of a computer program without the consent of the holder of the

copyright in that program, which, as is apparent from Article 1(2) of Directive 91/250, also applies to copies of the source code or of the quasi-source code, obtained by means of a decompilation.

73. While it is common ground that Article 5 of that directive allows the lawful purchaser of a computer program to perform such acts, without the consent of the holder of the copyright, it is only in so far as those acts are necessary for the use of the computer program in accordance with its intended purpose.

74. In the light of the foregoing considerations, the answer to the second question referred is that Article 5(1) of Directive 91/250 must be interpreted as meaning that the lawful purchaser of a computer program who wishes to decompile that program in order to correct errors affecting the operation thereof is not required to satisfy the requirements laid down in Article 6 of that directive. However, that purchaser is entitled to carry out such a decompilation only to the extent necessary to effect that correction and in compliance, where appropriate, with the conditions laid down in the contract with the holder of the copyright in that program.

Costs

75. Since these proceedings are, for the parties to the main proceedings, a step in the action pending before the referring court, the decision on costs is a matter for that court. Costs incurred in submitting observations to the Court, other than the costs of those parties, are not recoverable

On those grounds, the Court (Fifth Chamber) hereby rules:

1) Article 5(1) of Council Directive 91/250/EEC of 14 May 1991 on the legal protection of computer programs must be interpreted as meaning that the lawful purchaser of a computer program is entitled to decompile all or part of that program in order to correct errors affecting its operation, including where the correction consists in disabling a function that is affecting the proper operation of the application of which that program forms a part.

2) Article 5(1) of Directive 91/250 must be interpreted as meaning that the lawful purchaser of a computer program who wishes to decompile that program in order to correct errors affecting the operation thereof is not required to satisfy the requirements laid down in Article 6 of that directive. However, that purchaser is entitled to carry out such a decompilation only to the extent necessary to effect that correction and in compliance, where appropriate, with the conditions laid down in the contract with the holder of the copyright in that program.

[Signatures]

OPINION OF ADVOCATE GENERAL
SZPUNAR
delivered on 10 March 2021 (1)
Case C-13/20
Top System SA
v
Belgian State
(Request for a preliminary ruling from the cour d'appel de Bruxelles (Court of Appeal, Brussels, Belgium))

(Reference for a preliminary ruling – Copyright and related rights – Directive 91/250/EEC – Legal protection of computer programs – Article 5(1) – Exceptions to the restricted acts – Acts necessary for error correction – Article 6 – Decompilation of a computer program)

Introduction

1. This case provides the Court with a further opportunity to examine the particularities of the legal protection of computer programs. Although it is accepted, both under EU law (2) and in international law, (3) that computer programs are protected by copyright as literary works, they do however differ from such works in several respects. Their specific nature, as protected subject matter, is reflected in the mechanisms of such protection which differ from the general rules of copyright to such an extent that some authors refer to a de facto system of protection sui generis. (4)

2. First of all, not only do computer programs have a utilitarian purpose, but that utility is very special: to make computers work. Such a program consists of a series of instructions which, when executed by a computer, enable that computer to perform certain tasks. (5) It follows that, unlike any other category of subject matter protected by copyright, computer programs are not intended to be used by means of human perception. Moreover, the first computer programs were regarded as accessories to the machine itself, with software only gradually securing its independence from hardware. (6)

3. It is true that, in some situations, which may be relevant from the perspective of copyright, a person's understanding of a computer program may prove useful, for example in order to develop a rival or complementary program. However, as a rule, it is not the user but rather the computer which 'understands' the program and executes it. The value for the user therefore lies not in the computer program per se, but rather in the functions which that program enables the computer to perform. This puts computer programs more on a par with inventions protected by patent rather than 'traditional' works protected by copyright.

4. That first feature of computer programs leads on to the second: their mode of expression. Although a computer program is intended to be perceived not by people but by the machine, it must be expressed in a way which that machine can understand. That mode of expression is binary code, 'text' consisting of just two symbols, which are usually represented as 0 and 1, but that representation is still a convention for human use. The computer's processor 'reads' those symbols as different values of electrical voltage.

5. Although programs for so-called 'first-generation' computers were often coded directly in binary form, modern programs are much too complex to be created, or even read, in that form. There are therefore programming languages, referred to as 'high-level languages', which contain the different instructions for the computers, coded in the form of expressions close to natural language and, therefore, discernible by people

and understandable to those who know those languages. A computer program created in such a programming language constitutes its 'source code'. That source code is then 'compiled', using dedicated software referred to as a 'compiler', into an 'object code' or a 'machine code', that is to say into the form understandable to and executable by a computer. (7)

6.The fact remains that, in practice, computer programs are usually communicated to users only in the form of the object code. This means that those programs can be used by executing them on a computer, but does not allow their content to be known, which is unusual for a work protected by copyright. The question of whether and, potentially, to what extent the user of a computer program is entitled to translate the object code of that program into source code (this process is known as 'decompilation') in order to learn its content lies precisely at the heart of this case.

7. That question leads me to the third feature of computer programs as subject matter protected by copyright: the relationship between that protection and the traditional principle of copyright that copyright protects not ideas but only their expression. That principle reflects the very purpose of copyright, which is to contribute not only to creation, by protecting the creative work of authors, but also to the dissemination and the access to ideas, by preventing their monopolisation, such that those ideas can be the source of further creations. However, the fact that the expression of computer programs, as they are normally disclosed, is imperceptible to people means that the ideas underlying those programs can be concealed, thus affording their authors protection which exceeds that which is justified by the objectives of copyright. (8) Thus, computer programs are the only category of protected works in respect of which access to the underlying ideas, by mere sensory analysis not involving acts subject to the author's exclusive rights, is impossible. (9)

8. I consider these introductory remarks to be necessary in order to place the present case in the specific context of the protection of computer programs by copyright. Indeed, the key issue in this case, that of the right to decompile a program, cannot arise in relation to any other category of protected subject matter, for the simple reason that neither the decompilation process, nor any similar process, is needed in order to access the content of the works belonging to categories other than computer programs.

Legal context

EU law

9. Article 1 of Council Directive 91/250/EEC of 14 May 1991 on the legal protection of computer programs (10) provides:

'1. In accordance with the provisions of this Directive, Member States shall protect computer programs, by copyright, as literary works within the meaning of the Berne Convention for the Protection of Literary and Artistic Works. For the purposes of this Directive, the term "computer programs" shall include their preparatory design material.

2. Protection in accordance with this Directive 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 under this Directive.

3. A computer program shall be protected if it is original in the sense that it is the author's own intellectual creation. No other criteria shall be applied to determine its eligibility for protection.'

10. Under Article 4(a) and (b) of that directive:

'Subject to the provisions of Articles 5 and 6, the exclusive rights of the rightholder within the meaning of Article 2 shall include the right to do or to authorise:

(a) the permanent or temporary reproduction of a computer program by any means and in any form, in part or in whole. In so far as loading, displaying, running, transmis[s]ion or storage of the computer program necessitate such reproduction, such acts shall be subject to authorisation by the rightholder;

(b) the translation, adaptation, arrangement and any other alteration of a computer program and the reproduction of the results thereof, without prejudice to the rights of the person who alters the program;'

11. According to Article 5(1) of the directive:

'In the absence of specific contractual provisions, the acts referred to in Article 4(a) and (b) shall not require authorisation by the rightholder where they are necessary for the use of the computer program by the lawful acquirer in accordance with its intended purpose, including for error correction.'

12. Finally, Article 6 of the same directive, which is entitled 'Decompilation', provides:

'1. The authorisation of the rightholder shall not be required where reproduction of the code and translation of its form within the meaning of Article 4(a) and (b) are indispensable to obtain the information necessary to achieve the interoperability of an independently created computer program with other programs, provided that the following conditions are met:

(a) these acts are performed by the licensee or by another person having a right to use a copy of a program, or on their behalf by a person authorised to [d]o so;

(b) the information necessary to achieve interoperability has not previously been readily available to the persons referred to in subparagraph (a);

and

(c) these acts are confined to the parts of the original program which are necessary to achieve interoperability.

2. The provisions of paragraph 1 shall not permit the information obtained through its application:

(a) to be used for goals other than to achieve the interoperability of the independently created computer program;

(b) to be given to others, except when necessary for the interoperability of the independently created computer program;

or

(c) to be used for the development, production or marketing of a computer program substantially similar in its expression, or for any other act which infringes copyright.

3. In accordance with the provisions of the Berne Convention for the Protection of Literary and Artistic Works, the provisions of this Article may not be interpreted in such a way as to allow its application to be used in a manner which unreasonably prejudices the rightholder's legitimate interests or conflicts with a normal exploitation of the computer program.'

13. Directive 91/250 was repealed, with effect from 24 May 2009, pursuant to Article 10 of Directive 2009/24/EC. (11) However, the facts of the main proceedings remain subject, ratione temporis, to Directive 91/250. In any event, the relevant provisions of that directive have not been amended.

Belgian law

14. Articles 4, 5 and 6 of Directive 91/250 were transposed into Belgian law, essentially verbatim, in Articles 5, 6 and 7 of the loi du 30 juin 1994 transposant en droit belge la directive 91/250/CEE du Conseil du 14 mai 1991 concernant la protection juridique des programmes d'ordinateur (Law of 30 June 1994 transposing into Belgian law Council Directive 91/250/EEC of 14 May 1991 on the legal protection of computer programs). (12)

Facts, procedure and questions referred

15. The Selection Office of the Federal Authorities ('SELOR') is a Belgian public institution integrated into the service public fédéral Stratégie et Appui (Policy and Support Federal Public Service), which is responsible for selecting and orienting the future personnel of the authorities' various public services. The Belgian State is designated as a party to the main proceedings.

16. Top System SA, a company governed by Belgian law, develops computer programs and provides various IT services to its customers. It has been working with SELOR for a number of years.

17. Top System is, inter alia, the author of a number of applications developed at SELOR's request, including the SELOR Web Access ('SWA'), which is also called 'eRecruiting'. Those applications comprise, on the one hand, 'tailor-made' components specifically intended to meet SELOR's needs and requirements and, on the other, components taken by Top System from the Top System Framework ('TSF'), a program authored by it. One of the components of the TSF is the DataGridEditor ('DGE'). SELOR has a license to use the applications developed by Top System.

18. On 6 February 2008, SELOR and Top System concluded service agreements, one of which concerns the installation and configuration of a new development environment as well as the integration of the sources of SELOR's applications into, and their migration to, that new environment. Between June and October 2008, there was an exchange of emails about problems affecting certain applications, in particular the eRecruiting application.

19. Proceedings were subsequently brought before the commercial courts in Brussels (Belgium). In particular, on 6 July 2009, Top System brought an action against SELOR and the Belgian State before the tribunal de commerce de Bruxelles (Commercial Court, Brussels, Belgium) for a declaration, in essence, of the decompilation, by SELOR, of the TSF framework software. Specifically, Top System alleged infringement of its exclusive rights in the TSF and requested that SELOR and the Belgian State be ordered to pay damages. The case was referred to the tribunal de première instance de Bruxelles (Court of First Instance, Brussels, Belgium), which found the claim for damages to be unfounded.

20. Top System brought an appeal against that judgment before the referring court. Before that court, SELOR admits to having decompiled part of the TSF – the functionalities of which have been integrated into SELOR's applications – in order to disable a faulty function. SELOR contends that it is authorised to undertake that decompilation, in the first place, contractually, a claim which the referring court dismisses as unfounded, and, in the second instance, pursuant to the provisions transposing Article 5(1) of Directive 91/250. By contrast, Top System, whilst disputing the existence of an error in its software, claims that the decompilation of a computer program is permitted, extra-contractually, only under Article 6 of that directive and for the purpose not of error correction but of the interoperability of independent software.

21. It is in that context that the cour d'appel de Bruxelles (Court of Appeal, Brussels, Belgium) decided to stay proceedings and refer the following questions to the Court for a preliminary ruling:

'(1) Is Article 5(1) of [Directive 91/250] to be interpreted as permitting the lawful purchaser of a computer program to decompile all or part of that program where such decompilation is necessary to enable that person to correct errors affecting the operation of the program, including where the correction consists in disabling a function that is affecting the proper operation of the application of which the program forms a part?

(2) In the event that that question is answered in the affirmative, must the conditions referred to in Article 6 [of Directive 91/250], or any other conditions, also be satisfied?'

22. The request for a preliminary ruling was received at the Court on 14 January 2020. Written observations have been submitted by the parties to the main proceedings and the European Commission. In the light of the current circumstances relating to the health crisis, the Court decided to cancel the hearing. The parties replied in writing to questions put by the Court.

Analysis

The first question referred

23. By its first question referred for a preliminary ruling, the referring court asks, in essence, whether Article 5(1) of Directive 91/250 permits a lawful acquirer of a computer program to decompile that program where such decompilation is necessary in order to correct errors affecting its functioning. It is apparent from the order for reference that the doubts entertained by that court

concern, inter alia, the argument advanced by Top System that the decompilation of a computer program is permitted only in the situation provided for in Article 6 of that directive (13) and is, therefore, precluded in the situations covered by Article 5 of the directive. In order to reply to that question, consideration must be given to the prerogatives of the holder of copyright in a computer program as compared with those of a lawful acquirer of that program.

The relationship between the rightholder and the lawful acquirer of a computer program

24. First of all, Article 4 of Directive 91/250 lays down the exclusive rights of the copyright holder, rights of a preventative nature, (14) in its computer program. The first of those rights is the right of reproduction, which is defined in particularly broad terms because it covers not only any form of reproduction, whether permanent or temporary, but also acts of reproduction necessary to use a program. Unlike other categories of works, in any case those which are distributed on their own medium, a computer program always requires a reproduction, if only a temporary one, in the computer's memory in order for that program to be used. The rightholder's exclusive rights therefore constitute, as far as computer programs are concerned, greater intrusion into the private sphere of the user than in the case of other categories of protected subject matter, because those rights require de facto the authorisation of the rightholder even simply to use the program. In addition, Directive 91/250 does not include exceptions equivalent to those provided for in Article 5(1) and (2)(b) of Directive 2001/29/EC. (15)

25. Next, Directive 91/250 makes subject to the rightholder's exclusive rights a whole series of acts concerned with the alteration of a computer program, including 'the reproduction of the results thereof'. Here again, the rightholder's rights are particularly extensive as compared with traditional copyright solutions, under which alterations of the work may fall within the exclusive sphere of the author only where the results of the alteration are made public.

26. Thus, the copyright holder's exclusive rights in a computer program cover not only traditional acts of exploitation of the work under copyright, but also the enjoyment of that work in the user's private sphere.

27. Lastly, Directive 91/250 enshrines the right of distribution, with which the present case is not concerned.

28. That broad definition of the rightholder's prerogatives is however limited with regard to the rightholder's relations with a lawful acquirer of its computer program. In accordance with the opening sentence of Article 4 of Directive 91/250, exclusive rights are conferred on the rightholder 'subject to the provisions of Articles 5 and 6' of that directive. Thus, although those articles are presented as exceptions to the exclusive rights, (16) they are in fact a restriction inherent in such rights. In addition, under Article 5(1) of the directive, the acts referred to in Article 4(a) and (b) thereof – that is to say, the reproduction and any forms of alteration of the program – do not require authorisation by the rightholder where they are necessary for the use of the program by the lawful acquirer, including for error correction.

29. However, Article 5(1) of Directive 91/250 contains a reservation of its own: acts carried out by the lawful acquirer of a computer program in the context of using that program are not subject to the rightholder's exclusive rights 'in the absence of specific contractual provisions'.

30. Ultimately, the end result of Article 4(a) and (b) of Directive 91/250 is actually to permit the holder of copyright in a computer program, in its relations with a lawful acquirer of its program, to define by contract, in detailed terms, the rules for use of that program by that acquirer. By contrast, in the absence of such contractual provisions, the acquirer is free to carry out acts subject, as a rule, to the rightholder's exclusive rights, provided that the program in question continues to be used in accordance with its intended purpose, which includes the correction of errors.

31. Furthermore, it is true that, according to the 17th recital of Directive 91/250, 'the acts of loading and running necessary for the use of a copy of a program which has been lawfully acquired, and the act of correction of its errors, may not be prohibited by contract'. However, it must be stated that analysis of the legislative part of that directive leads to the opposite conclusion. Indeed, not only does the directive not contain any explicit provision to the effect of that recital, nor does it allow even an interpretation to that effect. The only potentially relevant provision of Directive 91/250, namely Article 5(1) thereof, treats all the acts listed in Article 4(a) and (b) of the directive in the same way. That provision does not therefore leave any scope for interpretation which would allow certain acts, namely the loading and running of the computer program and the correction of errors, to be exempted from the reservation relating to specific contractual provisions contained in Article 5(1) of that directive. In addition, although the recitals of a directive may guide the interpretation of the provisions reflecting those considerations, they do however lack any legislative force allowing them to replace absent provisions or to lead to an interpretation contra legem.

32. This is a fortiori the case since the second sentence of Article 9(1) of Directive 91/250 explicitly provides that any contractual provisions contrary to Article 6 or to Article 5(2) and (3) of that directive are null and void. The fact that the EU legislature did not mention Article 5(1) of the directive in that sentence can therefore only be regarded as intentional.

33. It may be, as the Commission states in its reply to a question put by the Court in this regard, that the 17th recital of Directive 91/250 reflects the wording of the original proposal for that directive. (17) Article 5(1) of that proposal drew a distinction between licensing contracts negotiated between the parties and 'pre-formulated, standard' contracts, in which the freedom of contract of the acquirer of a computer program was limited to whether or not to enter into the contract. According to the Commission, the prohibition

mentioned in the 17th recital concerns the second category of contracts only. However, the fact remains that the text of Article 5(1) of Directive 91/250 that was finally adopted does not make that distinction. Accordingly, the provisions of any user licensing agreement for a computer program may govern all aspects of such use, including loading, running and error correction.

34. This is not as irrational as it would appear prima facie. It is, of course, difficult to imagine a user license for a program which entirely prohibits that program's use. However, the use of the program may be restricted, for example, in terms of the number of computers on which the program may be installed and used, such that its loading and its running on additional computers, including by the same acquirer, (18) would be prohibited. This is a fortiori the case in relation to the correction of errors which is not, in normal circumstances, one of the acts necessary for the use of a computer program in accordance with its intended purpose. Error correction may therefore be reserved for the copyright holder without affecting the consistency of a license to use the program. (19)

35. I therefore understand the finding made by the Court in the judgment in SAS Institut, (20) that under the 17th recital of Directive 91/250 the acts of loading and running of a computer program necessary for that use may not be prohibited by contract, meaning that a user license entirely prohibiting the acts necessary for such use would be an inherent contradiction. (21) However, that finding cannot, in my view, be interpreted as conferring independent legislative force on that recital.

36. With regard, more specifically, to the correction of errors, an interpretation to the effect that it is not possible to preclude by contract the right of the acquirer of the program to make corrections would create an imbalance to the detriment of the copyright holders. That imbalance would be all the greater if the Court were to agree with my proposed reply in the present case and take the view that the acquirer should be granted the right to decompile the program for the purpose of such correction without seeking the rightholder's permission to do so in advance. This would deprive that rightholder of any possibility of opposing such decompilation. (22)

37. However, that question does not appear to me to be relevant in circumstances such as those at issue in the main proceedings. It is apparent from the case file that the contract between Top System and SELOR does not contain any provision prohibiting SELOR from correcting errors in Top System's computer programs or, in any case, that company is not relying on such provisions before the referring court. SELOR is therefore entitled, pursuant to Article 5(1) of Directive 91/250, to correct the errors in the programs concerned.

38. Accordingly, it is now necessary to consider whether that provision permits an acquirer of a computer program to decompile that program with the goal of correcting errors in it. I will begin my analysis by providing some clarification about the concept of 'decompilation'.

The concept of 'decompilation'

39. As I have already stated, (23) a computer program, written by the programmer in a programming language that people can understand, must then be transformed into a form which the computer can understand, that is to say into the machine language. That process is carried out using a special program, the compiler, and is called 'compilation'. The version of the program in the programming language is referred to as the 'source code' and the version in the machine language as the 'object code'. That process involves not simply transcribing the program into binary code, but rather 'translating' instructions formulated in functional and abstract terms in the source code into specific instructions for the components of a computer processor with a particular architecture. Some programs written in programming languages that are closer to the machine language ('low-level' languages) are not compiled but rather assembled. This is a process similar to the compilation process and, since Directive 91/250 does not distinguish between those two processes, the view must be taken that compiled programs and assembled programs are to be treated in the same way from a legal perspective.

40. Computer programs are usually distributed only in the form of object code, which people cannot understand. Accordingly, the lawful acquirer of a computer program, in so far as that acquirer wishes to learn the program's contents and make changes to it, inter alia with a view to correcting errors, must transform the object code in its possession into a program form that people can understand, that is to say code written in a programming language. That process, called 'decompilation', consists in reproducing the program's functional instructions from the instructions for the processor recorded in the object code. Decompilation is therefore a kind of 'reverse engineering', that is to say a process by which the finished product is used as the starting point for discovering how a complex tool is constructed, as applied to computer programs.

41. However, decompilation does not allow the original source code of the computer program in question to be reproduced. During the compilation process, some information contained in the source code that is not essential to the functioning of the computer's processor is lost and it cannot be restored via the decompilation process. Moreover, the same source code may give different results after compilation, depending on the configuration of the compiler. The end result of decompilation is therefore a third version of the program, which is often called the 'quasi-source code'. A program decompiled in that way can, however, be recompiled once more into a functioning object code.

Decompilation as an element of the author's exclusive rights

42. When asked whether the decompilation of a computer program is covered by the author's exclusive rights, as defined in Article 4(a) and (b) of Directive 91/250, the interested parties who submitted observations in this case answered unanimously in the affirmative. The Commission provided a detailed reply in this regard. In its view, in essence, although there is no direct reference to decompilation in those provisions,

a number of acts which together make up the decompilation process, such as the reproduction and the alteration of the computer program, are clearly subject to the author's exclusive rights.
43. I agree with that view.
44. Under the first sentence of Article 1(2) of Directive 91/250, protection in accordance with that directive is to apply to the expression in any form of a computer program. In addition, as the Court has already held, both the source code and the object code are two forms of expression of the same computer program and both are protected. (24) Passage from one form to the other therefore means that the program has to be reproduced and altered.
45. As for decompilation, it consists in a transformation of the program in (protected) object code form into 'quasi-source code'. The latter is a reproduction of the program resulting from its alteration; that alteration consists in the translation of the machine language into a programming language. Such reproduction is expressly subject to the exclusive right of the program's author pursuant to Article 4(b) of Directive 91/250.
46. That is, moreover, confirmed by the 19th recital of that directive, which states that 'the unauthorised reproduction, translation, adaptation or transformation of the form of the code in which a copy of a computer program has been made available constitutes an infringement of the exclusive rights of the author'.
47. Lastly, one final confirmation that decompilation falls within the scope of Article 4(a) and (b) of Directive 91/250 can be found in Article 6(1) of that directive. Article 6 of the directive, which is entitled 'Decompilation', refers to the 'reproduction of the code and translation of its form within the meaning of Article 4(a) and (b)' (25) of that directive. This is therefore an indirect definition of the concept of 'decompilation' within the meaning of Directive 91/250, and a definition which expressly refers to the exclusive rights of the author of a computer program listed in Article 4(a) and (b) of that directive.
48. It must therefore be concluded that the decompilation of a computer program falls within the scope of the exclusive rights of the author of such a program as provided for in Article 4(a) and (b) of Directive 91/250.

The inclusion of decompilation in the scope of Article 5(1) of Directive 91/250

49. The finding made in the preceding point means that the answer to the question whether decompilation is covered by the exception (or, more accurately, the limitation) laid down in Article 5(1) of Directive 91/250 must be in the affirmative. I am in agreement with the Commission in this regard.
50. Under that provision, the lawful acquirer of a computer program is entitled to carry out all the acts listed in Article 4(a) and (b) of Directive 91/250, as those acts are necessary for the use of that program, including for error correction. Accordingly, it is entirely logical that if decompilation or the constituent acts of that process, such as the reproduction and transformation of the code, fall within the scope protected under Article 4(a) and (b) of that directive, those acts must necessarily also fall within the scope covered by Article 5(1) of the directive.
51. The interpretation of those provisions put forward by Top System, namely that decompilation falls within the sphere of the author's exclusive rights pursuant to Article 4(a) and (b) of Directive 91/250 but is excluded from the exemption provided for in Article 5(1) of that directive, cannot be accepted. The construction and the wording of those provisions clearly demonstrate that those two interpretations are mutually exclusive.

The contribution of Article 6 of Directive 91/250

52. Top System submits, however, that Article 6 of Directive 91/250 should command an interpretation of Article 5(1) of that directive that differs from the one I have proposed above. According to that company, Article 6 of that directive forms a sort of lex specialis and is the only provision relating to decompilation. In its view, since that provision is lex specialis, decompilation is excluded from the scope of Article 5(1) of Directive 91/250. In addition, it argues that, as Article 6 of that directive permits decompilation solely for the purpose of ensuring the interoperability of independently created computer programs, decompilation with a view to correcting errors in a computer program carried out without the authorisation of the copyright holder is prohibited.
53. That line of argument does not, however, stand up to criticism.
54. Indeed, as I have stated, Article 5(1) of Directive 91/250 does not list the various acts which it covers. That provision simply refers to Article 4(a) and (b) of that directive, exempting from the obligation to obtain the copyright holder's authorisation 'the acts referred to' in Article 4(a) and (b), where they are necessary for the use of a computer program. In addition, that provision does not contain any reservation relating to Article 6 of the directive.
55. By contrast, Article 6(1) of Directive 91/250 relates to two specific categories amongst the acts covered by Article 4(a) and (b) of that directive, namely the 'reproduction of the code' and the 'translation of its form', where those acts are indispensable to obtain the information necessary to achieve the interoperability of an independently created computer program with other programs. This is a different objective from that referred to in Article 5(1) of the directive.
56. There is therefore nothing to indicate that Article 6 of Directive 91/250 constitutes lex specialis as compared with Article 5(1) of that directive. The scope of the two provisions is different because they cover different situations. Article 5(1) concerns the acts necessary for the use of the computer program, including for error correction, whereas Article 6 concerns the acts necessary to ensure the interoperability of independently created programs. Both provisions are therefore independent from one another and a relationship of lex specialis / lex generalis does not exist between them.
57. Top System's argument that Article 6 of Directive 91/250 is the only provision that permits the

decompilation of a computer program must therefore be rejected.

The effect of the travaux préparatoires for Directive 91/250

58. The conclusion that Article 5(1) of Directive 91/250 covers the decompilation of a computer program with the goal of correcting errors in it is not invalidated, contrary to Top System's claim, by the guidance provided in the travaux préparatoires for that directive.

59. Accordingly, I disagree with Top System's arguments, as developed inter alias in its reply to the questions put by the Court, that the travaux préparatoires for Directive 91/250 show that the decompilation of a protected computer program is possible only in the circumstances and for the purposes defined in Article 6 of that directive. The documents cited by Top System show that it was clear from the start of the travaux préparatoires that the exclusive rights of authors defined in Article 4(a) and (b) of the directive would cover the decompilation of the protected program. In addition, since Article 5(1) of Directive 91/250 permits a lawful acquirer to perform all the acts listed in Article 4(a) and (b) of that directive, where necessary for the use of the program, including for error correction, this necessarily encompasses decompilation. Thus, the entire debate during the legislative process for Directive 91/250, which resulted in the addition, to the Commission's initial draft, of the current Article 6 of that directive, concerned decompilation conducted outside the normal use of a computer program and, therefore, outside the framework of Article 5(1) of the directive. That decompilation was, in fact, for the purpose of the interoperability of programs created by independent authors.

60. It is therefore incorrect to claim, as Top System does, that the question of decompilation is definitively excluded from Article 5 of Directive 91/250. For decompilation to be excluded from Article 5(1) of that directive, it would also have to be excluded from Article 4(a) and (b) of the directive, which would move it entirely outside the exclusive sphere of the copyright holder given the absence of any other provision capable of guaranteeing that rightholder protection against decompilation. Such a conclusion would be absurd.

61. All that the travaux préparatoires for Directive 91/250 reveal is that the original idea of including the exception for decompilation for the purposes of interoperability in a specific paragraph of Article 5 of that directive (separate from paragraph 1 thereof) was abandoned in favour of the creation of a new, more detailed article devoted to that exception. However, that in no way affects the scope of Article 5(1) of the directive.

62. It is true that the Council greatly restricted the scope of that new exception. In particular, it dropped the idea, initially presented by the Commission, of permitting decompilation for the purpose of the maintenance of the newly created program that is interoperable with the decompiled program. This can be explained, to my mind, by the fact that, pursuant to the second sentence of Article 9(1) of Directive 91/250, it is not possible to derogate from that exception by contractual means, unlike in the case of Article 5(1). The goal was therefore to protect copyright holders from abuse. The fact remains that, in such cases, decompilation is carried out for purposes outside the normal use of the program. (26)

63. I therefore share the Commission's view that the travaux préparatoires for Directive 91/250 cannot be used in support of conclusions different from those drawn from a literal and schematic interpretation of Article 5(1) of that directive.

Proposed reply

64. I therefore propose that the first question referred for a preliminary ruling be answered to the effect that Article 5(1) of Directive 91/250 is to be interpreted as permitting a lawful acquirer of a computer program to decompile that program where that is necessary in order to correct errors affecting its functioning.

The second question referred

65. By its second question referred for a preliminary ruling, the referring court asks if, in the event that Article 5(1) of Directive 91/250 were to be interpreted as permitting a lawful acquirer of a computer program to decompile that program where that is necessary in order to correct errors, that decompilation must satisfy the requirements laid down in Article 6 of that directive or, indeed, other requirements.

The applicability of the requirements under Article 6 of Directive 91/250

66. Article 6 of Directive 91/250 provides for an exception to the exclusive rights of the holder of copyright in a computer program which allows that program to be decompiled where that is necessary in order to ensure the compatibility of another independently created program with the program. That exception is accompanied by a number of conditions and prohibitions which are listed in that provision.

67. As per my analysis, (27) Article 6 of Directive 91/250 is independent from Article 5 of that directive, in particular from paragraph 1 of the latter article. The exception introduced by Article 6 of the directive differs in its scope and its objectives from the exception provided for in Article 5(1) of that directive, and it differs also in its definition of the acts permitted by it.

68. The requirements laid down in Article 6 of Directive 91/250 cannot therefore apply, directly or by analogy, to the exception provided for in Article 5(1) of that directive.

69. However, that does not mean that the application of the latter exception does not have to satisfy any other requirement.

The other applicable requirements

70. In the light of the wording of Article 5(1) of Directive 91/250, certain requirements and certain restrictions are inherent in the exception to exclusive rights established by that provision. (28)

71. First of all, that exception benefits only the lawful acquirer of a computer program. That point does not appear to raise any issues in the main proceedings and therefore need not be considered further.

72. Next, the acts performed, here the acts which – together – make up the decompilation of a computer

program, (29) must be necessary in order for that program to be used in accordance with its intended purpose and, more specifically, for error correction. The following comments must be made in relation to that condition.

73. First, the concept of an 'error' has to be defined. After all, the very existence of an error in a computer program may be a matter of dispute between the author and the user of that program. (30) Something that may constitute an error from the user's perspective may be an intended function or feature from the point of view of the program's author. Although Directive 91/250 does not provide a definition of that term, one may however be inferred from the wording and the purpose of Article 5(1) of that directive.

74. Under that provision, the acts carried out by the lawful acquirer of a computer program must enable that acquirer to 'use [that program] … in accordance with its intended purpose, including for error correction'. The correction of errors therefore constitutes a use of the program in accordance with its intended purpose.

75. The intended purpose of the computer program is that defined by its author or, as the case may be, that agreed between the supplier and the purchaser of the program when it is acquired. An error is therefore a malfunction which prevents the program from being used in accordance with its intended purpose. The correction of such errors is the only possible justification for acts by the user, including decompilation, which are carried out without the copyright holder's consent.

76. By contrast, any amendment or improvement of the program as compared with its original intended purpose is not a correction of errors that justifies such acts. This includes, inter alia, the updating of the program in line with technological progress. In other words, the technical obsolescence of the computer program is not an error within the meaning of Article 5(1) of Directive 91/250.

77. Since computer programs are not only a category of utilitarian works but are also part of an industry in which technological development occurs at a particularly rapid pace, it is normal for them to become obsolete over time. In addition, addressing such obsolescence by updating computer programs, or even by replacing them with new programs, is part and parcel of the normal exploitation of such programs as subject matter protected by copyright and, therefore, of the prerogatives of the copyright holders.

78. Secondly, the intervention of the user of the computer program must be necessary from the perspective of the objective pursued. In the present case, the question is whether and to what extent the decompilation of a computer program is necessary in order to correct errors in it.

79. There are certainly errors that can be corrected without access to the program's source code, either 'manually' by the user or with the help of specialised software. However, the parties who submitted observations in the present case appear to be in agreement that such correction more often than not requires amendments in the program's actual code. Since the object code cannot be understood by people, such correction necessitates access to the original source code or the translation of the object code into source code ('quasi-source code'). (31) The following question therefore arises: in what circumstances does that need justify the decompilation of the program by its lawful acquirer?

80. Top System submits that such cases are very rare and exceptional. In that company's view, in most situations, either the lawful acquirer of a computer program already has the source code, or the copyright holder can give the acquirer access to it, or the rightholder is responsible for the correction of errors under a maintenance contract.

81. I will set aside the situation in which the lawful acquirer has a non-compiled or already decompiled version of the program, that is to say access to the source code. It is clear that, in that scenario, decompilation is not necessary. The more problematic issues are the relationship between that acquirer and the holder of copyright in the computer program and their mutual obligations. However, the issue here is not the need to decompile the program in order to correct errors, but rather the condition for the application of Article 5(1) of Directive 91/250, namely the absence of contractual provisions precluding it.

82. As a reminder, Article 5(1) of Directive 91/250 applies 'in the absence of specific contractual provisions'. In other words, the contract under which the program is acquired may organise the use of the program, including error correction, such that it restricts the acquirer's ability to carry out acts subject to the rightholder's exclusive rights for the purpose of error correction. That restriction may go as far as an absolute prohibition on the correction of errors by the acquirer. (32) In such a situation, the exception provided for in that provision does not apply and the acts of the acquirer are limited to those permitted under the contract.

83. However, if the contract between the parties does not include such a restriction, the lawful acquirer of a computer program is, in my view, free to carry out the acts listed in Article 4(a) and (b) of Directive 91/250, including the decompilation of the program, where that proves necessary inter alia in order to correct errors. That acquirer has no other obligations towards the holder of copyright in the program. It is therefore not obliged to ask the rightholder to correct the errors, to request access to the program's source code, or to bring legal proceedings seeking an order that the rightholder perform a particular act. By contrast, although those are not obligations under Article 5(1) of the directive, it must be borne in mind that decompilation is a time-consuming and expensive process with uncertain effects. In practice, users will therefore make use of that technique only as a last resort. (33)

84. It will, of course, be for the court having jurisdiction, in the event proceedings are brought, to determine the exact content of the contractual rights and obligations of the parties to the contract under which a computer program was acquired.

85. Although the correction of an error often means that a minute fragment of a computer program's code has to

be amended, finding that fragment may mean having to decompile a substantial part, if not all, of the program. Accordingly, such decompilation cannot be regarded as unnecessary for the correction of the error, as that would make the correction impossible and deprive the exception laid down in Article 5(1) of Directive 91/250 of its practical effect. The lawful acquirer of a computer program is therefore entitled, under that provision, to decompile the program to the extent necessary not only to correct an error stricto sensu, but also to locate that error and the part of the program that has to be amended.
86. Finally, it must be observed that Article 5(1) of Directive 91/250 makes no mention of restrictions as regards the use of the information obtained from the decompilation of a computer program, such as that referred to in Article 6(2) of that directive. However, it does not follow from that fact that the lawful acquirer of a computer program who has decompiled that program in order to correct errors in it is then free to use the results of that decompilation to other ends.
87. Article 4(b) of Directive 91/250 makes not only 'the translation, adaptation, arrangement and any other alteration of a computer program' subject to the author's exclusive rights, but also 'the reproduction of the results thereof', that is to say, in the case of decompilation, the source code resulting from that decompilation. Thus, any reproduction of that source code for a purpose other than the correction of errors is subject to the authorisation of the copyright holder. Furthermore, Article 4(c) of that directive prohibits the distribution to the public of a copy of a computer program without the consent of the holder of copyright in that program; this also applies to the copies of the source code resulting from decompilation.
88. However, under Article 1(2) of Directive 91/250, information which is not part of the program strictly speaking, that is to say a form in which it is expressed, is not protected. (34)
89. I therefore propose that the second question referred for a preliminary ruling be answered to the effect that Article 5(1) of Directive 91/250 is to be interpreted as meaning that the decompilation of a computer program, pursuant to that provision, by a lawful acquirer, in order to correct errors in that program, is not subject to the requirements of Article 6 of that directive. However, such decompilation may be carried out only to the extent necessary for that correction and within the limits of the acquirer's contractual obligations.

Conclusion

90. In the light of the foregoing considerations, I propose that the Court should answer the questions referred by the cour d'appel de Bruxelles (Court of Appeal, Brussels, Belgium) for a preliminary ruling as follows:
(1) Article 5(1) of Council Directive 91/250/EEC of 14 May 1991 on the legal protection of computer programs is to be interpreted as permitting a lawful acquirer of a computer program to decompile that program where that is necessary in order to correct errors affecting its functioning.
(2) Article 5(1) of Directive 91/250 is to be interpreted as meaning that the decompilation of a computer program, pursuant to that provision, by a lawful acquirer, in order to correct errors in that program, is not subject to the requirements of Article 6 of that directive. However, such decompilation may be carried out only to the extent necessary for that correction and within the limits of the acquirer's contractual obligations.

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1 Original language: French.
2 See point 9 of this Opinion.
3 See Article 4 of the WIPO Copyright Treaty, adopted in Geneva on 20 December 1996.
4 See, inter alia, Markiewicz, R., Ilustrowane prawo autorskie, Wolters Kluwer, Warsaw, 2018, p. 463. Other authors categorise computer programs as 'text as determined by law', see Vivant, M., Bruguière, J.-M., Droit d'auteur et droits voisins, Dalloz, Paris, 2015, p. 183.
5 Janssens, M.-Ch., 'The Software Directive', in Stamatoudi, I., and Torremans, P., EU Copyright Law. A Commentary, Edward Elgar Publishing, Cheltenham, 2014, pp. 89 to 148, in particular p. 93.
6 Bing, J., 'Copyright Protection of Computer Programs', in Derclaye, E., (ed.), Research Handbook on the Future of EU Copyright, Edward Elgar Publishing, Cheltenham, 2009, pp. 401 to 425, in particular p. 401.
7 Or, more specifically, for the processor with a specific architecture because object code instructions are specific to each type of processor and will not be executed by a different type of processor.
8 See, inter alia, Karjala, D.S., 'Copyright Protection of Computer Documents, Reverse Engineering and Professor Miller', University of Dayton Law Review, 1994, Vol. 19, pp. 975 to 1020.
9 Shemtov, N., Beyond the Code. Protection of Non-Textual Features of Software, Oxford University Press, Oxford, 2017, p. 28. For further consideration of the idea/expression dichotomy in copyright and its application to computer programs, see, in particular, pp. 102 to 127 of that book.
10 OJ 1991 L 122, p. 42.
11 Directive of the European Parliament and of the Council of 23 April 2009 on the legal protection of computer programs (OJ 2009 L 111, p. 16).
12 Moniteur belge of 27 July 1994, p. 19315.
13 That is to say, in order to ensure the interoperability of a computer program created independently from the decompiled program.
14 The rightholder has the right 'to do or to authorise'.
15 Directive of the European Parliament and of the Council of 22 May 2001 on the harmonisation of certain aspects of copyright and related rights in the information society (OJ 2001 L 167, p. 10).
16 Article 5 of Directive 91/250 is entitled 'Exceptions to the restricted acts'.
17 See Proposal for a Council Directive on the legal protection of computer programs (COM(88) 816 final), submitted by the Commission on 5 January 1989.

18 Unlike Article 5(3) of Directive 91/250, Article 5(1) of that directive refers not to the user of a copy of the program but to the acquirer of the program, regardless of the number of copies acquired.
19 Furthermore, contracts for the use of computer programs will be subject to other rules of law, such as provisions of contract law, consumer protection law and competition law. Those rules will restrict the freedom of contract of the parties, thus protecting the acquirers of computer programs from abuse by the holders of copyright in those programs.
20 Judgment of 2 May 2012 (C-406/10, EU:C:2012:259, paragraph 58).
21 Since it is contrary to the very purpose of a contract for the use of a computer program.
22 In addition, it cannot be ruled out that decompilation may be carried out for an unlawful purpose unconnected with the correction of errors.
23 See point 5 of this Opinion.
24 Judgment of 2 May 2012, SAS Institute (C-406/10, EU:C:2012:259, paragraphs 37 and 38).
25 Emphasis added.
26 Furthermore, as I will explain subsequently, Article 5(1) of Directive 91/250 does not, in my view, allow a computer program to be decompiled for the purpose of the maintenance of the decompiled program, save for error correction stricto sensu (see points 75 and 76 of this Opinion).
27 See, inter alia, points 52 to 56 of this Opinion.
28 See, inter alia, Janssens, M.-Ch., op. cit., p. 127.
29 See points 45 to 47 of this Opinion.
30 In the main proceedings, Top System denies that there is an error in the program at issue, even though the referring court points to an expert's report that finds that such an error does exist.
31 See point 41 of this Opinion.
32 Such a possibility exists, in my view, despite the wording of the 17th recital of Directive 91/250 (see points 31 to 34 of this Opinion).
33 A number of authors point to this aspect of decompilation. See, inter alia, Bing, J., op. cit., pp. 423 and 424.
34 I must point out that, in my opinion, that interpretation does not afford the holder of copyright in a computer program lesser protection than that afforded by Article 6(2) of Directive 91/250 in the case of decompilation for the purposes of the interoperability of independently created programs. When read in the light of Article 1(2) of that directive, Article 6(2) thereof can be interpreted only as meaning that the term 'information' covers only the elements of a computer program that are protected under the directive, that is to say the forms in which it is expressed, and not the 'ideas and principles which underlie' those elements. Furthermore, I would recall that, pursuant to the second sentence of Article 9(1) of Directive 91/250, decompilation on the basis of Article 6 of that directive cannot be excluded by contract, unlike decompilation carried out for the purpose of error correction.