

OPINION OF ADVOCATE GENERAL  
BOT  
delivered on 14 October 2010 ([1](#))

**Case C-393/09**

**Bezpečnostní softwarová asociace – Svaz softwarové ochrany**  
v  
**Ministerstvo kultury**

(Reference for a preliminary ruling from the Nejvyšší správní soud (Czech Republic))

(Intellectual property – Directive 91/250/CEE – Legal protection of computer programs – Concept of ‘expression in any form of a computer program’ – Inclusion or non-inclusion of a program’s graphic user interface – Copyright – Directive 2001/29/EC – Copyrights and related rights in the information society – Television broadcasting of a graphic user interface – Communication of a work to the public)

1. In the present case, the Court is requested to define the scope of the legal protection conferred by copyright on computer programs under Directive 91/250/EEC. ([2](#))
2. The questions referred by the Nejvyšší správní soud (Supreme Administrative Court) (Czech Republic) relate, more precisely, to the graphic user interface of a computer program. That interface, as I will see, is used to establish an interactive link between that program and the user. It makes a more intuitive and user-friendly use of that program possible, for example, by displaying icons or symbols on the screen.
3. The national court is therefore unsure as to whether the graphic user interface of the computer program constitutes an expression in any form of that program within the meaning of Article 1(2) of Directive 91/250 and thus benefits from copyright protection applicable to computer programs.
4. In addition, the national court asks whether a television broadcast of such an interface equates to communication of the work to the public, in accordance with Article 3(1) of Directive 2001/29/EC. ([3](#))
5. In this Opinion, I will state why I consider that a graphic user interface is not, of itself, an expression in any form of a computer program within the meaning of Article 1(2) of Directive 91/250 and that, accordingly, it cannot benefit from the protection conferred by that directive.
6. Next, I will explain why I believe that, when it constitutes the author’s own intellectual creation, a graphic user interface can benefit from copyright protection as a work within the meaning of Article 2(a) of Directive 2001/29.

7. However, I will propose that the court rule that a television broadcast of a graphic user interface, because it deprives the latter of its quality of a work within the meaning of Article 2(a) of Directive 2001/29, does not constitute a communication of that work to the public within the meaning of Article 3(1) of that directive.

## I – Legal context

### A – *International law*

#### 1. The TRIPS Agreement

8. The Agreement on Trade-Related Aspects of Intellectual Property Rights, which constitutes Annex 1 C of the Agreement establishing the World Trade Organisation (WTO), signed in Marrakech on 15 April 1994, was approved by Council Decision 94/800/EC of 22 December 1994 concerning the conclusion on behalf of the European Community, as regards matters within its competence, of the agreements reached in the Uruguay Round multilateral negotiations (1986-1994). (4)

9. Under Article 10(1) of the TRIPS Agreement, ‘[c]omputer programs, whether in source or object code, shall be protected as literary works under the Berne Convention (1971)’.

#### 2. The Copyright Treaty

10. The Copyright Treaty (‘the CT’) adopted by the World Intellectual Property Organisation (WIPO) in Geneva on 20 December 1996 was approved on behalf of the European Community by Council Decision 2000/278/EC of 16 March 2000. (5)

11. Article 4 of the CT provides that ‘[c]omputer programs are protected as literary works within the meaning of Article 2 of the Berne Convention. Such protection applies to computer programs, whatever may be the mode or form of their expression’.

12. The CT does not define the concept of a computer program. However, in the *travaux préparatoires*, the signatories agreed on the following definition. A computer program means a set of instructions capable, when incorporated in a machine-readable medium, of causing a machine having information-processing capabilities to indicate, perform or achieve a particular function, task or result. (6)

### B – *European Union law*

#### 1. Directive 91/250

13. Directive 91/250 seeks to harmonise Member States’ legislation in the field of legal protection of computer programs by defining a minimum level of protection. (7)

14. Thus, the sixth recital in the preamble to that directive states that the European Union’s legal framework on the protection of computer programs can accordingly in the first instance be limited to establishing that Member States should accord protection to computer programs under copyright law as literary works and, further, to establishing who and what should be protected, the exclusive rights on which protected persons should be able to rely in order to authorise or prohibit certain acts and for how long the protection should apply.

15. Article 1 of Directive 91/250 is worded as follows:

‘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.'

2. Directive 2001/29

16. Directive 2001/29 concerns the legal protection of copyright and related rights in the framework of the internal market, with particular emphasis on the information society. (8)

17. That directive applies without prejudice to the existing provision relating, inter alia, to legal protection of computer programs. (9)

18. Article 2(a) of Directive 2001/29 states that Member States are to provide authors with the exclusive right to authorise or prohibit direct or indirect, temporary or permanent reproduction by any means and in any form, in whole or in part, of their works.

19. Under Article 3(1) of that directive, '[m]ember States shall provide authors with the exclusive right to authorise or prohibit any communication to the public of their works, by wire or wireless means, including the making available to the public of their works in such a way that members of the public may access them from a place and at a time individually chosen by them'.

C – *National law*

20. Directive 91/250 was transposed into the Czech legal order by Law No 121/2000 on copyright and related rights and the amendment of various laws (zákon č. 121/2000 o právu autorském, o právech souvisejících s právem autorským a o změně některých zákonů) of 7 April 2000. (10)

21. By virtue of Article 2(1) of that law, copyright covers all literary works or other artistic work created by its author, which may be expressed in any objectively perceptible form, including electronic, permanent or temporary, without regard to its scope, purpose or meaning.

22. Article 2(2) of that Law states that a computer program is also regarded as a work if it is original, in that it is its author's own intellectual creation.

23. Under Article 65(1) of the Law on copyright, computer programs, without regard to the form of their expression, including the preparatory elements of their conception, are protected as literary works. Article 65(2) of that Law states that the ideas and principles on which all elements of a computer program are based, including those which are the basis of its connection to another program, are not protected under that Law.

## II – Facts and the dispute in the main proceedings

24. By an application made on 9 April 2001 to the Ministerstvo kultury (Ministry of Culture) and amended by letter of 12 June 2001, Bezpečnostní softwarová asociace – Svaz softwarové ochrany (Security software association; 'BSA') requested authorisation for the collective administration of copyrights to computer programs, under Article 98 of the Law on copyright.

25. By a decision of 20 July 2001, the Ministerstvo kultury dismissed that application. Accordingly, on 6 August 2001 BSA appealed against that decision, which appeal was also dismissed by decision of 31 October 2001.

26. BSA brought an appeal against the decision of 31 October 2001 before the Vrchní soud v Praze (High Court, Prague). The Nejvyšší správní soud, to which the case was referred, set aside that decision.

27. The Ministerstvo kultury therefore adopted a fresh decision on 14 April 2004, by which it once again dismissed BSA's application. BSA brought an appeal against that new decision before the Ministerstvo kultury. By decision of 22 July 2004, the decision of 14 April 2004 was annulled.

28. The Ministerstvo kultury finally adopted a new decision on 27 January 2005, by which it rejected BSA's application yet again. Inter alia, it stated that the Law on copyright protects only the object code and the source code of a computer program, but not the graphic user interface. BSA appealed against that decision to the Ministerstvo kultury. Since that appeal was dismissed by decision of 6 June 2005, BSA further appealed to the Městský soud v Praze (Municipal Court, Prague) which confirmed the line taken by the Ministerstvo kultury. BSA appealed against the decision of the Městský soud v Praze before the Nejvyšší správní soud.

### III – The questions referred for a preliminary ruling

29. Being unsure as to the interpretation of the provisions of European Union law, the Nejvyšší správní soud decided to stay the proceedings and refer the following questions to the Court for a preliminary ruling:

- '(1) Should Article 1(2) of ... Directive 91/250 ... be interpreted as meaning that, for the purposes of the copyright protection of a computer program as a work under that directive, the phrase "the expression in any form of a computer program" also includes the graphic user interface of the computer programme or part thereof?
- (2) If the answer to the first question is in the affirmative, does television broadcasting, whereby the public is enabled to have sensory perception of the graphic user interface of a computer program or part thereof, albeit without the possibility of actively exercising control over that program, constitute making a work or part thereof available to the public within the meaning of Article 3(1) of ... Directive 2001/29 ...?'

### IV – Analysis

#### A – *The jurisdiction of the Court*

30. In its reference for a preliminary ruling, the national court draws attention to the fact that the Court could be found not to have jurisdiction to answer the questions which it refers.

31. The facts of the dispute in the main proceedings do indeed predate the accession of the Czech Republic to the European Union.

32. In accordance with settled case-law, the Court has jurisdiction to interpret directives only as regards their application in a new Member State with effect from the date of that State's accession to the European Union. (11)

33. However, the Court, in its judgment in the case of *Telefónica O2 Czech Republic*, (12) pointed out that the decision contested in the main proceedings was adopted after the Czech Republic acceded to the Union, that it is prospective in its regulatory effect and not retrospective, and secondly, that the national court asks the Court for an interpretation of the Community legislation applicable to the main proceedings. Next, it stated that, provided that the questions referred for preliminary ruling concern the interpretation of European Union law, the Court gives its ruling without, generally, having to look into the circumstances in which national courts were prompted to submit the questions and envisage applying the provision of European Union law which they have asked the Court to interpret. (13)

34. In the case which gave rise to that judgment, although the facts of the dispute arose before the accession of the Czech Republic to the European Union, the decision contested in the main proceedings

was adopted after accession. (14) Accordingly, the Court considered that it had jurisdiction to rule on the questions referred by the national court.

35. In the present case, I find the same situation. We have seen that the first decision of the Ministerstvo kultury dates from 20 July 2001, thus before the date of accession of the Czech Republic to the European Union. After a number of appeals by BSA which were dismissed by the Ministerstvo kultury, the latter adopted a new decision on 27 January 2005, once again dismissing BSA's application.

36. Since BSA has contested that new decision before the Ministerstvo kultury without success, it has sought annulment thereof before the Městský soud v Praze.

37. That court upheld the decision of the Ministerstvo kultury and BSA therefore appealed to the Nejvyšší správní soud.

38. The decision which forms the subject-matter of the dispute in the main proceedings is therefore one which postdates the accession of the Czech Republic to the European Union, that is to say, the decision of 27 January 2005.

39. Furthermore, that decision is prospective in its regulatory effect, since what is at stake is the collective management, by BSA, of copyright in computer programs, and the questions referred concern the interpretation of provisions of European Union law.

40. Consequently, in the light of those factors, I take the view that the Court has jurisdiction to answer the questions referred by the national court.

#### B – *The first question referred*

41. By its first question, the national court wishes to know, in essence, whether the graphic user interface is an expression in any form of a computer program within the meaning of Article 1(2) of Directive 91/250 and therefore benefits from copyright protection of computer programs.

42. The difficulty facing the national court in the present case is related to the fact that that directive does not give a definition of the concept of a computer program. The question referred by the national court leads us, in reality, to investigate the object and scope of the protection conferred by that directive.

43. In order to answer that question, it is necessary to ascertain, first of all, what that concept covers for the purpose of Directive 91/250 in order to be able to determine, next, whether the graphic user interface is an expression in any form of that concept.

44. After examining the concept of a computer program, I will state why I believe that the graphic user interface is not an expression in any form of a computer program within the meaning of Article 1(2) of Directive 91/250 and that accordingly it cannot benefit from the protection conferred by that directive. Next, I will explain why, in my view, that interface is likely to be protected by the ordinary law of copyright.

#### 1. The concept of a computer program

45. Article 1(1) of Directive 91/250 states that computer programs are to be protected, by copyright, as literary works. That directive gives no definition of the concept of a computer program and merely states that it also includes its preparatory design material. (15)

46. The lack of definition results from an express choice by the European Union legislature. In its proposal for the directive, (16) the Commission of the European Communities states that '[i]t has been recommended by experts in the field that any definition in a directive of what constitutes a program would of necessity become obsolete as future technology changes the nature of programs as they are known today'. (17)

47. Nevertheless, although the European Union legislature refuses to bind the concept of a computer program to a definition which could quickly become obsolete, the Commission, in that Proposal for a directive, does provide useful information. Thus, it is stated that that concept designates a set of instructions the purpose of which is to cause an information processing device, a computer, to perform its functions. (18) The Commission also states that, given the present state of the art, the word program should be taken to encompass the expression in any form, language, notation or code of a set of instructions, the purpose of which is to cause a computer to execute a particular task or function. (19)

48. The Commission adds that the term should be taken to encompass all forms of program, both humanly perceivable and machine readable, from which the program which causes the machine to perform its function has been or can be created. (20)

49. In reality, the Commission is referring here to the literary elements which are at the basis of computer programs, that is to say, the source code and the object code. At the base of a computer program is the source code, written by the programmer. That code, made up of words, is intelligible to the human mind. However, it cannot be executed by the machine. In order for it to become executable, it must be compiled to be translated into machine language in binary form, most frequently using the digits 0 and 1. That is what is called the object code.

50. Those codes therefore represent the writing of a computer program in a language first understood by the human mind, then by a machine. They are the expression of the programmer's idea and, as such, there is no doubt that they benefit from the copyright protection conferred by Directive 91/250.

51. Furthermore, that finding is confirmed by the wording of Article 10(1) of the TRIPS Agreement which provides that computer programs, whether expressed in source code or in object code, will be protected as literary works pursuant to the Berne Convention.

52. The question which presently arises is whether the graphic user interface, which is the result, on screen, of a computer program, constitutes an expression in any form of that program and thus benefits from the protection conferred by Directive 91/250.

## 2. The concept of any form of expression of a computer program

53. The 10th recital in the preamble to Directive 91/250 states that the function of a computer program is to communicate and work together with other components of a computer system and with users. For this purpose, a logical and, where appropriate, physical interconnection and interaction is required to permit all elements of software and hardware to work with other software and hardware and with users in all the ways in which they are intended to function. It is then stated that the parts of the program which provide for such interconnection and interaction between elements of software and hardware are generally known as interfaces. (21)

54. In the field of computing, interfaces thus have many forms which can be grouped into two categories, that is to say, physical interfaces and logical or software interfaces. Physical interfaces include, inter alia, hardware such as the computer screen, the keyboard or the mouse.

55. At the heart of software interfaces, I find interconnection interfaces, which are internal to the software and permit dialogue with other elements of the computer system, and interaction interfaces, of which the graphic user interface forms part.

56. The graphic user interface, commonly referred to as the 'look and feel', enables communication between the program and the user. It is in the form, for example, of icons and symbols visible on the screen, windows or drop-down menus. It makes interaction possible between the program and the user. That interaction can consist of the mere provision of information, but can also enable the user to give instructions to the computer program using commands. That is so, for example, in the case of a file

dragged by the mouse and dropped into the recycle bin or the commands ‘copy’ and ‘paste’ in a word processing program.

57. For reasons which I will set out below, I do not believe that a graphic user interface is an expression in any form of a computer program or that it can be protected by the law as a computer program.

58. The objective which Directive 91/250 seeks to achieve is that of protecting computer programs against any reproduction not authorised by the proprietor of the right. (22)

59. In my view, the specific nature of the copyright applicable to computer programs arises from the fact that, contrary to other works protected by that right which appeal directly to the human senses, a computer program has a practical purpose and is therefore protected as such.

60. We have seen, in point 47 of this Opinion, that a computer program forms the expression of a set of instructions the purpose of which is to enable a computer to perform a task or a particular function.

61. Thus, I believe that, whatever the form of expression of a computer program, that form must be protected from the moment when its reproduction would engender the reproduction of the computer program itself, thus enabling the computer to perform its task. In my opinion, that is the meaning which the European Union legislature intended to give to Article 1(2) of Directive 91/250.

62. Furthermore, it is the reason why the preparatory design work, where it leads to the creation of such a program, is also protected by copyright applicable to computer programs. (23)

63. That design work can include, for example, a structure or organisational chart developed by the programmer which is liable to be re-transcribed in source code and object code, thus enabling the machine to execute the computer program. (24) That organisational chart developed by the programmer could be compared to the scenario of a film.

64. Accordingly, I consider that the concept of any form of expression of a computer program refers to those forms of expression which, once used, enable the computer program to perform the task for which it was created.

65. The graphic user interface alone cannot give that result, since its reproduction does not entail reproduction of the computer program itself. It is, in addition, possible for computer programs having different source and object codes to share the same interface. Accordingly, the graphic user interface does not divulge the computer program. It merely serves to make its use easier and more user-friendly.

66. The graphic user interface is not, therefore, in my opinion, an expression in any form of a computer program within the meaning of Article 1(2) of Directive 91/250.

67. To admit the contrary could lead to protection being conferred on a computer program, and therefore to its source code and object code, on the basis of the mere fact that the graphic user interface has been reproduced and without even having ascertained whether the codes which constitute it are original, which would manifestly run counter to Article 1(3) of that directive, which provides that ‘[a] computer program shall be protected if it is original in the sense that it is the author’s own intellectual creation’.

68. For those reasons, I take the view that the graphic user interface is not an expression in any form of a computer program within the meaning of Article 1(2) of that directive and, accordingly, that it is not eligible for protection under Directive 91/250.

69. However, I do not believe that such an interface is never entitled to protection.

3. Protection of the graphic user interface by the ordinary law of copyright

70. Although the graphic user interface cannot be regarded as an expression of a computer program and therefore cannot be protected as such, I consider that it is, nevertheless, entitled to protection under copyright applicable to all literary and artistic works under Article 2(a) of Directive 2001/29.

71. In accordance with the case-law developed in Case C-5/08 *Infopaq International*, (25) copyright applies to a work when it is original in the sense that it is the author's own intellectual creation. (26)

72. In my opinion, there is no doubt that the graphic user interface can be an intellectual creation.

73. Development of such an interface requires considerable intellectual effort on the part of its author, as is the case for a book or piece of music. Behind the graphic user interface there is a complex structure developed by the programmer. (27) He uses a programming language which, structured in a certain way, will create a special command button, for example, 'copy-paste', or permit an action, such as double-clicking on a file to open it or clicking on an icon to minimise an open window.

74. However, even if the graphic user interface requires intellectual effort, it remains necessary, under Article 2(a) of Directive 2001/29, for it to be, as the Court described it, a subject-matter which is original in the sense that it is its author's own intellectual creation. (28)

75. The difficulty as regards determination of the originality of the graphic user interface lies in the fact that the majority of the elements which comprise it have a functional purpose, since they are intended to facilitate the use of the computer program. Accordingly, the manner in which those elements are expressed can be only limited since, as the Commission stated in its written submissions, (29) the expression is dictated by the technical function which those elements fulfil. Such is the case, for example, of the mouse which moves the cursor across the screen, pointing at the command button in order to make it operate or of the drop-down menu which appears when a text file is open.

76. In such cases, it seems to me that the criterion of originality is not met, since the different methods of implementing an idea are so limited that the idea and the expression become indissociable. If such a possibility were offered, it would have the consequence of conferring a monopoly on certain companies on the computer program market, thus significantly hampering creation and innovation on that market, which would run contrary to the objective of Directive 2001/29. (30)

77. Accordingly, I believe that, in its case-by-case assessment, the national court must ascertain whether, by the choices of its author, by the combinations which he creates and the production of the graphic user interface, it is an expression of the author's own intellectual creation, excluding from that assessment the elements whose expression is dictated by their technical function.

78. In the light of the whole of the foregoing considerations, I take the view that the graphic user interface is not an expression in any form of a computer program within the meaning of Article 1(2) of Directive 91/250 and that, accordingly, it is not entitled to protection under that directive. However, when it constitutes the author's own intellectual creation, a graphic user interface is entitled to protection under copyright as a work within the meaning of Article 2(a) of Directive 2001/29.

#### C – *The second question referred*

79. By the second question, the national court asks whether the television broadcasting of a graphic user interface constitutes a communication of the work to the public within the meaning of Article 3(1) of Directive 2001/29.

80. At the hearing, which was held on 2 September 2010, the parties gave some examples of the broadcasting, on a television screen, of a graphic user interface. It could be, inter alia, the display on the screen, during the broadcasting of elections, of a table showing the results of those elections.

81. The national court is uncertain as to whether such an interface can be the object of a communication to the public within the meaning of Article 3(1) of Directive 2001/29, since that interface is broadcast on a television screen in a passive manner, without the television viewers being able to use that interface or even access the computer or other equipment to which it gives control.

82. In my view, the mere television broadcasting of a graphic user interface is not a communication of a work, within the meaning of Articles 2(a) and 3(1) of Directive 2001/29.

83. We have seen in point 56 of this Opinion that the graphic user interface is intended to enable interaction between the computer program and the user. The purpose of such an interface is to make the program more user-friendly.

84. The graphic user interface therefore differs from other works protected by the ordinary law of copyright by its particular nature. Its originality lies in its production, in its method of communicating with the user, such as the possibility of operating buttons or opening windows.

85. By the broadcasting of that interface on a television screen, it loses its originality by reason of the fact that the essential element which makes it original, that is to say, interaction with the user, is made impossible.

86. Accordingly, deprived of the essential element which gives it its character, the graphic user interface no longer corresponds to the definition of a work within the meaning of Article 2(a) of Directive 2001/29. It is therefore no longer the work which the broadcasting body shows on television screens and communicates to the public.

87. For those reasons, I consider that the television broadcasting of a graphic user interface, because it causes it to cease to be a work within the meaning of Article 2(a) of Directive 2001/29, does not constitute a communication of a work to the public within the meaning of Article 3(1) of that directive.

## V – Conclusion

88. In the light of all the foregoing considerations, I propose that the Court should answer the Nejvyšší správní soud as follows:

- (1) A graphic user interface is not an expression in any form of a computer program within the meaning of Article 1(2) of Council Directive 91/250/EEC of 14 May 1991 on the legal protection of computer programs and, accordingly, it is not entitled to protection under that directive.
- (2) When it is the author's own intellectual creation, a graphic user interface is entitled to copyright protection as a work within the meaning of Article 2(a) of Directive 2001/29/EC 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.
- (3) The television broadcasting of a graphic user interface, because it causes it to cease to be a work within the meaning of Article 2(a) of Directive 2001/29, does not constitute a communication of a work to the public within the meaning of Article 3(1) of that directive.

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<sup>1</sup> Original language: French.

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<sup>2</sup> – Council Directive of 14 May 1991 on the legal protection of computer programs (OJ 1991 L 122, p. 42).

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<sup>3</sup> – 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).

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[4](#) – OJ 1994 L 336, p. 1; ‘the TRIPS Agreement’.

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[5](#) – OJ 2000 L 89, p. 6.

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[6](#) – See the definition given by the WTO in its standard provisions on protection of computer programs on the WIPO internet site ([http://www.wipo.int/edocs/mdocs/copyright/en/wipo\\_ip\\_cm\\_07/wipo\\_ip\\_cm\\_07\\_www\\_82573.doc](http://www.wipo.int/edocs/mdocs/copyright/en/wipo_ip_cm_07/wipo_ip_cm_07_www_82573.doc)).

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[7](#) – See the first, fourth and fifth recitals in the preamble to that directive.

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[8](#) – See Article 1(1) of that directive.

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[9](#) – See Article 1(2)(a) of Directive 2001/29.

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[10](#) – 121/2000 Sb., ‘the Copyright Law’.

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[11](#) – See, inter alia, Case C-302/04 *Ynos* [2006] ECR I-371, paragraph 36 and the case-law cited.

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[12](#) – C-64/06 [2007] ECR I-4887.

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[13](#) – Paragraphs 21 and 22 and the case-law cited.

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[14](#) – Paragraphs 19 and 20.

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[15](#) – The seventh recital in the preamble to that directive states that ‘for the purpose of this Directive, the term “computer program” shall include programs in any form, including those which are incorporated into hardware; whereas this term also includes preparatory design work leading to the development of a computer program provided that the nature of the preparatory work is such that a computer program can result from it at a later stage’.

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[16](#) – Proposal for a Council Directive on the legal protection of computer programs (OJ 1989, C 91, p. 4; ‘the Proposal for a directive’).

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[17](#) – See the first subparagraph of Article 1(1) in the second part of the Proposal for a directive, entitled ‘Particular provisions’.

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[18](#) – See Article 1(1) in the first part of the Proposal for a directive, entitled ‘General’. See also footnote 6.

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[19](#) – See the second subparagraph of Article 1(1) in the second part of the Proposal for a directive.

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[20](#) – See the third subparagraph of Article 1(1) in the second part of the Proposal for a directive.

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[21](#) – See the 11th recital in the preamble to that directive.

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[22](#) – See the first and second recitals in the preamble to that directive.

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[23](#) – See the seventh recital in the preamble to that directive and paragraph 1(1) in the first part of the Proposal for a directive.

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[24](#) – For a concise overview of the development of software, see Caron, C., *Droits d'auteur et droits voisins*, 2nd edition, Litec, Paris, 2009, pp. 134 and 135, and Stroil, A., and Derclaye, E., *Droit d'auteur et numérique: logiciels, bases de données, multimédia: droit belge, européen et comparé*, Bruylant, Brussels, 2001, pp. 181 and 182.

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[25](#) – C-5/08, ECR I-6569.

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[26](#) – Paragraph 37.

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[27](#) – For an example of creation of a graphic interface, see internet site <http://s.sudre.free.fr/Stuff/Interface.html>.

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[28](#) – See *Infopaq International*, paragraph 37.

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[29](#) – See paragraphs 36 and 37.

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[30](#) – See the second and fourth recitals in the preamble to that directive.